THE

FARMERS' CABINET;

DEVOTED TO

AGRICULTURE, HORTICULTURE,

AND

RURAL ECONOMY.

Upon Agriculture, the foundation of individual happiness and national prosperity must rely for support.—*Clinton*

Vol. II.---August, 1837 to July, 1838.

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THE FARMERS' CABINET,

DEVOTED TO AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

Vol. II.—No. 1.] Philadelphia, Aug. 1, 1837. [Whole No. 25.

For the Farmers' Cabinet.

Observer---No. 9.

TAIL EVIL.

It frequently happens, that the most erroneous opinions spread to an almost universal extent, and assume the sanctimonious garb of established truths. This was exemplified in the popular opinion respecting *hollow horn*. An instance, not less remarkable, is to be found in the common opinion, among the people, of the *tail evil* or *tail slip*.

The name is intended to express a wasting of the extremity of the bone of the tail—whereby, a portion of that member becomes *soft and flexible*, or even *hollow*, as many express it. In our country, the *tail ill* is very commonly associated with *hollow horn*, and believed to constitute one of its characteristic symptoms. In Europe, where *hollow horn* does not exist, the *tail slip* is made the concomitant of a variety of other diseases among cattle.

The wide spread prevalence of an opinion, is not sufficient evidence of its correctness. The general belief in the existence of *tail evil*, does not prove that it really has an existence. It is almost a century since twelve cows, which died in Saxony of supposed murrain, were dissected by the celebrated Leiberkuhn, who "*examined, and divided the tail in various parts, and found it in its natural state.*"

Youatt, in his recent work on British cattle, when treating of palsy, says, "in many parts of the kingdom, this complaint is traced to a most ridiculous cause. The original evil is said to be in the tail—and all maladies of this kind, involving the partial or total loss of motion of the hind limbs of the animal, are classed under the name of *tail-ill*, or *tail-slip*." "The farmer, and the cow-leech, believe that the mischief passes along the cow's tail, to the back, and that it is on account of something wrong in the tail, that she loses the use of her legs. And, then, some set to work and cut the cow's tail off, while others, less cruel, or more scientific, make an incision in the under surface and allow the wound to bleed freely, and then fill it up with a mixture of tar and salt, and we know not what. In some parts of the country the practitioner is not content with this treatment, but, supposing there is witchcraft in the business, he has recourse to some *charm*, in addition to the cutting and dressing. This charm consists in binding a small piece of the rowan tree on the extremity of the tail, and making a *black cat* pass three times round the cow's body, over her back and under her belly, which, (if it happens to be a tortoise shell cat, which is often the case, from the necessity of the colour being black) so enrages the animal, that she kicks, and screams with all the fury to which she is so excited, until she escapes from the hands of the necromancers, leaving them convinced that the *devil* has got into the cat."—pp. 501—2.

I have never examined a great many tails, in quest of the *tail evil*, but, in every instance, have found them, as Leiberkuhn did, in a "natural state." To me it seems just as consistent with reason and analogy, to believe that the cow is affected with *witchcraft*, as with the *tail evil*—and the application of the *black cat*, is about as scientific as that of the *tar and salt*—with this difference, however, that in many diseases, the bleeding from the wound, and the acid substances with which it is filled, may produce a salutary effect on distant organs, in spite of the wrong philosophy by which they were directed.

An Edinburg writer, in the Quarterly Journal of Agriculture, speaking of the *tail slip*, says "the disease, in ordinary cases, is said to consist in a softening of the bones about the extremity of the tail, and is to be distinguished by the point of the tail being easily doubled back upon itself, and having, at this doubling, a soft, and, rather a crepitating kind of feel. But what is the real state of the case?—The tail is lengthened out to the extent of about three feet and is formed like a common whip. Towards the extremity, the bones terminate gradually, becoming insensibly smaller as they proceed downwards. At this part is said to be found a soft space—the *tail slip*. Beyond this, again, a firm, swelling, cartilaginous portion is found, covered with hair, to brush off the flies within its reach. Now, why have we the long column of bones; the termination of a soft space of a few inches; this thickened, hard, cartilaginous part, at the very extremity, and that extremity covered with hair, but with a view to form a whip to drive off, and with the greatest possible effect, the insects which wound and torment the animal? Here the column of bones forms the shaft or handle of the whip—the soft part the connexion between the handle and the thong—while the thickened extremity may be easily recognized to represent the thong—and the hairs to form the lash or point; so that we have a whip to drive away the flies, and so complete a one, that the coachman may borrow a lesson from its construction."

This very appropriate and natural whip, so happily described, ought to whip the *tail evil* out of the mind of every one who reads it. I have endeavored to show, that the *hollow horn* is the natural state of the horn. So, also, the *tail evil* appears to be the natural state of the tail.

New Garden, 6 mo. 30th, 1837.

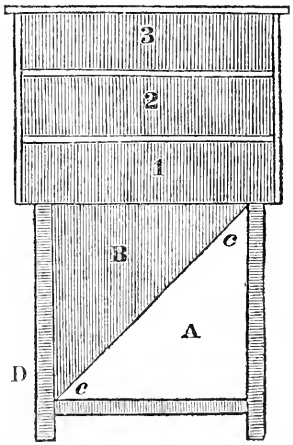
For the Farmers' Cabinet.

Improved Bee Hive.

Mr. Editor,—The following representation of a bee hive cannot fail to be interesting, to those of your readers, who are interested in rearing and managing bees. It is a fact, of which many bee growers have a very unprofitable experience, that the enemies of the bee have increased for several seasons past. This fact has given rise to the invention of different kinds of hives; some of which are ingenious and useful; but the most of them are too expensive for general use.

I have seen none that, in my opinion, embraces so many advantages as the one here represented. A is a stand, the legs of which are 16 inches high, the stand itself 18 inches square. B represents a three cornered box, * open on the top; with a slanting bottom c c; a space is to be left open in the front of the hive the whole length at D, to admit the bees and allow the dirt to slide off the slanting bottom.

Fig. 1.



1, 2, and 3, are boxes on hives, 19 inches square and 7 inches high, with slats nailed across, a sufficient distance from each other to admit the free passage of the bees; bars are to be put across the hive to support the comb. The top to be secured by a tight cover. The bees enter at D, and pass up the slanting bottom of the stand into the boxes above, and the boxes can be increased by adding others, always placing the additional boxes nearest the stand.

This hive possesses the following advantages over the hives in common use:

I. *It prevents the ravages of the miller*, whose worm is the bee's most fatal enemy. The miller deposites its eggs in the bee dirt; which in the common hive is constantly accumulating on the bottom. This difficulty is obviated by the slanting bottom of the stand; the dirt falling on this rolls out at D, and the bottom is kept clean.

II. *The cruel practice of destroying the bees* is entirely superseded by the use of this hive. By blowing a small quantity of tobacco smoke into the upper box, through a hole made for that purpose, the bees will descend into the box next below; the upper box can be removed; fifty or sixty pounds of honey, entirely free from dead bees and dirt, can thus be taken from a good hive; and enough remain to winter the bees without any risk of loss.

III. *The swarming of the bees can be regulated* by the rise of this hive, and the new

* The Box and Stand can be made in one article.

swarms taken at the season of the year when they are most valuable. The bees can be prevented swarming again for the season, by additional boxes as the young bees increase.

IV. *This hive is cheap* and requires but little mechanical knowledge in its construction; any farmer with ordinary tools can make it from the above description.

I hope bee growers generally will be disposed to give the hive a trial. It is very desirable when we feed on the *sweets* collected by the art and industry of this little insect, that we should not be pained with the reflection that *our* enjoyment is at the expense of *its* life. If any are induced to abandon the practice of destroying the bees, and adopt the above plan, my object in writing will be accomplished.

A LOVER OF GOOD THINGS.

Allegheny co., April 25th, 1837.

For the Farmers' Cabinet.

Agricultural Implements.

NO. X.

THE STRAW AND CORN-STALK CUTTER.

There are a great variety of machines in use for this purpose, some with knives or cutters placed upon the periphery of a wheel, others with cutters upon the face or end of a wheel; in both kinds the cutters pass by and rub against a piece of steel fixed to the box in such a manner as to cut the desired object, and the steel at the same time tends to keep the cutters sharp.

The objections generally made to the former, is the difficulty of preserving the form so as to press against the whole face of the fixed steel, owing to the twist (or irregular form varying from straight lines) which the cutters must necessarily have when presented at a proper angle with the steel.

The objection to the latter is the difficulty of preserving a sufficient degree of correctness between the shaft and box in which it turns to cause the cutters to press against the steel with a proper degree of force to cut the object perfectly, and at the same time preserve a perfect edge. And, also, the difficulty of pushing the object to be cut forward between the different cutters.

Another kind which has also a continuous circular motion, but instead of rubbing against a fixed steel, the cutters are placed upon the periphery of a wheel and extend in radius or direct lines from it, the edge of each cutter is in a line parallel with the centre of the wheel or cylinder; these edges, as they revolve, press against the periphery of another cylinder composed of wood, lead, or other substance, so as to cause the *object* to be cut between the cutters and cylinder.—The objections to this kind are the injurious effect upon animals eating the lead which is necessarily worn off the cylinder, by the action of the cutters upon it; and other substances either injure the edges of the cutters or are liable to wear away too rapidly.

Another kind is where the cutter, instead of moving in a continuous circular direction as the three kinds described above, moves in an alternating direction, attached to a slide which moves in vertical grooves, and cuts in its descent, and the object to be cut is pushed forward (while the cutter ascends) by a lever and catch acting on a ratchet wheel or wheels; the edge of the cutter is at a proper angle with the line of motion, say forty-five degrees or other suitable variation, and is made to press against the face of a piece of fixed steel, both in its ascent and descent.

A machine made upon this principle, and driven by the power of a horse, would probably be found in practice the best kind of a machine where either straw or corn-stalks are cut in the large way; motion may be given to it by a horse moving upon the *Portable Horse Mill, described in a former communication.*

As there is but a single cutter here, and that cutter rubbing against the steel, both in its ascent and descent, it is kept sharp a considerable length of time, and should it require grinding, this can be done by almost any one without difficulty as the sides and edge are straight.

If any practical agriculturist who would think the cutting and steaming of his straw and corn-stalks previous to giving the same to his cattle an advantage, and should erect a machine upon this principle for cutting them, I should be pleased to see a communication from him in a future number of the Cabinet, both in regard to the cost and utility of the machine and the relative value of a given quantity of straw and corn-stalks compared with the same amount when eaten without cutting or steaming them; and the best process of steaming and the proper temperature for the food.

17th July, 1837.

For the Farmers' Cabinet.

Preservation of Timber.

Since the inquiry appeared in the 24th number of the *Cabinet* relative to the proper time to cut timber and the best means to preserve it from premature decay, &c.; the subject has undergone considerable discussion in presence of the writer of this, and the general opinion appears to settle upon the month

of August, within one day of the time when the moon is full, as the best time to cut all kinds of oak; and that the best and cheapest mode of guarding it from decay, is to immerse the wood, immediately after it is cut, in lime and water—to remain immersed a sufficient length of time for the small particles of lime to penetrate into the wood; one year is considered sufficient for this purpose; the timber is split or otherwise reduced nearly to the dimensions to suit the purpose for which it is required, so as to permit the lime to penetrate the pores in the best manner, in the least space of time. One gentleman states that he considers oak posts for fences treated in this manner equal to ordinary locust without any preparation. A vat made water tight, with plank sunk in the ground, of sufficient dimensions to contain the required quantity of timber, with a small space between the different courses and the sides of the vat, sufficient to allow the water and lime to be agitated occasionally, is all the preparation required. The timber is placed in the vat and covered with water and lime, mixed to the consistence of common whitewash, and this agitated occasionally during one year; the timber is then removed and when sufficiently dry is fit for use.*

* Perhaps the lime may act chemically in neutralizing the acid of the sap, as well as mechanically in filling the interstices between the fibres of wood; if so the above process may possibly not be so useful when applied to some other kinds of wood; there are several other substances which are naturally brought to the mind when investigating this subject, particularly those of a resinous nature; also, salt, and charcoal, either of these might be brought into contact with the interior part of the wood by a strong hydrostatic or hydraulic pressure where expedition in the process may be important.

From the Cultivator.

Sheep Barn---Ruta Baga.

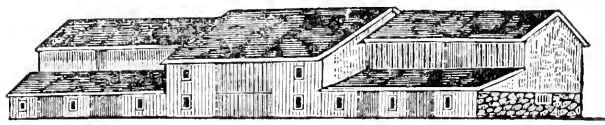


Fig. 2.

Dear Sir,—As you are engaged in agriculture, and no doubt take an interest in all improvements, I enclose you a sketch of a barn, (fig. 2,) which I built last season for the accommodation of sheep—141 by 40 feet, with a basement, three sides of which are built of stone laid in mortar, 6½ feet high in the rear and 7½ in front, with a cellar 40 by 16, which will hold about 2,500 bushel roots, which are dropped into it through a trap door from the outer floor. The barn will hold from 80 to 100 tons of hay, besides grain, straw, &c. The basement will conveniently hold 700 sheep, where they are fed with hay, ruta baga, and watered. In cold weather, we close the doors and windows,* and throw them open in mild weather, and it is sufficiently warm in March and April, for young lambs. We shear on the centre floor, and have a wool room plastered on the right. Our flock consists of about 1,000 of the finest Saxony sheep, and we have long found it difficult to keep these fine and tender sheep sufficiently warm, and particularly to guard young lambs against the vicissitudes of the weather, even in April.

We think ruta baga are decidedly preferable to any other roots, and raised about three thousand bushels last season. They are as valuable for cattle as for sheep.

The enormous high prices which are demanded for oxen and cows, as well as for butter and cheese, admonish us that the people of this country have run too much into sheep, to the neglect of cattle; which the good sense of the farmers will soon rectify. We have an earnest of this from the number of calves which we see in the pasture of almost every farmer.

I am very respectfully yours, &c.,

E. Tilden.

New-Lebanon, May 26, 1837.

* We doubt the propriety of closing the doors and windows at any time, except during a *driving* snow storm. No animal is more sensitive to foul air than the sheep; and 700 of these animals will soon vitiate the air of the basement story. We think it would be an improvement to have doors or ventilators, on the ends and rear, as well as in front.

If we were to prescribe rules in regard to the management of sheep, they would be something like the following:—1. Give them pure air; 2. Feed them well; 3. Keep them dry; 4. Give them salt often; and 5. graze them in hilly, stony pastures.—*Cond.*

Lime Stone,

Ground, *but not* burned, *for agricultural purposes.*

The following paper, on the use of *Lime-stone, ground* instead of *burned*, for agricultural purposes, was read before the Lyceum of Natural History of New York, by William Partridge, Esq.

The facts therein set forth, are highly important, and are worthy of being tested by those who have lime-stone on their farms. We ask for this subject, the attention of our readers; and of those who have heretofore

tested, or may hereafter test, the theory by experiment, to furnish us a statement of the result for publication. We shall also be much obliged to Mr. Partridge for a continuation of his favors.

To the President of the Lyceum of Natural History.

Sir,—In a conversation I had with you on board a steamboat on the North river, sometime during the summer of 1835, relative to lime, as applied agriculturally, I mentioned the advantage of using it generally in a ground state, as plaster is now used, instead of burning it. You informed me, subsequently, that your farmer had applied some on your land in a state of powder, and found it decidedly beneficial. I then promised to send you my written opinion on the subject, and now beg leave to fulfil that promise, with an apology for delaying it so many months.

It is well known, to every intelligent agriculturalist, that soils covering lime-stone rocks are the most productive of any on the globe. I know of but one exception, when the lime-stone is too highly charged with magnesian earth. Our country affords many facts in proof of this assertion. I shall refer to two locations as all sufficient for my purpose. The state of Kentucky has a bed of lime-stone running underneath its whole surface, and its natural soil has been produced, and is still producing by the abrasion of those rocks. The superior productive powers of the soil of the State is well known to every intelligent farmer in our extensive country, and is spoken of in terms of admiration by the Europeans. That part of Pennsylvania extending from the Lehigh Water Gap to Easton, is a lime-stone country, and affords another instance of its highly productive powers.

In England, the soil deposited in valleys at the foot of lime-stone hills, are equally productive. The valley running from the city of Bristol, to the city of Worcester, is of this description, and there is no soil more productive in Great Britain. There are more than twenty spurs of hills bounding that valley, each containing large bodies of lime-stone rock, and the springs flowing from them, are so charged with lime-stone, as to incrust every thing lying in them. When the springs issue from the rocks high up the hills, they are much used for irrigating the higher lands, and the beneficial effects are visible to every observer.

Lime, in the state of Chalk, is also used very generally on land near to the Chalk Mountains in England.

The lower part of this State abounds in primitive lime-stone, and the preceding observations were made with a view to apply the facts to rectify a material error committed, as I conceive, by the farmers in using it on their land. They burn the lime-stone at considerable expense, and in that state use it for agricultural purposes. I would suggest, as a far better general application, that the lime-stone be merely ground, and in that state applied to the land. As this may be a new mode of application, I shall endeavor to show wherein it is preferable to the present.

I have been frequently informed by farmers who use burnt lime on their land, that they keep it some months before using, and that then the good effects are not observable the first year. We have only to ascertain what these facts prove, and the whole mystery will be instantly solved. In burning lime-stone two materials essential to agricultural productiveness are driven off, its water and its carbonic gas. In its natural state it is a carbonated hydrate, when burnt it is caustic lime (oxide of calcium) made so by the heat driving off its water and carbonic gas. Why does the farmer delay putting it on his land, but for the simple reason that it is too caustic for vegetation. Why does it require to lie in the soil one year before producing any visible fertilizing effect? it is for nothing more than to give it time to return again to a state of carbonated hydrate, the same condition it was in before burning.

I have said that lime-stone merely ground is the best general mode of applying it to agricultural purposes, there are some exceptions to this rule. When a soil contains "hard roots, dry fibres, or other inert vegetable matter, a strong decomposing action will take place between burnt lime, and the vegetable matter, rendering that which was before comparatively inert, nutritive." Where this is the case, it would be well for the farmer to use one-third burnt lime, and two-thirds of ground lime-stone, or any other proportion he may find most efficacious. For stiff heavy soils use the lime-stone coarsely powdered, for in this state, after being well ploughed and harrowed, so as to mix thoroughly with the soil, it would so lighten it as to enable the sun and air to penetrate to the roots of its vegetation, thereby rendering the future crops more productive. For lighter soils it cannot be ground too fine. Our primitive lime-stone rocks are peculiarly well calculated for this purpose, as the particles are held together by a loose aggregation, and therefore easily reduced to small pieces, or to a fine powder, at the option of the operator.

The question was asked by a writer in a late New York Farmer, "if it be possible that ground lime-stone can answer the purpose of plaster of Paris." I should say that it can, and it may be, eventually, a better purpose. The fertilizing property of plaster

depends mainly, if not altogether on its hydratic property, that is, on its power to attract moisture during the night, and imparting it gradually to the plants during the day. The carbonate of lime possesses the same property in a considerable degree. I have never heard of these two lime-stones being analized, for the purpose of developing their comparative powers of absorbing moisture from the atmosphere, and their facilities of giving out their moisture at atmospheric temperatures. To have this accurately performed, would be a desideratum with agriculturists.

We know that soils formed by the abrasion of lime-stone rocks are of the most fruitful description; we see its productive powers when land is irrigated with water holding lime-stone in solution, and with equal effect in the state of chalk. Science has developed the properties on which this productiveness depend, and if our farmers would suit their appliances scientifically, we should not now be receiving a supply of agricultural products from Europe.

William Partridge.

Corn Bread.

The south has long been celebrated for its grateful corn bread, cakes, muffins and hominy. In consequence of an invitation in the Cultivator, a young lady in Tennessee, has kindly sent us the following directions for making these domestic delicacies of the table, for which we respectfully tender her our acknowledgments.—*Cultivator.*

PLAIN CORN BREAD.

Six pints meal, one table-spoonful salt, four pints water; thoroughly mixed with the hand, and baked in oblong rolls about two inches thick. Use as much dough for each roll as can be conveniently shaped in the hand. Many persons use hot water; in winter it is certainly best. The bread is better to be made half an hour or more before it is baked. The oven must be tolerably hot when the dough is put in. All kinds of corn bread require a hotter oven and to be baked quicker than flour.

LIGHT CORN BREAD.

Stir four pints meal into three pints tepid water; add one large tea-spoonful salt; let it rise five or six hours; then stir up with the hand and bake in a brisk oven. Another method is to make mush, and before it grows cold, stir in half a pint of meal. Let it rise and bake as the first.

CORN CAKES.

Six eggs well beaten, one pint milk, one tea-spoonful salt, two pints mush almost cold, two pints meal, and three table-spoonsful melted lard. Grease the oven and put one *large* spoonful of batter in each cake. Do not let them touch in baking.

CORN MUFFINS.

Made in the same way as corn cakes; grease the muffin hoops and heat the oven slightly, before putting in either corn cakes or muffins. A better muffin is made by substituting two pints flour instead of meal.

BEST BATTER CAKES, OR MUSH CAKES.

Beat the yolks of eggs very light, add one pint milk, two pints mush almost cold, 1½ pints flour, one tea-spoonful salt, three table-spoonsful melted butter. To be well beaten together. Just before frying them, whip the whites to a strong froth, and stir it lightly into the batter. For frying all kinds of batter cakes, use no more lard than is necessary to make them turn well.

MUSH.

Put two pints of water into a pot to boil; then take one pint cold water and mix smoothly into it one pint meal. When the water in the pot boils stir this well into it, and let it boil ten or fifteen minutes, or until it looks clear.

COMMON BATTER CAKES.

Six eggs well beaten, 2½ pints milk, one tea-spoonful salt, stir in three pints meal that has been thrice sifted through a common sifter. Keep the batter well stirred while frying, otherwise the meal will settle at the bottom.

BEATING HOMMINY.

Soak the hominy corn ten minutes in boiling water; then take the corn up and put it into the hominy mortar, and beat it until the husks are all separated from the corn. Once or twice while beating it, take it out of the mortar and fan it; that is, throw up on a tray or bowl so as to allow the husks to fly off. When sufficiently beaten, fan it until all the husks are out.

PREPARING HOMMINY FOR THE TABLE.

It must be thoroughly washed in cold water, rubbing it well with the hands; then washed in the same way in warm water, changing the water several times. Put it into a large pot of cold water, and boil steadily eight or ten hours, keeping it closely covered. Add hot water frequently while boiling, otherwise the hominy will burn and be dark colored. When hominy beans are used, one pint to a gallon of hominy, to be put in when the hominy is put on. If it is put on the first thing in the morning, and kept briskly boiling, it will be ready for dinner at two o'clock. Season with butter and send it to the table hot.

But the usual mode is to boil hominy twice a week, and put it into a wooden or stone vessel, and set it in a cool place to prevent its becoming musty. When wanted for use, take the quantity necessary for breakfast or dinner, and having put a small quantity of lard into an oven, let it become hot; put in the hominy and mash it well, adding some salt; when well heated it is ready for the table. Some persons allow it to bake at the bottom, and turn the crust over the hominy when put on the dish. Be careful to have no smoke under the pot while boiling, or when frying it for the table. Few things require more care or nicety in their preparation than hominy.

(These pints were all measured with the common tin cup.)

For the Farmers' Cabinet.

I am happy to find that subscriber is so well pleased with his *cloak*—that it fits him so completely—and with all, that he is so sensible that he stands in need of its covering. As he finds its protection necessary to the preservation of his comfort, I will not be so cruel as to attempt to wrest it from him. I can heartily respond to his kind feelings and "thank him very much for his simile of the *north wind*,—I never should have thought of so apt a likeness."—*Strong and penetrating*, as the *truth* always is, to him it may have seemed "loud," from the manner in which it *penetrated* and forced conviction on his mind. It may have seemed "rough" from the manner in which it lifted the skirts of his *cloak* and exposed "the folly of (his) pretending to a knowledge of the absence of things." Hence he was led to compare it to a *storm of wind*. The term "empty," however, seems quite inconsistent with the other attributes which he has given it and must have been misapplied.

Subscriber seems a little discomposed at my saying that it was "animal matter, not the bone which he found rotten"—and places his *dictum* upon it. "I examined the piths or bones and *knew them to be rotten*, or I should not have made the statement." This is too great an assumption of infallibility for him to make after having complained so much of my "positive manner." There could have been no deception in appearances—no error in judgment—no oversight of accompanying circumstances—his penetrating eye and comprehensive judgment must have been infallibly correct. "He knew them to be rotten." Appearances no doubt satisfied him that they were rotten—he believed them to be rotten and as a matter of fact asserted that "he knew them to be rotten." All this does not prove that they were *bona fide* rotten. The same appearances might not have satisfied me that they were so. It is often a nice and delicate observation in *pathology* to determine such a question. I will avail myself of his suggestion to introduce "a more agreeable manner of investigation." Instead of denying his assertion I will only say that I *doubt* its truth. I *doubt* the minuteness and accuracy of his observations being equal to the difficulty of determining the fact.

I may perhaps be excused for informing Subscriber what he probably does not know—that *bones rot more readily and rapidly*—in the sense in which he uses the term—*in living than in dead animals*. Bony caries or rotting is an ulceration of living bones produced by the action of the absorbent vessels which take up and carry off the bony matter. It is completely a vital action—a process which does not belong to dead matter. After death the *membranous and vascular* materials in the bone first becomes decomposed or rotten. By long exposure to the agents of decomposition the *gelatine*, which is much more intimately associated with the earthy matter of the bones, is gradually destroyed. But the *phosphate of lime* or calcareous base of the bone remains with little or no alteration either of substance or form for a long period. In very spongy bones, this earthy substance may be left so loose and cellular after the more obvious animal matter is removed, as to be readily crushed or crumbled by external violence. For the same cause it may be so infiltrated with the decomposed elements of the soft parts as to appear black or to emit an offensive odor. Subscriber has, no doubt, seen *this* condition of the pith of horns, but it affords no evidence that they were "rotten"—so far from it, that a little exposure to the bleaching influence of sun and rain would probably have restored them to a *white, sound state*.

Had Subscriber been really sincere in his aversion to a "war of words," I *doubt* whether his last essay would ever have been written.

At p. 241, he says, "Observer challenges those who oppose him to produce the horn. I ask him to look at the horn he has described * * * here is an admission of all that is necessary * * * the horn is hollow in the sense in which we understand the question." But at p. 372, he strongly enough accredits himself with the discovery of the horn and in a sort of mock triumph says, "*as I have given Observer information that has enabled him to find a hollow horn for himself*, I feel pretty much out of danger from his challenge, and hope that he will not expect me to continue the discussion on the mere existence or non-existence of the hollow horn."

Having thus *slipped the noose* and ran

clear off the field of controversy, he very properly asks exemption from further danger and from a continuance of the discussion. He is entitled to both. Yet what means the shout of victory which I hear in the distance!—"the fact is *now* admitted that hollow horn exists—that the bony part of the pith wastes away by a disease to which all horns are liable."

So far from being *now* admitted, it has never been denied. The question, therefore, rests on precisely the same ground *where I had placed it* before Subscriber drew his pen in its support.

New Garden, 7 mo. 15th, 1837.

For the Farmers' Cabinet.

New Churn.

Mr. Editor,—The following is a description of a Churn which I lately saw in use in Columbiana county, Ohio. It consisted of a box about 30 inches long, 12 inches wide, and 12 inches high, with *rockers* placed under it, lengthwise. On the inside there was a rack, to stand upright, with a gutter cut in each side of the churn, and said rack is put in in the form of a slide. The cream is then placed in the box and the operation performed by *rocking*, which produces butter in a very short time, and is performed with much less labor than any other way where the operation has to be performed by manual labor.—The amount of cost in making is a mere trifle, and those wishing to try the experiment, can do it with very little trouble. J. K.

Beaver co., 7 mo. 15th, 1837.

Harnessing Horses.

Under this head comes the question of the best direction of the traces, or, as it has generally, but less clearly been called, the angle of inclination of the line of traction. This question appears to have been always considered one of great importance: the point has been frequently discussed, and various opinions have been advanced; some having recommended it to be horizontal, others inclined; and, as they have each in their turn, in demonstrating the correctness of their own theory, proved the error of others, there can be no presumption in laying them all aside, and in taking a different, but at the same time, a more simple and practical view of the case. By referring to a figure, we see that if AD represent that portion of his whole weight which is relieved from his fore-legs and AE the direction of the traces, then AF is the measure of the horizontal pull upon the carriage. Now, AF bears a constant proportion to AB, which represents the strain upon the legs; and AD being constant, AB, and consequently, AF increase or diminish according as the angle ADB is increased or diminished: that is to say, the horizontal pull applied to the carriage is proportionate to the strain upon the legs; but they are both dependent upon the angle formed by the traces, increasing or diminishing as the latter are inclined downwards or upwards from the collar; so that whether the traces be inclined upwards, as Fig. 3, or downwards, as

Fig. 3.

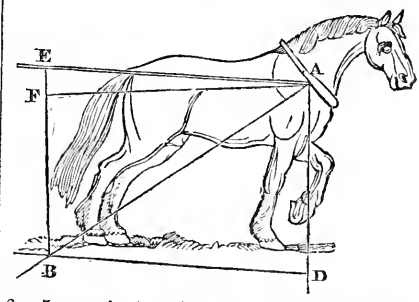
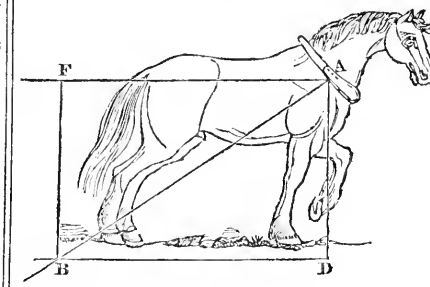


fig. 5, or whether they be horizontal, as fig. 4, makes no difference in the manner of pull-

Fig. 4.



ing. In the first case, a portion of the animal's weight is borne by the traces, and is transferred by them to the carriage. AF is here small, but the strain upon the legs AB, is also proportionably less than in the second case, where the traces are horizontal. In

Fig. 5.

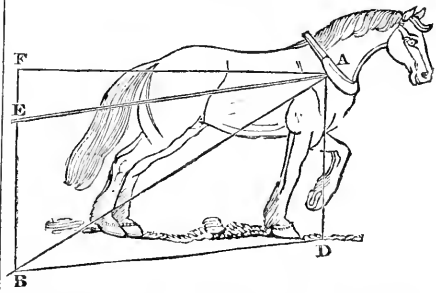


fig. 5, where the traces incline downwards,

we see that the horizontal force AE is much more considerable; but, at the same time, AB is increased, and consequently the muscular exertion required in the legs is proportionably great: in fact, here a portion of the weight of the load is transferred to his shoulders.

The comparative advantages, therefore, of the three, do not follow any general rule, but depend simply upon the peculiar qualities of the particular animal employed, and his relative capabilities of lifting and pulling, or the proportion existing between the weight of his body and his muscular strength. To render this more clear to our own feelings, we will put the case of a man. An able bodied man is more adapted for lifting than pulling; consequently, in his case it would be advantageous to throw a certain portion of the weight upon him, by making him pull upwards, as in fig. 6, or what we are more

Fig. 6.

accustomed to see, and which amounts to the same thing, applying his strength to a wheelbarrow, fig. 7, and we have frequently

Fig. 7.

seen an ordinary man wheel 800 lbs. in this manner.

If, however, we take a person unaccustomed to hard work, and consequently not so strong in the legs, although he may be unable even to lift the wheelbarrow which the other moved with ease, still he may, by pushing horizontally, put in motion a considerable load; and lastly, in the case of an invalid who can barely carry his own weight, if he lean on the back of a garden chair, he will not only walk himself, but push on the chair; or a child who is yet too weak to stand, can, if part of his weight be supported in a go-cart, not only move himself, but also the frame which supports him. These are very familiar and homely comparisons, but they are cases exactly similar to the three positions of the traces; and the argument will equally apply to horses as to men. It is true, we rarely use for draught a horse that cannot stand; but the case is very possible that a large heavy horse, otherwise not strong, or one which it was not desirable to fatigue, might pull better and longer, if part of the weight was borne upon the carriage, or if, in other words, the traces pulled upwards. And we know by experience, that in the case of stage-coaches, where, owing to the speed, the weight of the horse's body is already generally a burden to him, it is disadvantageous to increase that weight by inclining the traces much downwards; on the contrary, where we wish to obtain the utmost effect of a powerful horse, or of a horse that is muscular, but without much weight forward, it is highly advantageous to augment the effect of his gravity by inclining the traces even as much as 15°, or about 1 upon 3; the strain upon the traces will be then considerably increased, and the effect augmented, provided always that he is able to exert the necessary strength in his legs. As far, therefore, as the mere force of traction is concerned, there is no particular angle which will always produce the greatest effect—but it must depend upon the particular capability of the horse; and this in its turn varies, and is affected by circumstances; for the same horse that upon a level road requires no addition to his weight, might be materially assisted by a slight addition when ascending a hill, if not continued too long; and most horses would be benefited considerably by the opposite arrangement in a descent, that is, by a portion of their weight being borne up; they should at least have no additional load thrown on them while descending a hill.

Mulberry Trees.

There are in the vicinity of Burlington, New Jersey, about three hundred and twenty thousand mulberry trees under cultivation. The Messrs. Cheeney have about 200,000; Hon. Garrett D. Wall, in connection with Mr. Chauncey Stone, about 40,000; Samuel Gummere and Caleb R. Smith, 40,000; and Israel Kingsman 40,000. In order to favor the production of silk, these gentlemen are preparing cocoonaries, intending to commence feeding worms the present season.

Laying Out of Farm Lands.

A variety of considerations present themselves in the arrangement of farm lands. No instructions, applicable to every case, can be given. The best mode of dividing or laying out a farm, will depend upon the nature and situation of the land, its water, its proximity to roads, the kind of fences about to be adopted, and especially the objects to which the grounds are to be appropriated. As a general rule, admitting indeed of but few exceptions, fields of a large size will be found more advantageous than small ones. The larger the divisions of a farm, the less fencing is required. This is a point not likely to be overlooked by those who have had some experience of the perplexities and oppressive cost of keeping up the necessary enclosures upon their farms. A few small fields, particularly on grazing farms, are convenient, and in the winter, will be profitable, if enclosed by hedges, on account of the shelter which they afford to the pastures. Beyond this, but little can be said in their favor. Large fields are more easily supplied with water than small ones, and where they are regularly laid out, and of proper size, "five ploughs may do as much work as six ploughs in fields of a small size and of an irregular shape; while every other branch of labor (such as dunging, sowing, harrowing, reaping, and carrying in the harvest,) can be executed, though not altogether, yet nearly in the same proportion." It is to be observed, however, that the size of the fields must, in a great measure, depend on the extent of the farm, the character of the soil, and the object to which it is to be appropriated. Where the soil differs materially, it will often be advisable to separate the light from the heavy, the wet from the dry. As a general rule, a farm should be divided with a reference to the course of crops to be pursued in it; "that is to say, a farm with a rotation of six crops should have six fields, or twelve, according to circumstances." Again, the size of the fields must in some degree depend upon the flat or hilly shape of the ground, for even on dry land, if there be a rise on the ground, twenty chains is sufficient length: If the ridge be longer, the horses, in ploughing, are apt to become fatigued. When the system alternates with grazing and tillage, fields of from fifteen to twenty-five acres will perhaps be found to combine more advantages than those of any other dimensions. They should be either square or oblong. There is great advantage in having the fences of fields in straight lines, and when the fields are large, the square form should have preference: If they be small, the oblong shape has superior advantages. On a large farm, in a bleak situation, and on which it is proper to keep a numerous stock, it may often be found requisite to subdivide the arable divisions, not only for the sake of shelter, while the lands lie in a state of herbage, but for the convenience of separating and shifting the stock. Hence it is incumbent on the planner of a farm, to weigh well the various circumstances that belong to it, as on these only the true size and number of arable fields can be calculated. Even the shape of an arable field is not a matter of choice. It ought to be regulated by the shape of the farm, and by the roads and water courses running through it, as well as by the nature of its lands, the form of its surface, and its aspect or exposure. A perfect square or a long square, is a desirable shape, when circumstances will admit of it. Crooked lines and irregular fences are inconvenient in the operations of tillage, and should of course be avoided. Two sides at least ought to run parallel to each other: and it is equally, or more desirable, that each field should have a uniformity of soil and subsoil, as on these depend the uses to which it is applicable; and it is at once unpleasant and unprofitable to have different parts of the same field under separate courses of management. Yet where the natural line of division is very irregular, it is improper to follow implicitly all its windings. The planner ought rather to draw a judicious line between the two, and the cultivator to alter the qualities of the lands, which happen to be unnaturally severed, by draining, manuring, and other necessary means.

The direction of the fields should be the same as that in which the land ought to be ploughed for a crop, provided it be compatible with the given lines of the farm. On a level surface, or on one which is gently inclining, the direction of the beds of retentive lands that require to be laid up in round ridges ought to be nearly north and south; in order that the crops on either side of them, may receive equal sun, and ripen evenly: consequently, in this case, the fences which form the two longer sides of the quadrangle should take that direction. But where the surface is steep, this principle of direction must give way to another of greater utility. If the land is retentive, and the soil requires to be laid up into rough beds, across the slope, the direction of the ridges must be guided by the face of the slope; and the fences, on the general principle, ought to take the same direction; observing, in this case, when circumstances will permit, to let the fences wind to the right of a person standing on the brink of the slope, and facing towards it; as the beds ought to take that direction for the greater ease in ploughing them. And when the face of a hill is steep, and the land ab-

sorbent, the soil requires to be turned downwards of the slope; and the fences to be directed by the natural lines of the hill as much as possible. In laying out cow grounds, or other perrennial pasture grounds, regard should be particularly had to water; and wherever good water is naturally found, or can be conveniently brought by art, to that point, a pasture ground ought to tend, in order to enjoy the necessary supply as much as possible."

When the soil and situation of the land will permit, the arable grounds should be laid out nearest the farm house, and the pasture grounds most remote from it. This will save much cartage in removing the grain to the barn, and carrying out the manure to the fields. The laborers, moreover, will be more immediately under the supervision of their employer.

From the Farmer and Gardener.

Saw Dust for Packing Plants.

I have noticed in the agricultural papers, some accounts of the loss of a large number of Morus Multicaulis imported from France during the past spring, occasioned by neglect or inefficiency in packing. I presume the material commonly used for preserving the vitality of plants is moss. The kind denominated *Sphagnum* is the best for that purpose, as it retains moisture for a length of time, and is not liable to fermentation.

The moss, however, besides that it is not always readily accessible, is, I believe, inferior to saw-dust in both the qualities adverted to. When mixed with earth in equal proportions, and with a proper allowance of water, it will be many months before it can become dry, when securely closed in a box. By the way, boxes should be used in preference to mats—in all cases at least in which plants are impatient of removal; or when they are to be transmitted to a considerable distance.

Some years ago I received a box of plants from the south, which were put up in the fall and sent to Charleston to await the sailing of a packet. It lay there for months, and did not reach me until quite late in the spring: but on opening it, I found the contents in a fine *growing* condition.

About the first of this year I put up two boxes in the same manner—one to be sent to Boston, the other to Columbus, in Ohio. On the 23d of May, the former was opened, and the plants were in a state of perfect preservation; having lain undisturbed for nearly five months. In the other case, though the box was small, and almost as late in reaching its destination, yet the plants were in a condition equally good.

I have reason to believe that many of the losses sustained in the removal of trees and plants to a distance—and they are not few—are to be ascribed to the imperfect manner in which the packages are made up. An accidental delay, or unexpected change of weather, may materially retard the operation of planting; and if such occurrences are not guarded against by the care of the nurseryman, disappointment must frequently be the lot of his customers.

A Horticulturist.

The Turnep Fly.

The Editor of the Farmer and Gardener, E. P. Roberts, Esq. states that he lately saw a patch of Ruta-baga, on the farm of Mr. John Barney, near this city, which had been rescued from the ravages of the fly by the use of fish oil. He says Mr. B's mode of applying it was as follows:—"The oil being placed in a vessel, he dipped a rag into it and sprinkled it over the plants. He had previously tried sifting lime over them without effect, as was evinced by the many rents in the first leaves; the aroma of the oil being repulsive to the delicate sense of smell of these little mischief doers, they instinctively leave the plants as the oil is cast upon them. Another good is effected by the use of it—it acts as a powerful manure, and pushes the plant rapidly into the rough leaf state, when it is beyond the reach of harm from this insect. It is the opinion of Mr. Barney, that a gallon of oil, judiciously used, will go over an acre of turneps; but should it take four, the expense should be no object with any one desirous of securing a crop of turneps; for if it will drive off the fly, there can be no question that it will also expel *grass-hoppers*, which, of late years, have proved equally as destructive to the turnep plant as the fly itself."

We have seen it often stated that by boring a tree, inserting a portion of quicksilver or sulphur in the hole, and plugging it up again, that it would exempt it from the caterpillar and other insects. While in Philadelphia lately, we were shown an Elm tree, on which the experiment had been doubly tried, —that is, two holes had been bored in it. In the one, quicksilver had been placed, and in the other flour of sulphur, and when we saw the tree a week ago, not a single living leaf was on it—its insidious foe had been as rife with his mischief as ever.—*Gar. and Far.*

Why do you desire riches and grandeur? Because you think they will bring happiness with them. The very thing you want is now in your power—you have only to study *contentment*.

Stimulating Manures.

Most of our farmers are somewhat averse to trying new experiments in the art of cultivation, and yet of all new arts which are practised by man, there is none in which there is more need of them. Those experiments which require great expense at the outset should be instituted by Societies, or by those who have both money and time to devote to them. Many very important experiments may be tried by the man of very moderate funds, for they may cost but little else than the time consumed in performing them. One subject which we would name is stimulating manures, though prehaps the word nutritive would be better than stimulating. After the plant or crop is up, what is the best application to cause it to thrive? Liquids in which manure has been soaked are often used for particular purposes. We recollect that an old friend of ours once amused himself by pampering a squash vine, which he pushed forward to an immense length, by watering it every day with a liquid which he drained from his pigstye. He applied it not only to the main roots, but also to the little radicals which put out at intervals along the vine. No doubt there are many articles, cheap at cost, which may be used to great advantage.

We quote the following use of the *chloride of lime* from a French work. Mr. Dubuc, a French apothecary, has discovered that muriate of lime (chloride of lime dissolved) is a very active manure, or vegetable stimulant. He dissolves about two and a quarter pounds of the dry chloride, in about sixteen gallons of water, and with this solution waters the plants at distant intervals. He sprinkled a light soil with this fluid, and eight or ten days after, planted it with maize, and from time to time during the season watered the corn with the same solution. Another portion of corn at six feet distant, he watered with common water. The former yielded double the produce of the latter. A large variety of plants and garden vegetables were tried in the same manner and with similar results.

The sunflower, (helianthus) which at that place rises only six or eight feet, grew by this treatment to the height of twelve or fourteen feet, with flowers whose discs were eighteen or twenty inches in diameter, producing seeds which yielded half their weigh in oil, good to eat, and exuding from its centre a transparent vein like turpentine, very odorous and drying easily in the air. Potatoes were also tried. They were planted on the 1st of May, 1822, in two squares, six feet asunder; the one was watered with the solution, and the other with water from the cistern. They were gatherd on the 10th of November.

The bed which had been watered with the solution, and only three times during the season, produced potatoes six inches long, twelve in circumference, and weighed nearly two pounds each. The others were in general only half as large, and their stalks in the same proportion. Three or four waterings with the fluid at distant periods are considered sufficient. Some ascribe its action to electrical agency.

Allowing one half the above statement for the natural enthusiasm of the French, when any thing new occurs among them—the solution must be a valuable stimulus for some plants. The chloride of lime can be had at the paper mills, or at the apothecary's, for a few cents per pound, and the experiment may be tried, and if good effects described above, are corroborated, it certainly will be a valuable auxiliary.—If it proves to be of no worth, still the experiment will be valuable as refuting the above statement, and proving that the results obtained by Mr. Dubuc must be attributed to something else.—*Maine Farmer.*

Massachusetts Agricultural Society.

The Trustees of the Massachusetts Agricultural Society, believing that the interests of Agriculture will be more promoted by awarding liberal premiums, than in expending their resources in a cattle show, have decided to postpone the latter this fall, and therefore offer a large amount in liberal premiums, some of which we will mention. They offer for the best cultivated farm in the state, not less than 70 acers, exclusive of wood land, $150; for the second best $100. For the best rotation of crops on the same land, not less than two acres, for three or four years, commencing when it is in grass, $75. For the best way of improving and enriching poor and exhausted soil, without manure, by ploughing in green crops, $75. For the compost of stable manure with muck, mud, &c., which shall approach nearest to clear stable manure, in strength and efficacy in producing crops, $50. To a person, persons or incorporation, who shall raise the greatest quantity of sugar beets, by the acre, which shall be manufactured into sugar in the years 1837, '38, and '39; or to a person, persons, or corporation, who shall manufacture from the sugar beet, sugar in the greatest quantity and best quality in the same years, particulars of culture and manufacture being furnished—for each, $100. For an effectual and satisfactory mode of extirpating the worm that attacks the locust tree, $100; for extirpating the borer of the apple tree, $50. For a particular

account of the best experiment of turning in a grass crop as a manure, $50. For the best plantation of white oak trees, not less than one acre, nor fewer than one thousand trees per acre, raised from the acron, and three years old on the first September next, $50. For the best quality and greatest quantity of hemp on an acre, $40. For the greatest yield of carrots to an acre, $30, for mangel wurtzel $30, for beets $20. And numerous smaller premiums, besides a premium of $20 for the best newly invented agricultural implement, &c. &c. The total of premiums amounts to $1550.

Thus the enlightened agriculturists of Massachusetts are endeavoring to excite their fellow farmers to improvement in the agricultural art. And as many of their premiums are calculated to lead the emulous to experiment in new branches, we doubt not that a favorable influence will be felt throughout the state, and the products of the earth be increased. We should be glad to see a similar course taken in this state.—*Poughkeepsie Telegraph.*

Fruit Ladders.

Fruit trees are often much bruised, and greatly injured in consequence, by using ladders which rest against the branches while gathering the fruit. Very simple ladders may be made, which support themselves, and by which the fruit may be gathered with great facility, even from the ends of the longest and most spreading branches, without the slightest danger of injury to the tree. The following is one of the simplest. There are two upright slender posts, (which may be from six to twelve feet long,) inclining to within a few inches of each other at the top, and spreading from three to five feet, (according to the height,) at bottom. The rounds of the ladder connect these posts together, and the lower ones are made somewhat larger in the middle than at the ends, in order to give them greater strength. A third post is attached to the upper part of the latter simply by the upper round of the ladder passing through a hole in its under end; thus permitting it to turn freely, so that its lower end may be placed at proper distance from the other posts to enable it to stand firmly. It may then be placed under any part of the tree.

Generally, however, where the required height is more than ten feet, it is best to make the ladder with the first two posts placed parallel to each other about eighteen inches apart and then to connect, by suitable hinges for joints, *two* additional posts to the upper end of the ladder, so that they may at the same time be spread out from each other and form the foot of the ladder, thus forming, a sort of tripod or three-legged stand. In this way, one may be made lighter and more portable than by the former method.—*Gen Farmer.*

Topless Potatoes.

We were, the other day, shewn a curious specimen of new potatoes, that were grown without any top, or leaves. About five weeks ago, Mr. J. H. Hill, of Waterville, planted some potatoes of the common kind in the usual way. One or two hills did not come up, and he last week dug down to them and found that the potato which he had planted, and which was a whole one, had put out several tubers.

Two of them were as large as a pidgeon's egg, each; and there were several smaller ones beginning to show themselves. There was not a sign of any top or leaves to be seen. He found another hill in which the same process was going on.

We do not recollect of having seen an instance of the kind. The growth of the new tubers must have been quite rapid, having grown out and formed to the size above mentioned in five weeks, of not very warm weather. The question suggests itself—how long and how large will they grow without any stalk or leaf to prepare sap for their nourishment? and also, will they continue to grow after the parent potato becomes decayed? and if so, from whence comes the nutriment that gives their increase?

The potato that was planted is sound and hard yet.

Blackberry Cordial.

This Syrup is said to be specific for the summer complaint. From a tea-spoonful to a wine glass, according to the age of the patient, must be given at intervals till relieved. How to make it:—

To 2 quarts of juice of Blackberrys, add 1 pound of loaf sugar, ½ oz. nutmegs, ½ oz. cinnamon, pulverized, ¼ oz. cloves, ¼ oz. alspice, pulverized. Boil together for a short time, and when cold, add a pint of fourth proof brandy.—*Fredonian.*

The Chintz Bug in Corn.

People seem generally to have very contradictory and inconsistent notions about the nature of trouble. What one would look upon as a very annoying and troublesome matter, another will profess to consider as of "no trouble at all;" and some, by the habitual use of the latter sentence, upon all occasions, are frequently led to make exaggerated applications of it. The following from a South-

ern paper, is an evidence of this. The writer, speaking of the loss of corn by the chintz bug, and suggesting a plan for their destruction, says:—"As soon as these insects leave the wheat, they commence upon the corn, destroying each stalk before they leave it. The husbandman must take them at the onset. In order to prevent them from lodging, let the interstices of the blade and stalk be filled with sand or loose dirt, flatten the earth at the root, by clapping it with the hoe, and then shake the insects off. By this means they will all fall on the hill, where they can be beaten with the hoe, and covered over with dirt, so as to prevent their recovery. The hill must be clapped smooth with the hoe each morning, and left in that way, so as the better to get at the bugs the next morning. This process should be followed up for a few mornings, which will be sufficient to prevent them from getting headway in the field, and will destroy them for the season. The experiment is well worth the little trouble it will occasion."

"Clapping the hills smooth with a hoe each morning" in some of the forty acre fields of corn that we have seen in some parts of Maryland, must be no ordinary task, but one that we suppose, however essential to their welfare, very far from being a matter of "little trouble."

Explanation of Terms.

1. *Broad-Cast Husbandry*—is that in which the grain or seed is sown by a cast of the hand, so as to be strewed equally as possible over the whole ground.

2. *Drill Husbandry*—is that in which the grain or seed is sown in rows, by means of machines contrived for that purpose, and the ground afterwards kept stirred and cleared of weeds by a kind of plough called the horse-hoe, hence sometimes called the *horse-hoeing husbandry.*

3. *Convertible Husbandry*—is when the ground is cultivated alternately in tillage and grass.

This is much practised in some parts of the country, with wheat and clover. A field in clover, soon after haying, is turned up and sowed with wheat and clover seed. After the wheat is taken off, it is once mowed, when it is again ploughed up and sowed as before; thus, the ground carries *wheat* every other year, and the intermediate years *clover.* The term applies also to a succession of any kind of crops in which grass is comprehended as one.

4. *Trench Ploughing*—is running the plough twice in the same furrow.

In doing this the top soil, with all its foul seeds, is cast to the bottom of the trench, and a new soil is thrown up on which the sun had never before shed its rays. It is done sometimes at one operation by a plough constructed for the purpose, called a *trench-plough.*

5. *Horizontal Ploughing*—is so conducted, by the use of an instrument, called "rafter level," as to lay the sides of hills in horizontal *beds*, about six feet wide, with deep hollows or water furrows between, for the purpose of retaining the rains.

6. *Indigenous Plants*—are such as are natives of the country in which they are found or grow.

Thus, maize, the potatoe, and tobacco are called indigenous to America, having first been found here, and from America introduced into Europe.

7. *Exotic Plants*—are such as are natives of foreign countries.

Such as the lemon tree, and many others, when introduced into the New England States and cultivated in hot houses.

8. *Annual Plants*—are such as are of but one year's duration.

Such are most of our garden plants and all others growing from seed sown in the spring, which arrive at maturity in the summer or autumn following, producing flowers and ripe seed, and which afterwards perish both in their *top and root.*

9. *Biennial Plants*—are such as, in their roots at least, are of two years duration.

Many of these plants perish in their *top* the first year, but live in their *root* through the winter, and the second year shoot up stalks, flower, produce seed, and afterwards perish both in root and branch. Such are the parsnep, carrot, &c.

10. *Perennial Plants*—are such as are of many years duration.

Such are all plants, whether the leaves and stalks perish annually or not, provided the *roots are of many years duration*, as the horse-radish, burdock, &c.

11. *Herbaceous Plants*—are those whose herb, that is, whose stem and branches are of but one year's duration, whether the root be annual, biennial, or perennial.

12. *Esculent Plants*—are such as are replete with nutritious matter, consequently, proper for being eaten as food.

Such as parsneps, carrots, cabbage, beets and various others of a similar nature.

13. *Umbelliferous Plants*—are all such as produce their flowers on the ends of numerous little flower stalks or rays, nearly equal in length, spreading from a common point or centre, forming a level, usually convex or globose surface, somewhat like a spread umbrella, as the parsnep, carrot, &c.

14. *Leguminous Plants*—are those of the pulse kind, which, producing their seed in

pods, may be gathered by the hand, as peas, beans, &c.)

15. *Culmiferous Plants*—are all such as have smooth pointed stems, and whose seeds are inclosed in chaffy husks or coverings.

All the grains and most of the grasses, as well as many other plants, are of this kind.

16. *Deciduous Plants*—are all such plants whether of the tree or shrub kind, as shed or lose their leaves, in the autumnal or winter seasons.

17. *Tuberous Roots*—are such as consist of one or more knobbed tubes, of a solid, fleshy substance, as the potatoe, artichoke, &c.

18. *Bulbous Roots*—are such as have a roundish, swelling, bulbous form, composed of numerous scales or coats, as the onion, garlic, &c.

19. *Tap Roots*—are such as in the form of a tap descend down into the ground in a perpendicular direction, as the carrot, parsnep, red clover, &c.

20. *Fibrous Roots*—are such as are wholly composed of numerous thready or fibrous parts, such as the roots of all kinds of grain.

21. *Radicals, or Radicles*—in botany, are the small fibrous roots, which extend themselves in every direction in the earth for the purpose of collecting nourishment for the support of the plant.

To be continued.

August.

Please to attend in season to preserving your sheep from the *œstrus ovis*, or fly which causes worms in their heads. This may be done by keeping the noses of the animals constantly smirched with tar from the middle of August till the latter part of September. In order to accomplish this, it has been recommended to mix a little fine salt with tar, and place it under cover, where the sheep can have access to it, and they will keep their noses sufficiently smirched with tar to prevent the insect from attacking them. Destroy thistles, which some say may be done by letting them grow till in full bloom, and then cutting them with a scythe about an inch above the surface of the ground. The stem being hollow, the rains and dews descend into the heart of the plant, and it soon dies.—Select the ripest and most plump seeds from such plants as are most forward and thrifty, and you will improve your breeds of vegetables by means similar to those which have been successful in improving the breeds of neat cattle, sheep, &c. As soon as your harvesting is finished, you will take advantage of this hot and dry weather to search your premises for mines of manure, such as peat, marl, mud, &c., which often gives unsuspected value to swamps. Now is also a good season to work at draining. You may drain certain marshes on your premises, which will afford you better soil than you now cultivate; cause your land to be more healthy, and the earth taken from the ditches will make valuable deposits in your cow-yard and pig-sty.

Drought.

As a country becomes cleared of its timber, it becomes more liable to droughts; and these will be more or less severe according to climate. That which is naturally cool and moist, such as that of Great Britian and Ireland, will seldom, if ever, be affected by too much dry weather; while that in which the summers are hotter, and of course the atmosphere drier, will often suffer much on this account. In most parts of Spain, the fields are parched up by the middle of summer; but before this the crops are all harvested. In this country, droughts are never so severe, nor so universal; yet partial ones are often experienced, much earlier, and long before the crops have come to maturity. This is an evil; and all the farmer can do, is to make the best possible provision against it.

Generally speaking, nothing is better calculated to ward off the effects of droughts, than good cultivation, by ploughing sufficiently deep and effectually, and manuring well. Ground that is well mellowed, to a proper depth, will stand a drought much better, than that which is ploughed shallow and left in clods; and that which is well manured will retain more moisture than that which is poor. Again, ground which is thus well prepared, and manured, shoots forth its crop so rapidly, that the ground is soon covered and shaded from the sun; and, for this reason, retains its moisture longer. The same may be observed of mowing-lands.

Gypsum is also an antidote to droughts; and, fortunately, it suits the soils best which are most affected in this way.

Another way to avoid the effects of droughts is, to cultivate swamp-lands more extensively, in raising such productions as are most liable to receive injury in this way. Such lands, when well drained, and duly mixed with proper earths, or other manures, may undoubtedly be rendered excellent for almost every summer crop which is liable to be injured by too much dry weather. Wet lands also, which have been hollow-drained, will stand a drought much better than in their original wet state.

Two tea-spoonfuls of mustard from the mustard pot, mixed with water, and swallowed, instantly operate as an emetic, and are recommended in case of accidental or other internal poisoning.

To the Readers of the Cabinet.

With the present number we commence the second volume of the Farmers' Cabinet. The experience of the last year, and an increasing correspondence with gentlemen who have devoted themselves to the science of agriculture, has not only convinced us more than ever, of the great importance of an agricultural newspaper in this section, but has determined us to persevere in our enterprize as long as we have a fair prospect of being sustained. In the prosecution of our work, we ask the aid of the friends of an enlightened system of agriculture—they can aid us essentially, by their communications, and also by introducing the Cabinet among their friends. From the nature of our publication, and the wide extent of country over which it is designed to circulate, we must, in a great measure, depend upon individual aid. Now, would it not be an easy matter for any farmer, who feels an interest in the prosperity of our work, to obtain among his own personal friends, in his own neighborhood, six subscribers for the Cabinet? In carrying on our work successfully, we need—1. Communications on all subjects of interest to the agricultural community: these communications should be written in a plain, easy, farmer style. 2. We require a large list of subscribers—as a paper of this description has no revenue from advertising, it requires a much larger subscription to sustain it than an ordinary newspaper. The expenses are heavy, and so far, by adhering to our terms, we have been enabled to meet all the demands against the establishment, and we therefore commence the second year of our work unembarrassed. We do not wish to obtrude our private affairs upon the public, but we deem this statement necessary in justice to our subscribers who have paid in advance. We have gone upon the cash principle, believing it to be the only system upon which a newspaper widely circulated, can be properly sustained. And our subscribers we are satisfied, will not object to our adherence to a rule so necessary and wholesome. Indeed, but little objection was made to advance payments, even in the commencement of our work.

A copy of this number is forwarded to all our old subscribers whose term of subscription expired with the twenty-fourth number, or the first volume. But no more will be sent to such persons unless they renew their subscriptions. Post Masters are hereby authorized, and also respectfully requested, to forward the names of such persons, and receive payment, and, after deducting twenty per cent. commission, transmit us the balance of any moneys they may have received. *Or, any gentleman may constitute himself a special agent, by remitting us Five Dollars free of postage, for which sum we will send seven copies, according to his direction.*

Postage. We have hesitated a long time on this subject, but it has increased to such an extent of late, that we are at last compelled to beg our friends not to *tax us unnecessarily.*

The state of the markets in our next.

REMOVAL.

The office of the Farmers' Cabinet is removed to No. **45 NORTH SIXTH STREET,** a few doors above Arch. ☞ Subscriptions will be received as heretofore, by Mr. O. Rogers, at the old stand, No. 67 South Second street.

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THE FARMERS' CABINET,

DEVOTED TO AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

Vol. II.—No. 2.] Philadelphia, August 15, 1837. [Whole No. 26.

For the Farmers' Cabinet.

OBSERVER---NO. X.

THE CUT WORM.

A writer in the Cabinet, vol. 1, p. 6, says that the *cut worm* "is the offspring of the *phalæna destructor;* wings horizontal, white, with small dark spots, under wings, orange." The *phalæna* thus described may, for aught I know, produce *a* cut worm, but I am quite certain that it does not produce *the* worm commonly so called, in Pennsylvania. It is quite probable that more than one species of worm may *cut* corn, and, thence, acquire the name of *cut worm.* This is a point worthy of accurate investigation. I am acquainted with the insect described by "Senex," but not with its caterpillar.

Several years ago, I confined a number of cut worms in a box of earth, during their transformations, and succeeded in obtaining the moths, or phalænæ from them. Some of my agricultural friends made similar experiments. We all obtained the same result; but *our* phalænæ were totally different from that of "Senex." I determined to repeat the experiment the present year. About the end of the fifth month, when the cut worms had nearly acquired their growth, I placed a number of them in a glass jar, half filled with moist earth, and loosely covered. They were fed on the leaves of the common elder, (sambucus canadensis,) of which they appear to be immoderately fond.* During the day, they lay concealed in the earth, and at night, fed on the leaves. Some of the number died, but the larger part completed their larva state, and entered the earth to undergo their first metamorphosis. I examined the earth in the jar some days after, and found that the pupæ were each enclosed in a *ball* or *follicle* of clay. These follicles were composed of the common earth, cemented together by some adhesive fluid which the worm had furnished for the purpose. They were of a roundish oval figure—near an inch in their longer diameter, and smooth on the inner surface. The walls were about an eighth of an inch thick, and loosely connected with the exterior earth. They were somewhat impervious to water, as on trial, a drop placed on the surface, did not readily enter.

Nearly all the phalænæ made their appearance on the two first days of the present month.

The Linnæan genus phalæna, contains such a numerous assemblage of insects, and withal, so diversified, that subsequent entomologists have divided, and subdivided it, into a great number of genera. The number of the species, and the near resemblance of many of them, renders a distinct classification and description of them extremely difficult. Many of the modern genera have their characters drawn from the larvæ. Possessing little knowledge of entomology,—not having access to any description of my phalæna, (if such exists,) and having neglected to preserve a description of the worm, I cannot attempt to determine its position in the systems, or to give its specific characters. The following *general description*, taken from a number of specimens now before me, will give some idea of the insect.

Pupa.—Length, about seven-tenths of an inch; smooth, shining, at first dirty white, or yellowish, becoming brown, or almost black—

* Hence, it is the practice of some farmers, when the cut worms are numerous, to strew bunches of elder leaves over their corn fields, and in the morning, go round and destroy the worms which are found collected under them in large numbers.

rudiments of the wings strongly defined—abdomen tapering, abruptly terminating in a short, bristle-like point—annuli or rings distinct, and quite movable—spiracles, or breathing holes, on the sides of the rings, projecting in form of short flattened tubes. Duration of the pupa state, about three weeks.

Perfect State.—*Color*, variable shades of blackish gray—*length*, three-fourths of an inch—*body*, stout—*movements*, sudden and rapid—*habits*, nocturnal.

Antennæ, long, setaceous or bristle-shaped; *eyes*, laterel, large, black; *palpi*, projecting forwards, hairy, last joint very small, scaly; *tongue*, very long, horny, spirally rolled up beneath the head; *thorax*, tufted with long hairs, marked anteriorly with a transverse, wavy, black line; *wings*, horizontal, incumbent, the superior ones overlapping, ciliate or fringed behind, with long scaly hairs, and ornamented above with faint lines, and spots of different shades of gray, and brown; inferior ones lighter colored, the inner margins folded and fringed with long whitish hairs; *thighs*, covered with long hairs; *legs*, hairy above, spinosi, ciliate on the posterior edges, the hind ones, with a pair of long spines near the middle; *feet*, with two similar spines at the first joint; *spines*, white, with a black ring in the middle; *articulations* of the feet, white.

Supposed female—upper wings, silvery grey, with the lines and spots similar, but less distinct than in the male.

Habits.—I am not aware that the manner in which the cut worm, phalæna deposits its eggs, has ever been observed. I can, therefore, only arrive at probable conclusions. As very few phalænæ survive the winter season, it is probable that the eggs are deposited in autumn, among the grass, at or near to the surface of the ground. The eggs appear not to hatch until spring.

The correctness of this view, is inferred from the success of fall or very early spring ploughing, in preventing the ravages of the cut worm. It may be proper to inquire a little, how winter ploughing produces this result. I apprehend that the eggs become buried so deep in the earth, that the vivifying influence of the sun and air does not reach them, or if they do hatch at such a depth, they must perish before reaching the surface, where alone food is to be found to nourish them. In late spring ploughing, the same thing would not so certainly happen; vegetation having started, the proper food for the worms would be buried along with them, and the loose state of fresh ploughed land not only admits the passage of warmth and air, but would greatly facilitate the egress of the worm to the surface. Even should the moth survive the winter, and not deposit its eggs till spring, the foregoing explanation will apply equally well; or if the moths should find the ground already ploughed, they would probably seek some other field in which to deposit their eggs. It is generally admitted, that *fall or early spring ploughing* does, in some way, prevent the cut worm from injuring our corn crops.

Some prefer having the sward imperfectly turned down, so as to have a portion of grass remaining on the surface for the worms to feed on. But these should remember, that this practice may preserve alive a number of worms sufficient to do the corn crop a serious injury. By turning all down, they might destroy the worms, and render the precaution of feeding them unnecessary.

Another means of lessening the injury from the cut worm, is to plant deep. The heart of the plant remains longer in the ground, and if the worm should cut it off above, the growth is but little retarded.

I hope others will investigate the subject, and make known the results.

New Garden, 7th mo. 25th, 1837.

Manufacture of Beet Sugar.

The following letter from an intelligent French gentleman residing in Louisiana, to a gentleman of this city, will be read with attention by those who are interested in the cultivation of the Beet Root, and its fabrication into Sugar. This "branch of industry" promises to be of great advantage to the country. We hope that those engaged at present, will give it a fair trial—and persevere until the most triumphant success shall crown their efforts.

St. James' Parish, Louisiana, June, 1837.

Sir—I am indebted for introduction to your acquaintance to Mr. Edward Harris, and beg leave to ask your kind information concerning the actual state of fabrication of Beet Sugar in Pennsylvania. I was a manufacturer of said article in France, and have been engaged three years as foreman of the model farm established in the State of Louisiana. I have compared the fabrication from cane with the one from beets, and am convinced that both are subject to great modifications. You would oblige me by mentioning the manner in which you intend to boil your beet syrup. Is it by evaporation or by vacuum? To which do you give the preference, to the English systen of Howard, or to one of the four French systems? I shall be happy to receive your advice, as well as any questions you might desire to make, and I am convinced that my experience might be of

some service to you. Please to mention also, what use you intend to make of the remnants of beets. These remnants are of greater value here than in France. I have studied and compared this branch of industry, and I do not hesitate to say, that if the acre can produce here, as in Europe, from 30 to 40,000 lbs. of beets, it will be the most important branch, cotton excepted. Should you not be provided with all kinds of machinery, I have here at your service four large boilers, with double tubes, called *a la moul farine* for vapor boiling, and another for the vacuum.

Please to honor me by your answer, and receive the assurance of my high consideration.

CLAUDOT DUMOREL.

Beet Sugar.

At a time when so many are, from necessity, turning their attention to some new employment, it cannot be amiss to refer to the advantages which the cultivation of the Sugar Beet hold out to those who are desirous of entering on the duties of a farm. It is but recently that this article has been introduced into the United States, and few are probably aware of the profits arising from its culture. The Sugar Beet is adapted to every variety of soil, and can be raised in all parts of our country—from the rich alluvial lands of the west, to the almost sterile of the New England States. The machinery for its manuture has been brought to a high degree of perfection in France, but no doubt admits of still greater improvement.

The average crop of roots in France, is 40,000 pounds per acre. The per centage of saccharine matter is 12; but only 4 to 8 per cent. is obtained. The products of sugar, therefore, from one acre, are about 3000 pounds, which at 8 cents, would give $240, exclusive of the molasses. The cakes are also useful in fattening cattle and sheep. Comparing it then with the average crop of wheat, which does not exceed 25 bushels per acre, at two dollars, we find a difference of $190 in favor of the beet crop.

The consumption of sugar in this country, is great. Mr. Samuel Fleet, a distinguished writer, and formerly editor of the N. Y. Farmer, states that "during Napoleon's continental restrictions, a fraction more than one pound per head was yearly consumed in France. In England, where the price of sugar is less, and where the people generally are better able to purchase, the consumption is *sixteen* pounds per head. In the East and West Indies, there is a far greater use of it; for instance, in Cuba 120 pounds are consumed by each of the free population."

For the Farmers' Cabinet.

Hollow Horn---Potatoes.

MR. EDITOR—I have read with much attention the controversy in the Cabinet on the "Hollow Horn." I am not about to enter the lists, but suffer me to ask why it is that Subscriber, who believes firmly in the Hollow Horn, has not given us the *remedy*. That's what I want to know. Now for my experience. About nine years since, my cattle were afflicted with the Hollow Horn, and it afflicted me very sorely, I assure you, as several of them died. But I *bored* away.—One morning while engaged in this business, I was accosted by an intelligent farmer, recently from England—he was surprised at the operation. I told him that it was the only way of saving my cattle—that several had already died of the Hollow Horn, and the others assuredly would, unless *bored*. He absolutely laughed at me—I felt provoked, but was still willing to hear him, as I might get an original idea. He stated that the "Hollow Horn" did not exist in England. That it was not a disease of the horns, that hornless cattle had all the symptoms, &c. He advised me to desist boring—After much persuasion I did so; and he recommended me to give each of my cows a half a peck of potatoes twice a week, for three or four weeks in succession, and then occasionally, as circumstances might require—and by all means to keep my cattle well sheltered, and in good condition. I obeyed his directions—and the consequence is, that my cattle have not been troubled with the hollow horn since that time. I have, therefore, come to the conclusion, that cattle well housed in bad weather, and kept in good heart, at all seasons, and properly attended to, stand in no danger of hollow horn.

A MONTGOMERY COUNTY FARMER.

Implements for Boys.

A friend who feels considerable interest in the promotion of agricultural science,—and whose practice in this matter corresponds with his sentiments, has called our attention to the subject of agricultural implements for boys. He states, that in many cases he has observed a marked difference in various respects, between those who have had implements suited to their age and strength, placed in their hands, and those who have been compelled to operate with such as are disproportioned to their years, or the physical force they are capable of exerting with ease. The importance of this subject has not been duly estimated—indeed, it has been almost entirely overlooked. We ask for it the attention of our correspondents.

Draining, No 1.

BY AGRICOLA.

Lands to be drained are usually dvided into two classes: 1st, uplands, or those which are situated so high, that the water can descend from them, if properly collected and conducted; and 2nd, low, flat and wet lands, such as command little or no fall.

When water, in descending from highlands, spreads over a considerable space in a flat or hollow, a ditch should be cut in the lowest parts of the ground, deep or shallow, according to circumstances, which will have the effect of throwing the water into a narrow channel, and of giving it a free and unobstructed course; by which means the land will be reclaimed and admit of cultivation to the borders of the drain.

It frequently occurs that a multitude of springs break out at the termination of the highland, and spread their waters over the adjacent low grounds, which render them useless or unfit for cultivation. If the water rises in a bold spring at the junction of the hills with the flat land, a ditch should be cut in the lowest ground in order to give it a free and unobstructed channel to the stream or main drain to which it is tributary. If a multitude of springs ooze in a continued line at the junction of the high and flat land, a deep and wide ditch should be cut, running along the foot of the highland, so as to intercept them all, which should convey the water of these springs into the main drain or outlet, or into one emptying into it.

Drains, to be lasting and valuable, should be covered; otherwise in sandy soils, and in many situations, they are liable to be filled up, or to be washed into gullies. Covered drains, and thereby preserving a level, dry, cultivatable and productive surface, are every way eligible. In grounds where there is a considerable declivity, a straight open ditch in the direction of the declination, is injurious and dangerous; violent floods, in such ditches, always produce a ravine or gully. In all cases, therefore, where land lies on a declivity, care should be taken that the drains have an easy and gentle descent, which is generally effected by carrying them in an oblique or meandering direction.

Covered drains, are not liable to the ravages of floods, and may be straight, without being exposed to the dangers to which open ditches are subject.

Drains that are intended to be covered, should be cut at least three or four feet deep, and gradually narrower from top to the bottom, where they should not be above eight inches wide. A row of poles of such size as nearly, but not entirely to touch, is laid on each side of the ditch at bottom. Green or seasoned brush, without leaves, is then packed into the ditch; if the brush is crooked, it receives a chop in the elbow of the crook, and is put into the drain with the small ends downwards and then pressed down to the poles with the foot. The brush should be packed to within eight or ten inches of the top, and then covered with four inches of dry leaves or straw, and the whole of the dirt to be returned and well rammed. Drains of this kind will have, besides the advantages mentioned, the effect of curing all sour or boggy land through which they may be cut; as the oozing water will be received by the straw, and trickle through the brush down to the open drain, and the wet ground will lose every boggy appearance.

Drains of this description will last a long time, as the brush is completely secured against the effects of the sun and wind. Where rock can be made, drains of this description may be made to last forever; the best method is to place flat stones standing on the bottom and along on one side of the drain, as perpendicularly as the side will admit; then another row of flat stones on the opposite side, placed with the top part to rest against the upright stones, in the form of Λ making a kind of angle; should this cavity be insufficient for the current of water, another flat-stone may be placed in a reversed form, as $\Lambda\!>$ by which there will be a double vacuum fully sufficient for the greatest current.

The remainder of the drain may be filled up with stones, to within about eight inches of the surface; then covered with straw or leaves to prevent the earth from falling between the stones, and fill up the the remainder with dirt that came out of the drain.—Covered drains which have the smallest passage for the water at the bottom, are reputed to be the most durable; as the force of the water has been found sufficient to clear away any small obstacles, accidently obstructing its course.

To the Editor of the Farmers' Cabinet.

Stumps.

Sir,—I believe that it is not generally known, that covering the tops of stumps with the sub-soil, will very essentially hasten their decay. Please give publicity to this fact, as it may be of some benefit to those persons who are clearing new ground. By pursuing this process, they will soon get rid of the stumps.

S. Bray.

Monmouth Co. N. J. Aug. 7, 1837.

Hedges---Osage Orange.

The following interesting article appeared in a late number of the Farmers' Register, published at Petersburg Va., under the editorial direction of E. Ruffin, Esq., extensively and favorably known to the farmers of our country, as the author of a most valuable essay on calcareous manures.

Hitherto, attempts to construct live fences in this country have mostly failed, in consequence of the want of adaptation in the material to the circumstances of soil and climate. The thorn flourishes well in the humid climate of England, but in our hot and dry seasons its growth becomes feeble and stunted. The cedar and some other plants, though very ornamental, constitute weak barriers against the inroads of stock.

So many unsuccessful attempts to grow hedges, especially in the states north of us, have induced a general prejudice against that species of enclosure. Every person, however, is disposed to admit, that if a suitable plant for the purpose could be introduced, it would be an important acquisition. At present, each farm is obliged to have from a fifth to a third of its contents in timber, in order to maintain its enclosures. If efficient hedges could be substituted, the advantages would be obvious. A large portion of good land, now unproductive, might be brought into cultivation; and a great amount of labor might be saved, which we are now compelled to bestow on the present system of fencing—to say nothing of the improvement in the rural appearance of the country, which would be effected by doing away our log fences, and rearing hedges in their places.

It is gratifying, therefore, to be assured, that in one of our native plants; namely, the *maclura* or Osage orange, we are likely to realize this desirable object. The maclura is a deciduous tree,* growing indigenously in Arkansas and Louisiana—is perfectly hardy in this latitude, and even as far north as Boston. For a number of years it has been cultivated in the grounds of a few private gentlemen, and in some of the large nurseries. It is only recently, however, that its value has been appreciated, or any pains taken to propagate it extensively. In its native place, it attains to the size of a tree of the second or third class; but in this latitude, its altitude is very moderate, seldom rising to the height of fifteen feet. Its great merit consists in the spreading manner of its growth, the denseness of its branches, and the armature with which they are furnished. Planted in hedge-rows, the maclura would never become unmanageable on account of its size—at the same time, its growth is sufficiently vigorous to make a fence in three, four, or at most, five years, from the seed. It may be asserted with safety, that on land of tolerable fertility, the labor and expense of perfecting a system of hedges, would not be greater than to keep our ordinary enclosures in good order, for the time required to construct them. When completed, this heavy item in every farmer's account would thenceforth be expunged.

The maclura is readily raised from the seed. Unlike those of the thorn, they require no preparation—on the contrary, they vegetate with certainty in two or three weeks after planting. Under tolerable care, the seedings will grow two feet or more in height the first season; after which, they are fit to be removed from the nursery rows to the place designed for the hedge. I raised a number of plants the past year from seeds, the produce of a tree growing in my garden, now eight or nine years old.

For an individual to engage in the business in earnest, it would be best for him to obtain the seed from the south-west, rather than to purchase the plants from a nurseryman. A few dollars would procure enough of the former, and pay all the expenses of transportation, to set a long line of hedge. The preferable mode would be to have them brought in the berries, from which they might afterwards be picked without much trouble. Fifty berries would yield at least a pound of seed, and a pound contains from eight to ten thousand grains. It is the practice to place the sets from twelve to fifteen inches apart, in a single row. These facts will enable any person to form a correct judgment of the number necessary to plant any given length of hedge.

But it is not to be expected, whatever may be the adaptation of any plant to the purpose of hedging, that it will, under a long time, be brought into general use. The most palpable improvements are slow in being adopted. A considerable portion of our country is moreover too much impoverished to admit of the successful rearing of hedges. They belong eminently to a state of cultivation where taste and industry are measurably combined. But if we have worn-out fields, we have also fine districts of country, where their pleasing effects, as well as utility, would be most manifest. What an air of neatness and improvement they would impart to the finely cultivated farms on James river, both above and below Richmond, to those also on the

* That is, it is not perennial, as its leaves fall in the autumn.

Rappahannock, and Roanoke, and in many other sections of the state that might be designated with equal propriety. In most of these places, the lands are so valuable that there is now a great deficiency of timber; and, from necessity, they are therefore almost exclusively devoted to grain. Along the lines of canals also, where permanent fences are obliged to be maintained, there would be a great advantage in planting hedges at once. The idea that, when fairly established, they will never need removal, would inspire a degree of security which cannot be felt by those persons who are in the habit of patching up decayed fences, and calculating the value of a rail in resisting the depredations of stock.

T. S. P.

Goochland county, Va.

Brief Hints for August.

The pressure of work which farmers are obliged to attend to through haying and harvesting, often causes them to neglect the extirpation of weeds at this time, when they are about going to seed. This should be carefully avoided.

After the second hoeing of corn, the weeds among the crop, of which there always spring up more or less, are suffered to have undisturbed possession, and the ground becomes completely seeded with them by another year. A little seasonable labor would prevent this evil. We observed a piece of ground which was kept clear of weeds last year, and another which was but imperfectly cleared of them; the consequence was, that the crop this season (field beet) which grew on the latter piece, was literally hid with a dense growth of weeds, while the other was comparatively free.

Canada thistles, must in no instance whatever be allowed to ripen their seed.

Thistles, mulleins, burdocks, &c., in pastures and fence corners, must be destroyed without fail.

Root crops, as ruta baga, and mangel wurtzel, are liable to be too much neglected after one or two hoeings; they should be kept all the season perfectly clear from weeds, and the benefit they derive from this, and from stirring the earth around them, amply repays the expense of the labor.

With a little pains, it is as cheap to raise a good crop, as a crop of noxious weeds; and seed now selected should be therefore as perfectly freed from foul stuff as possible. If clean wheat is always sowed, we may expect on clean ground, a clean crop; but land will become more and more infested with weeds so long as we sow the seeds with the grain.

Chess being almost universally the worst weed among wheat, no pains should be spared to separate it. It may be done by means of brine, first made strong, and then weakened till the wheat will just sink in it, when the chess, being lighter, floats and is skimmed from the surface. A basket should be used, to let the brine run off the more freely. The wheat should then be spread on a barn floor, two or three inches thick, and about one-fifteenth part of air, slacked lime sifted over it and well stirred. This assists the drying, and destroys the smut.

A good fanning mill will clear most of the chess from wheat by passing it through a few times.

No seed wheat should be considered clean, until by repeatedly spreading handfuls of it on a table, no chess can be found. There is not much of what is termed *very clean* seed that will endure this test.

Underdraining should be performed during the dry season, and those farmers who have wet spots of ground in cultivated fields, should no longer delay this simple mode of rendering such land productive. Open drains should never be made but to carry off surface water. No drain for any other purpose should be much less than three feet deep, but an open one this depth, must be nine feet wide to prevent the banks sliding, and this is an enormous waste of land. But a covered drain occupies no ground. The expense of digging, from this cause is also much greater in case of open drains.

Covered drains may be filled with stone or brush. The stone may be laid so as to leave a small open channel at bottom; or if they are quite small, and the quantity of water passing off not large, such channel is not necessary. Brush drains are filled by placing the branches of trees, freshly cut and with the leaves on, in a sloping direction in the ditch, the leaves upwards, and then covering them with earth. The spaces between the branches below allows the water to flow off. This method of filling is best in sandy ground where stones are scarce.

In cutting off underground channels of water, particularly those which ooze out of the surface of sloping ground, by means of covered drains, the mode of operating should be adapted to circumstances. The common error is to cut in at the wet spot; whereas, the proper place is a little *above*, before the current reaches the surface. The judgment and close examination alone can direct the proper course and situation for the drain in such cases.

Horses often suffer from slobering during the latter part of summer, especially when they feed in succulent pastures. The best remedy is dryer food.

Fruit trees are frequently injured in col-

lecting the fruit, by resting ladders against the branches, and thus bruizing the bark. Apricots, plums and peaches, often suffer much in this way. The remedy is to use self-supporting ladders, constructed like a common ladder, with either one or two expanding legs of equal length, which serve to support it without any other prop.

Budding or inoculating should be performed while the stocks are growing most rapidly, or while the *cambium* or mucilaginous substance under the bark is in the greatest abundance. This cements the inserted buds and makes them adhere the better to the wood. Cherries and plums should be budded immediately, but peaches may be deferred three or four weeks later, if necessary. The general rule is, budding may be performed successfully at any time when the bark peels freely.

If the stocks are thrifty; if the bark is carefully cut and raised so as not to injure the cambium; if the buds are cut smoothly off the shoot so that they may be applied closely to the wood of the stock; if the bandages are bound so evenly that they may just maintain this close contact between the bud and stock; and if they are carefully removed as soon as they begin to indent the growing stock, there can be a little doubt of success in budding.—*Genesee Farmer.*

Advantages of Soiling Cattle.

Von Thaer highly commends soiling over depasturing, and lays down the following facts as incontrovertible:

"1. A spot of ground which, when pastured upon, will yield sufficient food for only one head, will abundantly maintain four heads of cattle in the stable if the vegetables be mowed in proper time, and given to the cattle in a proper order.

"2. The stall-feeding yields, at least, double the quantity of manure from the same number of cattle; for the best and most efficacious summer manure is produced in the stable, and carried to the fields at the most proper period of its fermentation; whereas, when spread upon the meadows, and exhausted by the air and sun, its power is entirely wasted.

"3. The cattle used to stall feeding will yield a much greater quantity of milk, and increase faster in weight, when fattening, than when they go to the field.

"4. They are less subject to accidents, do not suffer by the heat, by flies and insects; are not affected by the baneful fogs that are frequent in Germany, and bring on inflammations; on the contrary, if every thing be properly managed, they remain in a state of constant health and vigor."—*Com. to the Board of Agriculture, vol. 1, p. 376.*

Our habits of farming take much from the force of Von Thaer's facts—for we neither regard land nor manure of any thing the value they do in Prussia; though if we should *run over* less of the former, and better husband and apply the latter, we should undoubtedly be the gainers. Our farmers are apt to boast of the acres they cultivate—of the bushels they sow; but it is very seldom you can come at their nett profits, or the products of an acre.

We copy the following article from the *Meadville Courier*, considering it applicable to the farmers of our section of country. We hope they may profit by the advice contained therein.

"Taking a deep interest in the prosperity of these and the adjoining counties, I would make a few suggestions to our farmers, which they may consider, and weigh how far they are worthy attention.

For some years past I have urged on my brother farmers, the advantages they would gain by employing additional laborers to assist them in the cultivation of their farms, and using greater exertions to increase their crops. Some individuals have informed me that they profited by the hints, raised more abundant crops, and have the gain of good prices. Others replied, we can't afford to hire, wages are too high.

They were mistaken. They adhered to a fixed opinion formed years ago, when wheat would scarcely bring above fifty cents, and rye thirty-one, in cash.

I propose that every farmer should erect in some corner of his wood land, a cabin house, which costs but little; appropriate two or three acres of wood land to it, and say to some industrious laborer who has a family, you shall have a lease of this at a low rent; you may take your fire wood off the land without cost; you may raise your own potatoes and corn; the pasture of a cow in the woods costs you nothing, and hay in the winter but little; come work for me by the month, week or day, as may be agreed on; you can always have provision for your family in pay for your labor. The tenant who would have a certain home, would be much better off than the laborer on the canal, who nominally receives higher wages half the year, and spends his money the other half in idleness, destitute of a home.

But how will it operate with the farmer? He will soon find his crops and all the produce of his farm increasing by the assistance of his tenants, in the busy time of sowing, planting and gathering in. He will find his farm itself soon rendered more valuable, com-

manding a better price if offered for sale, the extension of his improvements, and with some care and management, every farmer may find steady work for his laborers in putting his farm in better order and clearing new land, and adding to his buildings.

I made these suggestions to a farmer, whose reply was, "That is the very plan I pursue." That farmer has every year a great surplus produce for sale, while some of his neighbors must buy, and he has become wealthy by farming.

Every good farmer admits that it is more profitable to work a small piece of land well, than a large piece carelessly. Then, I ask, why not farm a large tract well, by employing a sufficient number of laborers? The mechanic who works single-handed in a town or city, may earn bread for himself and wife, but cannot grow rich; whilst the one who employs many hands, and attends closely to the superintendence of his business, is sure to grow wealthy.

The ironmaster or manufacturer who grows wealthy, draws his gain from the employment of many hands and their industry, and his well managed operations. So with the farmer; if he attempts to work a farm single-handed, he may raise his bread, but can advance but little and slowly in the world. But he who intends to work hard himself, and employs a sufficient number of laborers to assist him, may say 'come and work, and not go and work.' It will take but a few years to show him the vast difference it will make in his worldly prosperity.

Had these suggestions been adopted generally, a few years ago, the community in these counties, would have had the advantage of a more general supply of provisions at this time. But it is not too late now. Laborers are to be had at moderate wages, and many strangers from abroad and from our overgrown factories of the east, will soon be coming amongst us; if they find encouragement held out to them by the farmers, they will remain amongst us, and add to the general wealth as well as to that of their employers.

In conclusion, there can be no doubt that every farmer would find a clear and certain gain by greater exertions and more labor in the cultivation and improvement of his land.

Every poor laborer would be essentially benefitted by obtaining a more permanent home and regular employment among the cultivators of the soil, than on the canal or about the town—and the community would be benefitted by the increased productions of our cultivated soil. The produce of the industry of the farmer and the mechanic, is the real wealth of every country. Money and bank notes, though property in the hands of the individuals who own them, yet to the community, are but the mere measure of value.

A Farmer.

Facts in the Science of Agriculture.

BY PROFESSOR RENNIE.

Lime.—If quick lime, either fresh, burned or slacked, be mixed with moist vegetable substances, however hard and fibrous, it soon destroys their texture, and forms a mixture, the greater part of which can be dissolved in water, thus rendering what was previously useless, fit for food or plants. [Hence the utility of applying quick-lime to reclaimed swamps, or other soils abounding in woody fibre.]

On the other hand, it is injurious to mix quick lime with vegetable substances already soluble in water, or with any sort of dung, or other animal manure, lest it should take up too much humic acid.—[Humic acid may be termed the *essence of dung*, combined with oxygen.]

Sugar and gluten.—There are few plants that do not contain sugar, which chemists have shown to be a compound of about three parts carbon, four parts oxygen, and eight parts of hydrogen.

It would follow, therefore, that it is not necessary to be introduced into the soil in the state of sugar, the constituents being always more or less contained in water, and most probably combined into sugar after entering the system of a plant. This applies also to starch, which is composed on the same principles, and may indeed be converted into sugar, as was lately discovered; and gluten differs only in containing nitrogen. [Gluten is the substance which imparts nutriment to wheat in a greater degree than is possessed by other grain.]

Flavor, color, &c.—All flavor, color, smell, and nutritive qualities, depend for their production chiefly on the action of light. The red color of forced rhubarb, [and of the blood beet,] which seems to be an exception, arises from the red matter previously produced by the agency of light being carried down to the root. [Hence, celery is blanched to divest it of its otherwise acrid taste—and hence fruits growing in the deep shade, are more vapid and colorless than those growing in an open exposure.]

Heat.—The soil of this country, below where the frost usually penetrates, averages a temperature of 48 degrees, or fifteen degrees, above freezing, which is the reason why springs do not freeze, and not any quality in the spring water, which will freeze readily enough when taken from the well. [And this explains why spring water, retaining always near the same temperature, appears

cold in the heat of the summer, and warm during the cold of winter.]

Radiation is the spreading of heat, which arises from heat passing from a hot body to a colder one near it, as uniformly as water runs down a slope. This spreading of heat takes places between the surface of the ground and air; and when the air is cold, though the soil be warm, it soon loses its heat, and dew or hoar frost is formed on the grass, by the moisture diffused in the air, though previously invisible, becoming condensed or frozen. But when the sky is covered by clouds; this spreading and loss of heart is, in a great measure, prevented, and hence there is no dew or hoar frost on a calm cloudy night. It is on this principle, that garden plants are protected by matting, which stops the heat of the soil from spreading about and being lost in the air. Dr. Wells proved this by stretching a very thin cambrick handkerchief, two feet square six inches above a grass plat; and he found on one night, that it was five degrees warmer under the handkerchief than on the rest of the grass plat; and on another night, there was eight degrees of difference. The screen should not touch the soil, or the plant to be protected. In this case it might carry off heat by conduction.

It is on the same principle that snow affords a protection from the severity of frosts, the plants under snow having been found, by Dr. Darwin, to indicate forty degrees, that is eight degrees above freezing; hence some Alpine and Siberian plants, do not bear exposure to frosts when unprotected by snow, so well as those which are natives of a warmer clime.

A reason for a slope or a hill being warmer than a valley, is that cold air being heavier than warm air, the coldest air always rolls down to the lowest situation; but if there be a brisk running stream in a valley, it will prevent, in some measure, the stagnation of cold air; injurious, because the greatest cold always occurs in air having the least motion. Prof. Daniel says he has seen a difference of 30 degrees on the same night, between two thermometers, one placed on an elevation and another in a sheltered situation. Daniel also states, that the same surface which in a calm state of the air, would give off 100 parts of moisture, would yield 125 in a moderate breeze, and 150 in a high wind.

The Fruits of Good Tillage.

We remember to have read somewhere, of an old gentleman who owned a large vineyard. Besides this farm he was blessed with two daughters. On the marriage of the eldest he portioned her off with one-third of his farm, and behold the remaining acres produced quite as much fruit and wine as before. Soon after he married his young daughter and gave her an equal dowry with the first, and still the remaining third of his soil yielded much as his entire original plantation. Good farmers will see no mystery in this. The moral of the story is, that as his farm became smaller he cultivated it more, and the same amount of labor upon a few acres, will make it produce the fruit of many.

There is a great difference between bad tillage and good tillage. Some farmers—no, some earth scrapers, merely scratch up the soil, and after dropping their seed haphazard, trust to the chance of the season. It is not wondered at, that such tamperers have to scratch hard for a living. We have heard many complain that large farms did not pay the expense of their cultivation—that manure is too expensive to use. The earth was therefore, lazily scratched up sufficient to destroy the face of the soil, and the seed thrown away upon it. We need not say that such farmers have but little grain to sell, and not much money in these hard times, to put out at interest.

Take another case, however; that of the farmer who makes his farm his pride, who means to show his labor and his skill upon every acre, and mark the difference. The land pays treble value upon its surface for all that has been bestowed upon it. The owner enriches the soil, and the soil in its turn enriches its owner.

Every farmer to make his farm a source of profit, should make it a source of pride. Whatever portion of the soil is cultivated, should be well cultivated. The point should be, not to have many, but rich acres. The means whereby husbandry is improved and facilitated, should be studied and employed. By such careful attention, a continual pleasure will be found in agricultural pursuits, which will heighten the rewards of good tillage.

A Cottage Garden,

Properly cultivated, is full of beauty. Its well formed walks and borders, adorned with fragrant flowers, exhibit a gorgeous display of richness which cannot be surpassed. The English cottager takes a praiseworthy pride in the various species of flowers which adorn his garden, and not unfrequently prizes are awarded to him by horticultural and other societies, for his skill in bringing to maturity, and presenting the world with improved specimens of floriculture. The study of the vegetable kingdom is also a subject of his earnest solicitude, and the avidity with which he pursues this favorite object is the theme of frequent admiration. The cogno-

men of "the Gardens of England" is certainly an appropriate compliment, and it is but justice to remark, that we are in a good degree indebted to the skill of the gardeners of our "father land" for many of the beautiful embellishments of our gardens. Our author recites several useful hints on this subject; which I here subjoin:

"Another way in which woman may make her labor extremely profitable, is in the management of the garden. She may easily acquire skill and experience, and for my part I think she cannot have a prettier amusement. If there were nothing to be got by it, it is worth a little labor to have the view from your cottage window, ornamented with roses, honey-suckles, stocks and mignonette, instead of seeing a heap of rubbish, or a slough, or a plantation of thistles or stinging nettles. But, let me tell you there is something to be got by it. If you live near a market town, and have a turn for gardening, I do not know of a better thing for a woman to turn her hand to. If proper pains were taken with a flower bed, (and I know of nothing which yields profit without taking pains, except it be money in the funds and the likely way to have that, is by taking pains to produce it,) a flower bed well managed, will furnish you besides supplying your bees, which, under such favorable circumstances, you will of course keep,) more than half the year with four or six nosegays a week, which may be sold to advantage. Suppose they bring you but three pence a week all the year round—thirteen shillings—it will buy your husband a new hat, or your child a warm coat. But this is not all—you will save some seeds of your annuals, and more than to stock your garden for the next year. These you will carefully separate and mark, keeping them from frosts and rain in the winter, and then, in March or April, when people begin to think of flower seeds, do them up in penny or two packets, and display them for sale. If you sell but two or three shillings worth, they will buy what lazy, shiftless people are distressed for."—*Newark Daily Advertiser.*

Pears.

As this delicious fruit is beginning to ripen, and some varieties are of short duration, on account of their rotting at the core, we would recommend to those who have pears, which are subject to this sudden decay, to pick them from the tree before they become mellow, and place them in a cool dry place, as in a chamber, where by spreading them, they can be examined more particularly than when on the tree, and those properly matured, selected for use before they become rotten at the core, which they will not do, as soon as when ripened on the tree.

Explanation of Terms.

Continued.

22. *Green Crops*—are such as continue green while ripening their seed, or till taken off the ground; such as peas, beans, cabbage, carrots, turneps, &c.)

23. *White Crops*—are such as become bleached, or turn white and dry while ripening their seed; such are all the various kinds of grain.

All plants, while their leaves continue green, and especially such as have large leaves, draw much of their nourishment from the atmosphere. The *green crops* therefore, exhaust the soil much less than the *white crops*, whose leaves becoming dry, receive nothing from the atmosphere, but draw all their support from the soil, while ripening their seed.

24. *Rotation of Crops*—is a course of different crops, in succession, on the same piece of ground, for a certain number of years, after which the course is renewed and goes round again in the same order.

There is a difference between a *course of crops* and a *rotation of crops*. Thus, if a piece of ground in sward be broken up and planted with Indian corn the first year; the second year with potatoes; the third year sowed with oats and grass seed; and mowed the fourth, fifth, and sixth years, this makes a course of crops. If then, the seventh year, it be again broken up, planted as before, and the same course of cropping pursued, it becomes a *rotation of crops.*

25. *Soiling*—is the feeding of cattle, either in the barn or yard, through the summer, with new mown grass or roots.

26. *Live Hedge*—is a fence formed of living plants, usually the white thorn, planted closely in rows, which being trimmed annually and kept clear of weeds, in a few years grow into a living, permanent fence, capable of stopping effectually every kind of domestic animal.

Most of the common farm fences in England are of this kind.

27. *Quicks*—a name commonly given to the young plants of the white thorn used in planting hedges.

28. *Layers*—are the tender branches of trees and shrubs bent down and buried in the earth, leaving the tops out, in which situation they are fastened with hooks to prevent their rising.

The part in the earth sends out roots, after which it is separated from the parent tree, and transplanted, in the same manner as trees raised from the seed.

29. *Cuttings or Slips*—are small portions of the twigs, branches or roots of trees or plants, cut off with a knife, or slipped off

with the thumb and finger, for the purpose of setting or planting in the earth, with a view of producing new plants or trees of the same kind.

30. *Sets*—are young plants taken from the seed bed to be set or planted out.

Cabbage and various other plants are usually propagated in this way, being first sown in beds, from which the plants are taken up and set out in fields or gardens.

31. *Fallow*—signifies land in a state of rest, not being planted or sown for a season, but repeatedly ploughed and harrowed, for the purpose of clearing it of weeds and of dividing and pulverizing the soil more perfectly.

Such is sometimes called a *naked fallow*, because the land carries no crop.

32. *A Green Fallow*—is that where the land has been rendered mellow and clean from weeds, by means of some kind of *green crop*, such as turneps, peas, potatoes, &c., cultivated by the horse-plough and hoe.

The crop so cultivated and for the above purpose, is called a *fallow crop*. In this mode of fallowing no time is lost by the land being left idle or in an unproductive state. Fallowing is sometimes distinguished by the season of the year in which the business is either principally or wholly accomplished; hence we have summer, winter and spring fallows.

33. "*Winter Fallowing*—is only breaking up the land, or ploughing it in the fall, and leaving it exposed to the action of the frosts of winter."

34. *Dibble*—is a tool of very simple construction, for making holes in the ground, at equal distances, in which certain seeds are sometimes planted.

Seeds planted in this way are said to be *dibbled in*. It is used also in transplanting. The handle of an old spade or shovel, sharpened at the lower end may answer very well for this purpose.

35. *Tiller*—is a term used to signify the branching out of a single grain, as of rye, oats, or wheat, *into several stalks*.

Where the individual kernels of any grain throw up *many* stalks, it is said to *tiller well*. Each shoot thrown out in tillering may be removed and treated as a distinct plant. A remarkable instance of this is related in the fifty-eighth volume of Philosophical Transactions. Of some wheat sown in June, one of the plants was taken up in August and separated into eighteen parts, and replanted: those plants were again taken up, and divided in the month of September and October, and planted out separately to stand the winter, which division produced sixty-seven plants. They were again taken up in March and April, and produced five hundred plants, from which grew twenty-one thousand, one hundred and nine heads, yielding three pecks and three-quarters of wheat, all produced from one single grain.

36. *Ley*—a term used in agriculture, to signify land in the state of sward or grass.

We frequently read of wheat being sown on a *clover ley;* by which we are to understand, land in clover, directly after mowing, being turned up, and sown with wheat on the back of the furrows.

37. *Meadow*—grass land for mowing.

In this country, the word is seldom used to signify upland mowing, but that which is low and moist, and seldom or never ploughed. In other countries, and by some writers on agriculture in this country, it is the name given to *all mowing grounds.*

38. *Effluvia*—are those small particles flowing out of any substance, which produce in us the sensation of smell.

Thus, most flowers send forth effluvia; and substances in a state of putrefaction send forth effluvia of a very different nature.

39. *Chemistry*—is the science which enables us to discover the nature and the properties of all natural bodies.

40. *A Simple Substance*—is one which cannot be decomposed; or which is not produced by the union of two or more substances; such as iron, sulphur, &c.

Sir Humphrey Davy, a celebrated chemist in England, reckoned forty-seven known simple substances in nature.

41. *A Compound Substance*—is one which may be decomposed; or which is produced by the union of two or more other substances of different natures.

Thus, gun-powder is a compound substance being composed of charcoal, sulphur, and saltpetre; and these substances, or those which united together, produce a compound substance, are called its *constituent* or *component parts.*

42. *The Elements of Matter*—are the simple substances into which all surrounding objects are capable of being reduced.

All the substances about which agriculture is employed are compounds; that is, they consist of elements into which they are capable of being resolved. Of this no farmer should be ignorant; and he ought to attain at least to so much chemistry as to know the nature, the properties, and the combinations of those elements, (the number of which is very small,) which are continually working such wonders before his eyes.

43. *Analysis*—is the resolution or separating of a compound substance into its elements, or constituent parts.

44. *Caloric*—is the name which modern chemists have to fire; or rather, it is that ex-

tremely subtle fluid which produces in us the sensation of heat.

The sun is the grand source of caloric; it is afforded also from combustion, and in various other ways. Thus, take a small phial about half full of water, grasp it gently with one hand, and from another phial pour a little sulphuric acid, or oil of vitriol as it is sometimes called, very gradually into the water. The phial will become hot, which is in consequence of the caloric disengaged from the mixture.

This subtle matter pervades the pores of all known substances, most of which are capable of existing in *three different states*—the solid, the fluid, and the aeriform or gaseous state; and these three different states depend on the quantity of caloric which may be present in any substance, at *any one time*. The first of these, termed *the solid state*, depends on the presence of *a small quantity of caloric;* such is water in the state of ice;—when the quantity of caloric or matter of heat is increased to a certain degree, the body passes into the second or *fluid* state; such is ice or lead when melted; and by still farther increasing the quantity of caloric or heat, it rises into vapor, called the *aeriform* or *gaseous state*, or simply GAS.

"Almost all natural bodies are susceptible of existing from the mere expansive energy of caloric in these three states; and the only difference among them is, that some require *less* and others a *greater* proportion of caloric to induce these changes. Water, which usually exists in our atmosphere as a fluid, can fluctuate by a very slight alteration of the thermometer, either into *solid* ice, or into aeriform vapor. All the metals exhibit the same phenomenon. If solid they melt by the application of fire into a fluid mass; and if that be carried to a given pitch of intensity, they fly off in fumes and assume the gaseous state. The solid earth is not exempt from the dominion of this universal law. Flint and sand when put in the furnace, dissolve into liquid glass; and if exposed to a still more powerful heat, they are dissipated in vapor and assume new aerial forms. Let it, therefore, be remembered, as an established principle in chemistry, that when different portions of *caloric* enter into combination with bodies, they pass, according to the quantity, into the respective states of *solidity, fluidity*, or *aeriform vapor*."

45. *Gas*—is any substance converted to vapor by the action of caloric.

In other words, it is any substance dissolved in caloric; or, it is any substance reduced to the aeriform state by the action of caloric. By the *aeriform state* it must be remembered is meant *a state similar to that of air*, which is neither *tangible* or *visible;* that is, it can neither be handled with the hands, nor seen with the eyes.

It may seem strange that the hard substances from which we receive so many knocks and bruises should in any way be converted into such a state. Yet something of this is seen every day. A log which it would require two men to lift, on being burnt, is all converted into gas, except a residuum of ashes so small as to be collected into a measure and carried by a child. So in the putrefaction of an animal, the solid substance left is little more than sufficient to color the ground; the rest, except some fluid parts which may have sunk into the soil, is all converted into gas.

46. *Alkalies*—are substances of an acrid, burning taste. Their most distinguishing properties are

1st, They change the blue juices of vegetables, as of violets or red cabbage to green.

2d, they render oils missible with water, thus forming soap.

3d, They combine with acids, thereby forming various kinds of salts.

There are only three alkalies;* 1st, Potash, or the Vegetable Alkali; 2d, Soda, or the Mineral Alkali; 3d, Ammonia, or the Volatile Alkali. The two first are also called *Fixed Alkalies*; the latter, or Ammonia, is called the *Volatile Alkali*, because it exists as a gas, and is that substance which on opening a smelling bottle, so effectually searches the nose and head.

To be continued.

Advantages of well Cultivated Farms.

The last season, those who tilled land under a high state of cultivation, were well remunerated for labor expended, while those who tilled worn out farms, scarcely raised the amount of bread stuff, expended during the summer. It is time that more attention was paid to increasing the fertility of the soil, and we are glad to see that the H. F. & H. Agricultural Society have offered a premium of $15 on the greatest quantity of good manure, that shall be made from the first day of June, 1837, to June 1st, 1838. A written description of the making will be required, and an opinion of the best and least expensive mode of increasing the same, regard being had to the number and kind of animals kept in the yard, stables, and pens.

We find a few (and too few) of our farmers awake to the subject, and they have resolved to till less land, believing that they can get larger crops; at any rate they are satisfied that a crop will be more sure on good land

* There is a substance lately discovered, called *Lithia*, which, so far as any thing is known of it, appears to possess alkaline qualities.

than on poor. A gentleman in this vicinity told us the other day, that he had commenced improving his farm in earnest. He had raised the value of his farm, and greatly increased the produce by ditching. He has a spout at his back door into which his soap suds, &c. are poured, and carried under ground to a pen or yard a few rods from his house. This pen is so constructed that he can drive through it with a cart, and here he deposits turf, muck, damaged hay and straw, which a good yard of porkers manufacture into first rate manure. In this way he has doubled the produce of his farm. Much may be done toward improving land by a rotation of crops.

The celebrated natualist Mirbel, has lately given the following explanations of the phenomena that render rotation of crops advisable. "Plants require other elements for their support, besides the elements of assimilation, and cannot thrive without them. For instance there is silex in the cane, and there is lime in certain plants, (say wheat) whose organization could not be completed without it. The quantity of any such foreign ingredient in a plant is generally small; still the necessity for it may be presumed as absolute. Plants cannot be constituted unless all the materials they require be furnished to them; and indeed the same observations will apply to animals; deprive a hen of lime, her eggs will have no shell; deprive the earth of its salts, such as form potash, soda, or in combination with minerals, lime, gypsum, &c., and you destroy its productive power. The smallest quantity of gypsum will have a remarkable effect on clover; and the effects of the other combinations are scarcely less visible on other varieties of plants. But the formation of these salts, or materials, exciting and sustaining the growth of plants, when spontaneous, is slow, and the result of regular chemical changes which have been at work for centuries; and when the natural and limited supply is exhausted as it soon must be, if the successive crops of the same kind are forced upon the soil, the plants will look yellow and shabby, each year renders it more worthless, until finally not enough will grow to repay cultivation. Let the crop perish where it grew, the earth will re-assume the minerals and salts extracted from it during such growth, and the same plants will flourish indefinitely."

The most ignorant ought not to be ashamed of seeking for more knowledge, though the most learned might well be ashamed of remaining willingly ignorant, when there is an opportunity to learn.

From the New York Farmer.

Management of Sheep.

Messrs. Editors,—In pursuance of the intimation in my last communication, I will now proceed to mention the "sins of omission and commission," relative to *washing* and *shearing* of sheep.

To correct, however, the slovenly mode practised by farmers, in general, in reference to both, is indeed a hopeless task;—to prove that it is downright dishonesty to sell wool to which is attached from 25 to 50 per cent. of filth and dirt, of which the manufacturer is ignorant until discovered in the process of using, is easy enough. But moralizing in these corrupt days is almost useless. I shall attempt to prove, however, that in these matters, honesty and interest go hand in hand, he that *will* be honest, will sooner or later find his reward.

It is common for farmers to prepare a pool by daming some convenient brook, which, doubtless, in many instances affords pure water, but nine times in ten is little better than a hog mire. The sheep are then soused in, held for a minute or two, the wool squeezed, and then let go, and pronounced *well washed*. If a by-stander questions it, or the owner feels some qualms of conscience, both are quieted by stating the fact, "that the fleece will weigh heavier if it is not *quite* so clean, and the dirt will bring as much as the wool." This is thought a "cunning thing" to *shave* the speculator or manufacturer.

When the time of shearing arrives, or rather is proceeding, these same *honest good meaning sort of men* take special care, in order that the fleece shall not fall short of weight, to scrape up every thing, consisting of wool not the sixteenth of an inch long, dirt locks, dung locks, bur locks, &c., which is carefully put *inside* and the fleece rolled in "first rate style." All this trash is of course excluded from the buyer, whoever he is, and from the external appearance, is deemed in good order and condition. But the manufacturer, at his cost, discovers not only the fair article, but much that is worse than nothingness within.

If these *honest good sort of men*, who are so *cunning* as *thus to prepare* their wool for market, will but take the trouble to cleanse a fleece, as the manufacturer is obliged to do before it is put in a process of manufacture, he will readily ascertain what a gross deception it is—the result will be, that a fleece *prepared* as above, described with its *beautiful superfluities*, and weighing 4 lbs., would be reduced by the cleansing operation to 2½ to 2¾ lbs.

Your readers need not suspect this picture overdrawn—it is true to the letter, and for

confirmation, let them appeal to the manufacturer.

Yes, my brethren wool growers, the picture represents faithfully the practice of too many of us. Is it honest and fair?—is this the way our gains are to be augmented? is this a principle to instil into our sons, and our example proper for them to follow? For my part, I will raise my voice, and condemn both principle and example as abominable dishonesty. As well might we fill our fleeces with stones, and sell them for wool, or sell our wheat and deliver chaff.

But this neglect, Messrs. Editors, in regard to wool, is only an item among the many, which farmers are guilty of;—it is of the same stamp and character with others, which go to make up the opinion which is formed of us abroad as well as at home, viz: that as a body, the farmers of this country are more neglectful, careless and slovenly, in their agricultural pursuits, than any others on the face of the civilized portion of the earth.

The above remarks are sweeping, but will apply, generally, with full force to farmers in this region. My knowledge is acquired not from what my ears have heard, but from what my eyes have seen.

But I am happy to state, that in the New England states, these "sins of omission and commission," are not so generally practiced. And well it is, that there are a "redeeming few" who put their wool in such order that they are not ashamed, when it is offered for sale, that the light should shine *inside* as well as *out*. If honesty be the impelling motive for doing the *clean thing*, so much the more redounds to their praise: if it be interest which dictates, why—it is perhaps as well.

At the Eastward it is common, with many of the wool growers to make use of vats for washing their sheep. This mode I have adopted. The size of my vat is ten feet in length, and about six feet in breadth. About the sides of the vat, are temporary platforms erected for the washers to stand upon when washing. The water is conducted by means of two troughs or spouts; and the fall is about four feet. Having two spouts, of course, the washing of two sheep can be carried on at the same time—during which, two others are put in for the purpose of soaking. The object of soaking the wool is to loosen the dirt:—by so doing, when the sheep are transferred under the spout, it separates more readily from the wool.

The advantages of washing in a vat, are the following—a man can stand beside a vat, and wash *all* day—whereas, if he is up to his waist in a pool, two hours is as long as he can endure the cold.

The water falling some three or four feet, removes the dirt quicker, by far, than it can be done by squeezing the wool, as is common:—and moreover, the water is all the while pure and clean;—in a pool it is always rily. Two active men in this way, will wash 400 sheep in a day.

My vat is made of two inch plank, well secured at each end by gripes, which are of oak timber, and the entire cost, including platforms, did not exceed seven dollars.

I have uniformly endeavored to put my wool, in every respect, in the best order, as regards cleanliness. I have been laughed at *by honest well-meaning sort of men*, for being thus particular. But I have, through life, adopted the proverb, that "honesty is the best policy," and, also believing that some time or other, purchasers of my wool, would discriminate between *it*, and *such* as is *prepared* in the manner already described in this communication.

My wool has been purchased by the Messrs. Lawrence, of Boston, for several years, than whom, most of your readers are well aware, no men stand higher in our country for business, talents, and integrity. I will here insert an extract from two of their letters, relative to the condition of my wool. "In fixing prices, we have allowed you five cents per pound, more than ours cost us this season, for the reason, that yours is in much better condition than is usual." And again in reference to the clip of last year. "Our sorts will turn out from two to three cents per pound less than we have allowed for yours, on purchases of over 300,000 pounds, but the condition of yours was very good." &c.

Want of room, Messrs. Editors, will compel me here to leave the subject. My efforts, uniformly, to put my wool in the best condition, I am satisfied, have been amply rewarded. I have also satisfied myself, that honesty and true interest go hand in hand. I hope your readers, who are wool growers, are satisfied of the truth of this position, will do likewise, and find their reward.

I intended, in this communication, to have exposed the slovenly practices of farmers, in reference to shearing of sheep, but defer it to another time.

M.

Lansing, Tompkins Co. N. Y.

Blight in Pear Trees.

The Pennsylvania Horticultural Society, anxious to promote the discovery of a preventive for the disease usually termed *blight* in Pear Trees, offers a premium of FIVE HUNDRED DOLLARS, to be paid the person who shall discover and make public an effectual means of preventing its attack. The premium not to be awarded till after the expiration of three years from the publication of the preventive, nor until the Society shall be fully satisfied of its efficacy. Communications on the subject may be addressed per mail to David Landreth, Cor. Sec. Philadelphia.

How to keep Cattle out of the High Way.

Cattle are much inclined to run in the highway either when that affords the best feed, or when they have no other pasture. By the process here recommended, you will compel these vagrants to *walk in different paths*, and if your fences be good, the enclosures of their owners will be more likely to afford them an asylum.

This simple process then accomplishes three objects. It kills your bushes and briers, makes you a good manure, and drives stray beasts from the road. One more advantage shall be named,—besides what you gain in addition of beauty to your rows of winter apple trees will grow and bear better by the roadside ploughing in this manner, than they will when you leave the soil and bushes undisturbed.

Young trees particularly cannot contend with success against the roots of grass and bushes. Breaking up the soil, even if a part of it be carried away is beneficial to them.

None but winter fruit should grow by the road side, and the Baldwin is here to be preferred to the Greening, as it grows more erect and will not rudely salute the civil traveler.

By picking these winter apples in season you will save nearly the whole fruit to yourself; but suppose you lose one-half, and it gets into the pocket of the traveler, you can well afford it, for only half the shade of the tree falls on your land. And trees growing by a wall are usually much more productive than those standing in mid-field.

Keeping Fruit.

At a recent meeting of the Horticultural Society in London, a paper was read, entitled "An account of the different modes of keeping fruit, which have been tried at the Society's garden for the season of 1831." The statement was drawn up at the garden, and enumerated eight different modes; the three best and most practicable of which were, the covering of the fruit in pure and perfectly dry sand, dry fern, or in a deal box buried in the earth. By any of these modes it was preserved, free from shrivelling and any disagreeable flavor; in all it must be deposited in a cold situation. By the other five modes, although the fruit was preserved in a pretty sound state, a musty flavor was found to be communicated; this was especially the case where oat-chaff was the medium.

Excess of ceremony shows want of breeding; that civility is best which excludes all superfluous formality.

Corn---The Weevil.

As the season is now approaching when farmers will commence gathering their corn crops, I deem it my duty, (as a farmer,) to inform them, through the medium of your paper, how to secure their corn from the ravages of the weevil, which often, during the summer and fall seasons, entirely destroys whole houses of corn. As the remedy is so simple and cheap, I am in hopes no farmer will leave it untried. It is simply this. When hauling in a crop of corn, have a mixture of salt and water prepared (say one pint of salt to a gallon of water,) and as each load is thrown into the house, sprinkle it thoroughly with salt and water, and it will entirely prevent the insect from breeding in the corn, and likewise cause the husks to to be more palatable for stock of any kind. As I know this from experience, I feel no doubt in recommending it to others.

A Farmer.

The Farmer's Song.

Sweet is the bread that toil hath won,
And sweet the sleep it brings,
And sweetly when the day is done
My cheerful helpmate sings:
How proudly round my hearth I see
My sturdy sons draw near,
And O how kindly smiles on me
Each one that's gathered here.

A thousand songsters welcome me
Forth to my daily toil,
And flowers of many a form and hue,
Upspringing from the soil:
The Spring with promise, beckons me
To sow the needful grain,
And glorious Autumn, thankful, shows
Its harvest mantled plain.

The student in his narrow cell
Reads by his midnight lamp:
I read in Nature's open book
Truths of immortal stamp:
While monarchs tremble on their thrones,
And quakes the city's lord,
I firmly stand upon the earth,
A basis deep and broad.

Sweet is the bread that toil hath won,
And sweet the sleep it brings,
And sweetly when the day is done
My cheerful helpmate sings:
How proudly round the hearth I see
My sturdy sons draw near,
And O how kindly smiles on me
Each one that's gathered here

ARTICLES.	Philadelphia, Aug. 12.	Baltimore. Aug. 8.	New York, Aug. 12.	Boston, Aug. 9.
Beans, white, per bush.	$1 37–1 62½	1 25—1 50	0 00—0 00	1 37—1 75
Beef, mess, new, per bbl.	14 00–15 00	13 00–14 00	13 50–14 50	15 00–15 50
Bacon, western, per lb.	8½— 10	7— 9	8— 10	.....
Butter, extra, per tub	12— 13	16— 20	18— 20	— 20
Butter, fresh, per lb. (market,)	18— 25	20— 25	25— 31	25— 26
Hams, per lb.	12— 15	10— 13	12— 14½	14— 15
Hog's Lard, per lb.	11— 12½	9— 10	9— 10½	9— 10
Cheese, American, per lb.	10— 10½	9— 11	7— 9½	9— 13
Beeswax, yellow, per lb.	25— 26	23— 25	23— 25	25— 30
Beeswax, white,	.....	38— 40	38— 40	38— 40
Bristles, American,	42— 65	25— 65	25— 65	.....
Flax, American,	8½— 9	9— 10	9—	9— 12
Flour, best, per bbl.	8 25—9 00	7 87—8 50	8 00—9 25	8 50—10 00
Grain—Wheat, per bush. Penna.	1 70—1 90	1 55—1 65	1 80—1 85	.....
do. Maryland,	1 60—1 75	1 00—1 25	1 74—1 75	.....
Rye, per bushel,	85— 95	60— 68	—1 00	1 05—0 00
Corn, do.	98—1 07	1 00—1 06	1 00—1 12½	1 10—1 12
Oats, do.	40— 48	36—	52— 65	75— 78
Barley, do. Penn.	.....	.....	1 06—	1 00—1 10
Peas do.	1 00—1 25	87—1 00	—	.....
Hay, Timothy, per 100 lbs.	75—1 10	00 00–00 00	.....	20 00 pr ton.
Meadow Grass,	70— 80	.....	.....	.....
Hemp, American dry rot, ton,	175 00–	0— 0	130 —140	.....
Hops, first sort. 1836, lb.	7— 8	— 9	4½— 6	6— 7
Plaster Paris, per ton,	3 25—3 37½	4 00—	.....	2 00—2 25
Seeds—Cloverseed, per bushel,	5 50—6 00	6 00—6 50	.....	.....
Flaxseed, rough, do.	1 35—1 40	1 37—1 50	.....	.....
Timothy,	2 —	3 00—3 50	.....	2 87—3 00
Tallow, per lb.	8½— 9	— 11	8¾— 9	10— 11
Wool—Saxony, fleece, per lb.	00— 00	40— 50	50— 68	.....
Merino,	00— 00	35— 40	50— 58	.....
1-4 and common,	00— 00	25— 30	40— 50	.....

Gentlemen whose subscriptions commenced with the thirteenth number, or second half year of the first volume of the Cabinet, and who may wish to complete their sets by obtaining the first twelve numbers, should make early application for the same. All letters on this subject, must be post paid. ☞ Post Masters are hereby authorized and respectfully requested to forward us the names of persons who may wish to *continue* the work, as well as the names of *new* subscribers; and after retaining twenty per cent. commission, transmit us the balance of any moneys they may have received:—And any gentleman may constitute himself a special agent, by remitting us five dollars, free of postage, for which sum, we will forward seven copies according to his direction.

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THE FARMERS' CABINET,

DEVOTED TO AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

Vol. II.—No. 3.] Philadelphia, September 1, 1837. [Whole No. 27.

Blight in Pear Trees.

It will be recollected by many of our readers, that the Horticultural Society of this city, at its last anniversary meeting, offered a premium of Five Hundred Dollars to the person who shall discover and make public an effectual remedy for the disease denominated Blight, to which pear trees have been subject for some years past. A number of communications, from all sections of the country, have been forwarded to the Society. These communications have been made mostly by intelligent gentlemen, with a view of preserving and more successfully propagating the pear,—they have been placed in our hands, and we shall from time to time publish such as are deemed interesting, and conducive to the great object contemplated by the Society in offering the premium.

—

Prince Edward, Va., May, 1837.

A Preventive of the Blight in Pear Trees.

The preventive is the simplest imaginable,—it is not to prune the trees, or break up the ground underneath them; but on the contrary, to let the ground be trampled. The facts from which I come to the above conclusion are the following:—

1st. There were in my grandfather's yard two pear trees, which have been bearing trees from my earliest recollection, say forty years. I am now the occupant of his house and yard. These two trees are now as healthy as they ever have been. The yard has always been trampled by calves and horses.

2d. There was a row of four trees in a lot adjoining the yard, which was occasionally cultivated; these trees have blighted more or less whenever the lot has been cultivated. Two of them have died with the blight; the other two have been several times very much injured by it, but since I have ceased to cultivate the lot, they have been flourishing trees.

3d. I grafted in the year 1821 about twenty pear trees. They remained in the nursery until 1824; they were then planted in a lot adjoining my yard, which lot was cultivated three years in succession in tobacco. Most of the trees during those three years, blighted more or less—some blighted within a foot of the ground. I then levelled the ground on which they were planted, and moved my fence so as to enclose them in the yard. Such as had been nearly destroyed by blight, I enclosed with a pen of rails, in order to keep off the calves which graze the yard, until the trees had grown sufficiently high not to be injured by them. These twenty trees are now all healthy, and there has been no appearance of blight since I cultivated the lot, except in one tree that was enclosed by one of my servants in a garden, in which he cultivated vegetables—that tree blighted and died.

I would recommend that pear trees be planted in a rich soil, (I would prefer the site of an old dwelling,)—that they be ploughed and worked a few years, even at the risk of blighting; and after that, that they be neither pruned nor ploughed. If they require manure, let it be applied to the surface. Ashes I think an excellent manure. Let the pear orchard be grazed by small cattle, until the trees are of sufficient size to admit of being grazed by larger without injury. I think it would be proper to keep down coarse weeds, briers, sprouts, &c. I am well convinced that there are some hardy native pear trees that may be pruned and ploughed without being subject to blight; but I feel confident, that most of the finest kinds of pears

would thrive best under the treatment I have described. I know too, that there is a difference in soils; and that the same mode of treatment may not suit all situations. But those who have not succeeded in raising pear trees, might try my method. My opinion is, that the blight is produced by the excessive flow of sap, and that pruning and fallowing produce that effect. If, however, I had pear trees growing on hard poor land, I would fallow and manure; preferring rather to risk the blight, than let the tree die with poverty; but when I had sufficiently manured, I would then cease fallowing.

Henry N. Watkins.

—

Poplar Grove, E. S. Maryland, April 20th, 1837.

Dear Sir,—I observe by the newspapers, that the Horticultural Society of Philadelphia are very anxious to detect the cause of the blight in pear trees, and to ascertain a remedy; and for this purpose, they have offered a reward to be adjudged three years hence.

I am a great lover of this delicious fruit, and have mentioned to several of my friends the confident belief, that I have detected the cause of the blight; and seeing your advertisement, I am induced to trouble you with a view of it, that your Society may make experiments to test that which, every succeeding year since, I first formed the opinion, has only tended to confirm.

Various causes have been assigned for the *blight*, by practical and scientific persons; some have thought the old delicious French varieties of virgoulese, jargonelle, arib, bonchretien, &c. &c., have lived out their day, and are disposed to expire with the termination of the life of the parent stock; and generally, perhaps, this malady is ascribed to the influence of the electric fluid. I am perfectly satisfied, that premature death by blight is not confined to *older sorts;* some seedlings with me have died as suddenly and as unexpectedly, sometimes a limb at a time, and sometimes the entire tree.

From many years experience and observation, I am satisfied that the cause of *blight* and destruction in the pear and apple tree, is almost always from what the French term *coup de sol*, (stroke of the sun.) This stroke of the sun occurs generally in the hottest weather, and when the earth is dry. It proceeds from intense heat in the atmosphere, when there is an absence of moisture for the roots—sometimes from intense heat without an absence of moisture. To obviate this, what is the remedy?—select when you can a *moist*, but not a wet soil, and allow your pear trees to stand in a position where they can be sheltered by tall dense forest trees, exactly on the *south and west*, or by some other shelter of a *house* or *hill*. The hottest part of the day is about 3 o'clock, when the sun is in the south and west, and any member of your Society may find without waiting three years to ascertain the facts, that in every orchard of pear or apple trees, open and sloping to the *west*, there is more destruction in those trees *than can be found in any other exposure*. I assert this fact, other circumstances being equal, without the fear of being found in error. I have made the observation within the last twenty years, some hundreds of times.

It is my opinion that no perfect defence can be made against the effects of our hot suns on apple and pear trees, unless a great umbrella could be supplied, and *periodically, and properly, used for each tree*. It may not generally be known, that a pear tree besides being healthy, will bear very well in a very dense forest. A thicket sheltered by high trees on the south and west, and a moist soil, are in this climate their proper localities, according to my opinion, founded on experience.

Your obedient servant,

Thomas Emory.

P. S. I will mention a fact which occurred with me ten or fifteen years ago, and the tree is still living. In the month of July or August, when the earth was very *dry*, and the weather *intensely hot*, I discovered one evening that a pear tree, which stood near the house, was evidently stricken with death. The leaves wilted and hung, as those would on a tree severed from the stump. I had before believed that excessive heat, and a want of moisture, would produce this effect. The tree was allowed to stand over untouched till the *next evening*, when it was regarded as being *dead*. I determined to experiment on it, and had a large cart load of wet sea weed hauled up and spread in every direction, 7 or 8 feet from the body of the tree, and then threw on some forty or sixty gallons of water. The tree as suddenly revived, and is still living, being sheltered by some tall lombardy poplars, since grown up, immediately on the south and west. The leaves next morning were filled with sap and distened. T. E.

Destruction of Insects by Tobacco Water.

In the process of preparing tabacco for use, a liquid is expressed from it, which is very cheap, and highly destructive of animal life. This mixed with from three to five parts of water, is found by a writer in the Transactions of the London Horticultural Society, to be an effectual remedy for the aphis caterpillars, and similar insects which infest fruit trees.

For the Farmers' Cabinet.

"Does the Pith of the Horn waste, yea or nay?"—Improving a worn out Soil.

Observer, in his last number, has favored us with his opinions upon "tail evil," for the purpose, it seems, of making another push at the *horns;* for he concludes by *observing*, "that the hollow horn is the natural state of the horn; so is the tail evil the natural state of the tail."

Here I shall only remark, as I did with the piths, that I see no reason why the tail should be exempt from disease; why it should never be "ill," and leave Observer to amuse himself with his odd stories about the tail, while I peep a little further into the horns.

Observer seems to attach some considerable importance to a knowledge capable of discriminating between a rotten and a sound horn. "It is," he says, "often a nice and delicate observation in pathology, to determine the question." Now where is the use of throwing mystery over a plain matter of fact in this way, "a nice and delicate observation" to tell the difference between putrid animal matter, (for the bones are animal matter,) and that which is sound. Some people might be *too nice and delicate* to make the observation, but as to the knowledge, a boy of eight years old, that could not tell the difference at the first glance, or even at the first action of his olfactory nerve, would, in common parlance, be called a *green horn.*

There is some acknowledgement due to Observer, for doubting my statement of facts in relation to this matter; 'tis true, there is something flattering in having one's statements doubted; but still it is so different from contradiction, that I am willing to receive it as an omen of more agreeable manners in future.

Observer next assumes the office of preceptor; he "will inform Subscriber what he probably does not know." To this I have no objection, for I love to know things, and am willing to learn of any one. "Bony caries or rotting, (he says,) is an ulceration of living bones, produced by the action of the absorbent vessels, which take up and carry off the bony matter." Truly, this is what I did not know, nor am I aware of any reason why I should be supposed to know it, for I presume such information is not generally possessed by men either of scientific or ordinary knowledge.

This action of the absorbent vessels may, in one sense, be considered the consequence, but never the cause of disease. So far is the action of the absorbent vessels from producing ulcerations, that it removes them, or more properly speaking, separates the living from the dead matter.

Observer might as well say that medicine produces the disease it is intended to cure, as to say that bony caries is produced by the action of the absorbent vessels.

A dose of calomel and opium does not produce the dysentery when it cures it; neither does the action of the absorbent vessels produce ulcerations when it releases them from the living parts of the body.

The action of the absorbent vessels is the natural effect of a healthy organization; it never produces disease of any kind. Bony caries originate, like all other diseases, from the various casualties and accidents to which animal beings are liable; the absorbent vessels are in constant action, and approach the disease as near as the laws of organised life will permit, and simply leaves the sanies or filthy matter to ooze out of the wound in thin acrid discharges. Observer will perhaps say this is not always the case, and I wish to save him the trouble by a little further explanation. The bone is sometimes diseased without an external issue, and sometimes the orifice making this ichorous discharge heals up. I know a young man, who, a few years ago, had a diseased finger with an issue of acrid matter, but the orifice closed up, and the absorbents carried away the diseased bone until his finger was reduced about half an inch in length.

I think it useless to follow up Observer's "very nice and delicate observations in pathology," through all the varied changes of decomposition, for it would be no difficult matter to show by a parity of reasoning that there is no rotting in the horn, nor in any thing else. Simple substances, oxygen, hydrogen, carbon, &c. never rot; horns are constituted of those simple atoms of matter; therefore, horns never rot. I understand the pith of a horn to be rotten when the action of the surrounding elements has entirely changed its form, and produced decomposition in its prominent features.

Since my last essay was sent to the Cabinet, I have been engaged in the *agreeable hardship* of harvesting a heavy crop of grain and hay, which, with other engagements, has deprived me of leisure sufficient to examine an additional lot of horns which I designed to do, previous to sending any further statement of facts to the Cabinet. As an apology, therefore, of this neglect, I will transcribe from my Farm Ledger, a three year's history of an old worn out field, being part of a farm purchased in 1834.

This field, in the spring of 1835, presented one of the most dreary prospects to the eye of the farmer that can well be imagined. Corn had been the last crop which was estimated at seven bushels to the acre, and the whole amount of verdure then upon the field

appeared insufficient for half a dozen sheep the summer season, and not as much manure in the barn-yard as would dress a common sized garden. Every thing necessary to improve this field had to be purchased; it was, therefore, no difficult matter to know the expense. The manure is all carried out at the cost delivered upon the field, and the field is credited with all the produce, except the pasture, at the cash prices in Wilmington, about 1¼ miles distant.

1835. FIELD, No, 3.	Dr.	1835. PER CONTRA.	Cr.
1st mo. 1.		300 bu. of corn at 80 cents,	$240 00
500 bushels of lime at 20 cents,	$100 00	175 bu. of potatoes at 30 cents,	52 50
150 cart loads of manure at $1 25 per load,	187 50	1836.	
200 bu. of bone dust at 30 cts. pr. bu.	60 00	96¾ bu. of wheat at $2 00,	193 00
100 bu. of ground oyster shells,	15 00	10 loads of corn fodder,	15 00
75 cart loads of manure at $1 25,	93 75	9 loads of wheat straw,	18 00
Clover and Timothy seed,	12 00	3 months pasture for 8 cattle,	21 25
15 bu. of seed wheat,	22 50	1837.	
Cost of 10 acres of land,	480 00	31½ tons of hay at $14 00,	437 50
	$970 75		$980 25

The interest account against the field is not carried out, but the second crop now growing will considerably more than balance it, leaving the field to stand against the labor of cultivating three crops and taking them to market. It will be seen that the profits of this operation has all grown out of the manure. I have been thus particular, in order to obtain a knowledge of the value of worn out lands in the vicinity of manure. Stone lime can be had from the Schuylkill, and leeched ashes, bone dust, glue makers' offall, comb makers' shavings, and other kinds of strong manure will bear shipping from Philadelphia and Baltimore, up the creeks and inlets of the Delaware and Chesapeake Bay. More again on this subject.

Subscriber.

For the Farmers' Cabinet.

Agricultural Implements.

NO. XI.

SUBTERRANEAN DRAINING MACHINE.

A machine for this purpose is used to advantage where stones, (the usual materials,) cannot be procured to make subterranean drains; the following description will explain the principle of the machine, and its operation. Suppose a standard passing down through a plough beam to a proper depth, and terminating at the lower extremity in a conical form with the point in advance, and with the base or hind end sufficiently large to make an opening in the ground of the required dimensions, when forced through it. The point may go two or three inches in advance of the standard, and the fore (or anterior) part of the standard be made sharp, and the remainder of such dimensions as the force to be applied may require, and the whole be composed of cast iron, and confined to the beam by keys.

The following dimensions will probably be sufficiently strong for four horses, or eight hundred pounds, viz:

Depth from the beam to the lower extremity, one foot.

Width of the standard, ten inches.

Thickness of the hind edge, one inch.

Horizontal length of lower extremity, one foot.

Diameter of large end of lower extremity, two and a half inches. Or instead of the lower extremity being of a conical form, it may be of a pyramidal or any other form that circumstances may require.

With a machine of this description, subterranean drains may be made at the rate of several miles per hour, with no expense except four horses and two men, besides the machine, which need not cost more than an ordinary plough, so that an acre of ground crossed in squares of two or three feet each way, would cost but little in the operation.

Oxen as well as horses, can be used to advantage to draw it.

August 1st, 1837.

For the Farmers' Cabinet.

An expeditious manner of producing Trees and Shrubs.

This consists in surrounding a branch or limb of a tree with earth, and keeping it sufficiently moist to receive the roots formed on this part of the branch, and girdling the branch by degrees during one season of its growth between this part and the body of the tree, immediately adjoining the part surrounded by the earth.

Suppose a cubical box of three inches square, composed of thin boards nailed together, and a horizontal branch passed through holes in the middle of two opposite sides, and the remainder of the box filled with vegetable mould, (say decayed leaves from the woods,) passed into it by an opening in the upper side. If the rain that falls upon the upper side of the box be insufficient to keep the earth within it sufficiently moist, more water may be added (by hand) when required; or a thin board with the edges higher than the middle, may be placed on the box to extend beyond the edges, so as to collect a sufficient quantity of rain water. A small part of the bark is cut through, and in the course of a few days another small por-

tion, and thus continued during the season, until the branch is completely surrounded, and a small ring or circle of bark removed. At a suitable time for transplanting, the branch may be cut entirely off, and treated afterwards as young trees usually are when transplanted; the sides of the box surrounding the earth and roots are removed previously to transplanting. Dry gourds, with holes formed in them while green, answer in the place of boxes.

Peach and other trees, where a *hard strong bark* is desirable, may be produced in this manner to advantage; also *thorns* for *live fences*, where the value of the plant is in proportion to the number of thorns upon it; another advantage arises from the short space of time required to produce an orchard, or shade trees. The branches that would otherwise require to be cut away to preserve the proper form of the parent tree, might be selected to a considerable extent for this purpose. *Sugar Maple* and many other trees, are now in great demand, with which the above method is certainly worth a trial.

P.

2nd August, 1837.

We have received another communication from "A Farmer," in relation to the controvery heretofore carried on in our columns between "Observer" and "A Subscriber." We give below all that part of the communication that relates to the point in dispute—and we are satisfied that our correspondent will see the propriety of our omitting all that had not a direct bearing on the subject. The controversy has already run through several numbers; we now wish to collect all the *facts* regarding the disease, and dispose of it as speedily as possible.

For the Farmers' Cabinet.

Hollow Horn.

Hollow horn (understood as the name of a disease,) is nothing more nor less than an inflammation of the horn; it may exist without the horns being hollow, just in the same way that the yellow fever may exist without any *yellow* symptoms being observable. The name of the disease is the name of its effect; but says Observer, "horns are always hollow." This assertion might be as correctly made in relation to any other substance whatever; the pith of the horn is porous, and so is every thing else—a sound horn is certainly not a hollow one, in the common acceptation of the term.

Early in the investigation, Observer congratulated himself on having completely overturned the "whole boring system;" subsequent observations, however, convinced him that boring was sometimes advisable, and in this latter conclusion, he is correct. I would not recommend the remedy for every complaint which may happen to be called the hollow horn; the "*hollow gut*," for instance, (to use a vulgar expression,) is best treated in the manner proposed in your last paper, by a "Montgomery County Farmer." We are told that the disease is unknown in England; be this as it may, the remedy is well known there, and appears to be often in request. Dr. Cooper, an *Englishman*, a Philosopher, and one of the most accurate observers, in his remarks upon the disease, considers it the effect of cold in animals, insufficiently fed. He recommends the usual remedy.

A Farmer.

For the Farmers' Cabinet.

The Heedless Farmer.

The reader has long since been apprised of the fact that farming has become a science, worthy the attention of the most noted men in the present age. Some have labored ingeniously to bring it to perfection, and many have occupied themselves in writing on it. Every intelligent person will readily admit that the study thereof, is in all cases, interesting—and causes him with emotion to repeat that well known sentence, "how wonderful are the works of nature." But the heedless farmer cares not to concern himself about the pleasure it affords, nor the substantial enjoyments accruing from a practical and scientific knowledge of that which so intimately concerns his welfare.

Brother farmer, let us pass by his habitation, and place the scrutinizing eye thereon, and see if we cannot learn a lesson that will be of advantage to us in time to come. Although it is possible for us to wander from the path of prudence into the the ways of selfishness, so far as to have too exalted opinion of ourselves, we nevertheless trust in some degree to the information derived from agricultural works. If the heedless farmer would settle his mind down into sober and serious reflection, he would soon become a genuine and honorable husbandman. Neither could it any longer be said by the passer by, that every thing around him assumed a dingy appearance, he would no longer be regarded as a century behind the times, he would keep pace with the improvements of the age—and by all intelligent farmers, whose favorable opinion is worth possessing, be highly commended for his reformation. A poor idea, indeed, is it for a farmer to say he cannot find time to do "this thing or that," but

Solomon says that there "is a time for all things." Now admitting the wise man's proverb to be true, you can find sufficient time, if attended to in proper season, to do every thing that is urgent,—time for the total extermination of all noxious and hurtful plants—time to place your work in such a position as to have the upper hand of it constantly. If to your own disadvantage you pursue the wrong path, you may depend upon it, as I heard an experienced farmer say, that "*he that letteth his work drive him is a slave.*" A Clover Ridge Farmer.

Pemberton, N. J., August 26, 1837.

For the Farmers' Cabinet.

Oat Stubble.

How often do you plough your oat stubble? With some it is the custom to plough once, with some twice, and others three times. The object of this short essay is, to inquire which of the three methods is the most beneficial to the farming interest; and the only true method of arriving at that conclusion, is from the observation of facts. Those persons with whom it is the custom to plough their oat stubble but once, may be set down as an indolent set of men, having little regard for the improvement of either mind, body or estate. The writer of this has observed, in some of the finest land of Pennsylvania, where this method has been pursued, a miserable deterioration of crops: and notwithstanding being sufficiently manured, yet it produced a very inferior crop of wheat; and as for timothy and clover, they scarcely deserved the name of a crop, being entirely superseded by a worthless natural grass and weeds, with which the ground had become entirely overspread. By ploughing oat stubble but once, the soil does not become sufficiently pulverized and intermixed; the roots of natural grass and weeds are suffered to remain too much in an undisturbed condition, and carry on all their process of vegetation, until they entirely occupy the soil, to the exclusion of that which would be more beneficial to the farmer.

Ploughing oat stubble but twice for wheat, (or that which is to be manured,) has its objections also. In the first place, if the manure is hauled and spread before it is ploughed, those deleterious substances, (weeds, grass, briers, &c.) are so long permitted to gain strength, and become so permanently attached to the soil, that the two subsequent ploughings will not be sufficient to eradicate them; and secondly, if the ground is ploughed before the manure is hauled out, the tracts beaten by the team, will plough up in coarse clods in a very unfit state for receiving the seed, and which no after tillage will sufficiently pulverize.

Now the inquiry comes, what will be the best method? Let the stubble be ploughed as soon as possible after the crop is taken off. This will immediately check the growth of grass, weeds, &c. Then let the harrow be passed over to pulverize the surface, after which the manure may be hauled out, spread and ploughed in immediately, to prevent loss by evaporation. Pass the harrow over again. Before seeding, let the ground be ploughed again, when it will be found to be completely pulverized and intermixed, and grass and weeds totally destroyed. Where this method has been adopted, it has been found to be superior to all others.

It must be, and is admitted by all practical agriculturists, that the better the soil is pulverized, the better condition it is in for producing a plentiful crop. Hence, by this method, there is not only a more certain warrant for a good crop of wheat, but grass has been found invariably to succeed better than in either of the other methods. After the crop of wheat is harvested, the grass in the stubble affords excellent pasture for cows, being free from weeds, which frequently gives butter an unpleasant flavor.

If those who have never made trial of this system were once induced to adopt it, I am certain they would be convinced of the truth of the positions here asserted, and find themselves not only amply, but doubly rewarded for all additional labor. A.

Chester county, Aug. 26, 1837.

From the Genesee Farmer.

Questions respecting the economy of cutting up Corn—topping cornstalks should not be practised.

It has, we think, been sufficiently ascertained, that when corn is injured by an early frost, cutting it up contributes nothing to its relief, and nothing to its subsequent improvement. It is, we think, better in such cases, not to molest it, for unless the frost be a very deadly one, the corn will still derive nutriment from the stalks and leaves. There is another question related to this which we think merits the attention of agriculturists. The question is this: Is it, in general, good practice to cut up corn at all, or to cut up the stalks while the ears are attached to them? We are not for war, and if we were disposed to answer this question in the negative, we should scarcely dare do it, knowing as we do, that this would bring us into conflict with almost universal opinion. We will, however, suggest certain considerations, and leave the question to be adjudicated and settled by our readers.

1. Cutting up corn at any time before the leaves are fully dead, does undoubtedly injure the crop in some degree, affecting it probably both as to quantity and quality.

2. When corn is cut up, and the stalks secured in the best manner that they can be, it rarely fails that some of them get down, and thus both the corn and stalks are damaged by exposure to the weather. If it were not so, the large buts and stems of the stalks are of little value for fodder, for no sort of stock will eat them, unless compelled to it by dire starvation.

3. If the stalks be left standing in the field, cattle wll consume quite as great a portion of them in the field after the corn is gathered, as they would if they had been cut and gathered to the barn.

4. As materials for dung, stalks cannot be disposed of to better advantage, than to be allowed to remain where they grew, and there be mixed with the soil, as is usually done by subsequent tillage.

5. Cutting up and securing a well grown crop of corn, is a heavy and toilsome labor, involving, together with the subsequent ingathering of the stalks, no trifling item of expense.

If these things be true, is it, in general, good practice to cut up corn at all? In times of threatened scarcity of winter feed for stock, it may be, and probably is, wise and prudent to do it, in the vicinity of cities and large villages, where fodder commands high prices.

In agitating the question thus far, we have supposed that the stalks, if they were cut and gathered to the barn, were to be given to stock, without further cutting, or any other preparation. In the case of farmers who have good cutting apparatus to prepare their stalks for the use of animals, the question may assume an entirely varied aspect.

With a few occasional exceptions, our practice for several years has been, to let our corn remain unmolested, until the time of harvesting it. Sometimes we have cut up and gathered the stalks after the corn has been separated from them. This, when corn is harvested early, can be done to advantage, and if cutting be practiced at all, we think this is the better way. More generally we have left our stalks to be depastured in the fields where they grew.

The advantages of practicing as we have done, are supposed to consist, 1st. In a greater quantity and quality of corn. 2d. In exemption from much toilsome and expensive labor.

The only loss known to result from this practice, consists in the inferior quality of the stalk to be consumed as fodder. It does not appear that, as to quantity, there is any loss, for cattle will consume as great a portion of the stalks, while depasturing in the field, as they would if they had been cut, as is usually practised, and given out in the barn-yard. Neither does it appear that any thing is lost in connection with the economy of manures. Or if there be any loss in this article, certainly it is very small.

We offer these remarks for the consideration of farmers. The question is, are the advantages which, in ordinary cases, result from cutting up corn while yet in a state of imperfect maturity, sufficient to balance the damages which it does to the crop, and the expenses of doing it?

Hitherto we have said nothing relative to the practice of topping cornstalks, which formerly prevailed almost universally and prevails now to some extent. The economy of this practice has been the subject of so many experiments, and so much light in regard to it has of late been gained and disseminated in the public journals, that it seems scarcely necessary to reagitate the subject. By many well conducted experiments, it has been proved most conclusively, that topping the stalks of corn, while as green as to be worth topping, essentially injures the crop, often causing a reduction equal to one-fifth of its value. Among enlightened farmers, the practice of topping has fallen into general disrepute, and as it is most clearly an unprofitable practice, it should be entirely abandoned.

DAN BRADLEY.

Marcellus, Aug. 1827.

Culture and Manufacture of Silk.

In the cultivation of the Mulberry and the rearing of the silk worm, there are no difficulties which cannot be over-come with very little study and observation. So simple and easy is the management of the worm, that children can readily be taught to give it all the assistance and attention necessary to its comfort and the completion of its labors. We reared the silk worm ourself for three years, when a boy, and we can truly say that it was the most amusing employment we were ever engaged in. We have ever reverted to the time, as the most pleasant of our childhood. From two trees that were planted when the Mulberry was first introduced into New England, we reared from five to six thousand worms of a season, and without any of the knowledge which is to be obtained from books of foreign writers on the subject, or of the practical information which has been sent forth to the American public within the past few years. Our own experience induces us to advise all those who are fond of innocent, pleasant, and at the same time profitable employment, to turn their attention to the culture of the Mulberry and the rearing of the silk worm. Our climate and soil are well adapted to the business, and those who engage in it will be abundantly rewarded for their labors.—*Calhoun county Patriot.*

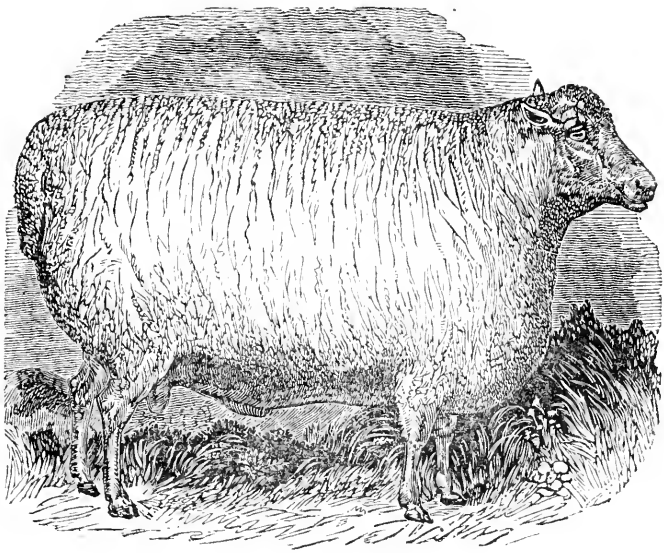

Fig. 8. The New Leicester.

As a lowland sheep, and destined to live on good pasture, the New Leicester is without a rival—in fact he has improved, if he has not given the principal value to, all the other long-woolled sheep.

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

This account combines the main excellences both of Bakewell's own breed, and Culley's variety or improvement of it. It is precisely the form for a sheep provided with plenty of good food and without any great distance to travel or exertion to make in gathering it.

The principal recommendations of this breed are its beauty and its fulness of form, comprising, in the same apparent dimensions, greater weight than any other sheep; an early maturity, and a propensity to fatten equalled by no other breed; a diminution in the proportion of offal, and the return of most money for the quantity of food consumed.

The sheep whose portrait is represented in the previous cut, belonged to the Duke of Bedford.

THE SOUTH-DOWN.

The hill sheep is adapted to more elevated situations and shorter feed on the natural and permanent pastures; able also to travel, without detriment, a considerable distance to the fold and to the down. There can be no hesitation in fixing on the South-Down as the model here.

The following is the substance of the de-

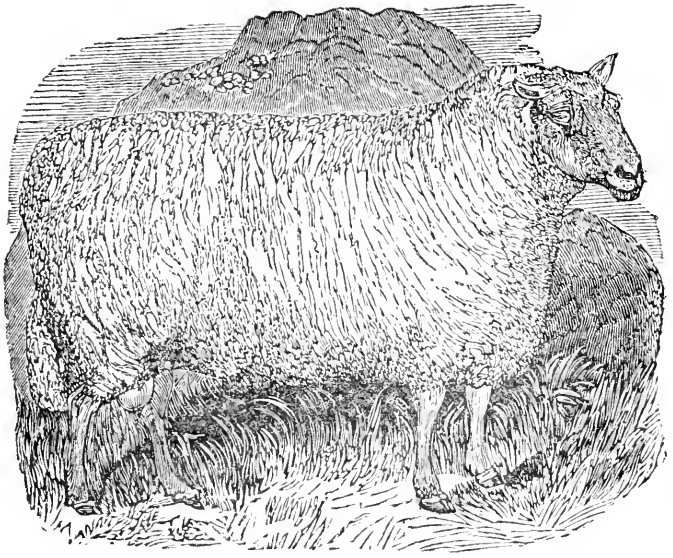

Fig. 9. The Chevoit.†

scription of this sheep by Mr. Ellman, who, if he may not be considered, like Mr. Bakewell with regard to the Leicesters, as founder of the breed, yet contributed more than any other man to its present improvement and value.

The head small and hornless; the face speckled or grey, and neither too long nor too short. The lips thin, and the space between the nose and the eyes narrow. The under jaw, or chap, fine and thin; the ears tolerably wide, and well covered with wool, and the forehead also, and the whole space between the ears, well protected by it, as a defence against the fly.

The eye full and bright, but not prominent. The orbits of the eye—the eye-cap, or bone, —not too projecting, that it may not form a fatal obstacle in lambing.

The neck of a medium length, thin towards the head, but enlarging towards the shoulders where it should be broad and high, and straight in its whole course above and below. The breast should be wide, deep, and projecting forwards between the fore legs, indicating a good constitution, and a disposition to thrive. Corresponding with this, the shoulders should be on a level with the back, and not too wide above; they should bow outward from the top to the breast, indicating a springing rib beneath, and leaving room for it.

The ribs coming out horizontally from the spine, and extending far backward, and the last rib projecting more than the others; the back flat from the shoulders to the setting on of the tail; the loin broad and flat; the rump long and broad, and the tail set on high and nearly on a level with the spine. The hips wide; the space between them and the last rib on either side as narrow as possible, and the ribs, generally, presenting a circular form like a barrel.

The belly as straight as the back.

The legs neither too long nor too short. The fore-legs straight from the breast to the foot; not bending inward at the knee, and standing far apart both before and behind; the hocks having a direction rather outward, and the twist, or the meeting of the thighs behind, being particularly full; the bones fine, yet having no appearance of weakness, and of a speckled or dark color.

The belly well defended with wool, and the wool coming down before and behind to the knee, and to the hock; the wool short, close, curled, and fine, and free from spiry projecting fibres.

The South-Down is adapted to almost any situation in the midland part of England; it has a patience of occasional short keep, and an endurance of hard stocking, equal to any other sheep; an early maturity, scarcely inferior to that of the Leicesters, and the flesh finely grained, and of peculiar good flavor.*

THE CHEVOIT.

The inhabitant of a still more elevated region and a colder clime, occasionally exposed to the severest storms, yet enduring them and thriving, will complete the list of models; and among the British sheep, the Chevoit most deserves to be selected.†

* Baxter's Agricultural Library, p. 453.

† For a very interesting account of this race of Sheep, see Farmers' Cabinet, vol. I., page 150.

From the Papers of the Philadelphia Agricultural Soc.

Hessian Fly.

Sharon, Bucks' county, Pa. Feb. 1, 1826.

Dear Sir,—Among the valuable memoirs of your society, there are several communications relative to the Hessian fly; but none of them sufficiently traces its history, or offers any plan that can be relied on to prevent its ravages. Indeed, it is lamentable, that an insect of its grade could have been suffered so long to have committed such devastation as has been ascribed to it. I, however, trust that its career will soon be closed, having during the last fall had an opportunity of investigating the subject, much to my own satisfaction; and as the society appears to feel a deep interest in it, I will now give you my ideas upon it.

On the 9th of October last, my very intelligent and worthy neighbor, Mr. John Linton, informed me, that on the preceding day, he saw the fly in the act of depositing its eggs upon the leaf of the young wheat in the stubble-field. Taking this valuable and well-timed hint, on the 11th, I went into the stubble field, to witness the interesting spectacle stated by Mr. Linton. I was, however, totally disappointed; not a fly was to be seen; but on examining the plants with a glass, I found the work was completed; an astonishing number of eggs were deposited, scarcely a plant had escaped, and some had more than twenty eggs each. Next day I met with one of the young caterpillars, that had just bursted its shell, and was moving down the leaf: the day after I discovered a plant where the caterpillars had all left the leaf (which I could readily determine by the mark or crust of the egg,) and by carefully stripping down the leaf, I saw them on the stalk, about a dozen in number, and some of them within an inch of the root. On the 18th of the same month, the caterpillars had generally passed from the leaf, and many of them had reached the end of their journey. About the middle of November, in a warm exposure, some of them had changed to the flaxseed or chrysalis state; and at this time the most of them are in that state. During my researches, I found them much the most numerous in stubble fields that had not been pastured, and that grain sown after September, had sustained no damage.

The history of the insect and its larvæ, as far as I have ascertained by actual observation, is as follows:—The fly certainly deposits its eggs in the gutters or furrows of the leaf, on the upper side, from half an inch to an inch or more from the stalk, choosing a position sufficiently exposed to the sun, and affording a sure passage to the stalk, preferring plants having only two leaves fully out; in a few days, probably not exceeding ten, if the weather should be favorable, the eggs (which are oblong, of a brown or somewhat yellow color,) become hatched, and the young caterpillar, of a reddish color, moves down the leaf to its junction with the stalk, then passes between the footstalk of the leaf and body of the plant to near the root, where it is usually seen; it soon afterwards assumes a transparent white appearance, being probably bleached by its covering; (I infer this, because I met with two cases where there was an aperture at its lodgment—it was nearly black) it there feeds on the sap of the plant, until it attains its full growth, and passes into the chrysalis state; it seems only calculated to perform a passage from the leaf to near the root; an outer coat or tegument is there formed, which renders it incapable of further motion; it then appears perfectly at rest, and is mistaken for an egg or nit (its prior state not having been noticed,) and the injury sustained is supposed to be by its pressure upon the stem of the plant, when, in fact, it is a worm actually feeding on its juices: as soon as it changes to the flaxseed color, by rolling it lightly with the finger, the tegument can be taken off, the worm will then appear with a greenish stripe through it, which is evidently the substance extracted from the plant: neither the egg nor young caterpillar, during its movement, can be distinctly seen without a glass; which every farmer ought to have, as it would enable him at all times to know the state of this and other insects. I think it probable, that another deposit of eggs will take place early in the spring, and perhaps a third between that and fall; but this conjecture remains for future investigation.

It appears to me that this insect can be utterly exterminated, by deferring to sow all grains affected by it until the fall deposit takes place; in which case the eggs will be lain on the young plants in the stubble field; then immediately afterwards commence pasturing or burning, which will destroy a large proportion, and any time during the larvæ state (about the first of November the last season would have been a good time, but even now would answer,) plough up the stubble fields well, which will finish the remainder, except such as are among the plants about stack yards, which must also be attended to. I have satisfactorily proven the efficacy of this plan, by ploughing a field where myriads were lodged; but it will probably fail of success, by not being generally gone into at the proper season, and it will be in vain for a few individuals to make the attempt. Let us then endeavor to ascertain that time of sowing which will be attended with most advantages; the first week in October, I have often heard

mentioned, by experienced farmers, as the most safe; but there have been instances of its being too early on account of the fly, and at other seasons too late on account of the winter. We may now, however, guard against the fall deposit, by observing the state of the insect, and sowing accordingly; and should the wheat be sufficiently rooted before winter sets in, I presume the spring deposit need not be dreaded, where the ground is well manured, and the season favorable: for although it will certainly destroy the branch upon which it is lodged, yet, the root being strong, it will throw up other branches sufficient to insure a good crop: nevertheless, we may be disappointed in our calculations, by an early or severe winter, and thereby sustain more damage than we should have done by the fly if sown earlier; besides, should the wheat not be well rooted when the spring deposit is made, it will undoubtedly be seriously injured. Under all these circumstances, I am clearly of opinion, that it would be best to sow the grain as early as possible, not later than the first of September, and immediately on the fly completing its deposit of eggs, (which can easily be known by proper attention,) turn in sheep or cattle sufficient to pasture it close in the course of a week or ten days: if the deposit should not be made before October, (as was the case last season,) the grain will not be injured by pasturing; the cattle, or whatever may be turned in, will be benefitted; and the roots of the plants will then have attained strength to resist the attack of the fly, in case pasturing should prove ineffectual. I can now show roots in the stubble field, that have completely resisted the attack, even where a great number of the larvæ are lodged. If it should so happen that it will be imprudent to pasture, and the ground is not too rough or stony, I would suggest the propriety of rolling, commencing as soon as the eggs are hatched, as the caterpillar is then in a tender state, and while on the leaf or upper part of the stalk might be easily crushed. As a further precaution, I would think it advisable not to sow near a stubble field; but where it cannot be avoided, perhaps sowing rye on that side might have some tendency to preserve the wheat. I conceive it an error to say that any kind of wheat is of that vigorous growth, that the stem will resist the fly; if the fly attacks it at all, it is the root that must be depended on, and it is idle to suppose that sowing oats with wheat (as recommended by some writers,) can have any good effect. This is fully proven by the practice of sowing wheat on oats stubble; the usual complaint is "too much oats," without in the least degree preserving the wheat; besides, I have during the past season, carefully examined the oats, and did not discover a single instance of deposit amongst it. The fly is remarkably sagacious in depositing its progeny, its eggs being exactly fitted to the gutter of the leaf of the plant, where it is very securely lodged. I, therefore, infer, that if there is a kind of wheat which the insect avoids, it must be on account of its leaf being smooth, and not offering a place of safety. I do not know that there is any such kind, but I think it deserves examination. I shall consider it my duty to endeavor to trace the insect and its effects throughout the whole year, and should any thing further appear worth communicating, you may expect to hear from me.

Yours, very respectfully,

JAMES WORTH.

R. VAUX, Esq., Sec. to the Phila. Soc. for promoting Agriculture.

For the Farmers' Cabinet.

Make your Hogs work.

Much has been said in the agricultural publications of the day, and especially in the New England Farmer, on the subject of manure. It is one that claims the attention of every farmer—of every one especially who would excel in the honorable art of husbandry. It may not be amiss at this season, to recapitulate some of the observations on this point, contained in the work referred to. A highly valuable manure, with a little attention, may be obtained from swine—the following is the method: "I usually keep and fatten, says the writer, four hogs in a year; these I keep confined in a yard twenty feet square, with a warm and convenient shed attached thereto as a shelter for them during the night time, and in cold and stormy weather." Into this yard he placed the scrapings of ditches, the dirt that is continually in and about buildings—this became mixed with the straw with which they were littered. The whole was cleared out as often as it was judged expedient. The quantity and quality of the manure would be greatly increased, if the pen was supplied with weeds, (an excellent way this of turning these noxious plants to good account,) and in the absence of weeds, which, by the way, is not very common, even on our best cultivated farms, resort may be had to the woods—here the farmer has an abundance of weeds and other rubbish that may be used to great advantage. The writer states that he has, in this way, with four hogs, made from twenty-five to thirty loads of manure in a year; which, in his judgment, answers a more valuable purpose than that from the stable or barn-yard. He says, "The last spring I planted a field, containing two acres, with corn. One-half of the piece was manured in the hill with ten

loads from the hogpen, the other half with the same quantity of the best manure the barn-yard afforded. A visible difference was to be seen in the growth of the corn through the season, and at the time of harvest the difference was still more discernible. That part manured from the hogpen produced ears generally much larger than that manured from the barn-yard, a great proportion of the stalks bearing two, and many of them three ears each. Having harvested and measured my corn, I found the result to be as follows: the produce of the part manured from the hogpen fifty bushels, while that of the other part was but forty-two bushels, making a difference of eight bushels in favor of the former. I have lately taken twenty-eight loads of strong manure from my hog-yard, which has been collected the past year, and which will be a sufficient quantity to manure two and a half acres in the hill; and should the difference be as great in its favor the next as it has been this year, the extra produce will more than repay the whole expense of making the manure.

Manures may be divided into two classes. The one is called animal and vegetable or putrescent manures. They consist of decayed and decaying animal and vegetable substances. The other class is denominated fossil manures. The last mentioned do not properly constitute the food of plants, although they enter into the composition of vegetables in minute quantities. Fossil manures stimulate plants, and cause them to take their food faster than they otherwise would. They are like what medical men call *condiments*, and answer the same purpose as respects the economy of vegetables, which salt, pepper, spices, &c. effect as regards the animal economy.

Rye.

The farmer who has it in his power to drive his business, instead of being driven by it, will do well to sow his winter rye somewhere between the middle of August and the 15th of September. The advantage of sowing early is, that it is less apt to winter-kill, will require less seed, the growth will be stouter, and the produce greater, other things being equal, than if the sowing was deferred till late in autumn. Foreign writers assure us that winter and spring rye are one and the same species. The editor of the Farmer's Assistant says, "there is but one kind of rye; but this may be made either winter rye, or spring rye, by gradually habituating it to different times of sowing. Take winter rye, for instance, and sow it later and later, each fall, and it may at length be sown in the spring; and then it becomes spring rye. On the contrary, sow spring rye very late in the fall, at first, and you may gradually sow it earlier each succeeding year, until it may even be sown in May, and used the first season for pasture, or mowing, and then grown to perfection the second year. Soils of a sandy or gravelly texture are the most natural for rye. Almost every kind of dry soil is more or less suited to its growth; it will even grow tolerably well in bog meadows, when laid sufficiently dry. It will produce considerably on the poorest soils; and prodigious crops of it may be raised on such as are made very rich, as may be seen from a case reported by Mr. *L'Hommedieu*. A neighbor of his manured twenty square rods of ground with four thousand Monhaddan fish, and sowed it with rye. In the spring, it was twice successively eaten off, close to the ground, by sheep breaking in after it had acquired a height of nine inches the first time, and six inches the latter. These cropings, however, only served to make it grow thicker and stronger than before; and, when harvested, it produced sixteen bushels, or, at the rate of one hundred and twenty-eight bushels to the acre; giving to the owner, according to the calculation of Mr. *L'Hommedieu*, at the rate of eighty-five dollars to the acre of clear profit. He supposes, however, that the crop would have been entirely lost, had it not been twice eaten off by the sheep. It is said that prodigious crops of wheat may be raised in the same manner.

Rye is subject to rust, but seldom or never to smut; nor, indeed, to any other disease that we know of, in this country. M. *Du Hamel* makes mention of a disease it is subject to in France, called the *spur*, which causes a dry gangrene in the extreme parts of the bodies of those who eat the grain thus diseased; so that these parts at length fall off, almost without pain. 'The Hotel Dieu, at Orleans (says this Author) has had many of these miserable objects, who had not any thing more remaining than the bare trunk of the body; and yet lived, in that condition, many days.' The grains thus diseased are larger than the rest, mostly crooked, bitter to the taste, rough, deeply furrowed from end to end, and project considerably beyond their husks. It is not every year, however, that the spur produces these effects in that country; and if the grain be kept some considerable length of time, before it is eaten, it will not prove hurtful. We notice this disease of rye, in order that, if similar effects should ever be produced from it here, the cause of any such malady, and the means of obviating it, may be more readily understood.

Rye may be raised for many years in succession on the same ground, without materially exhausting the soil, particularly if it

be perfectly suitable to the growth of this grain; and provided, also, that the stubble be turned under immediately after taking off the crop. But where the ground is suffered to remain unploughed, till the stubble has become divested of all its moisture, and the seeds of the weeds have ripened, the successive crops will gradually lessen in product, and the weeds will increase. We would, however, by no means recommend such a mode of culture, unless as much as twenty-five bushels, or more of this grain could be yearly had from the acre; as such a yearly product would probably afford a clear profit, to the acre, of half that number of bushels; and such a profit, in some of the lighter, and in some of the harder kinds of soils, is not to be despised. As the soil most suitable for rye is usually that which is most benefitted by the use of gypsum, it would be much the better plan, instead of successive crops of winter rye, to sow this grain, and spring rye alternately, in order that the ground might, every other year, be enriched by the application of this manure. The growing crop of rye receives no benefit from the application of this manure; but it quickly covers the ground with a find sward of white clover; and as soon as ground is thus swarded, it is in good condition for bearing any crop. Let the gypsum, therefore, be sown in the spring on the growing crop of winter rye; and, by the middle of October following, the ground will be covered with white clover; turn this sward over in the latter end of the fall, and in the spring sow a crop of spring rye; and as soon as this is taken off, turn the ground over again for a crop of winter rye; and in the spring repeat the process of manuring with gypsum, as before, for a crop of spring rye, and thus proceed with these crops alternately. In this way, we will venture to say, that nearly double the amount of grain might be obtained in each crop; particularly in the northerly part of our country, where spring rye is nearly as productive as that of winter. In such a mode of culture, however, particular attention should be paid to turning under the stubble of the crop of spring rye as quick as possible, in order that the seeds of the growing weeds be prevented from ripening, as well as for enabling other seeds, which may lie buried in the soil, to vegetate, and thus be destroyed by the after ploughing and harrowing for putting in the next crop.

Many farmers may have pieces of hard gravelly, or very light sandy soil, for which such a mode of culture might probably be found as profitable as any to which the land could be applied. But of this, the judicious farmer will be best enabled to judge, after obtaining a full knowledge of what mode of culture is most profitable for his more sterile grounds; and in order to this, he must estimate the expenses of putting in his crops; the clear profits, after paying these expenses, and the rent of the land; and, whether his lands are likely to become, eventually, more exhausted by such mode of culture, than by a change of crops, where grasses suitable to the soil, should be cultivated during some seasons. Where winter rye is early sown, a bushel to the acre is probably sufficient; but of spring rye, a bushel and a half to the acre, or perhaps more should be sown.

Rye intended for family use, should be harvested as early as the grain can be prevented from shrinking, and let lie on the ground a day or two to harden. In this way, the grain will make much whiter flour; though, perhaps, the product will not be quite so heavy and bulky, as when left till fully ripened. Probably all that is gained by letting the grain fully ripen, before harvesting, is an additional thickness of the skin; thereby increasing the quantity of bran, but not of flour.

Breaking up Grass Lands.

The Code of Agriculture has some general remarks on this subject, which we insert as the experience of the best agriculturists.

If the land be wet, it is advisable to drain it completely, previous to its being broken up.

Land that has been long in pasture, does not require dung during the first course of crops that is taken after being broken up, but the application of calcareous manure, is always, in such cases, expedient. Sometimes lime is spread on the ground before it is ploughed; at other times, marl and chalk have been used for the same purpose, with great advantage. The land thence derives additional strength and vigor; the succeeding crops are much improved; the soil is commonly so softened in its texture, that it may be ploughed with half the strength that would otherwise be necessary, and whenever it is restored to grass, the herbage is abundant.

Wherever the soil is not too shallow, nor of a friable nature, or when the turf cannot soon be rolled, if land is to be broken up from old pasture, paring and burning is the proper system to be adopted. In this way, good tilth is speedily procured; the damage that might otherwise be sustained by the grub, the wire worm and other insects, is prevented while the soil receives a stimulus, which ensures an abundant crop.

When paring and burning, from any circumstance, cannot take place, the land may be trenched, or double-ploughed. This is effected by means of two ploughs following each other, the first plough taking off a thin

surface of about three inches, and the second going deeper in the same place, covering the surface sod with fine mould; both furrows not exceeding the thickness of the vegetable mould, or other good soil.

If the land is ploughed with one furrow, the operation ought to be performed before winter, that it may receive the benefit of the succeeding frosts. by which the success of the future operations will not only be promoted, but most of the insects lodged in the soil will be destroyed.

When one furrow alone is taken, the best size is four inches and a half deep, by eight or nine wide. The strain on horses, in ploughing lay land, is mostly from the depth.

The rotation of crops to be adopted, when grass lands are broken up, must partly depend upon the soil, and partly on the manner in which it is prepared for cultivation. As a general principle, however, it may be laid down, that unless by the course of cropping to be pursued, the bad grasses and other plants indigenous in the soil, are extirpated, they will, when the land is again laid down to grass, increase and prevail with more rapidity and effect, than the seeds chosen by the farmer; and the consequence must be, a heavy disappointment in the future crops of grass, perhaps solely, or at least principally attributable, to a previously defective management.

Sugar Beet.

D. L. Child, Esq., agent of a Sugar Beet Company in Illinois, writes from France:

The most interesting aspect of the Beet Sugar business, is its bearing upon agriculture and rural economy.

1. It enriches the land, both as an excellent substitute for fallowing, and as producing an immense quantity of capital manure.

2. It has the latter effect in various ways, but principally by feeding a large number of cattle and sheep. The former are fattened in three to three and a half months, and in a manner that is really superb. So fine specimens of beef creatures are seldom seen in the United States, after six months of the best pasturing and stall feeding. The sheep are fattened in six weeks. At the manufactory where I have been, they pay on an average, about six louis for cattle, and sell them for about eleven. A louis is about for $4 37. I suppose that this branch of the business would be quite as lucrative in the United States, where stock animals may be bought somewhat cheaper. This, you see, is doubling capital three times a year, with the help, however, of the pulp or pumice of the beet. This can be kept good any desirable length of time. It is sold here at 10 cents the cwt.

3. The profit of raising the beets is very great; according to estimates which I have from the most intelligent sources, I do not find it so high as Mr. Pedder did. My data make the nett gain in France, after paying rent, ploughing, weeding, hoeing, digging, and preserving, 404 francs per hectare. This measure is a trifle over two English acres. Consequently the profit of cultivating beets on an acre, will be 202 francs—about $38. Can you wonder that land has risen from fifty to one hundred and fifty per cent. in the districts of the sugar manufactories. The wages of labor for cultivating and manufacturing the produce of an hectare, amount to $56 81. This would give for one hundred acres, $2,840 nearly; and for 400, which would be the quantity required for the largest establishments, $11,830, to say nothing of the profits of the proprietor, or lease holder, when he and the laborer are one and the same. In this case, besides getting pay for his labor, he would receive $38 profit per acre. Wages will be higher in America, and the profits of the laborer and proprictor still more encouraging. In one manufactory which I visited, two-thirds of the hands were women, who are paid much less than men. But there is no reason why it should be so, for they do just as much work, and just as well as men. They do the principal part of the weeding and dressing of the crop every where."

Beet Sugar.

A new process has been discovered at Strasburg, by means of which a white crystallised sugar is produced in twelve hours from beet root, and which does not require any further refining. This invention is the more curious as neither any acids or chemical agency is employed in this remarkable operation and the use of animal blood is entirely dispensed with. It has also the advantage of saving twenty-five per cent. in the consumption of fuel. The new process is also applicable in all the present manufactories of sugar, with the exception of those upon the principle of dessication of the beet root. The inventor is M. Edward Stolle, who, though not more than twenty-five years of age, is already highly distinguished for his experiments in chemistry, and his works in polite literature.

The Erie Observer says that choice fruit can be obtained in a shorter way than by grafting. It consists in *planting* instead of grafting. The limb of an appletree cut in the spring of the year, at the usual time of trimming, with the cut end stuck into a potatoe, and planted in the ground, is more likely to grow and become a thrifty tree than a graft inserted in the usual manner.

Profitable Dairy.

The dairy business having become so important a branch in the department of the agriculturist, that I feel it my duty to communicate the result of one of my farmers, a gentleman by the name of John Bush. He had fourteen cows of the common country breed, but better, on account of being better fed. He raised six calves, which were fed on milk ten weeks.

Made 2342 lbs. of first quality cheese, which sold at $8 per hundred,	$187 36
Made of butter, 1591 lbs., the average price, 19 cents,	302 29
Six calves at $3 a head,	18 00
	$507 65
Ten hogs fed on skimmed milk and whey, worth say, $3 per head,	30 00
	$537 65
Hay and pasture for the 14 cows, at $10 per head,	140 00
Nett proceeds,	$397 65
The average per head,	28 40

Such were the returns from a lot of cows that cost $20 a head.

Mrs. Bush pursued the old fashioned way, by skimming the milk and churning the cream, and our friends in Ithaca preferred her butter to any other brought to that market.

We have tried the method of making butter in winter by heating the milk in the pans after straining, to 130 Fahrenheit thermometer; the quality is a little improved, the quantity more, and the labor of churning is less than one half the time required in the old way.

The washing of butter in cold hard water, or soft, when taken from the churn, we think injurious to the quality of it, and takes from it that peculiar flavor which we so highly prize. If you think the above statements will be useful, let them find a place in your Genesee Farmer.

LEWIS BEERS.

Rasping Machine.

In Thorndike we saw a very simple apparatus for grinding or rasping apples, to make cider, which we thought would answer very well for rasping beets. It consisted of a short cylinder, about 8 or ten inches in diameter, in which were driven bits of wire or headless board nails, in columns, about three or four inches apart, running spirally, lengthwise of the cylinder, and the nails or wires separated, perhaps a quarter of an inch. This is made to revolve at the bottom of a hopper, and close to a hard facing on one side. The apples are crushed between the teeth on the cylinder and the hard facing, at the rate of about one bushel per minute. This apparatus is carried by water. It is owned by Capt. Timothy Ferrel, a very large farmer. The same water machinery is made to turn a grindstone and churn butter. A long lever, swung in the middle, which can be connected with the grindstone crank balances up and down and plies the churn dasher at the other end. The butter from a large churn full of cream can be extracted in about five minutes. The water power is nothing but a little babbling brook, but Yankee ingenuity has compelled it to well work its way to a larger stream—to water horses, grind apples, turn grindstone, churn butter, and irrigate a fine home-lot.—*Hampshire Gazette.*

Farmer's Work for August.

SECURE THE PRODUCTS OF HARVEST.—The Baltimore Farmer advises as follows: "After your harvesting shall have been completed, then turn your attention to getting out your grain for market. The sooner that is done the less you will lose by vermin, and in nine times out of ten, you will find that your grain will command as good a price at this season of the year, as any other. Besides, the sooner the better this necessary work is off your hand, as being relieved of it, you will be able to avail yourself of circumstances as they occur, and thus turn every thing to the best advantage.

At a late Agricultural meeting in this town, the Rev. Mr. Barastow stated a fact which should be more extensively known. He, last year, bargained to let his few acres for the season, but the man objected to half an acre of sandy land, as not worth cultivating. "Very well," said Mr. B., "I will take care of that myself." He planted it with yellow corn, having only a thin coat of manure, the last of April—covered it double the usual depth, so that the root was safe, while the frost nipped the top off once or twice. When it was fit to hoe, he spread around each cluster of stalks one-third of a pint of house ashes. In the fall he husked from the half acre, seventy bushels of sound ears.—*Keene Sent.*

The wheat harvest in the upper part of South Carolina is now over, and the crop has proved very good. A Greenville paper says, "it has certainly been many years since the harvest throughout the Southern states has yielded so abundantly, or so large and beautiful grain."

ARTICLES.	Philadelphia, Aug. 29.	Baltimore. Aug. 28.	New York, Aug. 28.	Boston, Aug. 23.
Beans, white, per bush.	$1 37–1 62½	1 25—1 50	0 00—0 00	1 37—1 75
Beef, mess, new, per bbl.	14 00–15 00	13 00–14 00	13 50–14 50	15 00–15 50
Bacon, western, per lb.	8½— 10	7— 9	8— 10	.....
Butter, extra, per tub	12— 13	16— 20	18— 20	17— 22
Butter, fresh, per lb. (market,)	18— 25	20— 25	25— 31	24— 27
Hams, per lb.	12— 15	10— 13	12— 14½	10— 12
Hog's Lard, per lb.	11— 12½	9— 10	9— 10½	9— 10
Cheese, American, per lb.	10— 10½	9— 11	7— 9½	9— 13
Beeswax, yellow, per lb.	25— 26	23— 25	23— 25	26— 29
Beeswax, white,	.....	38— 40	38— 40	38— 40
Bristles, American,	42— 65	25— 65	25— 65	.....
Flax, American,	8½— 9	9— 10	9—	9— 12
Flour, best, per bbl.	8 25—9 00	7 87—8 50	8 00—9 25	9 00—9 25
GRAIN—Wheat, per bush. Penna.	1 70—1 90	1 75—1 8	1 80—1 85	.....
do. Maryland,	1 60—1 75	1 25—1 65	1 74—1 75	.....
Rye, per bushel,	85— 95	65— 75	—1 00	1 05—0 00
Corn, do.	98—1 07	92—1 02	1 00—1 05	1 10—1 12
Oats, do.	40— 48	36—	52— 65	00— 00
Barley, do. Penn.	.....	.....	1 06—	1 00—1 10
Peas do.	1 00—1 25	87—1 00	—	.....
HAY, Timothy, per 100 lbs.	75—1 10	00 00–00 00	.....	20 00 pr ton.
Meadow Grass,	70— 80	.....	.....	.....
Hemp, American dry rot, ton,	175 00–	0— 0	130 —140	.....
Hops, first sort, 1836, lb.	7— 8	— 9	4½— 6	6— 7
Plaster Paris, per ton,	3 25—3 37½	4 00—	.....	2 00—2 25
SEEDS—Cloverseed, per bushel,	5 50—6 00	6 00—6 50	.....	.....
Flaxseed, rough, do.	1 35—1 40	1 37—1 50	.....	.....
Timothy,	2 —	3 00—3 50	.....	2 87—3 00
Tallow, per lb.	8½— 9	— 11	8¾— 9	10— 11
WOOL—Saxony, fleece, per lb.	00— 00	40— 50	50— 68	.....
Merino,	00— 00	35— 40	50— 58	.....
1-4 and common,	00— 00	25— 30	40— 50	.....

Gentlemen whose subscriptions commenced with the thirteenth number, or second half year of the first volume of the Cabinet, and who may wish to complete their sets by obtaining the first twelve numbers, should make early application for the same. All letters on this subject, must be post paid. ☞ Post Masters are hereby authorized and respectfully requested to forward us the names of persons who may wish to *continue* the work, as well as the names of *new* subscribers; and after retaining twenty per cent. commission, transmit us the balance of any moneys they may have received:—And any gentleman may constitute himself a special agent, by remitting us five dollars, free of postage, for which sum, we will forward seven copies according to his direction.

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THE FARMERS' CABINET,

DEVOTED TO AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

Vol. II.—No. 4.] Philadelphia, September 15, 1837. [Whole No. 28.

To the Editor of the Farmers' Cabinet.

Horticultural Society.

The Annual Meeting of the Pennsylvania Horticultural Society was held on the evening of the 4th September. Horace Binney, President of the Society, was appointed Chairman, and James S. Newbold, Secretary. The meeting proceeded to the election of officers for the ensuing year, when the following gentlemen were duly chosen:

President—Horace Binney.

Vice Presidents.—Charles Chauncey, Joseph Price, George Pepper, Robert Carr.

Treasurer, John Thomas.

Corresponding Secretary, J. B. Smith.

Recording Secretary, Garvin Watson, M. D.

Council.—J. J. Vanderkemp, Richard Price, Henry C. Carey, Andrew Dryburg, Thomas Astley, Alexander Parker, James Laws, Isaac Meyer, Robert Buist, Samuel C. Ford, John W. Burrows, C. W. Churchman, Joseph T. Mather, Charles Roberts, Thomas P. James, Horace Binney, Jr., John M'Arran, Daniel Maupay, George M. Coates, Christopher Langstroth, J. B. Smith, P. K. Gorgas, Charles B. Trego, Frederick Brown.

ANNUAL EXHIBITION.

The Society will hold its tenth Exhibition at the Masonic Hall, Chesnut street, on Wednesday and Thursday, the 20th and 21st of the present month, September. The Committee charged with the preparatory arrangements, solicit contributions in Fruits, Flowers, or Culinary Vegetables; and specimens of either of a quality meriting distinction, will be thankfully received and publicly acknowledged. When transmitted from a distance, by public conveyance, the Society will cheerfully defray the cost of transportation. They may be addressed to Messrs. D. Landreth & Co., at their Seed Warehouse, No. 63 Chesnut street. To prevent confusion, it will be necessary to present all but the Bouquets on Tuesday the 19th; the latter may be furnished on the mornings of the days of exhibition.

Should you be unable, personally, to furnish any thing towards the contemplated display, you may perhaps essentially aid by extending the notice of this circular.

John B. Smith,
Peter McKenzie,
John McArran,
Daniel Maupay,
Robert Buist,
Committee of Arrangement.

For the Farmers' Cabinet.

OBSERVER---No. XI.

In a preceding number of the Cabinet, I attempted a brief explanation of the nature and process of bony ulceration, or caries, for the special benefit of Subscriber. He acknowledges that he did not possess the information given;—says that he loves to know things; and, is willing to learn from any one;—yet, he becomes restive under instruction, and appears to doubt the truth of the information afforded. "I am not aware, says he, of any reason why I should be supposed to know it, for, I presume that such information is not generally possessed by men, either of scientific, or ordinary knowledge." Neither had I any reason to suppose that he did know it, but strongly to the contrary, or I should not have given the information. Whether it is "generally possessed by men of scientific knowledge," is quite another question. I aver, that ever since John Hunter wrote his admirable and demonstrative dissertation on what he hap-

pily calls, "*ulcerative absorption;*" there have been very few scientific men, who did not possess the knowledge in question, viz: "That bony caries is an ulceration of living bones, produced by the action of the absorbent vessels, which take up and carry off the bony matter." It is true, that some previous morbid exciting cause must exist, to stimulate the absorbents into such action—but this by no means changes the aspect of the case at issue. This doctrine may be found in almost every work on surgery, written since the days of Hunter, which speak of the pathology of caries. I will make a few quotations—a thousand others might be added.

"Whenever any solid part of our bodies undergoes a diminution, or, is broken in upon in consequence of any disease, *it is the absorbent system which does it.*"—*Hunter on Inflammation, p.* 409.

"Necrosis and caries differ in this particular respect; in the former, the bone is entirely deprived of the vital principle; but in the latter, *this principle exists*, and the disease consists in a *morbid action*, by which the asseous texture is destroyed.—*Boyer on Diseases of the Bones, p.* 165.

"Caries differ from necrosis, as ulcer differs from gangrene. In caries, *there is action, and the absorbents remove the diseased bone.* In necrosis, the bone is dead, and the absorbents of the *neighboring living bone* detach it, as a slough, or escher is detached in the soft parts."—*Dorsey's Surgery, vol.* 2, *p.* 408.

"Caries was often confounded with necrosis—it differs from it, however, in the same way that ulceration differs from sphacelus—caries, being the result of *an inflammatory action which alters the texture of a bone without destroying its vitality.* Necrosis, is the consequence of a peculiar influence, that involves the complete, or partial death of the original bone, and at the same time, repairs the injury by the formation of a new one."—*Gibson's Surgery, vol.* 1, *p.* 372.

Enough has now been said to show, that however gray Subscriber may have grown in the pursuit of knowledge, he is, to use his own significant phrase, a "green horn" in pathology—alike unacquainted with the plainest principles, and the commonest opinions, embraced in this discussion. Yet, unqualified as he is, he goes on to give a flippant lecture on the physiologico-pathological action of the absorbent vessels—and it is just such a lecture as I would expect to hear from such a lecturer. Thus, he says, "so far is the action of the absorbent vessels from *producing ulcerations that it removes them*—or, more properly speaking, separates the living from the dead matter." Now in what way do the absorbents *remove* an ulcer? Suppose an ulcer to exist on the arm, (I do not care whether it is alive or dead, so the arm is a living one,) and let the absorbents separate and remove that ulcer, either entire or by piece meal—the ulcer on the arm will still remain, and be made larger by the process. The old ulcer, if you please, has been *removed*—but another, and a larger one, has been *produced* by the absorbent vessels. How then, I ask, do the absorbent vessels *remove* ulcerations? If this principle is correct, we shall soon have it verified by the manufacturers of wooden bowls down east—for, having once obtained a block, they could first turn out a bowl, leaving a cavity in the space it had occupied—but by taking out another, the whole cavity would be *removed*, and the timber restored to its former solidity—thus by this alternate process of scooping out, and filling up, they would be enabled to employ all the appliances of wind, water, and steam in making bowls, to the end of time, from a single block of timber.

By confounding together the two diseases mentioned in the foregoing extracts—caries and necrosis,—Subscriber has also confounded the actions of the absorbent vessels, which are widely different in the two cases. "In caries, says Dr. Dorsey, there is action, and the absorbents remove the diseased bone. In necrosis, the bone is dead, and the absorbents of the neighboring living bone detach it."

Believing that this discussion has already occupied a full share of the pages of the Cabinet, tired of the cavillings of Subscriber—and convinced, moreover, that his object is not so much to substantiate facts, and elicit truth, as to "beat me out,"* I shall pursue the subject no farther at present, unless some new facts shall be furnished, possessed of additional value.

I shall embrace the first leisure in following the good example which Subscriber has set me, by turning to some other, and more interesting subject, to the generality of my readers.

New Garden, 9 mo. 8th, 1837.

Beet Sugar in Bohemia.

The manufacture of sugar from the beet has progressed already to such an extent in Bohemia, that it has been proposed to reduce the duty on colonial sugar from twenty florins, to four, per hundred. This proposed reduction of four-fifths of the present duty is said to cause great alarm among the manufacturers of indigenous sugar.

* Soon after Subscriber's first essay on horns appeared in the Cabinet, a friend told me, that in conversation with the writer on the subject, he had expressed a determination to "beat me out." His last essay has finally accomplished that *important* object, and I am free to acknowledge that I am *beat out* indeed.

The following letter, from a friend in Washington, was intended for our last number, but it was not received until our paper had gone to press.

Washington City, Aug. 22, 1837.

To the Editor of the Farmers' Cabinet:

In looking to the present condition of affairs, and following the retrospective with a prospective view, we are called upon to put in requisition, all our fortitude, sympathy and forbearance. Fortitude to bear us up under our trials, sympathy for the general distress, and forbearance to those who have been placed in our power by untoward events. Truly, the state of the times has been distressing, yet the cry of "hard times" has accompanied every year, nay, every *month* and every day since my recollection; and a worse predicament may enthral us before we shall enjoy improved circumstances. The merchant has felt the shock, the manufacturer is staggering under the blow; the mechanic, the farmer, and the laborer are none of them to escape unhurt. Yet, amid the distress consequent upon the wreck of fortunes, there are many individuals in all classes of society, who have cause to comfort themselves on their forethought and prudence "*in leaving well enough alone*," without having entered into hazardous enterprises, for the purpose of bettering their condition. Prudent industry has indeed ample cause of felicitation, and in no class is this exemption from dire calamity likely more to abound, than among the farmers of the middle and northern states. While the precocious plant, that like "Jonah's gourd," which grew up in a night, is blasted by the storm of adversity, the more humble one of the farmer, whose growth has been slow but sure, will be found strongly rooted in its native soil in despite of the whirlwind, with perhaps a partial loss of its foliage. Whether the measures of the government have contributed to the present distress, or how far it may be in the power of Congress, at its anticipated meeting, to afford relief, it is not my intention to discuss. Yet there are causes, not political, which we may with propriety and perhaps with profit, canvass, which have had considerable influence in producing the present unexampled embarrassments. It is our province to profit by past errors, and like the bee, extract honey from the apparently bitter plant. Not only is adversity a better teacher than prosperity, but it is the only school in which *some men* will learn. A prevalent and unaccountable desire not only to surpass one's neighbor in obtaining riches, but to live more ostentatiously, as if our happiness (the great object of pursuit,) depended more upon reputed wealth than a competency, with a disposition to enjoy it rationally, in temperate indulgence, and a proper discharge of our duties. The dull plodding pursuits of labor did not promise soon enough to realise to many, their golden dreams. Commercial and other extensive enterprises producing temporary success, were heralded over the world. Many new adventures being started, property acquired a fictitious value. Banks and other new facilities being multiplied, the belief daily gained ground, that with so many fields of speculation, the ruling passion might soon be gratified to an indefinite extent. Too many seeking thus to gain fortunes by their wits, and too few to earn them by their labor; multitudes were transferred from the *producing* to the *consuming class*, and the imports for a single year, exceeded the exports more than sixty millions of dollars. Our citizens thus became greatly in debt at home and abroad; notwithstanding which, speculation was rife in every quarter of the country, and in every description of property. The moderate well-doing capitalist, aspiring to the condition of the extensive, busy merchant, quitted the little business for which his qualifications and his means fitted him to be useful. Farmers and mechanics, deeming the employments in which they had prospered, too humble for their sons, raised them to the dignity of the learned or mercantile profession, and thus, while the consuming population were increased beyond their due bounds, the laboring, the producing class, was greatly diminished. With the fancied accumulation of wealth, extravagance kept *apace*, to the great detriment and shameful neglect of *agriculture*, the main business of our country, and source of our wealth, which was greatly curtailed in its products, both from this cause and the general failure of crops. Provisions doubled in price, and importations of foreign grain became extensive. At length, selling day has come! and thousands are reduced to bankruptcy, (either by the indiscretion of themselves, or those for whom they had vouched,) who had believed themselves secure in opulence; *general distrust* has taken the place of *general credit*. The foreign merchant who has not been a stranger to pressure, owing to the extravagance of his own land, has required of our importers, payments of their heavy debts, and that too in the *precious metals!* who, upon turning to the banks in this country for assistance, find them with one accord to close their vaults against them, and suspending specie payments, having generally issued notes twenty times the amount of their real capital or solid basis, and under the necessity of the case,

the country is found flooded with individual printed bills for the purpose of change in the ordinary transactions of life; which now constitutes the reward of the laborer, at a depreciated value compared with current money. Commerce is paralyzed; manufacturers are suspending their operations and discharging their workmen. The mechanic is necessarily curtailed in his business, and many thousands who depend upon their labor for bread, are thrown out of employment, while property of all kinds has depreciated below its minimum value.

To prescribe the means of restoring the community to prosperous circumstances, would be a task beyond the capacity of an humble pen; but some of the most important in my estimation, I will take the liberty to suggest.

We must wed the hands to labor—the head to knowledge. Those who have forsaken *rural* labors and been disappointed in their utopian dreams of riches and happiness, should return with the humility of the prodigal son to a forgiving parent. They will be kindly received, and amply remunerated for their labor, especially among agriculturists, whose fields are offering the same facilities of nature to the fostering hand of industry. Thus we may save millions to the country, which, last year, were sent abroad; or for which, in bread stuffs, &c., we are still in debt. We must live more within our means and become examples of prudence to our less opulent neighbors. In those who (so contrary to the principles and policy of a republican government.) hold themselves to be of a higher order than the honest and respectable in more humble circumstances, example is contagious, be it good or evil, and they who squander away with princely extravagance the substance of this life, inflict the direst evils upon community, and mistake alike their own true dignity and happiness; the true spirit of our institutions and the best interests of our country. Our expenses of living have, upon an average during the last thirty years, been quadrupled, and whence the necessity? None existed. Were they increased for necessaries and comforts? They were not, but for the baneful luxuries and superfluities of life. *We live too high. We dress too fine.* We are now (in the midst of calamity,) the *finest dressers* and the highest livers in the universal world, and though we plainly see to what a state of things we have arrived therefrom, few are willing to practice a commendatory degree of self-denial. Have we not had the fashions of cooking, eating and dressing from at least four European nations to follow? And have we not kept pace with all of them combined, especially in our cities and towns? That we have consumed more time in show and luxury, to say nothing of needless corrupting amusements, there cannot be a possible doubt, and how painful the reflection, when it is considered that time is money?—more valuable, more precious. The last dollar *may* be restored, whilst that *moment* which is lost is gone, gone forever!!

Our nation is as one family. Whatever benefits one class or one district, indirectly benefits the whole; so whatever distresses one class of people or one region of country, indirectly inflicts injury upon all. Let the people of America, therefore, look to a reformation of their habits, to a system of industry and frugality; economising in those expenditures both of time and money, keeping constantly in mind, that by the will of Divine Providence, ours is the most favored nation of people on earth, who should unite together in sustaining a form of government bequeathed by the blood of our fathers. And let our great men in council forego all personal animosity, and as far as possible, discard local jealousies and political intolerance; avoiding reproachful language, and like a band of brothers, legislate for the good of the whole family, with good intent and becoming respect; and may we not expect that the God of the universe will smile upon our land, and the population thereof again become a contented and happy people? That such may be the case, is the sincere wish of

A Plain Citizen.

Communicated for the Farmers' Cabinet.

From the Papers of the Penna. Horticultural Society.

Blight in Pear Trees.

If the blight in Pennsylvania is the same as that which prevailed in Connecticut, between the years 1808 and 1823, (where I then resided as an agriculturist,) or the same as that which has appeared in this section of country since 1830, the cause of the disease is a small, slimy, disgusting moth, or worm, which will be found enveloped in a closely woven web, underneath a leaf, usually on the topmost branch of the tree. Pluck off the leaf and destroy the moth, and the tree is preserved; or if more than one of the leaves are turned *brown*, (the first indication of the presence of the moth and its deleterious effects,) you may be sure that the branch is *tainted*, and must, therefore, to eradicate the *taint* or *poison*, cut off the branch until the pure white of the wood, and the clear green of the inner coating of the bark appear. The moth does not, apparently, feed on the leaf, for at no season of the year, is it perforated; but its effects appear to be of a deadly poisonous

nature. The leaf underneath which it is sheltered, first turns brown, and the poison appears to be communicated through its fibres to the stem to which it is attached, and then conveyed down the stem between the inner bark and wood, turning the leaves of a brown color, and the stem of a blackish hue, until it reaches the main body of the tree, when death ensues. Cutting off the stem *even below* where it appears to be dead, a dark ring between the inner bark and the wood will be perceived. *All* this discoloration *must* be cut away, or the poison will still operate and the taint go on. It is like gangrene in animal life.

While in Connecticut, I had a fine thriving young orchard of fifty-three pear trees, and twenty-three varieties. I was very choice of them, and by attention in plucking off the discolored leaves, and topping off the diseased branches, I preserved them *all* during the most fatal season, (and indeed during the whole time I was on my farm,) while my friends, during *that* season and before I was aware of it, had lost from one-third to two-thirds of their trees. I communicated the result of my observation and experience to an Agricultural Society in that state, and I am strongly under the impression, that by its direction, that communication was given to the public through the papers of the day.

The trees should be watched (according to the season,) from about the 10th of May to near the close of June, and on the appearance of a leaf turning brown, it should be immediately plucked off; and if the branch is diseased, it should be as speedily topped off.

I have not satisfied myself what insect deposites the egg which produces the moth, although I conjectured that an active, nimble winged bug, with a reddish head and about the size and shape of a winged pismire, might be the depositor, as on the trunk of every tree where I found the moth, I discovered this insect.

Lest I should tire you, I will close, merely adding, that if you should hereafter wish for a more detailed account of the discovery of the moth and its fatal effects, (which were purely accidental,) I will freely give it, or answer any queries which you may be disposed to put to me.

I am, sir, very respectfully, your obedient servant,

HEZEKIAH BELDEN.

Lewisburg, Va. April 17, 1837.

—

Woodbury, N. J., June 20, 1837.

I have discovered short white worms working between the wood and bark. As they advance to a limb, they cut off the communication of sap, consequently the limb dies. I also believe the worms or eggs are deposited at the root.

CURE. My method is to deposit a small quantity of live wood ashes. Trench around the trunk of the tree, deposit the ashes, cover them with stones to prevent waste, and if you chose, cover the stones with sods. Cut off the dead limbs—wash the trunk and large limbs with lye from wood ashes, which will destroy the worms, and bring off the shell bark. I practised on some valuable pear trees on the 1st of May, 1837, as above stated, and left directions to give them another washing in ten days, which was done.

The trees are now in a healthy condition. Bark smooth—leaves a good color. The bark and leaves will immediately show when the remedy is necessary.

I can remember the blight in pear trees forty years ago, but now more common. I believe to wash them with alkali every spring, and deposit a small quantity of live ashes at the same time, will keep them healthy.

Very respectfully yours,

ROBERT ROE.

Gambier, Ohio, 15th April, 1837.

From observations made in this part of the country, I am satisfied that the premature decay of these valuable fruit trees, (the pear,) is attributable to the effects of electricity; I propose the following as a

REMEDY.

Erect, within "striking distance" of the tree, a suitable metalic conductor, and in order that the rod may be at as great a distance as possible, and be effective, let it be duly elevated.

Respectfully yours, &c.,

GEO. P. WILLIAMS.

For the Farmers' Cabinet.

Preserving Corn Fodder.

MR. EDITOR,—Permit me, through the medium of your paper, to lay before your readers, my experience in preserving CORN FODDER. I am well aware that some of my readers are not ignorant of the method which I am about to describe, and I am also convinced that many have never had the idea suggested to them. My method is as follows: When corn is topped, and the tops sufficiently cured to bind, I set the sheaves in "open shock," (a term with which all farmers are acquainted,) about three dozen, laying the tiers double, each tier containing nine shocks, pressing them well together, and I find them to keep well till after threshing time, which is the common season for conveying them to the barn for the purpose of ricking or mowing away. When corn is cut up by the ground,

and, after husking, there should not be sufficient room in the barn to contain the stalks, my method is as follows: Instead of ricking, as many do, I set them up in round bunches, having about three dozen in a bunch, well pressed together, on a piece of ground adjacent to the barn. In this manner, I find them to keep better, and not half the labor is required to feed them to stock, for when a bunch is broken and not all fed out, the remainder may be carried into the barn for the next time; but in ricking, one must necessarily commence feeding from the top of the rick, thereby leaving them exposed to storms, and when wet, they oftentimes become so frozen as to require an axe to cut them loose. Let every undecided mind make the experiment and test its correctness.

J. K.

New Lisbon, 8th mo. 22, 1837.

For the Farmers' Cabinet.

On Ploughing.

In my former communication, I treated on ploughing, as requisite for preparing oat stubble in the best manner for producing ample crops of grain, and particularly of grass. In this, I intend throwing out a few hints as to the manner of ploughing, in which land may be left in the handsomest and best condition for laying in sward. But before I proceed any further, let me observe, that I do not do it with the object of building up theories on suppositious facts. The few crude ideas I have to present to the readers of the Cabinet, are wholly the result of experiment. Ground to be left in a handsome condition after ploughing, should, in all cases, be ploughed in as large lands as possible, for the fewer open furrows left in a field the better—say in a twelve or sixteen acre field, not more than three or four. If a field is to be ploughed twice in succession, in the same direction, the commencement of the lands in the second ploughing, should be at the place of finishing them in the first ploughing. This will completely fill the old furrows, and prevent any increase in their number. But if the field is to be ploughed in a direction transverse to the former ploughing, the old furrows should, before commencing it, be filled by ploughing into them about four furrows, that is, two rounds. This will keep the land completely level, which is far preferable to ploughing it in small lands. By ploughing in small lands, the field will be thrown up into a great number of ridges, and consequently, a corresponding number of hollows. This will not only expose it much more to the action of heavy rains and floods, but it will produce its crops very unevenly heavy on the ridges, and dwindling in the furrows; but by keeping the surface level and even, the crops will be uniform over the field; nor will it be exposed so much to the danger of being washed into gulleys by heavy rains.

I would further suggest, that if the field has any declivity, to prevent any action from heavy rains, that the last ploughing given it previous to laying any length of time, be in a direction as near as possible at right angles to the descent of the hill.

A.

Chester co., Sept. 6, 1837.

For the Farmers' Cabinet.

On Peach Trees.

In March, 1836, I deposited three half pints of live wood ashes. Made a trench around the trunk of every tree, and deposited the ashes.

In March, 1837, I dug around every tree, and carefully seached for worms. The result was in ten acres, containing 1100 trees, I found only four worms. There is a greater enemy to peach trees than the worms at the root. In the spring, as the leaves put out, a round yellow bug, with black spots over it, deposits lice in the bunches of leaves. In 1835, I lost several valuable trees before I knew the cause. In June the tree will turn yellow—In August it will die. My method is to kill the bugs, and strip off the bunches of leaves that have lice. I watch them until the leaves are full grown. My trees are healthy.

Very respectfully yours,

Robert Roe.

Woodbury, N. J., June 20, 1837.

On preserving the Beet Root.

For the information of those who have attended to the cultivation of the Beet Root, we publish the following article. They should in all cases be taken up before touched by frost—should not be exposed to the open air or to the light, but deposited immediately in trenches, as described below.

Take up the plants as soon as matured; after this they will "run to the top," or become the prey of their deadly enemy, the worm. Form trenches in some *sheltered* situation, 32 inches deep, and of any width most convenient to your purpose; line the trenches with fresh straw, and deposit the beets in layers, putting fresh, healthy straw between each layer; when on a level with the earth, heap them in layers terminating in a cone or edge, thus Λ, still placing straw between each layer; cover the exterior of the heap with straw, and this again with a coating of earth, well beaten and compressed.—This I have ever found the most effectual means of preserving both Beets and Mangel Wurtzel.

To the Editor of the Farmers' Cabinet.

Sugar Beets and Beet Sugar.

Lot Pugh, Esq., of Cincinnati, has cultivated most successfully the sugar beet, on his farm near that city. Last year he raised 50 tons of beets to the acre, and his crop is much better the present season.

The manager of the farm says that it requires but *little more labor to raise fifty tons of beets than fifty bushels of corn*, while the former is quite as good for horses, much better for cattle, and rather better for stock hogs. He also asserts that sucking calves preferred beets, when properly prepared, to milk.

Although cattle and hogs will eat beets in a raw state, still they are much better when boiled. The apparatus and fixtures used by Mr. Pugh for boiling or rather steaming, food for 300 hogs and 40 or 50 cows with other stock, cost about $150, and consumes a quarter of a cord of wood per day.

Mr. Frederic Le Clerc, from France, who had studied the beet sugar making in France, in order to render himself useful in the United States in this new branch of industry, and who is now engaged in experiments in the same at Ludlow's station, near Cincinnati, Ohio, writes under date 3d September, 1837.

"My last experiment was made on the last of August, on a small quantity of juice—only a glass full—and to day, the third day, having put it on a plate to crystallize, it is full of the most beautiful crystals that I have ever seen. Mr. L. and myself are overjoyed, for many reasons, principally, because what you were so much desiring is accomplished. The manufacture of beet sugar on *a large scale* is every way possible. I have seen by my last experiments, that the beet roots here are richer than in the north of France. In Ohio, certainly, there has not been for several years, a season so little favorable to the formation of the sugar principle, as the present one. It remains now to be known if this industry can be profitably conducted, which I doubt. I shall endeavor to make out some details on this head. My manual on beet sugar making is now translated, and I shall have some good additions to make to it, founded on my experience, and touching the state of things relating thereto in this country."

The above is a hastily made translation of the substance of Mr. Le Clerc's letter. His doubt, as to the practibility of the manufacture of beet sugar on a large scale, being made profitable, is to be expected, because he is not yet well acquainted with our resources for labor saving and rapid working. We only want evidence that good sugar *can be easily produced* from the beet root. There is ample ingenuity and perseverance to do the other in the country.

J. S.

Beet Sugar.

If the farmers that have raised the sugar beet this season, would send to the office of the Farmers' Cabinet an account of the quantity of roots they may have to spare, with the price they would sell them for per ton, they will meet with immediate attention, as a gentleman who has been some time out of business, has employed his leisure time in experimenting on the beet and other vegetables, containing saccharine matter, has succeeded in making good sugar from beets, and would establish a manufactory of beet sugar in or near this city, if a supply of the roots could be had at a moderate price—if not, he intends going to the west.

Philadelphia, September 12, 1837.

For the Farmers' Cabinet.

Many inquiries have been made of the writer of this, respecting the best method of destroying the "Daisey," or "Paxson's Clover," as some call it, and not having practical knowledge sufficient to answer the question, I take the liberty of asking for information, through the columns of the Cabinet. Most farmers are, or ought to be aware of the pernicious effects of this weed, for when once it obtains a footing, it is very hard to eradicate.

J. K.

N. Lisbon, Ohio, 8th mo. 1837.

On Saving Liquid Manure.

BY G. T. DALE.

No branch of economy has been more neglected than this, though the attention of farmers and horticulturists has frequently been called to it. I remember some years ago, when I was a boy, being for some months at a farm-house, where there was a spacious farm-yard. The whole of the valuable liquid from this yard was suffered to run away, and was lost in the ditches. After some time, a part of the wall surrounding the yard, being undermined by the drainings running under it, fell down. I then asked the farmer if it would not be a good thing to have a mew or cistern to collect it, instead of allowing it to run across the road as it had done for years. The answer I got was, "It did not much signify;" and the wall was repaired. Our English agriculturists are, in this respect, certainly not quite so sharp as their neighbors on the continent, where all drainings from their dung-hills, stables, cow-houses, &c.,

are collected into a reservoir. Our farmers can certainly be little aware of the expense and trouble they might save themselves by attending to this. Many, I have no doubt, will say, "But look at the expense to begin with." I will engage to prove that the expense of constructing the reservoir shall, in a very small farm, be paid three times over the first year. It is really lamentable to say, but nevertheless true, the system generally pursued is quite the reverse of what it should be.

At what expense do many agriculturists procure their manure, when all this expense, labor and trouble might be saved by a little management. Mr. Stafford, who has written much on this subject, is of opinion that four barrowsful of new manure, properly fermented and reduced to a liquid state, are sufficient to manure half an acre of land. The drainings from stables, &c., when properly fermented, is by far the most powerful manure we have, either for farming or garden purposes. How strange this valuable article should so generally be suffered to run to waste. There is no vegetable matter which, if properly managed, with the help of this liquid, may not be reduced to excellent compost.

August 11th.

Sir,—Mr. Ashford requests information as to the cause, prevention, and cure of the spotty and finally mouldy state of some of the berries in bunches of grapes. I am not technically acquainted with the botanical terms proper to be employed in my inquiries; but in my vinery, in which I have no flue, I am much annoyed and disappointed by the decayed and *burnt* appearance of many of the sprigs—or perhaps the proper word may be foot-stalks—from whence my berries proceed. They thus become red, instead of being black; and sour, instead of being sweet; and the whole stalk speedily decays, and the fruit falls. If this was general, I should attribute it to a bad border, too much or too little heat or air; but it is partial, only affecting some bunches, while others are quite healthy.

I also solicit from yourself, or some correspondent, the cause, prevention, and cure of this disease, or bad gardening.

John Mills.

August 17.

[As the defect described by Mr. Mills appears to be only a partial failure, it is extremely difficult for us (as strangers to the general condition of the vines) to name the cause of this failure. We can only surmise whether there may not be *too great* a crop on the vines, or whether they may not be suffering from the want of moisture at the root, or, more probably still, from the great heat of the sun, in unusually hot summers.—Ed.]

Great Sale of Imported Cattle.

The great sale of imported cattle, was held at Powelton, near Philadelphia, on the 12th inst. An immense number of persons attended the sale. We are truly gratified at the spirit evinced on the occasion—it is evident that the spirit of agricultural improvement, already great, is still extending and diffusing itself. Success attend the purchasers, as well as the enterprising importer. The following catalogue of the animals and the prices for which they were severally sold, will be of interest to our readers.

COWS.

Name.	Age.	Purchaser.	Amount.
Ruth,	6 yrs. old,	J. R. Neff,	$460
Adelaide,	6 "	do.	490
Minna,	5 "	Clarkson,	520
Lucilla,	5 "	Neff,	480
Empress,	2 "	Cunningham,	420
Brighteyes,	4 "	do.	490
Beauty,	4 "	Neff,	540
Vermillion,	4 "	Wetherill,	430
Nonsuch,	3 "	Warwick,	410
Media,	3 "	Fisher,	380
Ruby,	3 "	Rotch,	370
Mayflower,	3 "	Cunningham,	515
Profitable	3 "	Neff,	550
Clarkville,	2 "	do.	630
Virginia,	2 "	Cunningham,	690
Woodbine,	2 "	Robinson,	400
Belicia,	1 "	Andrews,	450
Celebrity,	3 "	Wetherill,	480
Isabella,	5 "	Wolbert,	405
			$9,110

BULLS.

Hector,	2 "	J. R. Neff,	475
Sir Robert,	2 "	Wetherill,	350
Melbourne	2 "	Sampson,	320
Maxwell,	1 "	Canby,	400
Llewellyn,	1 "	Gaskill,	210
Colostra,	1 "	Wolbert,	260
Miser,	1 "	Cunningham,	470
Brutus,	1 "	Neff,	330
Delight,	1 "	Eldridge,	370
P. of Wales	1 "	Kelly,	310
Ld. Fairfax,	1 "	Andrews,	250
Bruce,	1 "	Rotch,	360
Primo,	1 "	Sampson,	310
Nimrod,	2 "	Hunter,	470
Colossus,	3 "	Hickman,	310
			$14,305

SHEEP.

2 Bakewell Breed, at $100 each,		200
5 " " 95 "		475
	Total,	$14,980

Bone-Dust for Cultivation of Grain.

The exportation of bones from Germany to England constitutes a singular epoch in the annals of commerce. Myriads of tons have been already exported without glutting the market, or causing a cessation of the demand. In the vicinity of the north sea, mills have been erected to pulverise them. This bone powder, or bone dust, was long ago exclusively applied to the purposes of hot houses by German horticulturists; but the English, emboldened by their riches, have extended its use to general objects of agriculture, and fertilize by these expensive means, their cold, humid and poorest land; and have thus brought the uplands of Nottinghamshire, the western parts of Holderness, &c. into the highest state of cultivation, both in point of extent and intenseness of fertility. There is consequently, a proverb, "that one ton of German bone-dust saves the importation of ten tons of German corn." As Malta formerly covered her naked rocks with foreign soil, so does England now fertilize her clay and sandy heaths with German bones. Near the sea-coast even the church yards are robbed of their venerable relics, which is only ironically excused by rendering the German bone trade popular. An agriculturist, being rendered attentive by this exportation, instituted privately some comparative experiments, the result sof which prove that bone-dust acts in the cultivation of grain as compared to the best stable manure: First in respect to the quality of corn as 7 to 5; secondly, in respect to quantity as 5 to 4; thirdly, in respect to durability of the energy of soils as 3 to 2. It produces several collateral advantages: First, it destroys weeds: secondly, it diminishes the necessity of suffering the land to be fallow; thirdly, this concentrated manure, or substitute for manure, is more easy of conveyance, less laborious to spread, and can with facility be applied to the steepest vineyards, or other inaccessible lands, either in mountainous countries or in wet meadow land: fourthly, it renders agriculture practicable without cattle breeding, grazing, &c.

Seasonable Advice.

See to your fatting swine. The celebrated farmer, Arthur Young, said, "The best method of feeding all kinds of grain to hogs, is to grind it to meal, and mix it with water, in proportion of five bushels of meal to an hundred gallons of water; the mass to be well stirred several times a day until it has fermented and become slightly acid, when it will be ready for use. In this way two or three vessels must be kept for fermentation in succession; and the profit will pay the expense." Change of diet makes fat swine. The unripe ears of Indian corn should be given them before they become shrivelled and mouldy. Hard corn should not be dealt to swine without soaking, boiling or grinding. Indian meal will be better for boiling, or at least scalding; and every kind of food, proper for swine, will be greatly improved by cooking. Your swine will fatten the faster if they can have access at will, to charcoal, which will give them an appetite for food, and prevents their having a certain genteel disorder, called dyspepsia. Protect grapes and other fruit from wasps by hanging up vials of honeyed or sugared water near the fruits you wish to defend. Mr. Buel, of Albany, who is a practical as well as scientific cultivator, says, "it were better that the sun never should shine upon potatoes—they should be housed with all the dirt that adheres to them."

It is even beneficial to add more dirt to potatoes in the bin or cask, to exclude external air as much as possible; their surface should be kept moist, and the atmosphere which surrounds them as little above the freezing point as possible. In many situations it will be an excellent scheme to rake up all the leaves of trees, and mould, which has been produced by their decay, which can be procured at a reasonable expense, and cast them into the barn yard as a layer to absorb the liquid manure from your cattle. Likewise, it would be well to place quantities of them under cover, in situations where you can obtain them in winter to use as litter to your stables, &c. They do not rot easily, but they serve as a sponge to imbibe and retain urine, and convey to the field much food for plants, which, otherwise, might be lost. Gather winter apples by hand, in the middle of fair days, and by putting them down in sand well dried, it is said you may keep them till apples are again in season. Select your seed corn from the field, culling fine, fair, sound ears from such stocks as produced two or more ears, taking the best of the two. Land which is composed in part of clay, or what is called a stiff soil, should be ploughed in the fall and laid as light as possible, so as to expose it to the action of frost, which will pulverize and subdue it; and insects will be thus destroyed by exposure to the rigors of winter. But ploughed land which is sandy, loose and porous, should be and consolidate till spring. If you ever mean to fatten cattle to advantage, either for market or domestic consumption, you must rely chiefly on grass and roots. The celebrated cultivator, Arthur Young, says, "Of the food raised on a farm, the best for fatting beasts, is parsneps; next carrots; then come cabbages, potatoes and turneps. If a farmer has a due provision of these plants with good hay for cutting into chaff with

straw, he will not find corn and oil cake profitable, unless beef promises to be very high, and corn and cake very cheap. Whatever the food, it cannot be too often repeated, that small quantities are to be given at a time; that troughs, cribs, &c. are to be kept very clean, and that litter must be so plentiful, that the beasts have clean hides and warm beds. Straw given to stock, should be constantly made use of as soon after threshing as possible; for if exposed to the influence of the atmosphere, it becomes either musty or too dry; and in that state cattle neither relish nor thrive on it so well. It is time to take a critical and inquisitive view of your barn, cellar, and all other buildings where injury can be sustained by the agency of frost, and wherever it is possible, close every avenue to the intrusions of that unwelcome visitant. There is no danger of using too much salt in preserving fat pork.

Explanation of Terms.

Concluded.

47. *Acids*—are substances of a sour taste. The acids are very numerous. Their most distinguishing properties are, 1st, that they change to *red* those colors of vegetables which the alkalies change to *green*; 2d, They combine with alkalies, and thereby form various kinds of salts.

Thus, the combination of muriatic acid with soda forms common salt.

Some of the acids are met with in a solid state; others in a fluid state, as vinegar; and others in a gaseous state. Of the latter is Carbonic Acid, which requires a more particular description.

The carbonic acid, when uncombined with any other substance, is always met with in a state of *gas*, and hence it is called *Carbonic Acid Gas*. It is the same substance which was formerly called *fixed air*. It exists in a small proportion in the atmosphere. It destroys life and extinguishes the light of a candle when immersed in it. It is disengaged largely from liquors, such as beer, cider, or wine, when in the act of fermentation. It is this gas which produces the many unhappy accidents in some subterraneous caverns, inclosed cellars containing large quantities of fermenting liquors, in some deep wells, and in bed chambers, warmed by burning charcoal in pans.

This acid combines with a great variety of substances, which are then called *carbonates*. It exists in marble, chalk and limestone in different proportions, all which are called *carbonates of lime*, and the burning of limestone is for no other purpose, but to expel the carbonic acid, which is done by heat, in which operation the limestone loses nearly half its weight.

The alkalies attract it from the atmosphere. It is present in pot and pearl ashes, from which it is disengaged by the addition of a stronger acid, as every one may have seen in throwing pearl ash into cider, as some people do to drink in the morning. The acid in the cider in uniting with the pearl ash, displaces the carbonic acid, which rises in the form of gas through the liquor, producing much foam with a hissing noise, called *Effervescence*.

48. *Atmospheric Air*—or the air which surrounds this earth, is a mixture of two different kinds of air, called *Oxygen* and *Azote*. It likewise contains a small proportion of Carbonic Acid Gas, a substance already described.

It is well known that no animal will live, or fire burn, without air; but it is that part of the air called *oxygen* which is necesary for both. It is this which supports life and combustion; and where there is no oxygen, an animal will die and a light will be extinguished as suddenly as where there is no air at all.

All this may be made plain by a very easy experiment. Take a lighted candle, put it into a candlestick, and set it into a pail of water so deep as that the light of the candle may rise three or four inches above the surface of the water. Then take a deep tumbler, or a wide mouthed decanter, invert it, and let it down over the candle till the brim shall dip into the water. As the candle continues burning, the water will be seen rising in the decanter till it shall be about one quarter part full, when the candle will suddenly go out. Now the reason of the water's rising in the decanter, is, because the oxygen is gradually consuming by the lighted candle; and the reason that the candle goes out is, that the oxygen at that instant is all gone, or has all been expended in the combustion. What is then left in the decanter will be the other part or kind of air called *azote*, and if a small animal should be introduced into this air it would die as suddenly as if it had no air at all.

Oxygen gas (for you must remember that every substance in the form of air is called a *gas*) is a very wonderful substance. It unites with iron, when exposed to the atmosphere, for any length of time and converts it into rust; it unites with melted pewter or lead and converts them into dross, or oxyde, as it is called; it unites with another kind of gas, called *Hydrogen*, and forms water. Yes, what perhaps it may surprise you to know, *water* is not a simple, as most people suppose, but a *compound substance*, composed of Oxygen and Hydrogen gas. Both its decomposition and its composition are common experiments in every chemical room.

Oxygen likewise is one of the ingredients in the composition of acids, all which are compound substances; hence oxygen has been called the great *acidifying* principle. Thus, it unites with sulphur, in the act of combustion, and forms sulphuric acid, or oil of vitriol as it was formerly called; it unites also with carbon or char-

coal, when burning, and forms carbonic acid gas, already described; and hence we see how the carbonic acid gas, which sometimes proves fatal in close shut bed-chambers, heated with burning charcoal, is produced. The oxygen in the atmosphere unites with the charcoal or carbon in burning, and thus produces this gas so deleterious to life when breathed without a due proportion of atmospheric air mixed with it.

These four elementary substances, *Oxygen*, *Hydrogen*, *Azote* and *Carbon*, possess a very wonderful agency in nature, and every one who has any wish to look beyond the *mere surface* of things cannot but be gratified in knowing more about them. We shall have further occasion to speak of these substances in the Cabinet; it is important therefore that the character and distinguishing properties of each should be well understood. These are given in the following concise definitions, which are not to be forgotten; viz.,

49. *Oxygen*—is one of the constituent principles of water; it is called *vital* or *respirable* air, and is essential both to the support of life and combustion.

This substance performs an important part in most of the changes which take place in the mineral, vegetable, and animal kingdoms.

50. *Hydrogen*—is one of the constituent principles of water; it is very inflammable, and was formerly called inflammable air. It is the lightest of all ponderable substances.

This is the substance generally used in filling air-balloons. It is readily obtained by the decomposition of water. Vegetables and animals also in a state of decay and putrefaction afford it, and it is evolved from various mines and volcanoes.

51. *Azote*—is that part of atmospheric air which is incapable of supporting life or combustion.

All combustible substances burn violently in pure oxygen gas, and if it was not diluted in the atmosphere by a large portion of azote, it would be impossible to extinguish any considerable fire when once lighted up, and something like the general conflagration of the world would immediately commence.

Azote exists abundantly in nature, forming the greater part of the atmosphere, and is one of the principle ingredients in animal substances

52. *Carbon*—is the pure part of charcoal.

Carbon forms a large proportion of all vegetables; it exists also in animals, but its quantity is small.

53. *Carbonic Acid*—is a combination of carbon and oxygen, in the proportions of 18 parts carbon to 82 parts oxygen.

An account of this substance has already been given under the article "Acids." It may here be added, that the sources of this acid are immense. It exists in the atmosphere; it is found in abundance in many mineral waters, as at Ballston and Saratoga in the state of New York; it is produced by the combustion of wood and charcoal, by the fermentation of liquors, and by the decomposition or putrefaction of vegetable substances; but the largest store of it is that enormous quantity solidified or rendered solid in all the immense beds of chalk and limestone with which every part of the globe abounds.

Of limestone 45 parts in every 100 are computed to be carbonic acid.

As before observed, when uncombined with any other substance, it always exists in the state of gas. It is heavier than atmospheric air. If this gas be poured from a wide-mouthed jar upon a lighted candle, it will be as effectually extinguished as by water.

54. *Effervescence*—is a sudden disengagement of gas taking place within a liquid and separating from it with a hissing noise.

We have an example of this, as before observed, by dropping a little pearl ash into cider. The carbonic acid is disengaged and rises in the form of gas, producing much foam, with a hissing noise.

55. *Chemical Affinity*—is a term used to signify the attraction or tendency there is between the particles of certain substances, *of different natures*, to unite, thereby forming a *third* substance possessing properties altogether different from those of either of the two substances of which it is composed.

Thus, potash and oil have a tendency to unite, thereby forming *soap*, which is a *third* substance very different either from the *oil* or the *potash* of which it is composed.

Those substances which are *capable* of uniting in this manner, are said to have an *affinity* for each other, as oil and potash; but oil will not unite with water, and therefore those substances which do not form a chemical union, are said to have *no affinity*.

56. *The Primitive Earths*—are four; viz. clay, sand, lime and magnesia.

These are the only earths which enter into the composition of soil; they enter also in very minute portions into the organization of plants.

Sand and clay are by far the most abundant; lime is required but in small proportions; every soil however is defective without it. Magnesia is found but in few soils; its place is well supplied by lime; its entire absence therefore is not considered any defect.

57. *Clay*—in agricultural publications, is called alumina, alumine, aluminous, or argillaceous earth.

"The term *clay* should not be given to a soil which contains less than one sixth part of aluminous earth."

58. *Sand*—is called silex, silica, silicious earth, or earth of flints.

"The epithet *sandy* is not properly applied to any soil, that does not contain at least seven-eighth parts of sand; and sandy soils are to be

distinguished into *siliccous sandy* or flinty sand; and *calcareous sandy* or chalky sand."

59. *Lime*—as it exists in the soil, is commonly called calcareous earth.

"The word *calcareous* is not properly applied to any soil unless a specimen of it is found strongly to effervesce with acids; or unless water having a channel in the soil affords a white earthy deposit when boiled."

"Each of these earths answers a determinate and specific purpose in the economy and growth of plants; and the perfection of soil lies in a mixture of the whole."

60. *Basis of the soil*—By this term is understood the primitive earths which enter into its composition.

61. *Vegetable Matter*—all vegetable substances in a decaying or rotten state.

62. *Animal Matter*—all animal substances in a putrifying state.

63. *Organic Matter*—is a term applied both to animal and vegetable substances in a putrifying state.

64. *Vegetable Mould*—the earthy remains of vegetable substance which have either grown and decayed on the soil, or have been conveyed thither in the progress of cultivation.

65. *Loam*—is a combination of vegetable mould with the primitive earths.

66. *Peat*—is a substance dug out of swamps; it is produced from the decay of vegetables, is of a fibrous texture, and may be cut with a spade.

Peat is frequently used for fuel; it is of no use as a manure until it shall be brought into a state of fermentation, or putridity, which may be done by mixing it with other manures. Running water also extracts its antiseptic qualities and leaves it ready to pass into a state of decomposition.

67. *Marle*—is a substance consisting of lime with a small proportion of clay, and sometimes of peat, with a mixture of marine sand and animal remains.

It is found extensively in some situations, at different depths under ground, and is distinguished into *shell*, *clay* and *stone* marle. It is useful as a manure.

68. *Putrescent Manures*—are all animal and vegetable substances in a decaying state.

69. *Excrementitious Matter*—is the manure from animals.

70. *Long Manure*—is green barn-yard manure before it is rotted.

71. *Short Manure*—is barn-yard manure made fine by rotting, so as to be cut easily with a spade.

72. *Fossil Manures*—are lime, marle, plaster of paris and other substances which operate on the mechanical constitution of the soil, but do not afford directly nourishment to plants.

73. *Compost Manure*—is that which is formed by the mixture of various substances, as turf, pond-mud, weeds, ashes, lime, &c., with stable or yard manure, so as to constitute one uniform mass or substance, fit for the improvement of the soil.

74. *Irrigation*—is the turning of water from its natural channels, and carrying it by ditches over grass-lands, so as to render them more highly productive.

75. *Tilth*—is the condition in which ground is left after tilling.

When it is well pulverized by the plough and harrow, and made light to a sufficient depth, it is said to be in *good tilth.*

76. *Stumming Casks*—is burning within them matches covered with sulphur.

A strip of cloth, ten or twelve inches long and from one to two inches wide, smeared with melted sulphur, and lighted, is let down into the cask and suspended from the bung. Some have a long, tapering bung that may fit any cask, with a crooked wire in the small end, from which to suspend the match.

77. *Must*—is the new liquor pressed from apples or grapes, before it has worked, or fermented.

78. *Lees*—is a term used to signify the gross sediment or settlings found at the bottom of casks containing fermented liquors.

79. *To Rack Cider or Wine*—is to draw them from off their lees or sediments, into clean casks.

The Turnep Fly.

Mr. Berry ascribes his success in this department of rural management, first to sowing seed of one year's growth, which secures simultaneous vegetation, and defies the fly, the plants being numerous. Seedsmen too frequently mix the seed of differnt years, in consequence of which it comes out of the ground at various periods, and in such quantites, that the fly easily overpowers the crop. Second, thick sowing. It is much eaiser to cut out than to insert a plant. Third, sown immediately after the manure is ploughed in, by which the advantage of the moisture is secured. In showery weather, he finds an advantage in steeping the seeds in water, but if the weather be dry, steeping is injurious, the contrast being too great between the water and a dry hot state of the earth, and the plants come up yellow and sickly.—*Rep. of Invent.*

Procrastination, delay, putting off any thing till to-morrow.

Interesting Facts.

The following is an extract from the speech of Colonel Knapp, delivered at Newark upon the occasion of the delivery, by a committee of the American Institute, of the medals and diplomas awarded to the citizens of that place, at the late fair.

"Every thing in this country has been brought forward by protection. In this bleak clime, but a few of the sustaining fruits of the earth were here indigenous, or in a perfect state. Even the Indian corn, so often considered as native here, was with difficulty acclimated. It was brought from the south, and by degrees was coaxed to ripen in a northern latitude. The aborigines who cultivated it, taught the pilgrims how to raise it; they plucked the earliest ears with the husk, and braided several of them together, for the next year's seed, and their care was rewarded by an earlier and surer crop.

The pumpkin, brought from Spain, was first planted in Rowley, in Massachusetts, and it was several years before they came to a hard, knotty shell, which marks the true yankee pumpkin, such as are selected for the golden pies of their glorious thanksgiving festival.

Our wheat was with difficulty acclimated. That brought from the mother country had grown from spring to fall, but the season was not long enough here to ensure a crop. It was then sown in the fall, grew under the snows in winter, and catching the earliest warmth of spring, yielded its increase by mid-summer.

Asparagus, which is now the delight of all as an early vegetable, and for which several millions of dollars are paid our gardeners annually, is of late culture in this country. At the time of the revolution, asparagus was only cultivated on seaboard; this luxury had not then reached the farmer of the interior.

The history of the potatoe is a singular one. Rees' Encyclopedia states that the potatoe was brought from Virginia, by Sir Walter Raleigh, to Ireland,—the writer should have said from South America,—in the latter part of the sixteenth century. He had no idea of its ever being used as an esculent at that time. It was pointed out to him as a beautiful flower, and its hard, bulby root was said, by the natives, to possess medical qualities. He took it to Ireland, where he had estates presented to him by Queen Elizabeth, and planted it in his garden. The flower did not improve by cultivation, but the root grew larger and softer. The potatoe in its native bed was a coarse ground nut. The thought struck the Philosopher to try the potatoe as an edible, and boiling and roasting it, found it by either process excellent. He then gave some of the plants to the peasantry, and they soon became, in a measure, a substitute for bread, when the harvest was scanty.

The potatoe was successfully cultivated in Ireland before it was thought of in England; it grew into favor by slow degrees, and was so little known when our pilgrim fathers came to this country, that it was not thought of for a crop in the New World. It would have been an excellent thing for them, if they had been acquainted with the value of the potatoe. It was not until 1719, that the Irish potatoe reached this country. A colony of Presbyterian Irish, who settled in Londonderry, in New Hampshire, brought the root with them. These people found their favorite vegetable thrive well in new grounds. By degrees their neighbors came into the habit of raising potatoes, but many years elapsed before the cultivation of them was general among the yeomanry of this country. Long after they were cultivated in New England, they were held in contempt, and the master mechanic often had to stipulate with his apprentice, that he should not be obliged to eat potatoes. An aged mechanic once informed me that he had raised nine bushels, having at that time (1746) a dozen apprentices, but did not venture to offer them a boiled potatoe with their meat, but left them in the cellar for the apprentices to get and roast as they pleased; but soon found that he should not have enough for seed, and locked up what was left. The next year he raised the enormous quantity of thirty bushels; the neighbors stared, but his boys devoured them the following winter.

About this time some of the gentry brought this vegetable on their tables, and the prejudice against them vanished. Thus by degrees, a taste for this was formed, never to be extinguished. The cultivation of the potatoe is now well understood; a crop meliorates instead of impoverishes the soil, and the culture can be increased to any extent. Thus, by the curiosity of one lover of nature, and his experiments, has an humble weed been brought from the mountains of South America, and spread over Europe and North America, until it is emphatically called "the bread of nations." Still the country from whence it was taken, has been too ignorant or superstitious to attempt its cultivation, until within a few years. Now the lights of science are chasing away the long deep shadows of the Andes.

Rice was brought from India in 1721, and cultivated, by way of experiments in South Carolina. It succeeded well, and was for

many years, the staple article of the state. It seems strange, but it is not more strange than true, that a vegetable should have a moral and religious influence over the mind of man. Brahma could never have enforced his code of religious rites, with a hundred incarnations, if India had not abounded in rice plant. His followers would have become carniverous, notwithstanding all the rays of his glory, and the awful exhibitions of his might, if he had not driven the animals away, and secured his vegetable kingdom for his worshippers. Man is, in spite of his philosophy, a creature of the earth, and, in a measure, like the chamelion, takes the hues of his position and food.

The Cotton plant was at first cultivated as a flower in our gardens, and a beautiful flower it is. This plant alone has made a revolution in the finances of the world. Look at the growth and consumption of the United States, and the immense manufacture of it in England, where it cannot be grown, and you will find my assertion true in the most extended sense.

Until our purchase of Louisiana, this country was indebted to the East and West Indies for Sugar. In our country—the thirteen United States—sugar and molasses were made in small quantities, from corn stalks, sweet apples, pumpkins, and maple trees; but all put together, furnished but a small part of the sugar demanded by the great mass of the people. Our people are fond of saccharine, or sweetening, to use our peculiar term for it.

The corn stalk, the pumpkin, and the sweet apple, are given up for sugar and molasses—and the maple is falling before the axe, and we must rely on the sugar cane alone, unless we can substitute, as in France the sugar beet. The culture of the sugar beet has been commenced with us, and probably will be successful.

Pumpkins.

It may not be generally known that *pumpkins* may be kept fresh and green for a great length of time, if they are gathered before the frost has affected them, and kept in a dry, cool place, secure from freezing. They should be gathered with the stem on and without bruising, as a rupture of the skin will hasten decomposition. It is stated on good authority, that with a little care in gathering this fine vegetable, it may be kept nearly or quite a year, as sound and as well flavored as when first plucked from the vines. Those who have dry spacious cellars, would do well to try the experiment. ☞ The pumpkins should be placed on shelves and turned occasionally, or what is better, suspended from the ceiling.

From the Farmer and Gardener.

York, Pa, August 10, 1837.

E. P. Roberts, Esq.—Dear Sir,—You express a wish in your valuable paper of the 25th ult., to know the result of the culture of Spring Wheat in different parts of the country. Thinking that perhaps the experiment in this country might be of some advantage to the public, we give it so far as ascertained, with pleasure. Early last fall, we ordered from different parts of New York, about 100 bushels of the Italian, but succeeded in getting only 63 bushels. This, with the exception of about ten bushels, (which we sowed ourselves,) was sold in small quantities to the farmers in this county, and we are gratified to say, it has succeeded far beyond the expectation of the most sanguine. It is generally better than the winter wheat. We find too, that it does not require so strong a soil. We have a lot of four acres, a thin chesnut soil, improved by lime and manure, which we think will give us 30 bushels to the acre. All that we have heard of is free from mildew and rust, while a larger portion of the winter wheat in this country was injured by it.

The demand already is considerable for seed.

Respectfully yours, &c.,

P. A. & S. Small.

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Spring Wheat.—The newspapers are beginning to discuss the propriety of our farmers turning their attention to the sowing of spring wheat. The wheat which is called *white Tuscan*, having been imported some years since from Tuscany, in Italy. Our farmers would do well to try it. It has been tried with eminent success in some parts of Pennsylvania and Maryland. Seed wheat could be procured in Baltimore if desired.—*Danville (Va.) Reporter.*

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Spring Wheat.—A number of gentlemen, residing in Augusta county, last spring procured and sowed small quantities of the Italian or spring wheat. The Staunton Spectator says that the experiment has been highly satisfactory and successful in every instance. "The Senior Editor [of the Spectator] got a bushel, which, after cleansing it of the oats which was mixed with it, left about seven-eighths. This was sown about the middle of March, on a hill side, from which two crops had been taken without manuring, and the yield is estimated by judges at from fifteen to twenty bushels; there being something over thirty dozen. It is a bearded grain, the heads large and well filled, and the straw of a beautiful bright yellow. We have heard of one gentleman whose yield from a peck is

fourteen dozen. Benjamin Crawford, Esq., who also succeeded in procuring about a bushel and a half of the seed from New York, we understand, estimates his yield at about twenty-five bushels."—*Winchester, Va. Rep. August 9.*

Sugar from Pumpkins.

A discovery has been made in France which, if transplanted into this country, will make the pumpkin fields of New England dangerous rivals to the cane fields of Louisiana and the West Indies. A French paper says:

"A complete revolution is expected to take place in the manufacture of native sugar—a revolution which will probably compel the beet-growers to 'hide their heads.' In other words, the pumpkin is about to enter the field as a rival of the beet root, and to force the Chamber of Deputies to revise its late enactments on the sugar question. An industrious speculator is on the point of establishing a manufactory for extracting sugar from this overgrown and hitherto despised production of the vegetable world, the first experiments on which, it is added, have been crowned with complete success."

The Raising of Ducks.

These birds being acquatic in their habits, most persons suppose they ought to give the young ones a great deal of water. The consequence is, they soon take colds, become droopy, and die. This mode should be avoided. Ducks, when first hatched, are always inclined to fever, from their pinion-wings coming out so soon. This acts upon them as teething does on children. The young ducks should, consequently, be kept from every thing which may have a tendency to create cold in them. To prevent this, therefore, I always allow my young ducks as little water as possible. In fact, they should only have enough to allay their thirst, and should on no account be permitted to play in the water. If the person lives near the city, liver and lites should be boiled, and chopped up fine, and given to the young ducks. Or, if fish, crabs, oysters, or clams can be procured, they should be given. In case none of these can be got, all the victuals should be boiled before feeding. Boiled potatoes mixed with hominy, are also excellent. Half of the ducks which are lost, are because raw food is given them. To sum up all in a word—if you wish to raise almost every duck that is hatched, give them little water, and feed them on no food which is not boiled. By observing this plan, I raise for market, and for my own table, between two and three hundred ducks every year.—*Southern Agr.*

Domestic Economy.

As appropriated to the season, we give a few receipts for preparing pickels:—

Pickled Onions.—In the month of September, choose the small white round onions, take off the brown skin, have ready a very nice tin stewpan of boiling water; throw in as many onions as will cover the top. As soon as they look clear on the outside, take them up as quick as possible with a slice, and lay them on a clean cloth, cover them close with another, and scald some more, and so on. Let them lie to be cold, then put them in a jar, or glass wide-mouth bottle, and pour over them the best white wine vinegar, just hot, but not boiling. When cold, cover them.

Cucumbers and Onions Sliced.—Cut them in slices, and sprinkle salt over them, next day drain them for five or six hours, put them into a jar and pour boiling vinegar over them keeping them in a warm place. The slices should be thick. Repeat the boiling vinegar, and stop instantly, and so on till green.

Pickled sliced Cucumbers another way.—Slice large unpaired cucumbers, an inch thick; slice onions, and put both into a broad pan; strew a good deal of salt amongst them. In twenty-four hours drain them, and then lay them on a cloth to dry. Put them in a small stone jar and pour in the strongest plain vinegar, boiling hot; stop the jars close. Next day boil it again, and pour over, thus thrice; the last time add whole white pepper, and a little ginger. Keep close covered.—*New Bedford Gazette.*

Don't give your Chickens Salt.

A correspondent says in a letter—"The fatal effects of mixing salt, in any considerable quantities, with food intended for chickens, or which they can eat, received a singular illustration on the farm of a friend a few days since. As an inducement to his horse to eat a handful or two of salt, he mixed it with a quart or two of meal, and fed it to the animal. The horse refused the mixture, and it was left where it was soon found by the chickens, which, to the number of forty-five or fifty, soon caused its disappearance. Within twenty-four hours, every one that eat of the meal died, and the greater part did not live half that time. There is an old saying among poulterers, that 'salt is health to a gosling, but death to a chicken,' and the foregoing result would seem to prove that, like other old saws, it contains some truth."—*Gen. Far.*

Quintessence, the virtue of any thing extracted, the purest part, the spirit.

ARTICLES.	Philadelphia, Sept. 12.	Baltimore. Sept. 12.	New York, Sept. 12.	Boston, Sept. 13.
Beans, white, per bush.	$1 37–1 62½	1 25—0 00	0 00—0 00	1 37—1 75
Beef, mess, new, per bbl.	14 00–15 00	13 50–14 20	13 50–14 50	15 00–15 50
Bacon, western, per lb.	8— 9½	7— 9	8— 10	.....
Butter, extra, per tub	12— 13	16— 20	18— 20	17— 22
Butter, fresh, per lb. (market,)	18— 25	20— 25	25— 31	24— 27
Hams, per lb.	12— 14	12— 14	12— 14½	10— 12
Hog's Lard, per lb.	7½— 8½	9— 10	9— 10	9— 10
Cheese, American, per lb.	10— 10½	9— 11	9— 11	9— 13
Beeswax, yellow, per lb.	26— 27	23— 25	24— 27	26— 29
Beeswax, white,	.....	38— 40	38— 40	38— 40
Bristles, American,	42— 65	25— 65	25— 65	.....
Flax, American,	8½— 9	9— 10	9—	9— 12
Flour, best, per bbl.	8 00—8 75	8 00—8 50	7 00—8 00	9 00—9 25
GRAIN—Wheat, per bush. Penna.	1 60—1 75	1 75—1 80	0 00—0 00	.....
do. Maryland,	1 60—1 75	1 25—1 65	1 74—1 75	.....
Rye, per bushel,	87½— 0	65— 70	87½—0 00	1 05—0 00
Corn, do.	94— 97	00—1 02	1 00—1 08	1 10—1 12
Oats, do.	40— 50	32—	40— 50	00— 00
Barley, do. Penn.	.....	.....	1 06—	1 00—1 10
Peas do.	1 00—1 25	87—1 00	— 8	.....
HAY, Timothy, per 100 lbs.	1 00—1 10	12 00 pr. ton.	.....	20 00 pr ton.
Meadow Grass,	70— 80	.....	.....	.....
Hemp, American dry rot, ton,	175 60-	6— 7	130 —140	.....
Hops, first sort, 1836, lb.	7— 8	— 9	5— 6	6— 7
Plaster Paris, per ton,	3 25—0 00	3 37—3 50	2 50—	2 00—2 25
SEEDS—Cloverseed, per bushel,	5 50—6 50	6 00—6 50	.....	.....
Flaxseed, rough, do.	1 30—1 37	1 37—1 50	.....	.....
Timothy,	2 00—	3 00—3 50	.....	2 87—3 00
Tallow, per lb.	8½— 10	— 11	11—	10— 11
WOOL—Saxony, fleece, per lb.	00— 00	40— 50	75— 80	.....
Merino,	00— 00	35— 40	50— 68	.....
1-4 and common,	00— 00	25— 30	40— 50	.....

Gentlemen whose subscriptions commenced with the thirteenth number, or second half year of the first volume of the Cabinet, and who may wish to complete their sets by obtaining the first twelve numbers, should make early application for the same. All letters on this subject, must be post paid. ☞ Post Masters are hereby authorized and respectfully requested to forward us the names of persons who may wish to *continue* the work, as well as the names of *new* subscribers; and after retaining twenty per cent. commission, transmit us the balance of any moneys they may have received:—And any gentleman may constitute himself a special agent, by remitting us five dollars, free of postage, for which sum, we will forward seven copies according to his direction.

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The office of the Farmers' Cabinet is removed to No. **45 NORTH SIXTH STREET**, a few doors above Arch. ☞ Subscriptions will be received as heretofore, by Mr. O. Rogers, at the old stand, No. 67 South Second street.

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J. Van Court, Printer, corner of Bread and Quarry St. rear of 96 N. Second

THE FARMERS' CABINET,

DEVOTED TO AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

Vol. II.—No. 5.] Philadelphia, October 2, 1837. [Whole No. 29.

For the Farmers' Cabinet.

Reply to questions respecting the "Economy of Cutting up Corn."

In Vol. 2, No. 3, of the Cabinet, I find "questions respecting the economy of cutting up corn." It is asked, "is it, in general, a good practice to cut up corn at all, or to cut up the stalks while the ears are attached to them." However well the suggestions may suit the ideas of economy entertained at Marcellus, N. York, they are not calculated to suit those of eastern Pennsylvania. The grand conclusion at which the writer, in his view of not cutting up corn, arrives, is, "a greater quantity and quality of corn, and exemption from much toilsome and expensive labor." I will endeavor to answer his five suggestions, as they appear, in rotation, to prove that cutting up corn is preferable, in an economical point of view, to leaving it stand in the field.

1. He says, "Cutting up corn at any time before the leaves are fully dead, does undoubtedly injure the crop in some degree, affecting it probably both as to quantity and quality." But ears of corn, that have not been injured by frost, will attain such a degree of ripeness before the leaves are fully dead, that cutting it up will in no wise injure either the quantity or the quality of the corn. In nine cases out of ten, where corn ripens without injury from frost, the husks will be dead and the ears turned down, while the leaves are comparatively green. Further, it has been satisfactorily proved by experiment, that if corn is cut before it is fully dead, the nourishment obtained from the stalks after it is cut, will produce such a degree of perfection, together with the superiority of the fodder in this case, as to throw the balance in favor of cutting it before it is fully dead.

2. He says, "When corn is cut up, and the stalks secured in the best manner that they can be, it rarely fails that some of them get down, and thus both the corn and the stalks are damaged by exposure to the weather." In order to prevent the damage of the corn and stalks from exposure to the weather by falling down, I would recommend the very thing here objected to. It rarely fails but a portion of the corn will be blown down by the time it is fit to cut. If it is left uncut till it is sufficiently ripe to husk, sometimes the greater portion of it, during the high winds and rains of autumn, when the ground becomes soft at the root, will be blown down. But if it is cut, and carefully put up in shocks, it will withstand the effects of the wind much better, and be much less liable to be blown down. If exposure to the weather be injurious to corn as represented above, there arises another advantage from cutting and shocking it. Where corn is not cut and shocked, every stalk is equally, or rather more exposed to the weather, than those on the outside of the shock; while that in the interior of the shock is protected from any exposure whatever.

3. "If the stalks be left standing in the field, cattle will consume quite as great a portion of them in the field after the corn is gathered, as they would if they had been cut and gathered to the barn." The consideration of the stalks receiving damage from being left standing in the field, and exposed to the weather, has already been sufficiently noticed. Admitting that cattle would consume as great a portion of them when left standing in the field, as when gathered to the barn, a disadvantage presents itself in this form. The fodder from every two acres of well grown corn, when properly secured,

will be sufficient for the sustenance of one head of cattle during a winter. Now it would be very poor economy, to turn cattle out in the deep snows of winter, to gather their sustenance from the stalks of corn left standing in the field. But another objection still exists, which the writer is endeavoring, by not cutting up corn, to obviate. If cattle were turned into a field to consume the fodder, they would make sad havoc of it by breaking and tramping it down to the ground, and thus destroying a great portion of it before it would be consumed.

4. "As materials for dung, stalks cannot be disposed of to better advantage, than to be allowed to remain where they grew, and there be mixed with the soil as is usually done by subsequent tillage." The question might be asked, why are farmers so particular in collecting all the straw, weeds, and rubbish into their barn yards! It is because, when they become incorporated with the excrements and urine of cattle, their fertilizing properties are increased an hundred per cent. The same reason will equally apply to the stalks of corn. Otherwise the dry straw, and weeds, &c., might be spread over the ground with equal advantage, to that fermented in the barn yard. The stalks from every two acres of corn when gathered to the barn yard, will make at least two wagon loads of good manure, after the blades and husks are eaten off by the cattle. When the stalks are taken off the field, the surface of the ground may be prepared much smoother for taking off the succeeding crop: and ploughing and harrowing ground, with the stalks of a crop of corn laying over the surface, conveys any thing else but the idea of neatness in farming.

5. "Cutting up and securing a well grown crop of corn, is a heavy and toilsome labor, involving, together with the subsequent ingathering of the stalks, no trifling item of expense." That cutting up and securing a well grown crop of corn is a heavy and toilsome labor, I am willing to admit; but the expense or the labor, I believe to be no more than other ordinary kinds on a farm. Now, while farmers are sufficiently recompensed for any kinds of labor, as I believe they are in cutting up their corn, I do not see why they should avoid it. The advantages derived from cutting up corn, when the fodder is used in an economical manner, over that of leaving it stand in the field—are, a greater quantity and better quality of fodder for cattle, an increase in the fertilizing matter for the soil, and consequently, a greater gain in the nett amount of the proceeds of the farm at large. A.

Chester county, September 27, 1837.

The following excellent treatise we copy from the Poughkeepsie New York Journal. It is one of the very best that we have met with on the subject—plain, concise, and worthy the attentive consideration of all engaged in the propagation or preservation of fruit trees. Messrs. Jackson *and* Schram *have our thanks for the copy they forwarded us in pamphlet form.*

A Concise Treatise on the Growing and Propagating of Fruit Trees, Shrubs and Vines. Founded on the Theories of approved Authors, tested by several years practice, and improved by practical experiments.

Fruit and Fruit Trees.

NO. I.

INTRODUCTORY REMARKS.

Most fruit is in a great degree nutricious; the best kinds are a pleasing luxury, and the greater part, when ripe and in a perfect state, used with moderation, are not only inoffensive, but beneficial to health.

The art of growing and propagating fruit trees and good fruit, will be found to be plain, simple and easy when rightly understood, and in no wise difficult to attain; but it has not received the attention it deserves, and consequently fruit trees consist, in a great measure, of casual growth, or such as are the result of careless, unskilful management, and are either stunted, or diseased, or both, and bear fruit which is unsound or inferior in quality, and the wood is of little value for timber or fire wood.

Trees, when stunted from the seed, or afterwards, can rarely be restored to that vigor of growth which they have lost; and when kept too long in nurseries in a crowded state, which prevents their growing, they become too old to transplant, and either die in the operation, or continue dwarfs ever after.

Trees are frequently grafted and budded, not only when stunted or diseased, but when too large and old, and a great number of grafts stuck all over the trees without regard to being placed in the leading and best placed

limbs. The grafts may safely, as is the practice, be *warranted*, as they will live; but the natural stock will continue to form the bulk of the top and bearing branches, and the grafts will remain diminutive and bear fruit in proportion. 25 grafts well placed are better than 100 placed at random:—10 grafts judiciously placed in a tree of moderate size, will change the whole top in a few years, where 200 grafts scattered all over a large tree, will not materially change its top or its fruit.

No person can, therefore, expect to reap any advantage from grafting, unless on small and middle sized trees, and such as are sound and vigorous: all others should be cut down as cumberers of the ground.

Pruning and training are much neglected, or very unskilfully done—making trees of uncouth shape and condition. Trees, when hollow, are in a rapid state of decline; they will soon rot down. They are made so, in most cases, by pruning off limbs and branches, leaving stumps on the trees; these rot off, leaving a hole in the tree, which admits water and soon rots and renders it hollow. Haggling off limbs with an axe has the same tendency. Pruning should always be done by cutting or sawing off limbs or branches *smooth* and *even* with the trunk or main branch from which it is taken. The wound will then soon heal over and be covered with bark, which is prevented by stumps or snags being left, as the bark cannot grow over dry snags.

Success in growing and propagating fruit trees depends, like every other branch of business, on practical skill *how to do it*, and industry and perseverance in the performance. When you plant an orchard, or single tree, plant sound, vigorous young trees, and no other than those you *know* to be such, either by having raised them yourself, or, if procured from a nursery, on such person's representations and assurances as you can safely rely. If you are the owner of trees bearing common or inferior fruit, save, in general, none but the sound, small and middle sized, which graft with the best kinds of fruit. Regulate all by pruning so as to form full, neat tops, suitably open to light and air; keep the earth around, and as far as the roots extend, mellow and suitably rich; secure them well by staking or boxing; water them a little in droughts, until they have taken root.

Having thus given a general view or outline of the subject, I shall now proceed in detail to describe the method of producing sound, hardy, durable trees, and good healthy fruit, and of making the business successful, agreeable and profitable.

On the growth and propagation of Fruit Trees, Shrubs and Vines.

These may be propagated, 1. *By grafting;* 2. *By budding or inoculation;* 3. *By cuttings and layers, and* 4. *From Seed.*

SEASONS FOR EACH.

Grafting must me done in the spring, and may be performed as early as the middle of March, and as late as the first of June.

Budding may also be performed in the spring after the bark peels freely, with buds of the previous season's growth, or in summer and autumn after the buds of the same season have attained their growth, which is preferable.

Trees, cuttings and layers must be planted in the fall after frosts and before the ground is frozen, or in the spring after the frost is out and before vegetation has advanced much, which is also a proper time for pruning.

Seed should be planted so late in the fall as not to vegetate but little, if any, or so early in the spring as to have the advantage of the whole season to grow and ripen in, to withstand the winter frosts.

GRAFTING AND BUDDING IN GENERAL.

Grafting may be performed on most kinds of trees on large or small stocks. Different methods of grafting should be used according to the size of the stock. It may be done in any manner by which the scions and stocks can be united. Those methods most in use will be noticed. Budding will only succeed on small stocks of *vigorous growth*, from the size of a yearling shoot to half an inch, and not exceeding about three-fourths of an inch in diameter.

The apple and pear succeed well either by grafting or budding.

The peach, apricot and nectarine seldom fail when budded, but rarely succeed by grafting.

The plum and cherry take without difficulty by whip grafting, which is the best method to propagate them; they may also be propagated with tolerable success by budding (the plum more readily than the cherry) and likewise by cleft grafting, when you succeed in splitting the stick without splintering the wood or injuring the bark, which can seldom be done.

Grafting and budding, for the most part, can only be practised with success on stocks of the same kind with the bud or scion. That is to say, the apple on apple stocks, pear on the pear, the cherry on the cherry, &c. Peaches, apricots and nectarines may be propagated on each other, and together on the same tree. *The apricot succeeds well on the plum*, and is more durable than on the stock

of its own kind, or on the peach or nectarine, but not of so quick growth. The peach and nectarine may also be propagated on the plum, but will outgrow the stock, unless a plum stock be used growing equally or nearly as fast. Trees of the common small black, and red cherry, make excellent and perhaps the most durable stock for cherries of all kinds. The quince and the pear may be grafted on a thorn stock, &c.

GRAFTING.

Scions for grafts may be cut at any time in winter, and even late in the fall. The *proper time* is in February or March, before or at the time the buds begin to swell or vegetate; buds, in this respect, are like kernels of grain, if disturbed when they swell and sprout, they become of slender and sickly growth, and rarely recover their natural vigor. Cut for grafts shoots of the last spring's growth, with a little of the two year's old wood. Take your grafts from fruitful trees, bearing good fruit of the kind: that is, if from a pippin tree, let it be from such as bear the best of pippins. The best grafts are those about the size of a pipe stem, taken from bearing branches, and not of side shoots or suckers, nor of the rank growth of the top of trees; these are apt to continue their rank growth, and outgrow the stock, and are not so soon in bearing, nor so fruitful; if too slender they will not be thrifty, nor take well. Tie up the grafts of each kind by themselves, with some distinguishing mark; put them in a cellar or out house, to keep them from being saturated, dried up, or frost bitten; set in a box of earth one-third their length, the earth kept moderately moist by occasional sprinkling, to keep them plump and prevent their shrivelling, but not so wet as to cause them to sprout.

Scions may be used for grafting, fresh gathered, at any time during the season of grafting before the buds open to leaf; early gathered grafts will, however, take more readily.

Take 8 ounces of *pure, transparent rosin, free from sediment*, about 2 or 3 ounces of bees wax, and lard of half the size of a hen's egg, melt them over coals or a slow fire, stirring the composition with a stick; after thoroughly mixed and melted, empty it into a pail of cold water, rub some lard over your hands to prevent its sticking to them, and work it together thoroughly, as shoemakers do their wax. If the composition is too hard and does not work freely when making or while using it in grafting, rub over it more lard and work it in as before; if too soft add rosin, and so on until it becomes suitable for use.

CLEFT GRAFTING.

Cut down all diseased and stunted trees, and graft those only which are healthy and thrifty, of not exceeding 6 or 8 inches in diameter, in some of the leading, best placed and thriftiest branches on the tree, with a view to changing the whole top. Trees of a large size may be grafted, and partially, and in some cases wholly changed, but not generally, without a great deal of labor and attention. Saw off the branches for stocks to graft on, at smooth places where they split well, and are in diameter of from 1 to 2 inches, prune the tree sufficiently to give room and air to the grafts, and gradually to force the juices of the whole tree into the grafts. Continue pruning each tree yearly, at any leisure time in the winter or spring, giving sun and air, and making room for the grafts as they grow, in such manner that if the grafts are of vigorous growth, in the third season to have cut out all except the grafts, and formed a new top. When limbs are taken off in pruning, it should be done with a saw or chisel, not an axe, and if large limbs a coat of tar, paint or the composition mentioned, put over the wound.

Having the stocks prepared as above, and being furnished with grafts and the composition, with a case knife or other convenient instrument and hammer, split the stock in the middle, drive in a wedge of hard wood or iron of 6 or 8 inches in length, and open the split so as to admit the graft freely, prepare the grafts, either all for the same tree, or one by one as used, by paring off about an inch and a quarter of the end of the graft or scion to the shape of a wedge, leave that side of the graft which is to be put towards the centre of the stock of *equal* thickness with that part which is to be towards the outside of the stock. with a view that the pressure of the stock, when closing upon the graft, be on the *inside* and not on the outside of the graft, where it is intended to unite with the stock: the outside if a little open, will facilitate the communication of the sap from the stock to the graft; but if closed up tight, may prevent such communication and endanger the graft; insert the graft as far as cut in wedge form, matching the *wood* of graft and wood of the stock without regard to the outside or surface of the bark on either; take out the wedge with sufficient care not to disturb or displace the graft. To stocks a little over an inch in diameter, one graft is sufficient, if larger, two are necessary, leaving on every graft from two to four buds. Finish the work by covering the crown of the stocks and the splits on each side, whether containing a graft or not, with the composition about the thickness of wrapping paper, by drawing it

into strings over them, and smoothing it down lightly with your finger or thumb, covering the whole perfectly tight, to exclude air and rain, and more especially to prevent the sap from running out. The sap being confined, will force its way to the graft, which will readily receive it.

Stocks with only one graft will be improved by having the corner opposite the graft pared down to about the middle of the graft. It will enable them to heal over sooner, without leaving defects.

If the stock splits uneven, cut it a little to fit the graft. If the bark splits from one side of the stock and adheres to the other, cut it down even with the wood, and match the graft to that side only, in case the other is too badly injured.

The grafts should be examined occasionally, and the shoots from the stocks ought not to be suffered to acquire a luxuriant growth, but *gradually* thinned out and cut away as the graft acquires growth and strength to take the juices of the stock.

Let the limbs or stock for grafting be cut off, when convenient, above and near small branches or shoots, to be left at first to draw the sap.

If the above directions are substantially adhered to, few grafts will fail; and a middle sized tree of vigorous growth, may have the top changed, and in a fruit bearing state, in about three years.

Leached Ashes as a Manure.

It appears to us that the attention of farmers can scarcely be called too often to the subject of manures, or their varieties and modes of action too fully discussed or illustrated. Constituting as they do his wealth, and furnishing the only means of raising good crops, or renovating impoverished soils, every substance that can enhance and perpetuate the fertility of his lands should be carefully tried by him, and its value estimated accordingly.

In the western part of this state, and in all new countries, such is the fertility of the soil, and the abundance of native salts and vegetable matter furnished during a long course of growth and decay, that the first series of cultivators find little use for the manures, and the expedients for ameliorating the soil, which are so necessary in the older cultivated countries. Hence materials, which are considered invaluable for these purposes in the states on the seaboard, or in European countries, are in our new settlements considered a nuisance, and wasted in immense quantities. The gradual decrease which has taken place in the annual production of wheat per acre for several years, on most of our old farms, shows, we think, that the native energies of the soil are weakened, and that the course adopted for improving soils in other places must be resorted to by us.

One of the most prominent articles used as manure in older settled countries, and sought after with an avidity that shows its real value, in ameliorating the soil, is leached ashes, a substance which as yet has scarcely created a thought among us, except it was to devise some easy method of disposing of the quantities so rapidly accumulating around our domestic leach-tubs and asheries. Millions of bushels—we might almost say loads—of this valuable material are annually wasted, when the time has arrived, as we think, that it could most profitably be used on our farms.

There is scarcely a process in farming, or an article used for substantially improving the soil, for which more decisive testimony can be found, than can be adduced in favor of leached ashes as a manure. Under the head of "Stimulating Manures," Chaptal, in his celebrated work on Agriculture, makes these remarks: "The ashes produced by the combustion of wood in our common domestic fires, give rise to some very remarkable results. Without being leached, these ashes are much too active; but after having been deprived by the action of water of nearly all their salts, and employed in this state under the name of *buck ashes*, they still produce a great effect. The action of the buck ashes is most powerful upon moist lands and meadows, in which they not only facilitate the growth of useful plants, but if employed for several years they will free the soil from weeds. By the use of them, land constantly drenched with water may be freed from rushes, and prepared for yielding clover and other plants of good kinds. Wood ashes possess the double property of amending a wet and clayey soil, by dividing and drying it, and of promoting vegetation by the salts they contain."

The Rev. Mr. Colman, in his interesting account of the successful system of farming adopted and pursued by Mr. Stimson of Galway, in Saratoga county, thus speaks of the use made of leached ashes on that farm, and the opinion of the owner on their actual value: "Mr. Stimson manures his land only once in six years, excepting the application of plaster to his corn. He allows five loads of barn-yard manure and three of leached ashes to the acre, and this is always spread upon the surface after ploughing for the first crop, and either harrowed or ploughed in by a very light ploughing. * * * He deems leached ashes a most valuable manure, and much to be preferred to that which is unleached, which he considers as having at first a tendency to force the land, but in the end to im-

poverish it. Next to leached ashes, he considers lime the best manure for land." Mr. Stimson's course of farming is as follows: 1st year, wheat, manured; 2d, corn, plastered; 3d, flax, rye, or barley; 4th, clover and herdsgrass; 5th, clover and herdsgrass; 6th, pasture; then manure as above and wheat.

In no part of the United States has agriculture and horticulture reached a greater degree of perfection than on some parts of Long Island; and this conversion of sandy plains into the most fertile of soils is, by those who are acquainted with the history of that region, attributed mainly to leached ashes, purchased at New York and the various landings on the North River. Dr. Williams says, the favor with which they are viewed there is the result of experience, and adds, "I know of many thousand acres on the Island which were once too poor to produce even mulleins and rib-grass, which now cut from one and a half to two tons of clover hay per acre, and this has all been done by buying leached ashes at from twenty to thirty-two shillings per fourteen bushels, and carting them from one to ten miles. I therefore conclude that leached ashes are a good manure, and if properly applied will be invaluable even in Western New York." In a valuable paper on this subject by E. L. Hommedieu, published in the N. Y. Ag. So. Trans., he says: "That ashes are found best to succeed on dry loamy lands, or loam mixed with sand. It is here considered as the cheapest manure that can be procured. Ten loads of this manure on poor lands, will produce ordinarily twenty-five bushels of wheat, the value of which exceeds by five dollars the expense of the manure, and the five dollars pays for the expense of labor in the crop. The land is then left in a state for yielding a crop of hay of between two and two and a half tons per acre, which it will continue to do for a great number of years. No manure continues so long in the ground as ashes."

We think the opinions and experience of the eminent farmers we have given above, abundantly sufficient to establish the fact of the value of leached ashes as a manure, and also incidentally to illustrate the kind of soil on which it is most effective; and we trust the attention of farmers favorably situated for its use, or on farms which may require its application, will make a thorough experiment of its effects in the interior, and report the result. It has we believe been hinted, that as nature is made up of a system of balances, and as gypsum is found to be nearly valueless on the sea coast, while it is all important in the country, so ashes may be effective on the coast, owing to the combinations effected by the salts contained in them and those of the sea air, while from this cause in the interior they must of course be inert; but this reasoning will most probably be found entirely incorrect.

One principal reason why leached ashes are so valuable as a manure appears to have been mostly overlooked, and that is, the quantity of lime they contain. This substance is placed in considerable quantities at the bottom of the vats or leaches in all asheries, to facilitate the labor of working, and is thrown out with the ashes. This fact, taken in connection with the one that a large portion of alkaline matter must remain in all ashes after leaching, accounts for the benefit they render to wet sour soils, by neutralizing such acid, and promoting the decomposition of vegetable matter, which in such earths always proceeds slowly, while at the same time they prevent adhesion in the soil, and enable the roots of plants to seek their sustenance freely. On light sandy soils they give consistency, and by the existing action of their still abundant salts effectually promote vegetation.

The best mode of application appears to be, to mix it with the surface of the earth, where it will be slightly covered by the operations of sowing or planting. A Pennsylvania correspondent of this paper says: "I put a small handful of unleached ashes *into* each hill of corn at the time of planting, and I think this way better than to put it *on* the hill after the corn has come up. Leached ashes for this purpose are not worth as much as unleached, yet with the latter, the corn was far better than in that part of the field where no ashes was applied." A writer in an eastern journal affirms from his own experience, that a bushel of ashes is worth as much to the farmer as a bushel of corn, and advises his brethren to apply their ashes to their corn, flax, or grass, in preference to selling them at eight or ten cents per bushel. —*Gen. Far.*

Draining, No. 2.

Some of the richest land is formed of *alluvial deposites* in the bottom of valleys. Its consistence is so extremely fine and compact, that water is very slowly imbibed by it: hence in a wet time, or even after a heavy shower, the turf becomes like a sponge; and the surface having little or no declination, the water rests longer upon it than is suitable for the grass, for the cattle that feed upon it, or for those who breathe the vapors rising from it. Add to this that, when in this sloppy state, heavy cattle poach it sadly—breaking the turf, and filling it with steppings and holes, which becomes so many pools of unwholesome water. If sheep are put on such land in autumn, it will go far to rot them; in a showery time, it

is with difficulty hay can be made upon it; and many other inconveniences attend the possession of such a description of land, unless it is thoroughly drained.

But *how is a dead level to be drained?* This, indeed, is no easy affair, although it is done in many places with very good effects. The surface may have a fall, whether perceptible or not: when this is ascertained, a large receiving ditch is opened at the bottom; and if the meadow be of considerable length, two or three other receiving ditches are opened at different distances higher up. These being first finished, surface drains from six to twelve feet apart, are made from the top to the lower end of each division. These may be called *catch drains*, and are thus made. The drain being lined off a foot wide, and the turf at each side cut through with a racer, turves are cut off four inches thick, and of any the most convenient length, and laid regularly on one side to be replaced when the bottom of the drain is completed. This done, a narrow trench is dug out of the centre of the naked space with a spade, and a channel is made from end to end. After this, a still narrower pointed tool is used to make the cleft or channel another spit deep. A shoulder is thus left on each side of the cleft, on which the sod that was first taken up is carefuly laid with the grass side downwards, and the remaining space is filled up with a loose earth, as represented in the following cut at fig. 10.

Open drains on grass land will also carry off much of the surface water, and lay the land tolerably dry without turning up much of the soil, as they need not be made deep. A common plough may indeed be so held, if neatly made, with an iron mould board attached to it by means of rivets, about nine inches high, and formed with a slight curve, as to throw over a sod of about six inches wide, by which means it will cut the ground in small triangular trenches, nearly like those at fig. 11, the sides of which may then be firmly pressed down, and afterwards kept clean by a cart-wheel with the addition to the felly, as designed at *a* in fig. No. 12. The felly is that of a six-inch cart-wheel, with an addition of wood, of a conical shape, to put on round the felly, and either to be shod with iron, or a rim of solid iron to be added to it.

Fig. 10.

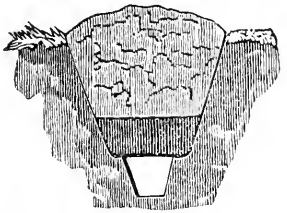


Fig. 12.

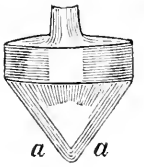
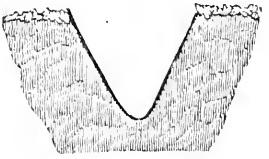
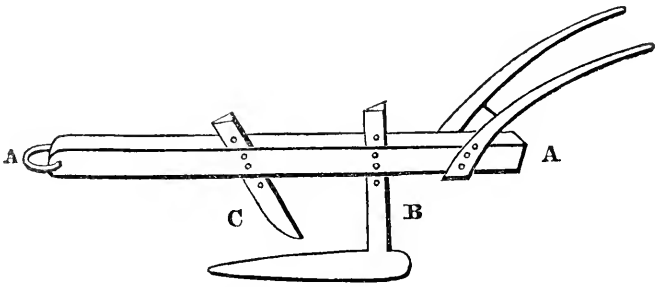


Fig. 11



A wheel of this description put on the axle of a cart in the common way, will, of course, rest on the rim of the iron; and on driving the horses forward it will fit exactly, if so made, into the trench, and thus press it down in every part equally. This side of the cart must however be loaded with some heavy material, in order to make the wheel sink into the soil; but as the wheel on the opposite end of the axle will only support the empty side of the cart, it will not cut the land. If the soil require very close drainage, a pair of wheels may be fitted with such rims, and being fixed upon an axle projecting beyond the cart

Fig. 13.



to the intended width of the trenches, will perform the operation still more completely. The advantage of this contrivance is, that it not only makes a firm indent in the soil sufficient to carry off the water during the winter, but in the following spring these drains will be so nearly clothed with grass, that little or nothing will be taken either from the pas-

turage or from the scythe; and in this manner the drains may be kept clear at the approach of every winter, at such moderate expense that a man with a couple of horses may go over from ten to twenty acres according to the breadth of the drains apart from each other, in the course of the day.* There is, however, one objection to all kinds of open drains in pasture land—that, when fed with sheep they frequently occasion them to be cast; and therefore, unless narrowly watched, they may become dangerous to that stock.

There is therefore another mode of preventing injury to meadow ground with *under drains*, by the use of the *mole plough*, (fig. 13,) which consists of a strong beam, A, with stilts of the usual form. The mole, or borer, is a well-tempered cast-iron conical share, of about three inches diameter at the largest end, but sharp at the point, and supported by a very stout flat wrought-iron bar, B, mortised into the beam, and about an inch in thickness at the back but champered to a sharp edge at the front, to cut the soil. The coulter, C, is rather smaller, but cuts with the edge in the same line, and in some ploughs has been also made a support to the mole by being fixed into it; but the plough, with a coulter of that construction, does not clear itself of obstructions so easily as when left with the usual space between, as in that above designed. It works in general at about a foot underground, but the depth may be regulated by pins placed through the beam in the coulter and support of the plough; and in a clayey soil of sufficient adhesiveness to prevent the crumbling of the earth, it forms a close hollow space, as round and compact as a leaden pipe.† The sides, however, become so perfectly closed as to completely prevent the filtration of water, and would therefore only serve as a passage to convey a quantity from any point of the meadow to a large drain, or pond were it not that the cut made by the coulter and support through the upp part of the soil leaves a small opening, w ch has in some cases been partially filled up immediately under the sward with the plaited straw, which prevents the sides from closing, yet allows of the grass to grow over the cut, so as to avoid all appearance of the operation.

In using this plough it is, however, necessary to guide it very evenly, or the drain will not carry off the water; and it has been thus found advisable to make it with wheels to the fore end, as in common ploughs, by which the depth of the draught may be thus regulated.

A man must live by the world and make the best of it, such as it is.

* See Middleton's survey of Middlesex, 2nd edit p. 351.

† Ibid. p. 361.

From the Watertown Eagle and Standard.

Sugar from Beet.

We find in the Ogdensburgh Republican of the 30th ult., a communication from Josiah T. Marshall, Esq., of Morristown, land agent, &c., on the culture of the sugar beet. With commendable liberality he has procured a quantity of seed for gratuitous distribution, with the view of exciting the attention of farmers and others to the culture of the beet, not only as furnishing sugar for the purest quality but also as a source of revenue and the preparation of the soil for other crops. Having himself witnessed the cultivation of the beet and the manufacture of sugar therefrom, in France, he is every way qualified to furnish the necessary information relative to these facts, and this he has kindly promised to do from time to time as the crop advances to maturity. We subjoin a few extracts from Mr. Marshall's communication, as best exhibiting the importance of the subject:

"The value of this article of husbandry is not confined to its use as the material of sugar. As a crop to alternate with grain it has no rival; and by a judicious use of it no land need lie fallow.

"The 'cakes' or that part which is left after the juice is expressed, affords a valuable nutriment for horses and cattle. It is eaten by them with great avidity.

"The mode of manufacturing the sugar from the juice of the beet is very simple. It is true that in describing the mode, learned men have used many hard words. But divested of technicalities and scientific terms, it is a matter of entire simplicity."

* * * *

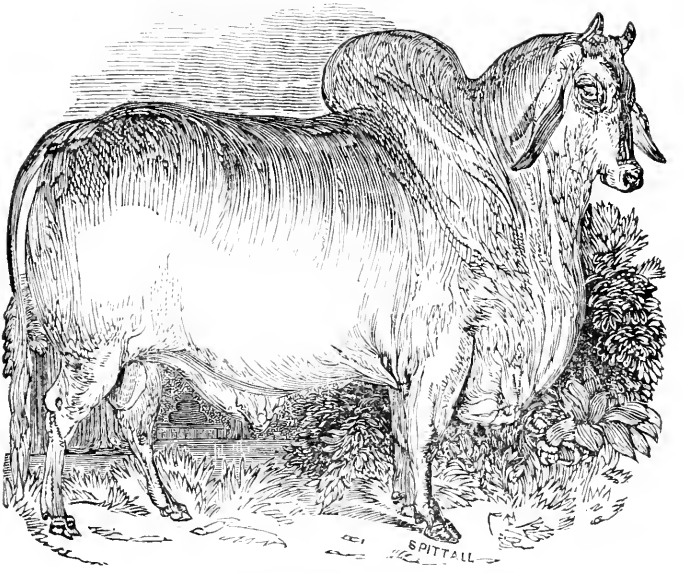
"The simplicity which is used in the manufacture of maple sugar may be advantageously used in this; and the manufacturing season is at another period of the year. There are some things in connection with the manufacturing process, which it is important should be known by those who purpose making the experiment. It will give me pleasure to furnish at a future time the details."

* * * *

"It may be sown between the 1st and 10th of June. The land should be in good order; a soft sandy loam, if possible. It may be sown broad cast, or in drills."

"If the former, it should be harrowed in. The plants should be left from 12 to 18 inches apart if they come up thicker than that, the surplus plants may be transplanted. No further directions are now necessary. they should be kept well hoed and free from weeds."

Let every man mind his own business.



The Nagore Bull. Fig. 14.

Nagore Cattle.

A bull and cow were exhibited at the Christmas cattle show, in London, in 1832, under the denomination of Nagore cattle. They were beautiful animals, and attracted much attention. They were the property of Henry Perkins, Esq., of Springfield, near Wandsworth, to whom we are indebted for the substance of the following account of them.

They were bred by Lieutenant Colonel Skinner, at his farm at Danah, near Pokah, on the borders of the Bichaneer desert, 100 miles to the westward of Delhi. They are not buffaloes, but of the highest breed of Indian cattle. They are used in India by the higher orders, to draw their state carriages, and are much valued for their size, speed, and endurance, and sell at very high prices. These specimens arrived at Calcutta, a distance of 1400 miles, in January, 1829, and were then something under six months old. They were sent as a present to Mr. Wood, who was then residing at Calcutta, and by whom they were forwarded to Mr. Perkins.

Colonel Skinner has a large stock of them; and six or seven beasts are always kept saddled to carry the military despatches. They remain saddled three or four hours, and if not wanted in that time, fresh ones are brought out to relieve their companions. They will travel, with a soldier on their back, 15 or 16 hours in the day, at the rate of six miles an hour. Their action is particularly fine—nothing like the English cattle, with the sideway, circular action of their hind legs—the Nagore cattle bring their hind legs under them in as straight a line as the horse. They are very active, and can clear a five-barred gate with the greatest ease. Mr. Perkins has a calf which has leaped over an iron fence higher than any five-barred gate; and the bull frequently jumps over the same fence in order to get at the water, and when he has drank his fill, leaps back again.

The bull (Jupiter) was in high condition when exhibited. He is employed in a light cart, in various jobs about the farm: sometimes he goes fore-horse in the wagon-team, to deliver corn; he also drags the bush-harrow, and draws the light roller over the ploughed land. He is very docile and tractable, when one man drives him, and attends upon him, but he has, now and then, shown symptoms of dislike to others.

He is fed entirely on hay. Except that when he works, a little bran is given to him, and in the turnep season he is treated occasionally with a few slices of Swedes, of which he is very fond. He was at first very troublesome to shoe; and it was necessary to erect a break in order to confine him. He was unwilling to go into it for some time, but now walks in very contentedly.

He is very fond of being noticed; and often, when he is lying down, if any one to

whom he is accustomed goes and sits down upon him, and strokes him over the face, he will turn round, and put his head on their lap, and lie there contentedly as long as they please.

Mr. Perkins very properly observes, that the chief advantages of these Brahmin bulls would probably consist in their speed and strength, in both of which they surpass any of our breeds.

The cow (Io) is at grass with the milch cows, and comes up with them morning and evening, when they are driven to be milked; but Mr. Perkins has not ventured to have her milked, on account of the probable danger of the attempt: the value of these cattle for the pail is therefore unknown. Two calves have been bred from them, and a milch cow is now in calf by the bull.

Farm accommodations for Cattle.

Farmers differ so much in their opinions, situations, pursuits, resources, &c., that it is quite impossible to lay down any general plan with regard to the arrangement of accommodations for their stock.

In Pennsylvania, there is a laudable emulation among the farmers in building good barns, which accommodate their stock comfortably. In them they stow away hay and grain. When the wheat is threshed out, the straw is replaced, ready to litter the stable and feed the cattle. The provender is so convenient, that a boy can feed the stock of a considerable farm in half an hour, without going out of doors; and as all the hay and straw is in one place, consequently all the manure, without much attention, centres in one body, and is by that means preserved, as they have mostly a cow-yard with a fountain of water in it; in this the manure is kept, and the cattle run during the day to get water.

These barns are so constructed that the lower story holds all the stock, and frequently have granaries and carriage houses, with room for all the hay, wheat, &c., produced on one or two hundred acres. This building is much more convenient, costs less, takes less room, and the business is more easily conducted, than by building corn-house, stable, carriage-house, hay and straw sheds, all separate, as some of our farmers do, requiring four times the roof, which is the most costly part of the building, some of which are frequently of a temporary character, and are often a disgrace to a handsome farm; whereas the barn is a convenient, substantial, cheap building, considering the accommodation it affords.

Robert Smith, Esq., of Baltimore, gives the following account of his dairy farm arrangements:

"The barn is constructed according to the best Pennsylvania models. The yard is to the south of it. On the east and west sides, are cow stables containing 110 well-made stalls, and well ventilated by a sufficient number of windows and double doors. In these stables, in summer as well as in winter, several ranges of cattle, duly littered and properly secured, each by a chain and halter. At the tails of each range of cows, there is a drain made of strong planks, so fixed as to receive all their dung and urine. These several drains have a sufficient declivity to carry all the fluid matter to their southern terminations, where they intersect similar drains, which convey all this liquid manure into a cistern fifty feet long. This cistern is so placed and constructed as to receive not only the urine of the stables, but also the liquid matter of the farm-yard. In it there is a pump, by means of which, its contents are pumped into a large hogshead, fixed on a pair of wheels, drawn by oxen. To the end of this hogshead is attached a box pierced with holes, into which this liquid manure flows through a spigot and faucet, and is then sprinkled over the ground, as the oxen move forward.

"For the purpose of augmenting the quantity and improving the quality of the food of my stock of every kind, I have established a steam apparatus. It consists of a boiler and two wooden boxes, in which boxes is steamed the food. These boxes contain each eighty bushels. By this simple apparatus, every species of coarse vegetable offal, is converted into nourishing food, and all the ordinary provender is rendered more nutritious."

The common cattle stalls of our country, says Col. Pickering, are so ill contrived and so straightened in their dimensions, that the cattle are constrained to lie down in part of their own dung. This dries and forms a thick coat on their hind quarters, from which they are not relieved till they shed their hair in the spring. They are thus rendered *uncomfortable*. To be uncomfortable is to suffer some degree of pain; and no one will suppose that animals in *pain* can *thrive*, or preserve their plight with the same food, equally with others perfectly at ease.

The practice of stacking hay and fodder in the fields, and feeding the cattle round the stacks and fodder houses, cannot be too much condemned. The disadvantages of which are, a wasteful use of the provender; the dung lying as it dropped, without straw or any other vegetable substance brought to it, the manure is little in quantity, and that not lying in heaps, is reduced abundantly by *ex-*

halation and *rain*, without leaving any thing to the soil.

In good husbandry, cattle are carefully housed, or otherwise confined to a foul yard in which are *shelters* against cold rains during the winter, and as far through the spring as food will last; by this means, there is a fair expenditure of provender, without waste, less exhaustion of the juices, because of the dung lying together in large heaps; and the dung being mixed with the straw and other vegetable substances brought to the beasts as litter, the whole is trod together and forms a large quantity of very valuable manure.

Litter is as essential to cattle, when let into yards, as when placed in stalls under cover, without which, yard manure is of small account; and unless it be in full proportion to the number of cattle in the yard, it is not thought highly of, but is a half done thing. Good farmers in England deem full littering of cattle, when in yards, of such importance, that after reaping with sickles, and inning their wheat, they cut the stubble and stack it for litter. Besides straw and stubble for litter, they apply to the same use fern, and such other vegetable substances as they can procure; and they buy straw from common farmers who are not in the practice of littering. In all countries, common farmers are indifferent to improvements; they work not beyond old habits; and it is prudent that they venture not on extensive new projects, without first making experiments. A full littering is three loads of 12 or 1300 pounds of straw to each grown beast. Corn stalks may be carried from the field in great quantities, in a skeleton frame cart, if not cut up and fed when fresh.

Many farmers feed in their yards in racks, and suppose that they gain every possible advantage from the practice, by the saving of the dung dropped, trampled, and watered by the cattle; and though this practice is certainly preferable to wasteful pasturing, or to feeding in the fields, yet it ought to be recollected that the manure will be much inferior to that made and preserved under cover.

Where cattle are yard fed, or stall fed in yards under sheds, it is of great consequence to defend beasts against the cold and damp north-east winds and the cold blasts from the north-west. Mr. E. Duffield, therefore, advised a friend who wished to have a complete farm-yard, to erect a range of buildings in a south-east direction, to have double stalls below, leaving the south-west and south-east sides open to admit the sun in the winter, and give free entrance to the prevalent winds of summer.—*Practical Farmer.*

Assume a virtue if you have it not.

An Essay on Indian Corn,

Delivered by Peter A. Browne, Esq., L. L. D., before the Cabinet of Natural Science of Chester county, Pa.

Zea Mays. "Maize" or "Maiis." "Indian Corn" or "Indian Wheat." "Blé ou Bled de Turquie ou d' Inde" (French.) "West India Corn" (Spanish.) "Lenehasquen" (Lenni Lennape.) "Melomin" (Chipeway.)*

The word "Zea" is borrowed from the ancien †Greek word "Zao," "to live," the seeds contributing eminently to the support of life. †It is rendered in Latin "triticum," (wheat,) and "hordium," (barley,) from which it is inferred, that in its original it meant "*grain*" only. In like manner in English the word "corn," which is derived from the

* L. Z. Mays, L. *Leaves Lanceolate, keeled, entire.* Willd. Sp. 4. p. 200.

Virgo—*Corn. Indian Corn. Maize.*

Root *annual.* Culm *6 to 8 or 10 feet high, and an inch to an inch and a half in diameter, simple, (often producing suckers, or branches, at base nodose, semiteretc, or with a broad channel on one side, smooth, solid with pith. Leaves* lanceolate, acuminate, nerved, keeled, 2 to 3 feet long, and 2 to 4 or 5 inches wide, smooth beneath, pubescent on the upper surface, ciliate on the margin: *sheaths* striate, smooth, conspicuously pubescent along the margin; *ligule* short, obtuse, slightly pubescent and ciliate. *Staminate Flowers* in terminal paniculate racemes *spiklets* somewhat unilateral on the branches, mostly in pairs, one subsessile and the other pedicellate, each two-flowered *Glumes* herbaceous, nerved pubescent, the lower a little longer *Palæ* 2 to each floret, nearly equal, membranaceous, ovate-oblong, obtuse, subdentate and ciliate at apex. *Anthers* greenish yellow. *Scales* collateral, cuneate, truncate, fleshy and smooth. *Pistillate Flowers* in solitary axillary, sessile spike, (1 to 3 or 4—usually about 2 of these spikes or Ears—on each plant.) *Spikes* enveloped in spathe-like convolute sheaths,—the outer or lowest of these sheaths (being the one next the culm) thin and membranaceous, with two keels. *Spikelets* 2-flowered, arranged in longitudinal series on a cylindrical spadix, or receptacle, 6 to 12 inches long,—the series or rows, always in pairs: *florets* sessile, the lower one abortive. *Glumes* 2; the lower one rather shorter, very broad, deeply imarginate, or somewhat two-lobed, ciliate, the upper one suborbicular *A fertile floret* with 2 palæ; the lower one orbicular, embracing the fertile floret, the upper one shorter, with the margin inflexed. *Fertile floret* with two or three palæ, the lower one suborbicular the upper one very broad (or somes 2.) *Ovary* smooth, obovoid, obtuse or rounded, compressed at base. *Style* very long, filiform, projecting beyond the sheaths, pendulous, often purple: *Stigma* pubescent, bifid. *Seed* compressed, orbicular reniform, or cuneate, often indented at apex, sitting transversely on the cylindric or conic receptacle, and partially imbedded in sockets formed by the persistent glumes and palæ.

Hab. *Cultivated fields: common.* Fl. *July—August,* Fr. *Sept.—October.*

Obs. There are several *Varieties* of this plant.—with the seeds *yellow, white,* or sometimes *dark purple*; and one which is smaller, and comes sooner to maturity. I have also seen a singular variety, in which every seed on the receptacle appeared to have its own husk, or spathe-like covering, in addition to the general envelope. The Indian Corn is one of the most interesting of the *Gramineæ*—rivalling the *Sugar Cane,* and the *Rice,* in intrinsic value,—and, in this region at least, ranking next in importance to *Wheat* itself. It is universally cultivated here, being generally the first in the routine of the crops, breaking up the Lay, or sod. The *seed* is planted early in May. No other species of the genus is known in the United States.—[Darlington.]

† Darlington.

Saxon "corn," and the German "Korn," includes "*all* seeds that grow on *ears*, and not in *pods*, and that are made into bread." "Corn," in political economy and commerce, is synonymous with "bread stuffs." All the British statutes regarding *grain*, are called "*corn* laws." The words blé and bled in the French, and the word "Trigo" in the Spanish language, correspond with the word "*Zea*," as thus explained. Blé was also the Norman name for corn.‡

The class Zea is divided into two orders. 1st Zea mays. 2d. Zea curaguá§

The Zea belongs to the 19th class of plants called Monœcia (one house.) because the plants of this class have imperfect flowers, the stamens and pistils growing on the *same* plant, but on separate corollas.

The *orders* of this class are determined by the numbers of styles and pistils. The Zea mays belongs to the third order "Triandria," three stamens.

In the natural orders it is arranged under the 4th "Gramina;" family "Cerealia," Cerealis, any grain from which bread is made, from "Ceres," the goddess of corn.

In books of horticulture it is ranged under "culmiferous crops."

Some writers call the Zea mays a "gigantic grass." Col. Taylor of Virginia, speaking of deep ploughing, calls it "a little tree."

It is generally ranked as the third grain, in point of utility, by European writers; they placing before it, rice and wheat; but in the United States it takes precedence of all other grains.

I propose to treat of this valuable plant under the following heads, viz:

I. To what country did it originally belong?—Is it a native of America?

II. Where is it now cultivated?

III. How much is raised in the United States?

IV. Of the varieties of Indian Corn.

V. Which kind is to be preferred?

VI. The capacity it has of retaining its germinating power?

VII. The methods of cultivating it.

VIII. Is the Indian corn capable of being improved by culture?

IX. Its cultivation compared with other grains.

X. The different uses to which it is applied.

I. To what country is the world indebted for this valuable plant?

Is it a native of America?

I state the above as two distinct questions, for it might be that the Indian corn was indigenous to different countries. But it was no apprehension that the Indian corn had been a native of any other part of the world that induced me to make the suggestion.

Not to trouble the reader with the numerous other writers who have dwelt upon this subject, I will remark that in "Lieber's Encyclœpedia *Americana*," published in 1831, it is stated, that "the native country of the Indian corn remains *still undetermined*." If this be the fact, is it not high time that the question were decided? I believe that there is on record information enough to put it forever at rest; and mine has been the task to collect and collate it. It is not meet that a nation, who (to use the words of Col. Taylor,) have lived "*in it*," and almost "*upon it*," for upwards of two hundred years should be unable to tell their children whether the Indian corn is a native or exotic plant. It is a reflection upon not only the learned, but the mass of the community, that their great *staple commodity*—the plant that demands and receives the patronage, the skill, and the industry of a large agricultural part, of a great agricultural nation, should be so imperfectly known. It is no longer to be tolerated, that a crop—which has not been too strongly described, as the *meal*, *meadow*, and *manure* of the American farmer, should be treated with such neglect, that in a scientific work, published in our own days, and in our own country, it should be represented as "an *unknown*," whose native country is undetermined.

I have therefore taken extraordinary pains to ascertain its history, and after I have given the details, it will be found very easy to pronounce, to what portion of the globe the rest of the world are indebted for the Indian Corn.

I propose to divide this part of the subject into the following heads of inquiry.

1. Has the Indian corn been mentioned by any Greek or Roman writer?

2. Has any traveler, *prior to the discovery of America*, noticed the culture of Indian corn in any other part of the world?

3. If it is not a native of America, whence was it derived and *when* transplanted?

4. Was it known to and used by the aboriginal inhabitants of the West India Islands, and of South and North America before, or at the time of, their being first visited by Europeans?

5. What is the general opinion of learned persons upon its origin?

6. Are there any recent discoveries that will bear upon this subject?

A few words on these questions in their order.

1. Has the Indian corn been mentioned by any Greek or Roman writer?

This point has been conceded by the author of the article quoted from Lieber's Encyclopædia Americana, and in so doing he has

‡ Kelham's Norman Dictionary.
§ Reese's Cyclopædia.

done no more than was required of him at the hands of truth and candor. The "corn" which the disciples of our Saviour plucked and eat on the Sabbath, as they went through the corn fields, was not *Indian* corn; for in Luke vi. 1. the disciples are represented as *rubbing* the *ears* in their *hands* to get at the grains, an operation which would have succeeded with wheat and other small grains, but which was altogether inapplicable to Indian corn.

Pliny speaks of a certain dish much used and admired by the ancient Romans, called "*alica*," which was made of Zea. "Alica fit e Zea quem semen appellavimus." But "Zea" here means "spelt," or according to some, "beer barley" or "beer corn." See Ainsworth's Lat. Dict. which cites Pliny.

2. Has any traveler, *prior to the discovery of America*, noticed the culture of Indian corn in any other part of the world?

It is well known that, previously to the discovery of America, many intelligent travelers visited China, India, and other parts of Asia, as well as Africa; that some of these have been very minute in their descriptions of the vegetable productions of these countries; yet it is not pretended that any one of them has mentioned the cultivation of Indian corn. This universal silence upon the subject furnishes negative testimony, *at least*, and negative testimony of the strongest character, that the Indian corn was then an unknown plant.

It can hardly be supposed, if the Indian corn had been growing in those countries, that it would have escaped the notice of travelers; and this negative testimony is strengthened by the circumstances, that immediately *after* the expiration of a sufficient length of time from the discovery of America, to have enabled the curious to have transplanted the productions of this hemisphere to other parts of the world, we find intelligent foreign travelers employing their time in describing the Indian corn and its mode of culture. I have among my notes numerous instances of this class, which I forbear to press upon the reader.

3. If the Indian corn is not a native of America, *whence* was it derived, and *when* was it introduced in America?

Is it not a great objection to the proposition that the Indian corn was introduced into America from another part of the world, that no two writers agree *whence* it was originally derived. One asserts that it was brought from India, supposing it to have been introduced through Persia to Africa; another says that it originated on the western coast of Africa, &c. In like manner are these writers at fault, when the *time* when it was introduced into America is required to be known. We will presently see the reasons of this discrepancy as to the *place* from which the Indian corn is supposed to have been brought, and total inability to show *when* it was transplanted into the Americas. But these reasons will serve for any thing better than to show that it was not a native of this country.

To be continued.

Peach Tree.

Peaches are of two kinds; the clearstone and the clingstone; but there are good varities of each. The same sorts can only be raised by grafting, or inoculation: This may be on apricots, or on plum trees, and will make the grafted trees longer lived. The trees should have a warm, dry, fertile soil: a sandy loam is best. If the spot where they are planted be sheltered from the northerly winds, it will be the better. To raise the young trees, take stones that are fully ripe, and plant them in October. They will come up and grow to a good size in the course of the summer. They are to be kept clear of weeds, while in the nursery. At a year's growth, they may be grafted, or innoculated, and after two summer's growth, they may then be transplanted. This may be done when the leaves have fallen in autumn, or in the spring. Take plants with one strong clean stem, or, if they have two, cut one away, however fair. Let the downward root be cut off, in order that the tree derive its nourishment from earth nigh the surface, which will make the fruit less crude, and finer tasted. Be careful not to plant the trees too deep; for this is injurious to all fruit. Let the pruning of the new planted trees be omitted, till they have taken root.

In making a proper selection of trees, from which to graft or inoculate, a due regard should be had to three essentials.

1. To obtain the grafts, or buds, from trees bearing the finest fruit.

2. That this fruit should ripen at different times, from the earliest to the latest of the season for peaches.

3. That the grafts or buds be taken from trees which are plentiful bearers; but not such as bear so plentifully as to be broken by their fruit.

But, perhaps, the too plentiful bearing of trees is a quality not properly descendible to those which are raised from them, by grafting or otherwise. It would be well to ascertain this point by experiment.

It is said by some, that if the stones of peaches be buried immediately, without drying, they will produce trees bearing the same kinds of peaches, as those whence the stones were taken. This is well worthy of particuticular trial.

Spring Wheat

Has already superseded the winter species in Lower Canada, and in the northern section of the Union; and such are the casualties which the winter crop has to encounter from the Hessian fly, from hard winters, and from the grain worm, for the latter we have no doubt, will soon extend itself over the whole country, that we apprehend the farmers of the northern and middle states, at least, will soon find it advantageous to resort to the spring species of this grain for their main crop. Under this view of the subject, we think we shall be doing a service to the readers of the Cultivator by detailing what we know in relation to different species of spring wheat.

The *triticum æstivum*, or spring wheat, is said to be a native of southern Siberia and Sicily, whence its culture has been gradually dispersed through Europe and America. It ripens ordinarily about the same time as winter wheat, when sown very early; but when sown later it is fit to harvest in ten or fifteen days after the former. The following, among other varieties, are described in the books.

1. Having a red spike, or ear and grain.
2. Red spring wheat, with a white ear.
3. A white spike and grain. These three are all beardless varieties, of the same species, are not easily affected by moisture, and give a flour nutritious, but not so white, or in so large proportions, as the winter varieties cultivated among us.
4. *Siberian spring wheat*, probably the variety cultivated in Oneidia, and already noticed on the authority of Dr. Goodsell. It is bearded.
5. *The Egyptian*, or *many spiked wheat.* Loudon terms this a variety of winter, whereas with us it is a spring wheat. This is remarkable for its uncommon productiveness. The grains, however, do not yield so large a proportion of flour or meal as other species or varieties, and the flour is said to be scarcely superior to that obtained from the finest barley. It has been introduced in our country to a considerable extent.
6. *Spelt wheat*, noticed under correspondence. Sown in spring.
7. *Italian spring wheat.* This is the variety which was introduced by Mr. Hathway, of Rome, and which seems to have proved congenial to our soil and climate wherever it has been tried. It is bearded, the product is abundant, and the grain makes excellent flour.

There are besides those we have enumerated, several other varieties of spring wheat, with which we are not acquainted, as the Black Sea and Tea wheat, which are probably mere varieties, which have been modified by climate and culture.

The white, or spring or summer wheats, flourish best on light soils. The ground, however, requires to be well pulverized. A good preparation is a clover lay, ploughed in May, and sown the 15th in this latitude, (Albany,) so as to escape the grain worm. The straw of spring wheat is generally shorter than that of the winter varieties, the berry less plump, the flour less abundant, and darker, but equally nutritious.—*Cultivator.*

Sugar.

The following, which we translate from a late French paper, contain curious and interesting information:

At this time, when the important subject of sugars occupies public attention, we believe that our readers will be glad to receive some statistical information relative to the consumption of the article. The following scale of consumption is from a table published in the Edinburgh Review:

Ireland, with 8,000,000 inhabitants, consumes 18,000,000 kilogrammes* of sugar.

Spain, with 12,000,000 inhabitants, consumes 40,000,000 kil.

The United States, with 12,000,000 inhabitants, 100,000,000 kil.

Great Britain, with 16,000,000 inhabitants, 180,000,000 kil.

France, with 32,000,000 of inhabitants, 100,000,000 kil.

Which is an allowance for Ireland of 2½ kilogrammes per head; for Spain, 3½ kil., for the United States, 8½ kil., for Great Britain, 11¼ kil., for France, 3½ kil.

So it seems that our consumption is less than that of either England, the United States, or even Spain. It is only in Ireland, that miserable country, that they consume a little less sugar than in France.

Agricultural Society, New Castle Co., Del.

An adjourned quarterly meeting of the Agricultural Society of New Castle County was held at New Ark, 9th mo. 16th, 1837.

The President, P. Reynold, in the chair.

Benjamin Webb, Sam'l. Wollaston. Wm. R. Sellars, Wm. Chandler and Wm. Solomon, were appointed a committee to make arrangements for, and superintend the annual Cattle Show to be held in Wilmington on the 4th of next month (the first Wednesday in October;) and Dr. Wm. Gibbons, Samuel Hilles, James Webb, Merrit Canby and Dr. Thomson were appointed to have the management of the Horticultural Exhibition to be held at the same time. The committees were desired to publish as soon as practicable, for the information of persons having cattle, vegetables, or other articles to be

* A kilogramme is nearly two lbs.

exhibited, or to compete for premiums, handbills setting forth the plan of arrangements adopted by them.

A communication on the subject of the Italian Spring wheat was laid before the meeting, containing a proposition to furnish a quantity for seed, at $3 per bushel. The President stated that he had sown a quantity of this wheat in the spring of the present year, and that the crop was a very good one, while the crops of the common wheat in the neighborhood were poor, and in many instances almost entirely failed. He considered it a most important acquisition to the farming interest of the State in consequence of the comparative certainty of the crop. He had not yet manufactured any flour from it, though it is said to be quite equal to the common kind for bread The entire crops that he had raised this year, he wanted for his own use as seed—intending to cultivate it in future. Several gentlemen present expressed a wish to have a supply of the article, and the corresponding secretary (Dr. Thomson) was requested to procure 12 barrels for distribution among the members.

The following gentlemen were appointed to decide on the premiums at the approaching exhibition.

On Neat Cattle. P. Reybold, B. Webb, Samuel Canby, Edward Tatnall, Thomas Blandy, Richard Topham, Jos. Hossinger.

On Horses. Dr. Thomson, Thos. Garret, D. W. Gemmell, Henry Dupont, John H. Price, James L. Miles.

On Oxen. John Higgins, Wm. Hurlock, W. R. Sellers, W. Robinson, Jesse Gregg.

On Swine. Bryan Jackson, Jas. Caldwell, John Clarke, Wm. Chandler.

On Crops. Andrew Gray, Thos. Stockton, Edwd. Tatnall, W. Reybold, Alex. S. Read, Anthony Higgins, Samuel Wollaston, Wm Rothwell, Levi Couch, Thos. Blandy, James L. Brindley.

On Butter. John Smith, N. C. H., Z. B. Glazier, John L. Robeson, Merrit Canby, James Webb.

On Oil. Dr. Thomson, and Edw. Grubb.

On Beet Sugar. Dr. William Gibbons, B. Webb, and Samuel Wollaston.

On Silk. Dr. J. S. Naudain, Merrit Canby, Eli Hilles, James Price.

On Culinary Vegetables. Edmd. Canby, Jas. M'Cullough, Marcus E. Capelle, and Benjamin Whiteman.

On Fruits. Dr. William Gibbons, Edward Tatnall, Dr. Thomas, A. S. Read, James T. Bird.

On Flowers. George Reynolds, Samuel Canby, Wm. H Jones.

A committed consisting of M. Canby and the Secretary, was appointed to examine the Treasurer's account, and report to the next meeting; and also to bring forward a list of members designating those who have not paid their annual contribution.

On motion of Mr. Canby, it was

Resolved, That this society have learned with great satisfaction that a company of gentlemen, members of our association, have purchased at Whitaker's sale of Durham Cattle at Powelton, the full breed, imported Bull, *Maxwell;* and that the society earnestly recommends to the breeders of Stock in Delaware, the use of this fine animal, which will soon be offered to the members of the society and the farmers generally of the State.

On motion of John Higgins, seconded by B. Webb, the following resolution was adopted nem. con.

Resolved, That in the appointment of Delegates to the Business Convention lately held in Philadelphia, as invited by the New York Institute, and in all its proceedings and appointments, this society has had in view no other objects than the advancement of the Agricultural interests of the county and State, and the general prosperity of the country; and that it utterly disclaims the gratuitous imputation of political or sectional influence.

Benjamin Webb was appointed to supply the place of Thomas Robinson, who has removed from the State, as a representative from this Society to the Convention of Business Men.

A number of gentlemen recorded their names as members, and the society then adjourned.

H Gibbons, Sec'ry.

The Cattle Show and Horticultural Exhibition

Of the Agricultural Society of New Castle county, will be held in Wilmington on the 4th day of next month. Particulars of the arrangements will be published in handbills. Persons having Cattle, Vegetables, Fruits, or any other articles for exhibition, or designed to compete for premiums, may apply for information to any of the individuals named in the following committees of management and superintendence

On the Cattle Show. Benjamin Webb, Samuel Wollaston, Wm. R. Sellars, Wm. Chandler and Wm. Solomon.

On the Horticultural Exhibition. Dr. W. Gibbons Sam'l. Hilies, Jas. Webb, Merrit Canby and Dr. Thomson.

Good Advice.

It is a bad practice to feed your mowing land very closely in the fall. There should be enough of the after grass left to protect the roots of the grass against the frosts of winter. We have known, says the editor of the Farmers' Library, good farmers who would not suffer their mowing lands to be pastured at any time of the year. But if the soil be well dressed with manure, it can do but little if any injury to pasture it in the fore part of autumn, *taking care not to let cattle run upon it when wet*, or so soft that they would make much impression on it with their feet.

ARTICLES.	Philadelphia, Sept. 28.	Baltimore. Sept. 27.	New York, Sept. 27.	Boston, Sept. 26.
Beans, white, per bush.	$1 37-1 62½	1 25—0 00	0 00—0 00	1 3.—1 75
Beef, mess, new, per bbl.	14 00-15 00	13 50-14 20	13 50-14 50	13 00-14 00
Bacon, western, per lb.	8— 9½	7— 9	8— 10	.....
Butter, extra, per tub	13— 14	16— 20	18— 20	18— 23
Butter, fresh, per lb. (market,)	18— 25	20— 25	20— 25	24— 27
Hams, per lb.	12— 14	12— 13	12— 14	10— 12
Hog's Lard, per lb.	7½— 8½	9— 10	8— 10	8— 9
Cheese, American, per lb.	10— 12	9— 11	9— 11	8— 9
Beeswax, yellow, per lb.	26— 27	23— 25	24— 27	26— 29
Beeswax, white,	.....	38— 40	38— 40	38— 40
Bristles, American,	42— 65	25— 65	25— 65	.....
Flax, American,	8½— 9	9— 10	9—	9— 12
Flour, best, per bbl.	8 00—9 00	8 00—8 25	7 50—9 00	9 00—9 25
GRAIN—Wheat, per bush. Penna.	1 55—1 70	0 00—0 00	1 70—1 80	.....
do. Maryland,	1 60—1 75	1 25—1 65	1 60—1 75	.....
Rye, per bushel,	80— 85	75— 80	—0 75	0 80—0 85
Corn, do.	1 00—1 02	90— 96	1 00—1 80	0 93—1 02
Oats, do.	40— 43	30— 32	35— 45	00— 00
Barley, do. Penn.	.....	.....	0 00—	1 00—0 00
Peas do.	1 00—1 25	87—1 00	— 8	.....
HAY, Timothy, per 100 lbs.	1 00—1 10	12 00 pr. ton.	.....	18 00 pr ton.
Meadow Grass,	70— 80	.....	.....	.....
Hemp, American dry rot, ton,	175 00-	6— 7	130 —140	.....
Hops, first sort, 1836, lb.	7— 8	— 9	8— 10	6— 8
Plaster Paris, per ton,	3 25—0 00	3 37—3 50	2 50—	2 50—2 62
SEEDS—Cloverseed, per bushel,	6 00—7 00	6 00—6 50	.....	.....
Flaxseed, rough, do.	1 30—1 37	1 37—1 50	.....	.....
Timothy,	2 00—	3 25—4 00	.....	2 87—3 00
Tallow, per lb.	8½— 10	— 10	9— 10	00— 00
WOOL—Saxony, fleece, per lb.	00— 00	40— 50	75— 80	.....
Merino,	00— 00	35— 40	50— 68	.....
1-4 and common,	00— 00	25— 30	40— 50	.....

Gentlemen whose subscriptions commenced with the thirteenth number, or second half year of the first volume of the Cabinet, and who may wish to complete their sets by obtaining the first twelve numbers, should make early application for the same. All letters on this subject, must be post paid. ☞ Post Masters are hereby authorized and respectfully requested to forward us the names of persons who may wish to *continue* the work, as well as the names of *new* subscribers; and after retaining twenty per cent. commission, transmit us the balance of any moneys they may have received:—And any gentleman may constitute himself a special agent, by remitting us five dollars, free of postage, for which sum, we will forward seven copies according to his direction.

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THE FARMERS' CABINET,

DEVOTED TO AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

Vol. II.—No. 6.] Philadelphia, October 17, 1837. [Whole No. 30.

To the Editor of the Farmers' Cabinet.

Lime.

Having been requested by you to give some views of Lime as applied to Agriculture, I have refrained from so doing, until time has been afforded for a degree of personal observation. In Agriculture, especially, theory, however plausible, should be advanced with diffidence, and submitted as soon as convenient to the touchstone of Roger Bacon—*experiment.*

The limestone of Whitemarsh, Montgomery county, Pennsylvania, my place of residence, is primitive, and remarkable for the purity of the lime produced from it. Fifty bushels, kiln measure, to the acre, are considered sufficient for our strong valley land, under a succession of crops for six years. The application is frequently made after the lime has been exposed in large heaps, to the action of the elements for many months. In regard to the most judicious method for the introduction of lime to the soil, opinions vary; but almost all agree that every crop, is materially benefitted by any of the usual modes of spreading.

The effect of lime in decomposing vegetable matter is well known.

Near the last of 8th mo. (August,) fifty bushels of lime to the acre were spread over a clover field almost run out, from which a first crop of grass had been taken at the usual time. The second crop grew tolerably well, and was ploughed down with the lime, preparatory to seeding with winter grain. At the interval of four to five weeks the ground was cross ploughed, and the vegetable mass of grass, weeds and roots, found to be almost pulverized, and incorporated with the soil.

It is customary with many farmers in this vicinity, to apply a handful of ground plaster to each hill of Indian corn, after it appears a few inches above ground. A small portion of a corn field thus treated, was last spring reserved for an experiment, with the same quantity of powdered or fine lime, applied in like manner.

The result has been in favor of the lime, both the stalk and ear of the corn, being much superior to the average production of the field. Your friend,

Morris Longstreth.

Valley Green, 10 mo. 2nd, 1837.

For the Farmers' Cabinet.

OBSERVER, No. XII.

If I rightly understand the design of the Farmers' Cabinet, it is to open a channel of communication between agriculturists—to record and publish facts and observations—and to facilitate an interchange of opinion among them. But facts so published, may have been too hastily observed, some of the attending circumstances may have escaped notice, rendering the inferences to be drawn from them liable to error, and giving rise to incorrect opinions. Too implicit reliance on such facts, and inferences, and opinions, would necessarily lead astray. Hence, it becomes our proper business—yea, an imposed duty—to examine them for ourselves, let the authority from whence they come be what it may, for all men are liable to err in these particulars. Indeed, the higher the authority from whence an opinion emanates, the more imperative will be the duty to examine it, because, if erroneous, that authority renders it more dangerous. For like reasons, opinions which involve the most important consequences, should be adopted with the greatest caution.

These reflections were occasoned by reading an interesting paper, in the 25th number of the Cabinet, by William Partridge, recommending the use of ground limestone instead of lime, as a manure.

The theory on which the recommendation rests is simply this, that lime applied to land, must first be converted back to its former state (carbonate of lime or limestone,) before it can promote vegetation. Assuming the truth of this theory, he draws the inference, that it would be "a far better general application, that the limestone be merely ground, and in that state, applied to the land." He, however, says, "there are some exceptions to this rule. When a soil contains hard roots, dry fibres, or other inert vegetable matter, a strong decomposing action will take place between burned lime and the vegetable matter, rendering that which was before comparatively inert, nutritious." Now I would suggest, whether the writer may not, by an unhappy transposition, have put the rule for the exception, and the exception for the rule. There are, probably, few soils which do not contain "comparatively inert vegetable matter." Those which do not, I would consider desperately bad and hopelessly irreclaimable by lime in any form, without the aid of vegetable manure. The great difference between soil and subsoil appears to be, that the former contains more vegetable matter than the latter.

"For stiff heavy soils, he advises to use the limestone coarsely powdered, for in this state it would so lighten them, as to enable the sun and air to penetrate to their vegetation, thereby rendering the future crops more productive." This will readily be allowed, but the effect would seem to be purely of a mechanical nature, and would be effected, perhaps, as well by the use of silicious sand as that of limestone. I have had some experience and opportunities for considerable observation in this matter, and my opinion is, that the principal, if not the entire effect produced by limestone in the form of sand, depends on its rendering the soil lighter. In the section of country where I have resided, it *unfortunately* happens, that much of the limestone rock is already disintegrated, or in the form of *limestone sand*. This has to be removed in order to obtain the hard limestone, which lies underneath. In doing which, it is frequently deposited in large quantities, on the adjacent fields, affording an admirable opportunity of testing the value of coarse ground limestone as a manure. On "stiff heavy soils," it is certainly found to be beneficial as any other sand or gravel would be; but after having assisted in applying some hundreds of loads in this way, I am free to declare, that I never could perceive any other effect from it, except in one instance. A few loads of the sands were carelessly spread on a lot prepared for buckwheat, the growth of which was rendered much more vigorous on the parts where the sand had been applied. No effect was observable in succeeding crops.

If pulverized limestone does possess the value attributed to it, it is quite time the fact should be known. Thousands of loads of it could be obtained in my neighborhood, with the thanks of the owner for taking it away.

The theoretical opinion, that lime must first be restored to the state of a carbonate, when mixed with the soil, and that its "fertilizing property depends (as in plaster,) mainly, if not altogether, on its power to attract moisture during the night, and to impart it gradually to the plants during the day," is not yet sufficiently proved. I am not aware that limestone sand possesses any greater attraction for water, than silicious or other sands. But admit the fact, and how does it operate? Does its attraction cease during the day, to allow it to impart the water to the plants? If it does not, the plants would realise little benefit from its "hydratic property." Admit this also, and from whence does it derive the water during the night? Being buried in the soil it can only derive it from the soil at night, to return it again during the day. The benefit would, therefore, seem to be more fanciful than real.

Theory may assist us to devise, and science may enable us to execute experiments more successfully, but until we ascertain the laws which regulate the nutrition and growth of plants, we must rely, mainly, upon the data which experience affords, to lead us to safe and positive conclusions. As yet, we know too little of what constitutes the food of plants—of their power of converting it into nourishment—and of the combinations of which they are capable of forming. We know too little of the manner in which manures operate, whether nutricious or stimulant; and of the modifying influence of soils, seasons and climates, to trust to any theory which does not rest on experience. Agriculture requires more *facts* to place it on the sure foundation of a rational and inductive science.

The facts given by Partridge do not appear sufficient to sustain his position—or "to rectify a material error, committed by farmers in using burned lime, instead of ground limestone, on their land." He says, "it is well known to every intelligent agriculturist, that soils covering limestone rocks, are the most productive of any on the globe." Were we to admit this sweeping declaration, to the full extent of its literal import, it would not prove

the point at issue; for it does not follow as a consequence, that soils partake of the nature of their subjacent rocks. Geology teaches that our planet is composed of numerous strata of rocks, which, by some disturbing force, have been broken up and displaced, while some of these strata were elevated into hills and mountains, others were depressed into valleys. The chemical agencies of heat and water have gradually decomposed, and disintegrated the surface of these rocky strata, producing the soil which covers them. But the water necessarily carried vast quantities of this earthly material from the hills, and deposited it in the valleys. The soil in our valleys, is therefore more commonly composed of the debris of the neighboring hills, than of the rock which it covers. This important circumstance has been left out of the account.

Again, we are told of the "beneficial effects" of irrigation on the hills bordering the valley between Bristol and Worcester, in England; which is attributed to the limestone, held in solution by the water. But it is well known that the purest water even the chrystal drops as they distil from the clouds of Heaven, produce the most *beneficial effects* and especially so when applied to the "higher land." A comparative trial with pure and with calcareous water, on the same soil and under similar circumstances, might not justify the inference which he has drawn.

A due admixture of calcareous earth, is probably advantageous to every soil, and necessary to healthful and vigorous vegetation, but I do not yet perceive the "error of farmers, in applying burned lime, instead of ground limestone on their land."

Too little attention has doubtless been paid to the nature and constitution of different soils—to the kinds of manure best adapted to their improvement, and to the crops which they will produce to the greatest advantage. It would be an important acquisition to agricultural knowledge, if some person qualified for the task, would furnish a series of essays, *or a more elaborate work*, which might be called *agricultural geology*. Such a work might embrace something like the following subjects:

1. A description of the rocky strata composing the surface of the globe.

2. The composition and qualities of the soils produced by the decomposition of those strata.

3. Alluvial soils, or those deposited from water, their composition and qualities.

4. Of the different kinds of manures and their adaptation to the several descriptions of soil. And,

5. The proper adaptation of crops, whether of grain or grass, to the several kinds of soils.

It is hoped that some of the readers of the Cabinet will follow up the suggestion here offered, at least by the communication of such facts in relation thereto as they may be in possession of.

New Garden, 9 mo. 28th, 1837.

Utility of Salt in Agriculture.

The following note on this subject is appended to "A letter to the Farmers and Graziers of Great Britain, on the advantage of using salt in the various branches of agriculture," published in England by a late eminent Chemist, SAMUEL PARKER, and republished in Philadelphia, in 1819, by Messrs. CAREY & SON, on the suggestion of the late JUDGE PETERS. As a new generation of farmers have appeared since that day, the editor thinks he will render the cause in which he is engaged a service, by its insertion in the Cabinet.

The utility of Salt for various agricultural purposes has long been known, and attended to in the United States.

1. As a manure it was early used for flax, as appears from some of Elliott's essays on husbandry, printed in Boston between 1715 and 1754: and Mr. Cadwalader Ford, in a paper on this subject addressed to the Massachusetts Agricultural Society, and published by that body,* bears testimony of its highly fertilizing effects on flax. The proportion which he advises to be used, is double the quantity of Salt to that of seed. He strewed the Salt at the time of sowing the seed. From three acres of flax salted he had 50 bushels of seed and also an excellent crop of flax.

The publication of Mr. Ford's paper by Mr. Carey, caused the experiment to be repeated by Mr. Henry Hendrickson, of Cecil county, Maryland. He states† that on a poor piece of land he sowed one peck of flax seed and one peck of Salt together, and that when the flax was about three inches high, he sowed another peck of Salt on it. He also sowed a piece of excellent land with flax, and although he had a good crop, yet the flax on the poor land "was a great deal better, and produced more seed than the flax on the rich land." A farmer in Delaware county, to whom I mentioned the fact of the utility of Salt as a manure to flax, told me

* Carey's American Museum, vol. 1. p. 49.
† Do. Do. vol. 2, p. 176.

he had tried it, and that it was plainly seen to be of great benefit.

Mr. Deane* says that he found it, in 1786, to act as a beneficial manure to carrots, when placed "under the surface in the centres of the intervals between the rows, at some distance from the roots: that the Salt might have time to be dissolved before the fibrous roots should reach it." Upon onions and turneps it had no effect. The farmers on the brackish rivers on our coast, find that the salt grass growing on the water's edge, when ploughed in, acts as a very excellent manure for Indian corn; and on the Raritan particularly it is a general practice thus to employ it.†

2. As a condiment to cattle, the utility of Salt is universally known to the American farmers, who are constantly in the practice of giving a portion of Salt to their cattle weekly. They find that the appetite is not only thereby greatly promoted, their digestion strengthened, and of course their disposition to fatten increased; but that their health is preserved by its use. During the late war with England, when the prices offered for domestic manufactures rendered the multiplication of Merino and other sheep an object with the American farmers, they were in the habit of placing large lumps of hard Rock-Salt in various parts of pasture fields, for the sheep to lick at pleasure. It is rational to believe that the very marked superiority in the health of every species of American cattle over those of Europe, may be ascribed to the general and free use of Salt. Many give a portion of Salt daily to their horses, as a preservative against worms of all kinds, as well as to preserve their digestive powers.

3. The practice of salting hay has been generally adopted for 30 years or more in Pennsylvania.‡ Hay thus treated (and clover hay particularly) may be put up with much less drying than when Salt is not used. Many farmers are in the excellent practice of mixing straw with hay, (as regularly as the hurry of stowing away will admit,) and of sprinkling the whole with Salt, layer by layer. In this way both hay and straw are rendered more palatable to cattle. The quantity of fodder is moreover increased by this mixture of hay and straw. About one peck of Salt to the ton of hay is enough, but more will not be injurious.

4. Salt will even preserve fresh clover from rotting, although put up in stacks in time of rain. An extensive and bold experiment was made in this way by Mr. Luke Morris, of Philadelphia, at his farm in Gloucester county, New Jersey, in the rainy summer of 1804. About 22 tons in two stacks were thus perfectly cured, and eaten greedily during the winter by some thriving steers. The hay exaled a saccharine odour, and the leaves and blossoms adhered to the stalk firmly. He put rather more than a bushel of Salt to the ton of hay.

The beneficial effects of salt air and salt marsh upon horses is proved by the fact, of broken-winded horses being greatly relieved, and sometimes cured by spending a season on the island in the Delaware bay. Several decided cases of this nature have been communicated to me. James Mease.

Chestnut Street, August 10th, 1819.

* New England Farmer. Worcester, 1790. Art. Salt.

† On Salt as a manure see a pamphlet by Mr. Geo. Reed, of Virginia, 1809, and remarks on it by Judge Peters, in Mem. Philadelphia Soc. for promoting agriculture, vol 2, p. 174.

‡ The good effect of Salt on the health of cattle and its use in curing hay were mentioned in the Philad. edition of the Dom. Encycl. Articles. "*cattle*" and "*hay*."

For the Farmers' Cabinet.

On the depth of Ploughing.

That ploughing deep is of the utmost importance to make land productive, no one will deny. Yet how deplorable is it, to see so many of our farmers, instead of *ploughing* their land, persist in the old and ruinous practice of merely *skinning* it. Soils of the best quality, may be very shortly impoverished by shallow ploughing: while on the other hand, those of an inferior quality, may be materially improved by judicious ploughing. Why, it may be asked, are swamps and bogs so inexhaustibly fertile after being drained? One simple reason is, because they are possessed of a soil of very considerable depth. Then why not plough deep, in order to increase the depth of the soil of upland. Lands which have been ploughed shallow, on receiving the first deep ploughing, will generally fail in some measure in producing a good crop, in consequence of turning up the clay. This has disheartened some that have made trial of it, so as to abandon it immediately again. But the action of the sun and atmosphere on the upturned clay, will contribute greatly to its fertilization. This being ploughed down, and the former surface turned up again, with the addition of proper manures will give land a deep soil and render it fertile and productive.

But few persons are aware of the depth to which the fibrous roots of grass descend into the ground. It has been discovered with very few exceptions, that they reach to the bottom of soils however deep; consequently, plants growing in a deep soil will be much better protected against the effects of drought, than those growing in a shallow soil. I would suggest, therefore, that land in all ordinary cases, be ploughed not less than eight inches deep. Will it not be much better to suffer partially in one crop, and

thereby to have afterwards a manifold increase; than to be always toiling, with very imperfect returns for our labor.

For the sake of neatness in farming, and to prevent high ridges and deep furrows, I would recommend that the first three or four furrows at the commencement of lands, and at the finishing of them, and at the edges of fields, be somewhat shallower than the remainder of the field. A.

Chester county, Sept. 15th, 1837.

For the Farmers' Cabinet.

An Apple tree eaten at the root, by Worms.

Mr. Editor.—An Apple tree in my garden has been this season, so roughly handled by worms, that I fear it cannot be saved; but as I have great fondness for it, and am anxious to preserve it if possible, I send you this account in hopes yourself or some reader of your valuable paper may be able to suggest a remedy.

The tree is a harvest apple, a prolific bearer, six years old, and is planted in a grass plot in the upper part of the garden. Until this season it has grown, flourished and produced remarkably well. Early in June last I remarked some signs of unhealthiness; the leaves at the extremities of the branches began to curl up, the green fruit dwindled and shrivelled and the larger part fell off. What remained was small and poor when ripe. As the summer advanced the curling of the leaves increased, many dropt off, and now it is almost stript of foliage.

I could not account for the sickness of my tree, but in hopes of relieving it, had the grass removed for some distance around, but with no benefit. It then occurred to me that the seat of disease might be in or about the roots, and such on examination was the fact. A few inches above ground were perforations in the trunk, circular, accurately drilled, resembling those made by the humble bee in old dry rails. These, on being opened with a sharp knife, appeared to extend downards underneath the bark. On removing the dirt and examining the tree, I found it at the surface of the ground and extending downward, literally alive with small white worms, about one inch in length. They had completely girdled it, having eaten in some places into the heart of the tree. I destroyed as many as possible and then covered the eaten portion with live ashes, pouring also some strong ley around. This must have killed the worms, but I am anxious to know whether any thing more can be done to save my tree, and shall be much indebted for any suggestions.

Is it common for apple trees to be infested by worms, and is there any *preventive?*

H.

Burlington, N. J., Sept. 26th, 1837.

For the Farmers' Cabinet.

Cider.

Many persons, perhaps, are not aware of the efficacy of black mustard seed (*sinapsis nigra,*) in preventing the acetic fermentation of cider. About a half pint of the seed put into a barrel of cider, will preserve it as sweet, from the usual time of making cider, in autumn, till the following May, as the day it was put in. The mustard is of very easy culture; a few seeds scattered in some rich vacant spot, will ensure a successive crop—although the plant is an annual. The succeeding crops will be perpetuated by the seed which falls to the ground in autumn. But in order to secure the cider from any unpleasant flavor, it is highly important that the vessels be perfectly free from must. An effectual method of cleaning cider barrels is, by putting into each one about a quart of unslacked lime, after which, pour on about four or five gallons of boiling water. Cover the bung hole with a loose covering that some of the steam may escape, which will be generated in great quantities, to prevent the barrel from bursting. Shake it up several times and then rinse it with clean water. It will add also greatly to the quality of the cider, by being separated entirely from all the sediment. This may be done by filtering it through a hair sieve when running from the press, and then to rack it off when it has stood a sufficient length of time, to leave any that might remain, settle to the bottom. A.

Chester county, Oct. 6, 1837.

For the Farmers' Cabinet.

The season is approaching when it is usual for farmers to put up their pork, for the ensuing year. Will some person, who is experienced in the preservation of pork, communicate, through the Cabinet, the best method of preserving pork to retain its sweetness and flavor, during the hot months in summer? A.

Chester county, 1837.

For the Farmers' Cabinet.

Would it not be profitable, in the mode of farming practiced by the "Farmer of Pemberton, N. J." as described in the Cabinet, vol. 1st, No. 18, to raise in his wheat stubble, previous to planting it with corn, a crop of turneps. Will he try the experiment and communicate the result to the Cabinet.

A.

Chester county, Sept. 18th, 1837.

The Farmer.—With no inheritance but health, with no riches but industry, and with no ambition but virtue, is the sole king among men, and the only man among kings.

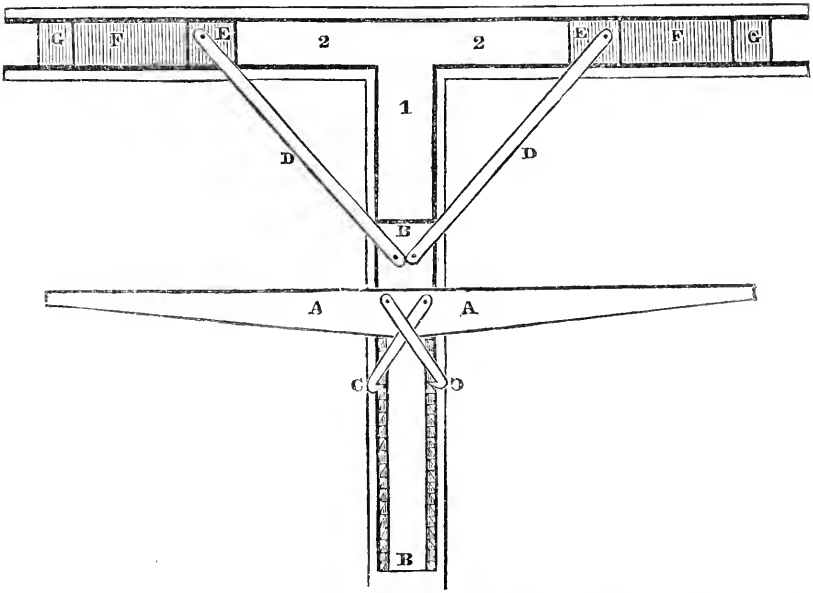
For the Farmers' Cabinet.

The Compound Lever Press or Forcer.

This machine may be used to great advantage where an increased pressure is required from a first mover that is uniform in its force. The following description will explain the principle upon which it acts, viz: Suppose a slide moving in a groove at right angles, to another groove in which two other slides move. Motion is conveyed to the two latter slides from the former one, by two connecting rods and four fulcrums, one fulcrum at each end of the respective rods.

A compound lever, acting with catches or hands in notches formed upon the first mentioned slide in groove No. 1, so as to change the relative position of the connecting rods from an angle of forty-five degrees, (or other convenient angle,) to a straight line, (or any degree approaching a straight line,) will show the manner which the other slides in groove No. 2 2, are acted upon so as to convey to them and through them to other objects, an *increased degree* of pressure or force, while the first mover is one of a *uniform degree* of force.

Fig. 15.



The compound lever may be moved by the power of men, horses, water, steam, wind, or any other convenient force.

The compound lever A A, moving on a fulcrum near the middle, moves the notched slide B B, by means of the catches or hands C C, this moves the connecting rods D D on the fulcrums at their ends, and forces the slides E E, farther asunder. The nearer the connecting rods D D approach a straight line, the greater will be the pressure of the slides E E upon the objects F F, confined between them and G G.

The fulcrums, hands and notches may be composed of iron, and the other parts of strong seasoned wood; of such dimensions as the force to be applied may require, or any other convenient substance.

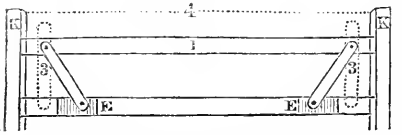
The particular manner in which this press may be used for various purposes, and the different powers which may be employed as first movers, will, probably, be given hereafter. P.

The *foregoing* description shows the pressure of the two slides E E in opposite directions; the *following* will explain how motion may be extended so as to press or force a body in a direction at right angles to the aforesaid motion; or two bodies in a circular direction, viz: Suppose two other connecting rods, moving on four fulcrums; one fulcrum at each end of the respective rods, two of them on the slides E E, and the other two on another slide which moves in grooves at right angles to that in which E E moves. Or instead of moving in grooves at right angles to the motion of E E, the fulcrums at the other ends of the connecting rods may be attached to two separate objects, each of which moves on another fulcrum, so that a circular motion may be given to those objects from the rectilinear motion of E E, communicated as aforesaid, from the compound lever A A. (Fig. 16.)

The aforesaid slides E E being forced farther asunder, as already described, until the

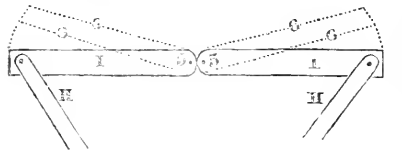
connecting rods H H are parallel with each other, as represented by the dotted lines 3 3; this brings the slide I, moving in the grooves K K, to the dotted line 4, with an increased force in proportion as the rods H H approach

Fig. 16.



a position parallel with each other. Or instead of the slide I moving as described above, it may be composed of two parts, as represented in the following cut, each part moving on a fulcrum at 5 5, until they are brought to the position as represented by the dotted lines 6 6 6 6, when acted on by the connecting rods H H, as before described, a section of each being represented, which is considered sufficient to show or explain the principle.

Fig. 17.



P.

September 30, 1837.

From the Rev. Dr Reed, Rector of the Episcopal Church, Poughkeepsie, N. Y.

Blight in Pear Trees.

The blight was destroying many of the pear trees in Dutchess county. Some ten or twelve years since, I lost one or two fine ones, and others began to be affected. In a ride into the interior of the county I observed in one neighborhood, the trees very flourishing, healthy and productive, when a few miles distant they were decaying. This neighborhood abounds in iron ore, which suggested to me the idea, that the mineral was necessary for the health of the pear. On returning home, I procured from a blacksmith shop, the cinders, and put a bushel of them aronnd the root of each tree. I also hung some old iron hoops on the limbs. The trees have since grown luxuriantly and borne bountifully. Three years since I took possession of a house and lot where were three trees in a rough, scruby state; the same means have produced the same effect on them. A friend from the state of Rhode Island, while on a visit, remarked the flourishing state of my trees and said he had lost most of his. I related to him my experiment. He remarked that his own case corroborated the theory I had adopted, for, said he, "I have but one healthy tree left, and that stands near where an old blacksmith shop stood." I have, therefore, no doubt but that iron is a complete preventive for blight in pear trees. I tried the effect of the same on a plumb and a peach tree, and they both died in two years.

Another fact may be acceptable to your useful society.

In our county, gooseberries, after a few year's growth, have their fruit mouldy, small and useless. A gentleman in our neighborhood observing this and knowing that this fruit grows finely on the islands of the sea, tried the experiment of brine at the root, and found his fruit restored to its original size and entirely freed from mould. He puts a pint of strong brine at the root of each plant early in the spring. The brine should be put on without stirring the earth, so as to wet the roots, as in that case it kills the plant, but there is no danger, if poured on the earth undisturbed.

Two years since, finding my Madeira grapes mildew and blast, and knowing that they flourished on the sea-coast, I used brine around them, but have not made the experiment long enough to be positive as to the effect. They did remarkably well the last year, produced bountifully and were free from insects and mould.

Yours, with respect,

John Reed.

Shady Grove, Franklin Co. Va., April 24, 1837.

This is a subject to which I have paid particular attention, and my first conviction, and in which I am more and more confirmed, was, that in striking at the root of the disease, you must not strike at the root of the tree, for the most superficial observer must have noticed that a branch will wither and die whilst the trunk and the other branches will remain in full health and vigor. Whether it is in a peculiarity of the air, or the effect of insects, I have never been able to determine.

My preventive is this. Take of copperas, two parts, and of brimstone, (flour of sulphur would be still better,) one part, well powdered and mixed; take a rag or piece of cloth, no matter what kind, about three or four inches wide, and as long as will reach three or four times around the branch to which it is to be applied. Wet the cloth and sprinkle on as much of the above composition as will stick, and wrap it moderately tight around a branch as high as convenient and confine it with a thread or twine, and so on with the other branches on the tree; there seldom being more than from three to five. In this way two hands can attend to from thirty to forty trees in a day; having

a small table which you can move from tree to tree and upon which you can the more conveniently prepare your applications. Every succeeding rain will dissolve a part of the copperas; this running down the branches, impregnated with the sulphur, seldom fails to produce a happy result. Whether it neutralizes the deleterious principle in the air, or owing to its noxious qualities to insects, I am not prepared to say.

I am, your most obedient,

JOHN COOK.

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To the Editor:

Having seen in the Farmers' Cabinet of May 1st, 1837, a reward from the Horticultural Society of Pennsylvania, for the cure of blight in pear trees, I now offer a remedy, which, from a number of years experience, I believe to be effectual. Having planted several pear trees, and for nearly ten years they were not in a healthy state, one of them died during that time, and the others having dead twigs on the end of the limbs, did not bear. I removed the earth and grass sod from the root about two or three feet in diameter and three or four inches deep, and poured soap suds at the root nearly weekly for several years, when the ground is not frozen, which has brought the trees to a thrifty state of bearing. The above I hope will be tried by the members of the Horticultural Society, or any other persons, as I am under a strong conviction, that it will bring the trees to a healthy state.

JOSEPH BRINTON.

Birmingham Township, Chester Co.
August 31, 1837.

Green's Straw, Stalk, and Hay Cutter.

In the first volume of the Farmers' Cabinet, No. 9, page 129, we published an article in commendation of Green's Straw Cutter. Since that time we have conversed with several gentlemen who have used this machine, and they all agree in recommending it, as fully answering the most favorable opinions they had formed of its utility. The following is the testimony of Richard Peters, Esq. of this city.

Philadelphia, Sept. 8th, 1837.

I purchased one of Green's Straw Cutters, in the autumn of 1836, and from that time until the present I have used it for cutting hay and straw at my farm. No hay was used for feeding my horses or cows, except that cut by the Straw Cutter; and during the winter of 1836–7, fifteen horses and three cows were fed exclusively on cut hay. Of these, four were carriage horses. The condition of all the stock, in the spring of the year was far better, than if they had been fed upon hay uncut, and better than any stock I have ever seen kept entirely on hay. I am satisfied there is an economy of at least one-third in feeding stock on cut hay, and they are much healthier than when fed in the usual mode. In less than 30 minutes by Green's Straw Cutter, hay was cut sufficient for the stock for twenty-four hours, and this without any fatigue. I have known and used many straw cutters, but have never been satisfied with any except that invented by Green.

RICHARD PETERS.

The instrument with twelve knives cuts rather more than an inch long—price thirty-two dollars; that with eighteen knives cuts about three-quarters of an inch long and sells at forty dollars. ☞ Orders addressed to Mr. I. I. HITCHCOCK, No 5 South Fifth street, will meet with prompt attention.

A Concise Treatise on the Growing and Propagating of Fruit Trees, Shrubs and Vines. Founded on the Theories of approved Authors tested by several years practice, and improved by practical experiments.

Fruit and Fruit Trees.

NO. II.

WHIP GRAFTING.

This method is particularly calculated for nurseries, and is most expeditious and advantageous on all kinds of young trees, (except the peach, apricot and nectarine, on which the budding may be considered *at all times*, preferable) and is particularly adapted to the cherry and plum, and all such as do not split well. It may be performed near the ground, or at the height of five or six feet, near where you intend to form the top, or in limbs from the thickness of a pipe-stem to about three-fourths of an inch, and too small to cleft graft; and the top of young trees having such limbs, may have their top changed by this method, as large trees by cleft grafting; and if the tree have some large limbs to cleft graft, but not many, it may be partly cleft and partly whip grafted. The manner is this: provide yourself with the composition before mentioned, soft woollen yarn, and a sharp pen-knife; begin the work by cutting off the head of the stock, at some smooth part, by one clean slanting cut upwards, so as to form a slope on one side about an inch and a half or two inches in length, and make a small slit from near the middle downwards, to receive the tongue of the scion; then prepare the scion, by cutting it with three or four buds, preferring the lower or thick part, and cutting the lower

end on one side also in a sloping manner, the length of and to fit the slope of the stock, as if cut from the same place, that the rinds of both may join as nearly as possible, in every part; then make a slit upwards in the slope of the scion, so as to form a sort of tongue, to fit that made in the slope of the stock, which insert therein, so that the rinds of both may join together, or on one side, if the stock is larger than the graft; then bind the parts together with the woollen yarn, bringing it round the stock and graft moderately tight, and fastened accordingly; make a plaster of the composition between your finger and thumb, and wrap it round the stock and graft over the ligature, squeeze it in your hand, so as to make it snug and tight, to keep the sap and exclude the rain and air, particularly at the ends. When the buds on the grafts have grown four or five inches, which will be about the middle of June or earlier or later, according to the season, the ligature becomes too tight, and will endanger the grafts; place the point of the knife on the upper side of the bandage or plaster, press it down through the composition and threads so as to cut them all in two, and take off the bandage and plaster entire. If the stock is large, and the graft is matched and united only on one side, leaving the other side exposed, put the plaster taken off, or a little composition over the exposed part.

ROOT GRAFTING.

This is done by whip grafting upon your seedling trees of the size of a quarter to an eighth of an inch, taken up, whip grafted at the root, and re-planted, and is practised in nurseries for want of better stocks. It may also be done upon pieces of roots of about $\frac{3}{4}$ of an inch in diameter and less, either by letting the roots remain or separating, and after grafting replanting them. No composition is required; the yarn by which the graft roots are tied together will rot off and make room for growth. Large roots may be cleft grafted, and then the composition is to be used.

CROWN GRAFTING,

May be practised upon such stocks as have become too large and stubborn to cleave, and then two, four, or more grafts inserted round the crown of the stock in a circular order, introduced between the bark and wood; this cannot be done until the bark peels freely—the grafts are subject to be blown off. The stock will be a long time in healing over, and is subject to decay.

SIDE GRAFTING.

This is done by inserting the grafts into the sides of the branches without heading them down. To fill up any vacancy on trees thus: prepare the scion as for whip grafting, by sloping and tongueing it; then cut a chip from the place where the graft is to be inserted, of the same size with the slope on the graft in such manner that the wood on the slope of the graft will cover and fit the wood laid bare by taking out the chip; cut a notch or tongue on the stock to fit that on the graft, and match them firmly together; cover the parts matched with composition when necessary, first binding them together as in whip grafting. Nothing further is necessary, except pruning, as directed in cleft grafting.

BUDDING OR INOCULATING.

Budding should be performed on stocks of thrifty, vigorous growth. They may be raised by budding young trees about half an inch in diameter, near the ground. Buds inserted in this manner, will grow five and six feet and upwards in one season, and will form straight and smooth stems and fine trees. Budding may also be performed in the branches of young trees in the top, and leading, and side shoots; but if in the season of grafting, and you have plenty of scions, the latter is preferable. Roses, Lilacs, &c. &c. may be budded at any time after they are full grown, and as many kinds as there are of either, may be put on the same stock together, and form a pleasing variety.

TIME AND SEASON FOR BUDDING.

The seasons proper for budding are two. 1st, the spring, beginning after the sap flows and the bark peels freely, until the first of June, with buds cut from scions preserved as for grafting, and before used buried or immersed in water, or fresh from the tree; or 2nd, (and which is the proper season) in the summer and fall, with fair, full grown buds, of the same season, taken from well ripened shoots, fresh from the tree, or kept with care only for a short time; otherwise it will be labor lost. In the summer or fall it should not be done so early as to cause the bud to shoot the same season; the short time they will have to grow before cold weather, will not admit of their becoming ripened and prepared to withstand the winter frosts. On the other hand, it should not be put off too late and be performed, whilst the sap flows and the bark peels freely, and before the trees or shoots become bound, which time varies in the different kinds of trees, and is a little sooner or later according to the season, whether it be wet or dry, but generally as follows: The cherry, plum, and pear tree become bark-bound by the 1st of August, and should, together with the apricot, if worked on plum stocks, be inoculated the second or third week in July. The apple trees become bark-bound about the first of

September and should be budded in August. The peach, apricot and nectarine about the 20th of September, and should be budded between the 1st and middle of that month. It may, however, be done later, and if occasion require, after the bark begins to fasten, by rubbing it with a smooth knife handle or other substance, and thereby loosening it, but this is not safe. The shoots intended to be taken are to be selected in the same manner as for grafting, and should be as fresh from the tree as circumstances will admit, and kept in the shade and moist, not saturated, and the work performed in cloudy weather, in the shade, or in the morning or evening.

MANNER OF BUDDING AND HEADING THE STOCKS.

This may be done by making incisions in the stock like a cross † or a T, then raising the corners and inserting the bud; the following is the most simple, easy, and successful method: Having provided suitable shoots from which to take the buds, cut off the leaves a little above the buds; furnish yourself with some soft woollen yarn and a sharp penknife; fix upon a smooth part of the side of the stock; make a horizontal cut across the bark to the wood; then from this cut make two slits downwards, parallel to and apart from each other, the width of the bud with its bark when severed from its shoot; then with the point of your knife raise the bark next the horizontal cut between the slits, and peel it down their whole length, clear from the wood; make a slit in the bark peeled down. Next prepare the bud; place your knife about half an inch above the bud, and cut down through the bark into the surface of the wood, and so along under the bud, and out about half an inch below it, taking out as little of the wood as may be; then turn down the loosened bark, insert the bud over the wood so as to cover it; then close the bark over it, leaving the bud to project up through the middle slit; break off about twenty inches of the yarn and place the middle over the bark, and just below the bud, binding it round the stock to the back side of it, then cross it and wind the thread around the stock over the bark, above and below the bud, not over it until it is all closed up, not so tight as to prevent the sap from communicating; then tie a knot and the work is completed.

If it be spring and the buds taken from scions preserved as for grafting, insert the bud with the wood; in summer or fall the wood may be separated from the bud. But if on separating the wood there appears a small hole on the under sipe, opposite the bud, the bud will not sprout and is rendered useless. It is therefore preferable to insert the buds on single stems and upright branches on the north or shady side of the stocks, and on the branches; insert them on the upper side to shed water and make a perfect growth. In about three weeks the bandage might be taken off by cutting across the yarn, on the side of the stock opposite the bud. When the buds begin to shoot, the stock must be headed down, in spring budding, at or shortly after the time the bandages are taken off; for autumn budding, not until the next spring. This is performed by cutting off the stock about four inches above the bud, sloping upwards from the side opposite the bud. After the bud has grown five or six inches, tie a string around the stock a little above the shoot, and bring the ends on the outside and there tie them together, so as to keep the shoot in a perpendicular position, and brace it against the wind, which may otherwise blow it off. The shoots which put out from the stock should be cut or rubbed off occasionally.

After one season's growth of the bud, the stump left above the bud should be cut down close to the shoot and sloping from it, and a little composition put over it.

To be concluded.

An Essay on Indian Corn,

Delivered by Peter A. Browne, Esq., L. L. D., before the Cabinet of Natural Science of Chester county, Pa.

Continued.

4. Was the Indian corn known to the aborigines of any portion of this hemisphere, and of those portions in the order in which they were first visited?

Hispaniola was one of the first of the West India Islands known to Europeans: it was discovered in 1492, by the Spaniards, before they had seen the continent; and therefore I shall commence with the Spanish West Indies. That the Indian corn was found in these Islands is proved by the following:

The Spanish word for *Corn*, used as a generic term, and also for "wheat," according to Delphini, is "*trigo*," which is derived from the Latin "*triticum*."* But the Spaniards use the word "mays," which they define to be "*West India corn.*"

Again. In Jos: de Acosti's Natural History of the West Indies, lib. 4, ch. 16, p. 236, speaking of the mays, he calls it "Indian wheat, to make bread of. He says that it was the only grain FOUND in the West Indies by the Europeans:—that it grows upon a long reed with large grains, and sometimes

* Which is rendered, "wheat" and "barley."

two ears on a reed, on one of which seven hundred grains have been told:—that they sow it grain by grain and not scattering, as is done with wheat; and it requires a hot and moist soil. There are two sorts of it, (says our author,) one large and substantial, the other small and dry, which they call '*moroche.*' The leaves of it and also the reed are very good food for cattle, green; and dry, it serves as well as straw. The grain is better for beasts than barley, but they must drink *before* they eat it; for if they drink *after* it, it swells and gives them pain. The Indians eat it hot, boiled, and call it '*mote,*' and sometimes toasted. There is a sort of it large and round, which the Spaniards eat toasted; they also grind it and make cakes, which they eat hot; and these, in some places, they call '*arepas.*' They also make bread, to keep, and sweet cakes of it. The Indians make drink with barley; this they call in Peru '*azua,*' and in most other parts '*chica;*' it was very strong. They have also a way of extracting *oil* from it which is good, and serves instead of butter and olive oil." This writer spent nearly his whole life, which was a long one, in America.

The South American continent was discovered in 1498, and in Robertson's History of America, speaking of the agriculture of the aborigines of that country, it is said, "The chief thing raised was *maize,* known in Europe by the name of 'Turkey' or '*Indian*' wheat, a grain extremely prolific, of simple culture, agreeable to the taste, and affording a strong healthy nourishment."

The Mexicans held in great veneration a goddess who presided over the *maize,* whom they called "To-na-cay-ohu-a," which means "She who feeds us." To her they consecrated the first fruits of the earth, as the Heathens did to Ceres.

The first account we have of any *French* navigator being on the American coast was in 1504. This nation endeavoured to effect the planting of a colony in Canada in 1534, but did not entirely succeed till 1603. M. Charlevoix, who wrote the earliest and most authentic history of Canada, which was then called "*La Nouvelle France,*" in describing the culture of the earth there in 1721 says, "Outre que le grain, dont ce peuple font usage, sont des grain d' été, on pretend, que la nature du Terrior de ce pays-ci, ne permet pas d' y rien semer avant l' Hyver. Mais je crois que le veritable raison pourquoi les grains ne pousseroient pas, si en les semoit automne, c'est qu'ils se gateroient pendant l' Hyver, ou qu'ils pourriroient á la fonte des neiges. Il se peut fair aussi, et c'est l' opinion de plusieurs, que le froment, qu'on recueille en Canada, quoiqu' originairement venu de France, ait contracte avec le tems la propriete des grain d'ete qui n'ent pas assez de force pour poussea plusieur fois, come il arrive á ceaux, que nous semons en September & en October.

"Les feves, (ou plutôt) les feveroles se sement avec le *maize,* dont la tige leur sert d'appui: Je crois avoir oui dire que c'est de nouis, que le sauvages ont reçu ce *legume,* dont ils font grand cas & qui ne differe effectivement en rien de notre."

This author is so anxious to assert that it was from the French that the Canadians received the feveroles, and claims nothing of the kind for the maize; the inference is irresistible that the latter was found in this country.

In his 3d v. p. 163, in giving an account of the plants belonging to Canada ('particulière au pays') he has enumerated "Le maiz ou Bled de Torquie.*

M. Charlevoix tells us also that in 1564, when M. Landonnie arrived in Florida, the natives presented him and his party with *Indian corn meal.* "Des farines de maiz."

When the first effectual settlement was made in Virginia, in 1607, that country from the sea coast to the mountains and between the Potomac and the James Rivers, was occupied by upwards of 40 tribes of Indians, of which the most powerful were the Powhatans, the Mannahocs, and Manacans; and we have the the authority of Mr. Jefferson for asserting, that when the English first visited them, they found them using the Indian corn. Whether it was of *spontaneous* growth or was by cultivation, is not stated; but most probably (says Mr. J.) it was a *native* of a more southern climate, and was handed along the continent from one nation to another of the savages.—*Notes on Virginia.*

As has been said before, the French settled in Canada in 1603, and six years afterwards the Dutch possessed themselves of New York. The British colonists did not arrive at New England until the year 1620. At the time above mentioned, these Europeans found five Indian nations, viz. the Mohawks, the Oneodoes, the Oriondagoes, the Cayugas and the Sennekas, joined together by a league and confederacy, possessing an immense district of the American continent, reaching from the Atlantic to the Lakes. The Aridondacks, another tribe, lived in Canada. The 'Five Nations' affected to think themselves a superior race to all the rest of mankind;—they called themselves '*Onguehonwe,*' which means 'men surpassing all others.' The white men were anxious to be made acquainted with the history of these nations previously to the Europeans coming among them; which having been

* Letter X. written in April, 1721.

related by the chiefs, and preserved [Colden's History of the Five Nations, London 1747,] will shed some light upon the question under discussion. It commences in this way: "The Aridondacks formerly lived 300 miles above Trois Riviere, where now the Utawawas are situated; at that time they employed themselves wholly in hunting, and the Five Nations made *planting of corn* their business. By these means they became mutually useful to each other by exchanging *corn* for venison. But a war broke out between the Five Nations and the Aridondacks, in which the former were the conquerors. *Soon after this*, (says this tradition,) the French arrived at Canada and settled at Quebec."

Carver, the celebrated English traveler, who traversed upwards of 5,000 miles of the interior of North America, tells us that the Ottagaumies, the Saukees, and all the eastern nations, were found *growing Indian corn*.

But Dr. Benj. Smith Barton places the Lenni Lennape at the head of the column of North American Indians, and they are generally acknowledged to have been of more ancient establishment in the country than many others.* Their tradition was, that they were formerly a very powerful people, inhabiting the country to a great distance westward and along the sea shore east and south. The great extent to which their language was spoken, gives countenance to this tradition. Besides this the tribes along the Mississippi called the Delawares their 'grand-father.' Of all the Indian nations which formerly inhabited this country from Massachusetts to the Mississippi, and between the Ohio River and the Canada Lakes, none but the five nations and the Delawares had a right to call a general council. It also appears from an inspection of Indian vocabularies that the language of the Lenni Lennape could be traced beyond the Canadian Lakes, on the North and in the South, among the Pamptieonghs, who formerly inhabited North Carolina and Sawaranoo, who lived in Georgia, and even to South America, [Barton,] Massachusetts, Connecticut, Monongahela, Alleghany, Muskingum, Savannah, Mississippi, and Missouri, are all derived from the language of the Lenni Lennapes.

Now every thing which these Indians considered as *original* or *native* among them, they distinguished with the word "Lenni" placed before it; the oak and hickory they called "Lenni Hittuck," the original or *native* trees; the chub fish was original and common in all their rivers and brooks; they called it "*Lennameek*," the *original* fish: they called themselves the Lenni Lennape, the *original* people; and the *Indian corn* they called "Lenchasquem," "the ORIGINAL GRAIN," thereby declaring their opinion that it was a *native* of their country.

To be continued.

* The British called them "the Delawares," and the French, "Les Loups"

Preventive of the Wheat Worm.

A correspondent of the Maine Farmer says, "Mr. Herrick, of Poland, informed me that a year ago, last spring, he had two and a half bushels of wheat sown on one piece—ground all alike—and on one bushel of sowing he sowed two bushels of good strong ashes. The ashes were sown in the time of a heavy dew, and when the wheat was just coming into blow, and sowed as much as he could on the wheat heads. The result was, that from one bushel of seed he got fifteen bushels of wheat entirely free from the weevil, and from the remainder one and a half bushels, he got only five bushels of poor blighted wheat, almost wholly destroyed by the weevil or worm. The whole was sown at one time, ground manured alike, and the only difference in the management, was the addition of the two bushels of ashes."

Winter Products of a Devon Cow.

Abraham P. Holdrich, Esq., of Spencertown, had an accurate memorandum kept of the butter made from a Devonshire cow, which calved late in autumn. The result was, that from the 10th Dec. to the 10th Jan, including both days, there was made from her milk 56 lbs. of well-worked butter, nearly equal to two lbs. per day. The cow was fed with roots, hay, and buckwheat bran. Estimating it at 20 cts. per lb. the butter made during the month, and in the depth of winter, was worth $11 20; and if we consider this the average product of 8 months in the year, the aggregate amount for that period would be $89 60. We need no better illustration than this, of the importance of keeping good animals, and of keeping them well.

To preserve Pumpkins through the winter and spring.

When taken from the vine open them, and throw away the soft contents which are found in their inside. Then cut them into small pieces, and dry them in the sun, or in an oven. Preserve them in a dry place. They may be either pounded or boiled before they are used. Prepared in this manner, they make a cheap and excellent food for cattle, horses and hogs. Many thousand pounds might be saved in grain to our farmers, and to our country, by the general use of this wholesome and nourishing food for domestic animals. They afford more nourishment than the potatoe or scarcity-root; they are cultivated with less trouble, and yield a much larger increase from the same labor.—*Southern Planter.*

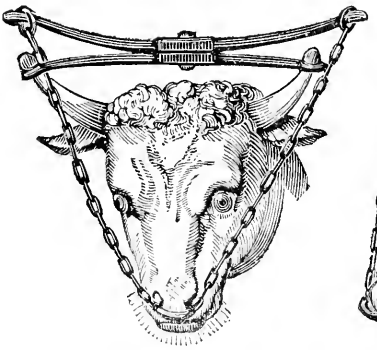

Fig. 18.

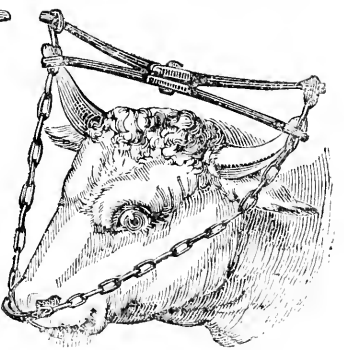

Fig. 19.

The design of this contrivance is to prevent accidents from mischievous bulls.

Fig. 18, in the above cut, represents a *front* view of the apparatus as fixed to the animal's head. It consists of a straight piece of wood or iron, (the latter is the preferable material) stretching from horn to horn, perforated at each end so as to pass over the tips, and fastened on them by the usual metal nut. On the centre of this is rivetted a *curved bar of iron*, bending upwards, which moves easily on the rivet, and has holes at each end, containing the upper round link of a chain. These chains again unite in a strong iron ring, which opens by a hinge and screw, and passes through the bull's nose.

The effect of this contrivance is as follows: Any person seeing a vicious animal approach may easily avoid him; but if the bull should make a push *forward*, the curved iron bar will prevent any bad consequences from tossing; and if the beast move in the smallest degree *either to the right or to the left*, the bar, communicating by the chain with the ring upon his nose, will immediately bring him to check. This *lateral* operation is delineated in Fig. 19.

An additional advantage resulting from the use of this invention is, that a beast may be led in any direction, with the smallest power.

Root Crops.

Root crops especially, should be placed beyond the danger of injury; it is better to take some additional pains than to lose one half the amount by carelessness. Potatoes should be packed away in such a manner that they may keep well, even if the winter should be much severer than common.—Their preservation depends on securing them from *frost* and from *moisture*. Hence these requisites should be particularly observed, both in placing them in cellars, and in heaps in the open field.

The best method of preserving ruta baga in open ground, is the following. They are to be placed in long heaps, three or four feet wide, and of any desirable length, in a roof-like form and terminating in a ridge at the top. They are then covered, first with straw, and afterwards with earth. They need not be covered to so great a depth as potatoes require, as they are not so easily injured by frost. But as they are liable without precaution to ferment and rot, in large heaps, holes should be made with a crow-bar through the earth into the heap, at intervals of a few feet, to suffer the warm air which may be caused, to escape; and these holes may be partially closed by straw. Where the soil is such that there is no danger from moisture, these heaps may be placed in broad trenches made for the purpose.

Mangel Wurtzel require nearly the same treatment in preserving as the potato—they are more easily injured by frost than ruta baga, and should consequently be sooner secured. As a general rule, they should never be left out later than the latter part of this month.

A dry, warm cellar, which will admit of some circulation of air, is the most convenient place of keeping both mangel wurtzel and ruta baga when they are to be fed out daily during winter.

PLOUGHING.

All ground intended for spring crops next season, should be ploughed before winter without fail. Teams are strong in autumn, the weather is cool and favorable for their labor, and the operation greatly assists in destroying grass and weeds. The diminished labor in hoeing next season, from this alone, will in many cases compensate for all the expense.

From the Baltimore Farmer and Gardener.

Time of Sowing Wheat.

I have noticed of late, that several writers have advanced the opinion that *wheat*, if sown late, will stand a better chance to avoid the ravages of the fly, than if it be sown early. One of these writers intimates that between the 1st and 10th of November, is the proper time. I have sowed my wheat late and early, and although I have no data to refer to, the impression is very strong upon my mind, that the former was more generally exempt from this insect. Upon one occasion, I think it was in 1831, I did not get my last field of wheat in until the 2d of December, and that my neighbors all prognosticated, kind souls, that the grain would rot in the ground and never come up. It did come up, though not until the next spring, generally, and it was observed on all hands, that it was the best field of wheat on my farm, although the rest (three in number,) had been manured and ploughed just as well as it was. The field consisted of 20 acres and yielded 456 bushels of good merchantable wheat. It was of the red bearded variety. The field had been, the two preceding years, in clover, and prior to ploughing it in, I put on 500 bushels of lime, 25 bushels to the acre. In turning down the sod, I was very careful, employing a hand to follow the ploughman and turn that did not lay flat with the sod completely under. I made the ploughman plough deep, say from 7 to 8 inches—the surface being harrowed, furrow-wise, I spread over the whole field about 1000 bushels of ashes, and 206 single horse cart loads of well rotted manure, mixed with about one-third its quantity of vegetable mould from the woods—then sowed my seed, and instead of harrowing it in, passed the cultivator over it. In this state it remained until the frost was out of the ground in the ensuing spring, when to prevent the ill effect of frost-spewing, I passed the roller over it.

I have intimated, that I gave this field a liming at that time, 1831, of 25 bushels to the acre, and I can now add, to this day its benefits are as obvious as the noon-day sun, and I doubt not that it is more productive than it was when cleared: how long it may remain so, is to be tested by time, but by following up the good system of rotation of crops, and ploughing in a green crop of clover, rye, oats, or buckwheat occasionally, I think it will last for at least ten years in good heart.

My neighbors lime much heavier than I do, some four-fold, others six-fold, but I doubt the necessity, and if by putting on 25 bushels to the acre, we can secure as great a benefit for a reasonable number of years as when we put on a much larger quantity, why should we incur the additional expense?

A Pennsylvania Farmer.

Bees.

We have often marvelled that our farmers do not pay more attention to the rearing of bees. The produce of these industrious insects is far more profitable than the generality of persons may be inclined to imagine, and and the little time which it is necessary to bestow upon them is seldom uselessly employed. They will always thrive in the vicinity of fields of clover and flower gardens; and, while the product of their labors will furnish no inconsiderable profit in a pecuniary point of view, the example of industry which will thus be constantly placed before the younger portion of the community, may have the most beneficial effects. We lately met with the following anecdote, showing some of the advantages which may arise from keeping bees.

"A French Bishop being about to make his annual visitation, sent word to a certain curate, whose ecclesiastical benefice was extremely trifling, that he meant to dine with him; at the same time requesting that he would not put himself to any extraordinary expense. The curate promised to attend to the Bishop's suggestion, but did not keep his word, for he provided a sumptuous entertainment. His Lordship was much surprised, but could not help censuring the conduct of the curate, observing that it was highly ridiculous in a man whose circumstances were so narrow, to launch out into so much expense, nay, almost to dissipate his entire income in a single day. "Do not be uneasy on that score, my lord," replied the curate, for I assure you that what you now see is not the produce of my curacy, which I bestow exclusively upon the poor." "Then you have a patrimony, sir!" said the Bishop. "No, sir." "You speak in riddles, how do you then do?" "My lord, I have a convent of young damsels here who do not let me want for any thing." "How! you have a convent! I did not know there was one in this neighborhood. This is all very strange, very unaccountable, Mr. Curate." "You are jocular, my lord." "But come, sir, I entreat that you solve the enigma; I would fain see the convent." "So you shall, my lord, after dinner; and I promise you that your lordship shall be satisfied with my conduct."

Accordingly, when dinner was over the curate conducted the prelate to a large enclosure, entirely occupied by beehives, and pointing to the latter, he oberved, "This, my lord, is the convent which gave us our dinner; it brings me in about 1800 livres per annum, upon which I live very comfortably, and with which I contrive to entertain my guests genteelly." The surprise and satisfaction of the Bishop at this discovery may easily be conceived. The sequel of the story informs us

that afterwards whenever a curate made application to his lordship for an improved living, he would only reply, "*Keep bees, keep bees!*"

Keeping Hens---Eggs.

Eaton, Massachusetts, July, 1837.

I send you an account of my success last year in keeping hens, and will thank you to publish it to let the people know how many eggs a hen lays in a year. I have heard much speculation on the subject, and last year I kept an account, which is as follows:

On the first of January, 1836, I had ten hens and one good crower. In the spring I suffered three of them to go through the process of incubation, which left me seven to make my experiment upon. The three which raised chickens, gave me twenty-four in number, which I sold for a shilling each when they were the size of quails. The sooner you sell chickens the better, for they will not bring more than three or four cents more when full grown than when half grown.

When the year was out on the first of last January, I looked over my account and found my seven hens had given me ninety six dozen of eggs, which were sold for $15 91. What we had used in the family made the whole quantity one hundred dozen. The lowest price I sold any for was 13 cents per dozen—the highest 25 cents I have asked many farmers to guess the number, but they always came short of it.

They ask me what I give them to make them so prolific; I inquire how they treat theirs, what they give them to eat, and where they rest at night. They tell me that they let them rest in barns or on apple trees—not giving them much except what they can pick up around the house and barn. They think warm dough will freeze in their crops and kill them in cold weather.

Now I'll tell you how I keep hens. I cause a good house to be made for them in the south side of a hill, and stone it up so warm that an egg will scarcely ever get frozen. During half the time in winter I give the hens boiled potatoes and bran or meal, mixed together with warm water. I never lost any hens in consequence of this dough freezing in their crops; if they have a good warm house to set in, dough will not hurt them any more than warm cakes will kill a man. For the remainder of the time, I give them oats instead of corn. I have bought oats in Boston for seventy cents a bushel, while corn was, at the same time, one dollar and ten cents, I tried the hens first on the oats and then on the corn. Before feeding the hens, I would let the oats soak in warm water for three or four hours, till they got well swelled, and in this way I found that a bushel of oats would go as far as a bushel and a half of corn; thus in using oats instead of corn I saved ninety-five cents to every bushel consumed.

Hens will dust themselves every day when they can get dry dirt. In the winter, when they cannot, I place a large box of coal-pit dust in their house and keep it dry so that it cannot freeze; this answers every purpose.

Hens should never be kept near cattle, for their vermin will escape to the cattle and prevent them from growing fat.

I preserve all the pieces of white earthern ware that I can find, and when the ground is covered with snow, I pulverize it and give it to them. I find by experience they will eat it in preference to corn. Water is always placed within their reach.

Last year, according to the best of my calculations, the cost of keeping my ten hens was $9. I sold eggs to the amount of $15 91, and chickens to that of $4—leaving a net profit of one season of $19 91. Besides this, eleven dozen of eggs worth a shiling a dozen, were used in the family.

Churning.

There is something considerably difficult in making butter from cream, owing perhaps to causes not exactly understood; and every dairy woman knows that causes occur in which the manufacture of a good article is impracticable. A friend assures us that in ordinary cases the difficulty is at once removed, and butter of a good quality procured by the addition of a little *sal eratus* to the cream. We have since tried it when cream proved refractory, and found it to succeed admirably. A spoon full of sal eratus, pulverized, is a sufficient dose for two gallons of cream. After the cream had been churned a proper time, if no sign of butter appear, sprinkle the powdered sal eratus over the surface, half at a time, as it is possible no more than half may be required. After churning a few minutes longer, if necessary, add the remainder. The philosophy of the matter, we take to be this—the alkali of the sal eratus neutralizes the superabundant acid of the cream and thus produces butter.

Green Corn.

Those who are fond of green corn and desire to have it in fine order, in the winter, should improve the present opportunity to pack it down in clean, tight casks, with a pickle sufficiently strong to preserve cucumbers. It should be put down in the husks and kept excluded from the air by the brine, so as to prevent fermentation, or decomposition. Corn thus prepared, it is said, will keep for any length of time, and will be sufficiently fresh for the table, when boiled.

ARTICLES.	Philadelphia, Oct. 14.	Baltimore. Oct. 10.	New York, Oct. 10.	Boston, Oct. 11.
Beans, white, per bush.	$1 37-1 62½	1 25—0 00	0 00—0 00	1 37—1 75
Beef, mess, new, per bbl.	14 00-15 00	13 50-14 20	13 50-14 50	13 00-14 00
Bacon, western, per lb.	8— 9½	7— 9	8— 10	.....
Butter, extra, per tub	12— 13	16— 20	18— 20	18— 23
Butter, fresh, per lb. (market,)	18— 25	20— 25	20— 25	21— 27
Hams, per lb.	13— 00	12— 13	12— 14	14— 15
Hog's Lard, per lb.	7½— 8½	9— 10	8— 10	8— 9
Cheese, American, per lb.	9— 10½	9— 11	9— 11	8— 9
Beeswax, yellow, per lb.	26— 27	23— 25	24— 27	26— 32
Beeswax, white,	.....	38— 40	38— 40	38— 40
Bristles, American,	42— 65	25— 65	25— 65	.....
Flax, American,	8½— 9	9— 10	9—	9— 12
Flour, best, per bbl.	8 00—9 00	8 00—8 25	7 50—9 00	9 00—9 25
Grain—Wheat, per bush. Penna.	1 60—1 75	1 80—1 85	1 70—1 80	.....
do. Maryland,	1 60—1 75	1 25—1 65	1 60—1 75	.....
Rye, per bushel,	95—1 00	82— 85	—0 75	0 00—0 00
Corn, do.	98—1 00	96— 98	1 00—1 80	1 00—1 02
Oats, do.	40— 43	30— 32	35— 45	47— 50
Barley, do. Penn.	.....	.....	0 00—	0 70—0 75
Peas do.	1 00—1 25	00—0 00	— 8	.....
Hay, Timothy, per 100 lbs.	0 00—0 00	12 00 pr. ton.	.....	20 00 pr ton.
Meadow Grass,	70— 80	.....	.....	.....
Hemp, American dry rot, ton,	175 00-	6— 8	130 —140	.....
Hops, first sort, 1836, lb.	12— 15	— 9	8— 10	7— 8
Plaster Paris, per ton,	3 25—0 00	0 00—3 50	2 50—	2 50—2 62
Seeds—Cloverseed, per bushel,	6 00—6 75	6 00—6 50	.....	.....
Flaxseed, rough, do.	1 30—1 37	1 37—1 50	.....	.....
Timothy,	2 00—3 25	3 25—4 00	.....	2 87—3 00
Tallow, per lb.	00— 00	— 10	9— 10	00— 00
Wool—Saxony, fleece, per lb.	00— 00	40— 50	75— 80	.....
Merino,	00— 00	35— 40	50— 68	.....
1-4 and common,	00— 00	25— 30	40— 50	.....

Gentlemen whose subscriptions commenced with the thirteenth number, or second half year of the first volume of the Cabinet, and who may wish to complete their sets by obtaining the first twelve numbers, should make early application for the same. All letters on this subject, must be post paid. ☞ Post Masters are hereby authorized and respectfully requested to forward us the names of persons who may wish to *continue* the work, as well as the names of *new* subscribers; and after retaining twenty per cent. commission, transmit us the balance of any moneys they may have received:—And any gentleman may constitute himself a special agent, by remitting us five dollars, free of postage, for which sum, we will forward seven copies according to his direction.

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THE FARMERS' CABINET,

DEVOTED TO AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

Vol. II.—No. 7.] Philadelphia, November 1, 1837. [Whole No. 31.

Lime.

[The Baltimore Farmer and Gardener gives the following valuable remarks on the uses of lime as a manure, in reply to questions of a correspondent. There continues to be much of ignorance as to the value of this article, though much has been written about it. It ought not to continue.]

Lime as a meliorator of the soil was used in the earlier days of the Roman Empire; its advantages were seen and acknowledged; its wonder-working powers were visible on ten thousand fields, centuries by-gone; but strange as it may seem—unnatural as is the fact—it is nevertheless true, that there are innumerable instances of highly intelligent farmers who still doubt its efficacy. That those who from the prejudice of misdirected or imperfect education, are incompetent to judge correctly, should still be sceptical, excites no surprise in our mind: for ignorance abounds in every business of life, and we have seen men who have been raised to the avocations of the soil from their "swaddling clothes," decrying the virtues of lime as stoutly as though they really knew something about it. We know an individual of this description, who is really so consummate a mass of animal matter, that if by any chance accident, or freak of the moon, an *idea* were to stray into the cells of his brain, an immediate eruption would be the consequence—and this man will attempt to be witty at the expense of those who are so "*silly* as to waste their money in buying lime," for agricultural purposes. But to return to the inquiries of our esteemed correspondent:

1st. "Its adaptation to various soils?"

It is adapted to the improvement of any soil wherein too much water does not abound. For instance to apply it to a wet marshy spot, would be a waste of means, as the lime in such a position could not perform its office, as it would become a mass of disintegrated mortar.

It, however, improves *clays*, by separating the adhesive particles of which they are composed, thus rendering the entire body more friable and easier of being penetrated by the roots of plants and vegetables. If there be, as there frequently is, a superabundance of acid in the soil to which it may be applied, it neutralizes that acid, and renders the earth more healthful to vegetation. The weed known as the sheep sorrel, whose presence is the certain indication of too much acid in the soil, will disappear upon the application of lime, and give place to a more wholesome growth of plants. Upon *sandy soils*, lime exerts a most happy effect, by imparting to them that principle of tenacity, so essential to the power of retaining manures. In a word it may be said that lime suits all soils, except those that are continually wet.

2d. "The proper time and mode of applying?"

These must be determined by circumstances. If the soil be what is called new ground, we would say, the lime should be spread on the surface, ploughed in during the fall, and on the opening of the spring the fields should be ploughed again, in order that the lime may be brought to the surface.

If it be a *clover lay* or a *grass sward*, intended for wheat, we would say, spread the lime and plough it in a few days before seeding.

If a *sod*, intended for corn, we would say—spread the lime and plough it in during the fall, and replough in the spring, just before corn-planting time.

Lime is strikingly beneficial to all lands, except those we have noted; but the greatest degree of benefit is perceivable where it is brought to act upon large bodies of woody and vegetable matter. The received opinion now is, that it is not of itself a manure, but the cause of converting other substances into food for plants. Whether this opinion be correct it is not our purpose to inquire, as we deem it would be an unprofitable expenditure of time. We all know, however, that *lime* has been found in almost every vegetable body that has been submitted to analyzation, with a view of ascertaining the fact; and chemists have proved that lime is soluble in 600 times its weight of water. If we take these two facts in connexion, they would seem to argue that besides performing the simple office of stimulating dead vegetable matter into a state of profitable digestion—into a pabulum capable of being eaten by living plants, that it is itself a *condiment* upon which these plants themselves delight to feed.

3d. "The quantity per acre, whether quick or slacked lime, on grass or ploughed lands?"

With regard to the quantity per acre, a great diversity of opinion exists, and *practice* is as variant as *theory* upon this head.

In England where liming has been carried on to a much greater extent than in almost any other country, there appears to be no settled rule of apportionment, each landholder consulting his own notions of propriety as to the quantity to be applied, and these varying from 150 to 600 bushels per acre. It is affirmed by European writers of approved merit, that strong loams and clays require more lime than light sands. Our own opinion is, that it is not so much the *texture* of the land, as the quantity of vegetable and fibrous matter it may contain.

In France, where the use of lime is justly popular, they are more sparing in their doses, and one of the most intelligent agricultural chemists who have ever written upon the subject, M. Puvis, maintains with great power of reasoning, that as lime is a mere stimulant, only intended to digest other matters into nutritive substances, that *small doses* are the best: he hints that 25 bushels is enough to be applied at any one time: that more good, with the same means, can be effected by periodical applications of small quantities of lime, than by putting on large quantities at a time. The whole scope of this eminent gentleman's reasoning goes to show, 1. That lime is a mere stimulant, a promoter of digestion; and 2. That after it has converted the matter in the soil into *food*, that it remains dormant until other crude substances are brought into contact with it, and 3. That therefore all heavy applications of lime are unnecessary and wasteful.

In this country there is also a difference of opinion as to the proper quantity. Some use from 150 to 300 bushels the acre, while others think that from 60 to 100 is enough. For ourselves we certainly would never exceed 100 bushels to the acre, and would not apply that except the soil was new and full of vegetable matter—a clover lay or a heavy grass sward. In most cases and especially of light soils, we think 50 bushels to the acre quite enough at a time.

We do not know that we should apply it to ploughed land whereon there was no vegetable coating, unless we supplied that deficiency by a full dressing of long manures.

We are not certain that there is much difference in the good ultimately resulting, whether the lime applied be *slacked* or *quick-lime*, except so far as qantity may be concerned—and it should be borne in mind, that the quantities named in this paper, have relation to unslacked lime. If quicklime be applied before it can be of service, it may be slacked, hence the justice of our position.

One important thing to be considered is, that as lime from its great specific gravity, has a tendency to sink, it is important to keep it as near the surface as possible; it cannot therefore, be ploughed in too shallow.

[We cannot agree with the editor of the Baltimore Farmer in his recommendation to keep the lime near the surface. It is, we believe, fully proved by experience, that lime on the surface, is inoperative; and it seems probable that it cannot sink so deep that the root fibres will not follow it. Plough deep, manure deep—for where do plants seek their principal nourishment—on the surface of the soil, or in its depths?—*Yankee Farmer.*]

From the Genesee Farmer.

Italian Spring Wheat.

We have great pleasure in laying before the readers of the Farmer, by permission of the writer, the following statements respecting the kind, quality, and introduction of this valuable grain, from the pen of Mr. Hathaway of Rome, Oneida county, the gentleman who has been the means of introducing it into successful culture in this country. The importance of Spring wheat is yearly becoming more apparent; and the necessity of making a proper choice among the many varieties known, has become imperious upon our farmers. English agriculturists describe the following kinds, all of which are supposed to have originated in the south of Europe; and by some botanical writers are considered as only a variety of winter wheat, the difference being affected by climate and cultivation. First, red, Spring wheat, white ears, beardless;—second, red ear and grain, beard-

less;—third, ear or spike wheat, grain white, beardless;—fourth, Siberian Spring wheat, introduced into Oneida Co. by Dr. Goodsell, bearded, and generally considered inferior in quality to the Italian, but a good grain for yield;—fifth, Egyptian wheat; in Europe treated and spoke of as a winter wheat; here sown as a spring wheat; but we have known many farmers who preferred sowing their spring wheat immediately before the freezing of the ground, in the fall;—sixth, Italian wheat, the kind spoken of in the communication of Mr. Hathaway, and apparently the most valuable of the varieties yet introduced among us. There is in the last number of the Cultivator a paper from Mr. Speyerer of Pennsylvania, and the qualities and culture of another variety of spring grain called in Germany, where it is extensively grown, spelt wheat. Spelt grows with a firm short stalk, will grow on most soils, and makes, when properly prepared, good flour: but as the berry much resembles barley, and cannot be divested of its adhesive husks by threshing, it requires the operation of a mill similar to those used for hulling rice or barley, before it can be manufactured into flour.

The extracts below are from a letter of Mr. Hathaway to a friend, who wishing to procure a quantity of the wheat, addressed Mr. H. on the subject; requesting information as to the manner of its introduction, kind of soil most favorable, mode of culture, &c. &c. Mr. Hathaway says—"The Italian spring wheat which has been disseminated through my means is an excellent grain, and a very sure crop. It yields largely, and has the wonderful property of doing well on poor worn out land, though of course the crop will be heavier on a more favorable soil; the fact is well ascertained here, that land so light and worn down, that it will not produce a crop of oats will bring a fair crop of spring wheat.

"The original imported wheat weighed full 63 lbs. to the bushel; and now that the fifth crop has come in, it weighs 62 lbs. The flour is fine, and the yield good; the miller speaks highly of its qualities; and the flour makes good light sweet bread, rather more moist perhaps than that from winter wheat. The Italian is a bearded wheat, white chaff, bright yellow straw, the berry variable in color, generally of a reddish yellow.

"The proper time for sowing is in April, if the ground can be well fitted; this season has been peculiar, and late sown wheat, has succeeded best with us, and in some instances ripened soonest. It seldom is infected with smut, and if limed, never. From one and one-fourth, to one and a half bushels of seed are sown to the acre, rich land requiring the most.

"This wheat appears to be a cosmopolite," as it grows well, and does well on almost every variety of soil, from a stiff clay to a sandy plain. In this county we have very little *good* wheat land, and I have not seen it growing on any that would be pronounced such by a western farmer. It usually ripens by the 14th of August, and yields from fifteen to thirty-five bushels per acre. The straw this year from its rapid growth is less firm than usual, and is taller; the consequence is that it has lodged more than in any former year.

"I came in possession of the original wheat by accident. An Italian gentleman of Florence married against his father's will, was disinherited, and emigrated to America, bringing among a quantity of other seeds, a tierce of this wheat, intending to turn farmer. The wheat did not arrive seasonable for spring sowing in this place, and was left in a store house near the canal. The gentleman contracted for a farm in the town of *Florence* in this county (induced by the *name* probably) he was no farmer and made bad calculations, and worse experiments, and failed in every thing; soon became reduced, and was about to eat his imported wheat for which I had advanced him money to pay the transit and charges. I happened to see it, and was struck with its excellence, told him it must not be so disposed of, procured him other wheat, and took it at its cost in Italy, $2 50 per bushel. I succeeded in getting it into the hands of some of our farmers, though without much confidence on their part. But the result was most gratifying—the wheat actually producing about double the quantity usually grown on an acre, and selling at more than double the price of common spring wheat. From this it has all arisen."

A small sample of the wheat which accompanied the letter, by its appearance fully justifies the account given of its quality; being of a plumper berry than is usual in spring wheat, thinner skinned, and kernels being more easily reduced to flour. The demand for the wheat has been great, and prices high, but it has become so extensively cultivated in that vicinity that it can be obtained for seed in any desirable quantity, and in all probability at somewhat reduced prices. The remark of Mr. Hathaway that in its adaptation to soil, the Italian wheat might be considered cosmopolite, or every where at home, would be applicable to it in reference to climate, as well as soils. It has been found to succeed admirably in Canada; where the culture of spring wheat promises entirely to supersede that of winter grain; and we have before us the Staunton Virginia Spectator of August 3d, which states that the Hon. Mr. Breckenridge last winter procured five or six bushels from Mr. Hathaway, and

last spring distributed it among the farmers of that neighborhood. The yield has been good, varying from twenty to twenty-five bushels per acre, thus establishing the fact that it may be successfully grown from the Canadas to Virginia. The editor remarks—"That he thinks it is not liable to rust, as he had fields of fall wheat smartly stricken with rust both sides of his patch of spring wheat while that was totally uninjured." We may here remark that in those sections of this state where the winter wheat has suffered most from rust, the spring wheat has, except in a few partial instances, wholly escaped, the straw being unusually bright and fine.

We are glad to see the attention of farmers directed to this important grain, not because we suppose it can ever supersede the culture of winter wheat in this state, for it clearly ought not to; but because there are many parts of the country where winter wheat is so uncertain a crop, owing to the culture of the soil, and the roots freezing out in the winter, that it has been nearly abandoned, and here spring wheat must be one of the most valuable of crops to the farmer. Every farmer should sow a few acres, as it is increasing his chances of remuneration for labor performed on the farm, and lessening the chances of an ultimate failure of that great "staff of life," good bread.

We are requested to say, that orders for the wheat described above, may be directed to Mr. John L. Peirce, Bulls Head, North Third street Philadelphia. Price $10 per barrel.

Fruit and Fruit Trees.

NO. III.

SEED.

Select proper seed from healthy trees, sound, ripe and fair fruit. Let the seed be put into sand as they are collected, and put into a cellar, or other cool, damp place, until the proper time to plant them. If the seeds are kept in a warm and dry place, they seldom vegetate after it, and when they do, are generally of a sickly growth, and seldom make large and vigorous trees.

THE SEED BED.

The seed bed should be planted in the fall, before the ground is frozen, or as early in the spring as the ground is in a state to be ploughed or spaded. Having selected your seed, prepare the ground to receive it; this should be of good soil, not subject to standing water. Let it be spaded some time previous to planting. Plant the seed in rows, fifteen to eighteen inches apart, from one to two inches deep, according to the size of the seed and lightness of the soil. Apples, pears and the like, eight or ten, and stone fruit three or four in a foot, in the rows. Cover them up and press the ground moderately over them.

Stone fruit should be cracked a little if planted in the spring, which need not be done if planted in the fall. During the ensuing season, and every succeeding season, until the trees are removed, hoe out the weeds, loosen the ground, and then thin out the seedling plants, (leaving only the most vigorous) to from eight to ten inches apart. Water them occasionally in a drought.

THE NURSERY.

After one season's growth either early in October, or immediately after the frost is out in the spring, trees that have grown about a quarter of an inch or more in diameter and formed perfect roots may be taken up and placed in nursery rows. Apple and other trees of slow growth which have not attained that size, nor perfected their roots, should remain another season. The nursery into which the young trees are now to be transplanted, should be in good soil, open to the sun and air. After being ploughed or spaded, and levelled by raking or harrowing, dig trenches lengthwise, from 2½ to 3 feet apart; then take up the trees from the bed, prune the roots and top with care, thinning out the branches and roots, cutting off the perpendicular or tap roots, and all irregular roots and branches, leaving only such roots as are in or near a horizontal position. Every tree that does not contain a sufficient number of well placed roots should be thrown away. Open trenches six or eight inches deep, and wide enough to admit the roots freely. Dip the roots in water, which will make the earth adhere to them, and place the trees in the trenches from a foot to eighteen inches apart; draw the ground upon the roots, raise the tree a little so that the end of the roots incline a little downwards; then gradually fill up the trench, at the same time pressing and packing the ground moderately around the roots. In dry weather, water the trees twice or three times a week with rain water, or water warmed in the sun, about a pint to each tree, until they have thoroughly taken root. Plough between the rows and prune them every spring, keeping them clear of weeds during the season. Trees planted from the seed bed which have not been root grafted, will be fit to bud in the budding season of the summer and fall following, or to be whip grafted in the following spring. Those who prefer root grafting are referred to the article on root grafting.

Peach trees and the like, will be fit for transplanting in two or three years, and apples plums, &c. in from three to five years.

They will then have attained about six feet in height and a proportionable thickness, and will make large, healthy, fruitful, and durable trees.

LAYERS AND CUTTINGS.

Many kinds of shrubs and vines may be propagated by cuttings or slips, and most if not all sorts, may be propagated by layers, and in either case the work is to be done early in the fall, shortly after the leaves are shed, or in the spring, as soon as the ground will admit of it.

CUTTINGS.

Cuttings should be taken from shoots of the preceding year's growth, from bearing stocks, of sound and perfect growth, close jointed, and neither rank and pithy, nor small and imperfect, and planted six or eight inches deep. Slips from shrubs, such as gooseberries and currants, may be from twelve to eighteen inches long; and for the grape, woodbine, and other vines, from sixteen to twenty inches long. Plant shrub cuttings in an upright or perpendicular position. On the other hand, the grape and other vines must be planted sloping, and nearly horizontal, with the ends turned up in such a manner as to raise two or three buds on the cutting above the surface of the ground where planted. Before planting, the ground should be loosened for some distance round, and the weeds kept down afterwards. Cuttings may be placed in a nursery a foot apart every way, and transplanted after one or two season's growth, or planted at first where they are to remain. Grape cuttings should be taken when pruning vines in the fall, buried during winter, and planted in the spring.

LAYERS.

All sorts of shrubs and vines which admit of being propagated by cuttings, will succeed equally as well and some better, by layers, and many kinds may be propagated by layers which cannot by cuttings. Layers may be prepared in various ways. My object is to point out only the most plain and simple method, best adapted to common use, and for all ordinary purposes. Take for layers such young suckers or shoots as can be bent down to the ground without separation from the shoot or main stock; dig up and mix the earth along side the shrub or tree from which the layer is to be selected; make a hole from four to six inches deep; prepare a peg or stick from six to eight inches long, sharp at one end, and a hook at the other; cut out from the shoot intended for a layer the buds as directed for cuttings, when it is intended to raise a single stem, bring down the shoot and fasten it with the peg in the hole about twelve or fifteen inches from the end, then cover it over; raise the end of the layer so as to stand perpendicular from the ground, and press the earth around it. In one year the layer will have formed a root of its own, and may be separated from the main stock, the roots and branches pruned and then planted permanently.

GOOSEBERRIES AND CURRANTS.

Currants and gooseberries, and particularly the first, are usually suffered to grow in bunches composed of side shoots and suckers, which absorb all the moisture and substance of the earth, so that no herb or vegetable will thrive within a space of five or six feet from them; they increase until they choke each other, and become a heap of rubbish; the fruit is small, insipid, and unhealthy. They can, with a little attention be raised with a single stem, the fruit then grows more abundant, larger, and better flavored, which is effected by merely cutting out every bud with a chip of the wood from all that part of the cutting which, when planted, will be at or below the surface of the ground.

PLANTING AN ORCHARD.

In planting trees in an orchard or garden, where they are to remain, the same rules should be observed as in transplanting them from the seed bed to the nursery, in pruning, planting, watering and previously mellowing the soil; they should be planted early in October, or as soon as possible in the spring, and the earth, unless it is ploughed, should be spaded four or five feet in diameter for a tree. They should be well secured with firm stakes, and tied up with whisps of straw or loose bandages of any kind, to secure them from being shook or loosened in the ground. The trees should be planted a sufficient distance apart so as to admit the sun and a free circulation of air when full grown: apple and pear trees at least 40 feet, cherry and plumb 30 feet, peach, appricot and nectarine 25 feet. Tilling by raising a succession of crops of grain and suitable manuring, particularly around the trees and as far as the roots extend, will promote a vigorous and rapid growth; in a few years they will attain considerable size and bear fruit in proportion.

SOIL AND SITUATION.

Low, wet or mashy ground is not suitable; it should be upland, or so much so as not to be exposed to standing water; should be open to sun and air, and tolerably rich.

That soil and situation which will bear good crops of winter grain, are well calculated for the cultivation of fruit trees, shrubs, or vines. Occasional ploughing, digging, or in other way mixing or mellowing the ground, keeping down underbrush and weeds, and manuring are beneficial, and will at all times

add to the health, vigor and fruitfulness of trees and vines.

TRAINING AND PRUNING.

Trees, when young, both forest and fruit, may be trained to any shape, from that of a lofty towering top, by pruning away the large limbs, except the leading upright one, to that of a low, spreading top, by cutting off the leading upright limbs. Pear and cherry trees do well with a high top; other kinds make the best bearers with round tops; and no tree, except it be intended as a wall or espalier, should be suffered to form a top less than five or six feet from the ground: to this end all limbs and branches should to that height, be gradually cut away.

Pruning should not be neglected, in divesting trees of suckers from the root, or side shoots, when they are not necessary to fill a vacancy; and generally, in promoting a free circulation of air, and in preventing limbs and branches or vines from intersecting or crowding each other, a medium should be observed, as pruning *too much* is injurious.

The superabundance of sap will cause side shoots, suckers, and eventually decay. The limb or branch intended to be removed should be cut away clear and smooth, without leaving stumps or snags, and even with the trunk or main limb from which they are taken. Large wounds, or those of a moderate size, exposed to wet should be covered over with tar, paint or composition. If this is neglected, or stumps or snags of the branches cut away are suffered to remain, the stump or exposed part will rot in the tree, render it hollow, and in a few years destroy it. Many orchards have rotted, and are now rotting down from this cause.

DISEASES.

To prevent or cure diseases in vegetation, as well as animal life, the best antidotes and principal remedies are to *remove the causes which produce them.* To this end destroy caterpillars, all noxious worms and insects, prune off all unsound and affected parts. If this cannot be done without destroying its usefulness, cut it down and replace it with a young, healthy, vigorous tree. Swine rooting under trees, and birds frequenting the tops, building nests unmolested, will, in a great measure, if not wholly, destroy insects and vermin.

When a tree is bark bound, covered with rough bark and moss, these must be scraped off; and being washed with soap suds or covered with a coat of lime wash, will be beneficial; prune the tree, removing side shoots and suckers from the root, and stir and manure the ground, for the most part, at least as far as the principal roots extend. The soil being sod bound, or barren, or covered with underbrush, or all together are the causes of the difficulty; these being remedied, the tree will again thrive.

It is a mistaken opinion that the disease which destroys peach trees, &c. caused by grubs, can neither be prevented nor cured; either of which can be effected, *if properly and thoroughly attended to.* It is caused by an insect in pricking the bark of the tree near the root, and depositing the seed which produces the grub, between the first of July and frosts in the fall. To prevent this, about a foot of the trunk of the tree next the root should be brushed over with a coat of some sticky, nauseous or impenetrable substance, and this repeated as often as the substance wastes away, is washed off by rains, or crumbles away during the time specified above, which may be tar, train oil, or whitewash, and a little ashes or lime kept on the ground around against the tree. When trees are affected either in the fall or spring, dig and remove the earth around the trunk to expose and give free access to every part affected; remove the gum, search thoroughly for the holes in the bark by which the grubs entered, prick into the bark with a sharp pointed knife: more effectually to find and trace the grubs and their holes, cut away the bark over the holes so as to lay them bare their *whole extent, length and breadth,* smooth the edges of the bark, scrape off all the gum and filth, which remove, together with all the grubs found, wash the holes and parts cut and scraped with ley or soap suds, or rub a little dry ashes over them, and close up the space dug with fresh soil; examine the tree occasionally, and more particularly every spring and fall; repeat the operation to a greater or less extent, when necessary. By this means the grub will be subdued and exterminated, and the trees flourish.

For the Farmers' Cabinet.

Lime, Carbonate of Lime,—Ground Limestone.

On the subject of using ground limestone, instead of lime as a manure, as recommended by Wm. Partridge, and replied to by "Observer," I will remark, that although lime does return to a carbonated hydrate, the same condition it was in before burning, yet between that and ground limestone, there is a material difference; such lime will render land barren, when applied in quantities much less than we often see washed upon the adjoining fields from roads made of and repaired with limestone, producing no effect sensibly different from the wash from the same road where made with other stone.

This difference probably results from car-

bonate of lime, (at least in a state of ground limestone,) being so nearly insoluble in water as to produce no effect on vegetables growing in soil containing it.

Various facts, in connection with reflection on the combinations that must take place when lime is incorporated with the soil, furnish strong ground for concluding that it is only in a state of super-carbonate that the great beneficial action of lime is produced.

We cannot, by grinding, destroy the attraction of cohesion in limestone; there will be two or more atoms adhering. While this is the case it never will be converted into a super-carbonate. Destroy the attraction of cohesion, as the result shows is done by burning and slacking, and it will ultimately be converted into super-carbonate, when incorporated with the soil; is then soluble in water, and acts beneficially or injuriously, as the quantity is in accordance with the wants of the plant, or in excess, as other manures do.

I have been in the practice of using lime for 25 years; there is little of the land I occupy that has not had 200, and some 300 bushels per acre, applied in that time. In my first applications, it was slacked, spread, and incorporated with the soil as soon as practicable from the kiln. But for more than 20 years I have spread but little that has not lain from 3 to 12 or more months, and when spread avoided all means that would incorporate it with the soil, that necessity did not urge for the accomplishment of other objects. This change was the fruit of a doubt of the ultimate utility of using lime to hasten the decomposition of vegetable matter contained in soil under regular cultivation,* and that this questionable advantage was all I conceived I had to place against the known and certain result that by so applying it, it would be converted into carbonate at the expense of a material contained in the soil that then was, or in future would become capable of supporting a vegetable, and that so far as it could be converted into carbonate before mixed with the soil, was clear gain; and I regard my experience as having fully sustained the conclusion. Whether the experience of others has or has not satisfied them which is the preferable mode of using it, they must admit that it is a question of great practical importance, as it would require the greater part of the barn yard manure made on any farm of 100 acres to furnish the carbonic acid that would saturate 800 bushels, 80 pounds to the bushel, of pure magnesian lime, containing 8 per cent. magnesia; and all that is not saturated before incorporation will become so at the expense of a material in the soil, that the farmer must depend on his barn yard for the means of restoring, except applied to an acid soil, and so far as the neutralising of acid is taken into account, it is past controversy, the effect will be the same whether mild or quick lime be used.

Delaware county, 10th month, 27th, 1837.

* This doubt was the result of a conclusion produced by careful observation of natural phenomena, that any substance that has once formed a part of a living fibre, was by the natural decomposition of that fibre placed in a condition more readily to re-enter into a new race of living fibre, than the same substance obtained from the mineral kingdom, or by the destructive analysis of vegetables, and that lime did not effect the natural decomposition, but destructive analysis, and as far as it carried it absorbed the product.

For the Farmers' Cabinet.

Remarks on Splitting Timber and Constructing Fences.

I send for publication the description of a process for splitting timber, which may be new to *some* who read the Cabinet, and in some cases such as dividing large Hemlock logs and others of a similar character *may be useful.*

A cylindrical hole, (say one inch in diameter,) is made in the object to be split, extending to or beyond the centre of it, and a charge of gunpowder in quantity according to the required force, is deposited in the bottom of the hole, and a screw bolt rather more than one inch diameter, with a hole about one-eighth of an inch diameter through the centre from one end to the other, is turned into the hole by means of a wrench acting on a square at the upper end; the hole in the centre is then filled with powder, which serves to conduct fire to the charge at the lower end. When the timber is split the bolt adheres to one of the parts.

In this way timber can be advantageously converted into rails, where it cannot by ordinary means. All timber which is clear of knots, and splits easily, and which will continue sound during one rotation of crops, (say ten years) is suitable for rails to make an angular (or Virginia) fence, *because* the expense of converting the same into rails and afterwards reducing it in size for fuel will be no more than reducing the same quantity to a similar size for fuel at first.

Such rails as cannot reasonably be expected to last during this period, should be excluded from fences intended to remain stationary thus long, and be reserved for fences of a more temporary character or converted into stakes and fuel.

Fences composed of strong materials,—and made of a uniform height are the most economical, *because* the cost of making and keeping in repair for such stated period is less than upon any other plan; and animals are not taught to leap over them, as when they are weak and of different heights,

Animals which cannot be guarded by a fence of ordinary height and strength, should be kept in the stable or other safe enclosure, lest they teach others bad habits.

All fences of this description should be moved, (or new set) at each rotation, for the double purpose of giving the rails a *new bearing* one upon another, in order to preserve them as long as possible; and also for the purpose of bringing the ground formerly occupied by the fence into a rotation of crops to prevent *foulness or to destroy such noxious plants as may have started during the preceding rotation.*

Such fences put upon ground well set with grass, are not so liable to be surrounded by *noxious plants, or foulness,* as when placed upon land recently ploughed. P.

21st of October, 1837.

Curing Pork.

Mr. Editor,—In the New York Farmer I noticed a recipe for making "Knickerbocker pickle," for beef or pork. I will give mine, which I have used twenty-six years with uniform success, and I will tell you how and where I got it. In August 1805, I lodged from Saturday to Monday with an innkeeper in Cherry Valley, N. J., (who was also a farmer.) On the table, for Sunday's dinner, there was a fine piece of pickled pork, boiled the day before; I tasted it, and thought it the most delicious I ever ate. I requested "mine host" to give me his recipe for curing pork. He replied he would do so with pleasure, and proceeded as follows:—

"As soon as my hogs are dressed and cool enough to be cut, I pack the side pieces in a barrel or cask, with plenty of salt on all sides of each piece, and when my cask is full I immediately roll it to my pump, and I pump in water until I can see the water cease to sink in the vessel, or to moisten the salt on the top of the cask. I then lay a flat stone, as large as the vessel, so as to keep the pork always under the salt or pickle. I put it in my cellar, covered so as to exclude the flies, and there it remains until a piece is wanted. Care must be taken to keep the meat under the pickle, otherwise it will rust."

Here is the whole secret of making good pickled pork for family use. I have used this method for the time above mentioned, and I want no better, easier, or economical plan. It has often happened that when I wanted to put down new pork there remained some old at the bottom of the cask; in that case, I poured off the pickle, took out the undissolved salt, packed the fresh pork on the top of the old, using the salt which had been in the cask, with the addition of fresh if necessary, and then poured on the old pickle or water. In this way I have had pork for three or four years in the bottom of my pork barrel, and when used it was as free from rancidity as it was three weeks after it was put down. Indeed, I seldom empty my pork barrel except when it wants hooping. I believe that boiling pickle is useless, if not injurious; pork ought not if it can be prevented, be frozen before it is put down.

C.

Princeton, N. J.

Keeping Farm Accounts.

Let any farmer make the experiment, and he will find it as interesting as it is useful, and both interesting and useful to know from year to year the actual produce of his farm. Let every thing, therefore, which can be measured and weighed, be measured and weighed: and let that which cannot be brought to an exact standard, be estimated as if he himself were about to sell or purchase it. Let him likewise, as near as possible, measure the ground which he plants, the quantity of seed which he uses, and the manure which he applies. The labor of doing this is nothing compared with the satisfaction of having done it, and the benefits which must arise from it. Conjecture in these cases, is perfectly wild and uncertain, varying often with different individuals almost a hundred per cent. Exactness enable a man to form conclusions, which may most essentially, and in innumerable ways avail to his advantage. It is that alone which can give any value to his experience; it is that which will make his experience the sure basis of improvement; it will put it in his power to give safe counsels to his friends, and it is the only ground on which he can securely place confidence to himself.

Ready Mode of Reducing Leaves to Manure.

I am very successful in reducing my leaves to manure. I collect an immense quantity during the winter, and carry them all to the yard where the cows are milked, and have their sheds. Their droppings reduce them quickly; but in order to make excellent manure of them within the season, I cause a light layer of earth to be scattered over them from time to time, as they rise. In February, I turn the whole over, and am sure to have the entire yard covered three feet deep with choice and valuable vegetable mould, fit for use at any time after June, particularly if the season be tolerably wet.

J. M. S.

Always be doing something; never seem to have nothing to do.

Work for November.

Those who neglected to dress their asparagus beds last month, should be careful that it is done early in this. For this purpose, let the old stalks be removed and all green weeds, and a layer of horse manure or litter from the stable spread over the bed from four to eight inches deep. By so doing, the roots will shoot much earlier and stronger in the spring, and are not so liable to be injured during the winter, as when the bed is left without dressing. Sea-kale should also be covered during this month. When it is intended for use in the spring, a small box should be inverted over each plant, and then the bed covered as for asparagus. In the spring the box should be allowed to remain as long as you wish to continue cutting the kale, by which the young shoots will be blanched and more tender, than when grown in the light. All edible roots should now be removed to the cellar, and early peas may be planted, also radishes. Plant out fruit and ornamental trees and shrubs. Cover tender flowering plants and roots with tan bark, horse manure, or litter from the stables. A fine time, this month, to collect compost for spring use. Plough much that your spring work may be in advance. Prepare wood for winter, and see that your houses are in repair, as a bad door will cost a load of wood before spring. See to ditches and drains and that water is not allowed to stand upon your grass lands.—*Goodsell.*

In many situations it will be excellent management to rake up all the leaves of trees, and the mould which has been produced by their decay, which can be procured at a reasonable expense, and cart and spread them in the barn-yard as a layer to absorb the liquid manure from your cattle. Likewise it would be well to place quantities of them under cover, in situations where you can easily obtain them in winter to use as litter to your stables, &c. They do not rot easily, but they serve the purpose of little sponges to imbibe and retain liquid manure, and by their use you may supply your crops with much food for plants which would otherwise be lost. Attend with diligence and punctuality to the wants of the four-footed tenants of your barn, hog-sty, &c. Do not undertake to winter more stock than you have abundant means of providing for. When young animals are pinched for food at an early period of their growth, they never thrive so well afterwards, nor make so good stock. See that you have good stalls, stables, &c. cow-houses, a proper implement for cutting hay and straw, an apparatus for cooking food for cattle and swine, &c. You may also carry out and spread compost, soot, ashes, &c. on such of your mowing grounds as stand in great need of manure. Though some say that the best time for top-dressing grass land is immediately after haying, any time will do when the ground is free from snow, and the grass not so high as to be injured by cattle's treading on it.

Agricultural Society Notice.

In pursuance of a resolution of the directors of the Agricultural Society of New Castle county, notice is hereby given to persons to whom premiums were awarded by the Society, in 1836, and who have not called for said premiums, that they shall be considered as relinquished for the benefit of the society if not demanded within *thirty days* after the publication of this notice. The following is a list of the premiums referred to:

Philip Reybold,	for the best	Bull,	$10
Saml. Canby	do	Cow	6
do	do	Heifer	5
James Canby	do	Heifer calf	3
Jno. Andrews	do	Bull calf	6
Wm. Reybold	do	Fatted calf	5
Jesse Gregg	do	Ram	5
do	do	Pen of Ewes	5
do	do	Oxen	7
Saml. Canby	do	Stallion	15
D. W. Gemmill	do	Mare	5
Dr. J.W. Thomas	do	Boar	5
John Platt	do	Butter	2
Ab. Alderdice	do	Wheat Fan	3
Eliza N. Ferris	do	Silk	5

Notice is also given that such of the premiums on the list for 1837, as are not called for within sixty days after the publication of this notice shall be considered as relinquished for the benefit of the Society.

Philip Reybold	for a Bull	$10
Saml. Canby	Cow	6
Geo. Platt	Heifer	5
Saml. Canby	Heifer Calf	3
Benj. Webb	Bull Calf	5
S. Canby	Oxen	7
Th. Massey. Jr.	Stallion	15
Henry Dupont	Colt	5
Th. Massey, Jr.	Mare	10
P. Reybold	Ram	5
do	Pen of Ewes	5
S. Canby	Boar	5
Th. Massey, Jr.	Sow	5
John Thompson	Butter	4
Saml. Canby	Cabages	2
John Andrews	Cauliflowers	2
Dr. Wm. Gibbons	Pears	2
P. Reybold	Peaches	2
Lydia Baldwin	Silk, a silver cup, value $30.	

The above premiums will be paid on application to JAMES CANBY, Treasurer.

By order of the Directors,

H. Gibbons, Sec'ry.

10th mo. 24th, 1837.

Proceedings of the Agricultural Society of Kent County, Del.

Pursuant to adjournment, the Agricultural Society of Kent county, met at Dover, on Tuesday, the 3rd instant.

On motion of John M. Clayton, Esq., Gov. Cornelius P. Comegys was elected the President of the Society.

On his motion also,

Resolved, That a committee to consist of one member from each hundred in the county, be appointed by the chair, to nominate the officers of the Society.

Whereupon, the chair appointed Jacob Raymond from Duck Creek Hundred, Elias Naudain from Little Creek Hundred, John M. Clayton from Dover Hundred, Robert W. Reynolds from Murderkill Hundred, Daniel Taylor from Mispillion Hundred, and Justus Lowery from Milford Hundred, who retired to effect the object of their appointment.

The committee previously appoined, reported as follows:

The committee on fruits, reported the following articles as the best produced:

Isabella grape, No. 1, Mrs. Frances L. Schee.
Catawba do No. 1, do do
Strawberries, No. 1, Thos S. Hillyard.

(Mr. Hillyard produced at the exhibition at least a pint of large ripe strawberries.)

Tomatoes, No. 1, Thomas Stevenson, weight of the largest 1 lb. 6 oz.

Pumpkins, No. 1, John M. Clayton.

Squashes, No. 1, Thomas L. Temple, weight 9½ lbs.

Squashes, No. 2, Charles Kimmey, Sr., 7¼ lbs.

Squashes, No. 3, Mrs. Elizabeth Freeman, 9¾ lbs.

(Squashes arranged according to quality.)

The committee also, by request, examined some beautiful specimens of honey, and reported as follows:

No. 1, to Benjamin Enos.
No. 2, to John McGlary.

ON FLOWERS.

The committee on flowers beg leave to report that they have examined the various specimens produced, and have found them respectively much finer than they had anticipated. In awarding preference they have felt considerable difficulty. A corronation Dahlia with the name of Mr. John Manlove is the finest specimen of this beautiful species they recollect ever to have seen.

Mrs. Harrington, through her husband, Judge Harrington, exhibited a tablet of ten or twelve varieties of the Dahlia, beautiful in the extreme.

With a bouquet, consisting of daily and other roses, with a rich variety of honeysuckle and other rare flowers, cultivated by Miss A. Ridgely, the committee were particularly gratified. The committee also examined a large variety of rich and beautiful flowers, without labels, many of which would deserve particular notice had the committee been apprised of the names to whom they could award the preference. Upon the whole, the committee would remark that as none of the flowers have been raised for the exhibition, they are remarkably fine, and reflect great credit upon the taste of those who presented them

ON CROPS AND GRAIN.

The committee on Crops and Grain report, That Thomas L. Temple exhibited the best specimen of corn. Jonathan Jenkins showed a very fine specimen of northern flint yellow corn, raised by him this season. There were four stalks of corn produced, raised by Jacob Penington, bearing *eight ears*—the whole the product of *one grain*. There was no account of crops, except that given by Messrs. Sipple and Pennewill of Dover, who reaped from two acres of ground, on the 15th of July last, 68 bushels of spring wheat, weighing per bushel, 60½ lbs. The wheat was sowed on the 15th of March previous.

ON CATTLE.

The committee on Cattle makes the following report.

No. 1. Jacob Raymond's bull calf, 5 months old, weighing 480 lbs. by a full blood, short-horned Durham bull, out of a half blood English Cow.

No. 2. William F. Parker's heifer—one year old, the stock unknown to the committee; raised by hand—weight about 600 pounds.

No. 3. Thomas S. Hidyard's bull—one year old, by a short horned Durham bull, out of a fine country cow, and raised in common with his other cattle—weight about 500 lbs.

ON HORSES.

The committee on Horses reported as follows.

Robert Palmatory exhibited a 3 year old bay horse, sired by the Maryland Eclipse.

John Woodall, one do. sired by Chance Medley. Both of these colts are fine, but your committee think that the latter has the best *form*.

Caleb H. Sipple exhibited a 2 year old sorrel mare colt, sired by Uncle Sam.

George W. Cummins, a 2 year old, horse colt, sired by the Maryland Eclipse.

James G. Waples, a 2 year old sorrel mare colt, sired by Uncle Sam. All of the 2 year old colts are very fine, exhibiting great bone and muscle, but your committee think Mr. Cummins' colt the best for size and general form.

George W. Cummins exhibited a 1 year old sorrel mare colt, sired by Uncle Sam.

Thomas L. Temple, a 1 year old grey horse, by same sire.

Simon Spearman, 1 do bay horse, by Mark Antony.

James Orskins, 1 do. dun mare, sire not known.

The above year old colts were uncommonly

fine, but your committee are of the opinion that Mr. Spearman's colt has the finest form.

Thomas L. Temple exhibited a coalt foaled this spring, sired by Uncle Sam.

Thomas Wallace exhibited one, do. Both are good colts; your committee are of opinion that Mr. Wallace's has the best size and form.

ON VEGETABLES.

The committee on Vegetables report, that they have been much gratified by the variety and excellence of the many samples of vegetables presented for their inspection, among which they would particularize

Very large and well headed cabbages exhibited by Daniel Cowgill and Jacob R. Griffin.

Mangel Wurtzel beets weighing 25 lbs. by Jacob R. Griffin, and also by John M. Clayton, very large.

A specimen of sugar beet, raised by Samuel Verdin, from Landreth's seed--weight 11 lbs.

Blood Beets by Wm. T. Milbourn, Samuel Virden, and Jonathan Jenkins, of which the largest, being Mr. Milbourn's, weighed 12¼ lbs.

A large yellow beet by Simon Spearman, 29 inches and a half in circumference.

A blood radish, by John Kennedy, 26½ inches, circumference.

Two samples of potatoes were presented by Simon Spearman and George W. Cummins, both of the mercer kind and both very fine.

Large turneps were exhibited by Nathan C. Ward and Nathan Farrow. Mr. Ward's turnep weihged 5½ lbs. and was but 41 days from the seed.

John M. Clayton presented the largest egg plant, weighing 4 lbs. 12 oz. Dr. Levin H. Adams and John Manlove also exhibited handsome specimens of this vegetable. The largest of those exhibited by Dr. Adams weighed 4 lbs. 10 oz.

Charles Kimmey exhibited a very fine citron (or rock) melon, as large as the common water melon.

Thomas L. Temple and Mrs. Freeman showed some handsome squashes, and Mr. Temple also obtained the preference for oyster plant.

Stalks of the celery plant over 4 feet long and very large, were presented by Samuel M. Harrington and Henry Todd. On motion of Martin W. Bates, Esq. the names of the members who had joined the Society, at its previous meeting, were read.

Jacob Raymond, Esq. from the committee to nominate officers of the society, reported as follows.

Vice Presidents. Benjamin Coombe, John Cowgill, David Onins, Samuel Thawley, William Masten, and Peter F. Causey. *Corresponding Secretary*, Henry M. Ridgely. *Recording Secretary*, Joseph P. Comegys. *Treasurer*, Caleb H. Sipple. *Directors*, Jacob Raymond, Robert Palmatory, George W. Cummins, Daniel Megear, Elias Naudain, John Frazer, Thomas L. Temple, William Nickerson, John M. Clayton, Jonathan Jenkins, Robert W. Reynolds, Joel Clements, Samuel Virden, Justus Lowery, Peter F. Causey. Robert Sorden, William Mastin, and Martin W. Bates.

On motion of Mr. Bates, the report was adopted.

On motion of Mr. Clayton, the meeting then adjourned for the space of half an hour, to afford time to the board of Directors, to appoint the standing committees of the society, in obedience to the Constitution. At the expiration of the time, the meeting again convened, and the Board of Directors reported to the meeting, their selection from among themselves, of the following persons to compose the said committees, to wit.

Committee on Agriculture.--Benj. Coombe, Peter F. Causey, Robert W. Reynolds, Martin W. Bates, and Jonathan Jenkins.

Committee on Horticulture.—Henry M Ridgley, Jacob Raymond, Thomas L. Temple, Justus Lowery, and Robert Sorden.

Committee on Silk.--John M. Clayton, Geo. W. Cummins, Elias Naudain, Samuel Virden, and John Frazer.

On motion the report was adopted.

On motion of Henry M. Ridgly, Esq., the Treasurer was directed to procure a record, for the purpose of having entered therein the proceedings of the society.

On motion of Simon Spearman, Esq. ordered that the proceedings of this meeting, including the reports of the committees, be published in the newspapers of this state.

On motion of Mr. Bates, Ordered that the names of those persons, who had become members of the society since the first meeting be now read.

Whereupon, it appeared, that the following persons had entered their names, to wit—Simon Spearman, Jabez Jenkins, Cornelius P. Comegys, E. William W. Morris, Henry Todd, Henry Cowgell, William Savin, Michael Lowber, John Eaton, Nathan Farrow, Charles Harper, Samuel Verdon, Robert Sorden, Jonathan Jenkins, Joseph Hollecker Jr., Daniel Lockwood, Hunn Jenkins, Benjamin Coombe, Elias Naudain, John Frazer, Charles Kimmey, Senr. John Cowgill and Joseph Green.

On motion the meeting then adjourned.

SAMUEL THAWLEY, Chairman.

Attest—George W. Cummins, Joseph P. Comegys, } Secretaries.

Smut in Grain.

We are surprised to learn that smut is still permitted to adulterate and diminish our grain crops, when it is a fact amply and satisfactorily established, that steeping the seed grain twelve hours in brine, and rolling it in fresh slacked lime, before sowing, will prevent the evil. The *paper-brand, dust-brand*, the two species of smut, are parasitic plants, the minute seeds of which attach to the grain, and are propelled through the sap vessels of the plant, to the germs of the young grain. The salt and lime destroy the vitality of these seeds.—*The Cultivator.*

Winter Cattle Feed.

The indifference which is manifested in every direction of our country toward procuring a supply of succulent food for milch cows during winter, is as cruel as it is impolitic. Without such food to be substituted for the herbage of pastures, it is as impossible that cows can be kept in good order as that they can be kept profitably to their milk upon dry food. Say what we may, the cow that keeps well to the pail during winter must be supplied with *such* food as yields succulent matter bountifully; —for without she be so provided, it is utterly impossible that the milk-vessels can *secrete* milk, and for the very obvious reason that they must have something to extract it from. We have often seen a farmer who, with half a dozen cows to the pail, in winter, did not make more butter and cream than supplied his own table, whereas he ought to have been able, in addition to domestic consumption, to have sent at least 20 lbs. per week to market. If this were an isolated case it would not strike us with wonder; but from its almost universal prevalence, it is at once a subject of regret and mortification—regret that the claims of self-interest and humanity are so shamefully neglected—and mortification, that so little regard is paid to a branch of husbandry so intimately connected with human comfort.

With these introductory remarks, let us say what are, in our opinion, the best food for cattle in winter. It is *Mangle Wurtzel*, *Sugar Beet*, *Ruta Baga*, and *Pumpkins*. Each of these may, by proper care, be provided in ample quantities, without materially interfering with the other farming operations. A single acre planted in *Mangel Wurtzel*, or *Sugar Beets*, in rows two feet apart, the plants one foot asunder, supposing that the beets average 3 lbs. a piece, which is a very moderate average, is capable of yielding 1089 bushels, which, at the rate of a bushel a day to *each* cow, would last seven cows from the 1st of December till the 1st of May, and if they get but half a bushel a day each, the product of an acre would keep 14 cows in food during the time named. Beets every one know how to cultivate—to wit, that they are to be planted in good deeply ploughed rich loam, previously well manured; that when the beets come up that they may be thinned, cleaned of weeds, and subsequently receive three hoeings and cleanings. This is not more trouble than ought to be devoted to either the culture of corn or potatoes; but how different is the result of product. Of all the articles named by us as proper for winter food, we would prefer the two varieties of beets; but we think that every judicious farmer will at once see the propriety of providing some of all, as there is nothing which so tends to keep cattle in winter to their appetites, as frequent changes of food; we have frequently seen them reject the same kind of food one day that they had eaten with avidity the previous one, and after an interval of a few days feeding on something else, return with renewed vigor of appetite to that which only a few days before they had loathed.—*Farm. & Gardener.*

For the Farmers' Cabinet.

In the autumn of 1836, the writer, in company with four other gentlemen, made a visit to Mr. George Walker, the justly celebrated agriculturist, near Holmesburg, Pennsylvania. The following lines commemorative of the visit are the offspring of genuine feeling.

How sweet in rural lodge to find
Intelligence and worth combined;
A love for all that nature strews
Through her domain with hand profuse.
But which alas! to vulgar eye
Is ever wrapt in mystery;
With pleasure I shall oft recall
The hour we passed in *welcome hall.**
A city's luxuries were there,
Crown'd with the dairy's bounteous fare;
A taste refined throughout was seen
With woman's most attractive mien.
Our host in rustic† ease reclined
With clear and philosophic mind,
On each new subject of debate
Could every doubt elucidate;
To rural lodge‡ I bade farewell
With feelings guest alone can tell.

H.

From the Paris Bon Sens.

Beet Sugar.

Monsieur de Dombasle had declared the desiccation of the beet in large quantities,—so effected as not to injure it for the subsequent stages of the Sugar manufacture,—to be impracticable. His experiments were met by so many difficulties, that he in the end abandoned them.

We hear that this important problem has just been solved in Germany, by M. Schuzenbach. A factory, which has adopted his process, is already in active operation. The immense advantages of this discovery, will doubtless be appreciated by our manufacturers; and we hope that efforts will be made to acquire a knowledge of the secret, which must bring about a revolution in the business of Beet Sugar.

* The dining apartment.
† Applied in its most refined sense.
‡ The name suggested for Mr. Walker's residence.

We learn from the National Gazette that Mr. F. J. SCHUZENBACH, of this city, brother of the inventor of the new process spoken of, will, probably, introduce it shortly into the United States.

From the Augsburgh Gazette, July 9.

GERMANY—*Carlsruhe.*—There are now in the neighbourhood of our city three Beet Sugar Factories, and the beet crop of this year, it is expected, will reach 14,000 quintals. These, according to the French process, would produce 7,000 quintals of brown sugar. But hopes are entertained of a yield of 11,200 quintals in employing the new method of Schuzenbach. A commission appointed for the purpose by government has verified the advantages offered by the process of Schuzenbach.

From Le Monde, a Paris paper.

There is still another symptom of commercial activity reigning in Germany. A company has just been formed in Stuttgard for carrying into operation a new process invented by Mr. Schuzenbach, by means of which it is expected the beet sugar will be sold for the price of 6 to 7*d.* per lb. The capital of the company is fixed at one million of florins, (2,160,000 francs,) and is divided into two thousand shares. On the very first day of its organization, eight hundred and twenty-five shares were subscribed by the richest capitalists and first bankers of Wurtemburg and Baden.

Kentucky Cattle Sale.

The Lexington Gazette has the following table of prices of cattle, sold recently: they were of Mr. David Sutton's stock of blooded cattle.

COWS.	
Cleopatra, aged	$601
Lady Gray, 7 or 8 years old	745
Western Daisy, 4 years old	745
White Rose, 20 months	735
Josephine, 18 months	495
Young Beauty, 14 months	555
BULLS.	
Wellington, 3 years	515
Frederick, 2 years	1310
Favorite, 2 years	530
Hervey, yearling	625
Cyrus, calf	810
Philip, calf	370
Pilot	275
Mary Jane, 2 years	405
Red Daisy, yearling	235
Roxana, yearling	220
Ann Maria, 3 years	275
Queen Mary, 3 years	160
Queen Mary's king calf	120
Lady Wallace, 2 years	175
Red Sides, 2 years	109
Lucy Roan, 2 years	177½
Young Bright Eyes, 2 years	199
Prudence, yearling	130
Lady Mundy, aged	100
White Mary, aged	127½

From the Plymouth (Mass.) Memorial.

Bridgewater Cattle Show.

The Plymouth County Agricultural Society held its anniversary, for the election of officers, *Cattle Show* and Exhibition, at Bridgewater on the 11th inst. Every thing was conducted with the strictest regularity and order, and nothing occurred to interrupt the business and pleasures of the day. The exhibition of almost every description were more numerous and of better quality, than they have heretofore been, and the number of competitors was much increased. The adventurers in the plough-field were greater in number than common, and the match was conducted with great readiness and despatch.

The address by the Hon. Solomon Lincoln, was highly appropriate and interesting, and delivered in an eloquent and impressive manner. The dinner was such as a Farmer's ought to be, the growth and produce of our native soil, plenteous, agreeable and wholesome. Several toasts were announced from the chair, which were highly appropriate, and others of much pith were proposed by individuals at the table.

We are happy that the spirit of Agriculture and the arts so important to the welfare and prosperity of the country, suffers no diminution in this section of the Commonwealth where the Pilgrims first felled the forest, and by cultivation brought the earth to yield its fruits for the benefit of its civilized inhabitants.

The following song was written for the occasion by B. Brown, Esq. of Boston, and sung with good effect at the Cattle Show on Wednesday.

THE PLOUGH.

When Adam with his blooming rib,
By the behest of Heaven,
From Paradise, his native home,
All sorrowing was driven,
The curse primeval, thought so hard,
A blessing was I trow,
That she should nurse her little babes,
While he should guide the PLOUGH.

So, our great ancestor became
A Farmer of the soil,
And millions of his children too
Are sharers in the toil.

We clear and beautify the fields;
We drain the miry slough;
We wield the sickle and the flail,
And guide the sturdy Plough.

Of all the stations here on earth,
The Farmer ranks the first,
Though some may reckon him debas'd
For toiling in the dust.
'Tis Nature's calling he pursues,
As, with a sweaty brow,
He turns the sod all upside down,
And guides the sturdy Plough.

When Spring in all its merriment
O'erspreads the fields with green,
And naught save notes of joy, is heard,
And naught but smiles are seen,
The Farmer turns his tillage lands,
And who's so happy now,
As he, while, whistling to his team,
He guides the shining Plough.

Domestic joy full well he knows,
And, it may hap a care;
For none must think to be exempt
From common lot and share;
His wife, she deems it her concern
To milk the bonny cow,
And cheer her ruddy husband, as
He guides the sturdy Plough.

For love of wealth some get ensnar'd
In speculation's toils,
And others, when disasters come,
Are scrambling for the spoils;
Still does the prudent Farmer pay
To industry his vow,
Nor heeds the struggle nor the strife;
But steady guides the Plough.

Good rule and order he maintains;
He lives in peace with all;
And, to defend his country's rights,
He's ready for the call;
Now, to be ever thus contented,
Say, wight, would ye know how?
'Tis but to mind your own affairs,
And steady guide the Plough.

From the Baltimore Farmer and Gardener.

A Good Spirit.

We publish below a highly interesting letter from the Corresponding Secretary of the New Castle County Agricultural Society of Delaware. We rejoice to find from it that a spirit of laudable enterprise has been awakened among the agriculturists of that generous and patriotic state; and we trust it will be impelled forward until it shall have infused itself into the bosom of every man who cherishes veneration for the noble calling of the husbandman.

We cannot close this article without returning our thanks to Dr. *Thompson*, for his acceptable present of a loaf of bread made from *Spring Wheat*, raised by that enterprising and intelligent farmer, Major *Reybold*, and we will say this much for the Delaware loaf, that, with a single exception, we have never eaten of such excellent bread. It was all that bread ought to be, all that good flour and human art could make it.

—

Wilmington, Oct. 6th, 1837.

To the Editor of the Farmer and Gardener:

Sir—Knowing the interest you take in every thing that appertains to the agricultural advancement and prosperity of our country, and how acceptable facts and practical experiments are to the conductors of the "Farmer and Gardener," I take the liberty of sending you, through the politeness of Capt. Frazier, agent of the Wilmington and Susquehanna rail road, a *loaf of bread* made from the Italian spring wheat raised on the farm of my enterprising friend Philip Reybold, esq., of this county, the present season, it being a part of the same bread produced at the agricultural dinner there on the 4th inst. Mr. Reybold, who is known to many of your readers as the president of our agricultural society, and one of the most prominent farmers in Delaware, stated to the members at the late quarterly meeting of the society held at Newark in this state, his experience and confidence in the success of the Italian Spring Wheat so highly spoken of lately to the North, and commented on in different publications. From eight bushels of the seed procured by him from Rome, New York, he had raised he said about one hundred and twenty bushels, and had heard, and believed from its purity, that it would make *good bread*.—Some of our old and respectable farmers present expressed doubts about *spring-wheat*, the same grain they thought had been tried in this state many years ago, and that the flour from it was considered little better than rye flour—that it was dark and the bread heavy. It occurred to us to suggest a trial of the bread made from this wheat, and that a lot of it might be sent to a disinterested committee of two members of the society:—the proposition was immediately acceded to by Mr. Reybold, and the wheat was liberally furnished by him. It was taken to mill by one of the committee, unmixed with any other wheat, ground and bolted in his presence, and baked by his cook in the usual manner. The result of the experiment you will see and judge for yourself. At the agricultural dinner, I need scarcely add, that it gave universal satisfaction to the large and intelligent company present (among whom

were several celebrated millers heretofore rather sceptical, but who were convinced as well as gratified as soon as they *saw* of the bread made from wheat sown on the 17th of last March, when the disastrous state of the winter grain was well ascertained to be general throughout the country.) The good example of Maj. Reybold will be extensively followed in Delaware. A number of us have already ordered a large supply for seeding the ensuing spring. Enclosed I send you some grains just received by me in a letter from Mr. J. Hathaway, Rome, New York, of this year's growth, and Major Reybold's crop is very much like it.—It is very pretty grain —Mr. Hathaway says of it, "that it produces well, and will succeed on worn and meagre land—and although the season has been very wet with them, and the grain not so bright as usual, still it is plump and heavy, and that a neighbor of his has just threshed 35 3-4 bushels of wheat from 7-8 of an acre and 2 bushels sown.

To the wheat growers of Maryland and Virginia, and indeed of our whole middle states, in part of the country, we think this grain is destined to become of vital importance, and that it will succeed in those states as we have ascertained it will do in Delaware, I have not the least doubt. Here its yield has been about 30 bushels to the acre, without manure, and on a tolerable soil only:—whilst the winter wheat in adjoining fields, cultivated in the best manner, and by a good farmer, has not given half that crop, in consequence of the change in our winters, and the ravages of Hessian fly. The loaf I send you is the best essay that can be given on the subject; as it settles and establishes the fact that good flour and *white and light bread* have been *made*, *exhibited*, and *eaten*, for the first time in this state from *spring-wheat*. This test, has made many converts to it with us, and although our farmers should not abandon winter grain altogether, it is a most happy reflection for them to know that they have a second resource in the *Italian Spring Wheat*, should their first crops fail.

To the doubtful and prejudiced farmer, perhaps the argument I have sent you (the bread itself) will scarcely be sufficient to convince him that the experiment will answer. All we need ask of him for the present is, to lay aside his preconceived notions, and give it for a season or two, a fair and honest trial. The improving spirit of the age demands investigation into every reasonable proposition, and if its principles are found to be correct, an intelligent mind will soon adopt them.

I have detained you much longer on this interesting subject than I had intended, but as I have been highly gratified at the result of the experiment myself, you will excuse me for having been thus prolix:—perhaps much *better bread* made from spring wheat is familiar to you—to us it is a novelty. I regret that you will not get it as fresh as it was served at the dinner table, and with the appliant of the fine premium butter exhibited on that occasion. As some of your friends might like to see the heads of this wheat, I send a few plucked from the field before they were ripe and filled—they will convey, however, a good idea of its general character. It grows tall and presents almost the rich appearance of a field of barley. The premium list, and detailed account of our agricultural and horticultural exhibitions, which took place on the 4th inst., are not yet published. I will send them to you for your paper as soon as they are out. I am happy to inform you that the proper agricultural spirit is getting up in Delaware. The New Castle County Society has just held its second annual cattle show—Kent has organized a society, with some of her most prominent citizens at its head, and we doubt not now, that the good example set, will be followed by Sussex, and many of the adjoining counties of the Eastern Shore of Maryland. Asking the aid of your valuable exertions to bring this state of things about, I remain, yours, most respectfully,

JAMES W. THOMSON.

Food for Cows.

M. Chabert, the director of the veterinary school of Alford, England, had a number of cows which yielded twelve gallons of milk every day. In his publication on the subject, he observes that cows fed in the winter on dry substances gives less milk than those which are kept on a green diet, and also that their milk loses much of its quality. He published the following receipt, by the use of which his cows afford him an equal quantity and quality of milk during the winter as during the summer;—Take a bushel of potatoes, break them whilst raw, place them in a barrel standing up, putting in successively a layer of potatoes and a layer of brar, and a small quantity of yest in the middle of the mass, which is to be left thus to ferment during a whole week, and when the vinous taste has pervaded the whole mixture, it is then given to the cows, who eat it greedily.

Wheat.

Those who have not yet got in their wheat, we would remind of two things. *First*—by no means to omit putting their seed in a *soak* made of *brine*, *lime-water*, or *ley*,—and *secondly*—to plough it in some three or four inches deep; while the first will cleanse the grain of all smut and destroy any eggs that may be deposited on its surface, the latter will greatly tend to prevent the frost from spewing the plants up, should the coming winter prove to be one of alterations of freezings and thawings, which are so disastrous to small grain.

ARTICLES.	Philadelphia, Oct. 31.	Baltimore. Oct. 24.	New York, Oct. 31.	Boston, Oct. 25.
Beans, white, per bush.	$1 37-1 62½	1 25—0 00	0 14—0 15	1 37—1 75
Beef, mess, new, per bbl.	14 00-15 00	13 50-14 20	12 00-13 00	12 50-14 00
Bacon, western, per lb.	7½— 10	7— 9	8— 10	.....
Butter, extra, per tub	14— 15	16— 20	20— 22	17— 18
Butter, fresh, per lb. (market,)	18— 25	20— 25	20— 25	25— 28
Hams, per lb.	10— 13	13— 13½	12— 14	14— 15
Hog's Lard, per lb.	7½— 8½	9— 10	8— 9½	8— 9
Cheese, American, per lb.	10— 12	9— 11	9— 11	8— 9
Beeswax, yellow, per lb.	26— 27	23— 25	25— 27	26— 32
Beeswax, white,	.....	38— 40	38— 40	38— 40
Bristles, American,	42— 65	25— 65	25— 65	.....
Flax, American,	8½— 9	9— 10	9—	9— 12
Flour, best, per bbl.	8 50—9 00	8 00—8 75	8 25—8 37	8 87—9 00
GRAIN—Wheat, per bush. Penna.	1 70—1 87	1 80—1 90	1 60—1 80	.....
do. Maryland,	1 60—1 75	1 10—1 40	1 60—1 75	.....
Rye, per bushel,	95—1 00	82— 85	—1 06	1 25—1 33
Corn, do.	1 00—1 03	96— 98	1 04—1 06	1 05—1 06
Oats, do.	40— 43	33— 34	35— 45	48— 00
Barley, do. Penn.	.....	.....	0 00—	0 00—0 00
Peas do.	1 00—1 25	00—0 00	— 8	.....
HAY, Timothy, per 100 lbs.	0 00—0 00	12 00 pr. ton.	.....	20 00 pr ton.
Meadow Grass,	70— 80	.....	.....	.....
Hemp, American dry rot, ton,	175 00-	6— 7	130 —140	.....
Hops, first sort, 1836, lb.	7— 8	— 9	— 10	7— 8
Plaster Paris, per ton,	3 25—0 00	0 00—3 50	2 50—	2 75—0 00
SEEDS—Cloverseed, per bushel,	6 50—7 00	6 00—7 00	.....	15— 16
Flaxseed, rough, do.	1 35—1 40	1 37—1 50	.....	.....
Timothy,	2 00—0 00	3 25—4 00	.....	2 87—3 00
Tallow, per lb.	8½— 10	— 10	— 11	10— 11
WOOL—Saxony, fleece, per lb.	00— 00	40— 50	75— 80	50— 55
Merino,	00— 00	35— 40	50— 68	45— 47
1-4 and common,	00— 00	25— 30	40— 50	30— 33

ILLINOIS.

We have just received from the publishers, Messrs. GRIGG & ELLIOTT, No. 9 North Fourth street, Philadelphia, a copy of the second edition of J. M. Peck's "*Gazateer of Illinois, in three parts, containing a general view of the state, a general view of each county, and a particular description of each town, settlement, stream, prairie, bottom, bluff, &c. alphabetically arranged.*" The author has resided for a number of years in the state of Illinois—is a clergyman of great respectability, and we take no little pleasure in recommending this Gazateer as a suitable and necessary companion or guide, to every one about to visit the west. The emigrant may depend upon the correctness of the information afforded him in this volume, which is sold at a price so low, as to place it in the reach of every one. We shall refer to this work again, and make some extracts respecting the soil, climate, productions, &c.

NOTICE.—After our paper was prepared for the press, we received a highly interesting communication from a Gentleman in Maryland, on the subject of curing "pork." It will appear in our next. ☞ We were disappointed in the *quality* of the paper furnished for the last Cabinet. ☞ Continuation of article on Corn in our next.

THE FARMERS' CABINET,

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THE FARMERS' CABINET,

DEVOTED TO AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

Vol. II.—No. 8.] Philadelphia, November 15, 1837. [Whole No. 32.

Raising and Curing Pork.

Auburn, Frederick Co. Md., Oct. 29, 1837.

In vol. 2d, No. 6, of the Cabinet, a Chester county writer asks some person who is experienced in the preservation of pork, to communicate through the Cabinet, the best method of preserving that indispensable article in sweetness of flavor, during the hot months in summer. What little information I possess in curing bacon, as practised by me for a number of years, and which, on a fair trial, I am induced to believe will be found fully equal if not superior to the Burlington or even the celebrated Westphalia, I give with much pleasure.

In order, then, to have good *bacon*, it is necessary to have good *hogs*. By good hogs I mean those of an approved breed, of proper age and size; much more depends on the breed of the hog than is generally supposed, and much, very much upon the age and size. The most approved breeds for bacon, are the cross of the Parkinson with the Siberian, or the Chinese with our common stock; the meat is more delicate in flavor and taste, and easier to be raised and kept fat. Hogs from fifteen to eighteen or twenty months old, are the best ages; and weight from one hundred and thirty to one hundred and eighty pounds. Hogs of less age than twelve or fifteen months, have too little firmness and solidity to retain their juices, and after smoking become hard and dry; the same objection holds good as to weights under one hundred or one hundred and twenty. Hogs of two hundred pounds or upwards are too thick and large to be thoroughly salted and smoked; consequently difficult to preserve any length of time. The next thing to be considered is, the *mode* of fattening. I prefer a pen large enough to enable them to exercise and prevent crowding; in a close pen they will fatten quicker. I commence feeding with corn, either shelled and set in troughs, or thrown to them in the ears; for the first four or five days they should be fed sparingly to prevent surfeit, and never at any time should more be given them than they eat up clean. If given in large quantities, it will either produce surfeit and prevent them from eating for a day or two, or they will waste it by chewing and throwing it out again. From six to eight weeks, according to the plight of the hogs when penned, (to say nothing about putting up in the increase of the moon and killing in the full,) will make them fat enough. My hogs are fed three times a day, morning, noon and night, and entirely on good sound corn, except occasionally throwing them raw potatoes or cabbages, which serves to cool the system heated by the corn. Charcoal or rotten wood, containing a large quantity of pyroligneous acid, is constantly kept in the pen—they are regularly salted twice or thrice a week. I hold it as an established fact, that no food for hogs, except good sound Indian corn, can ever make bacon of the first quality. Slops will make fat hogs, but never can make prime bacon. Your hogs being now fattened, the next thing to be done is to kill or slaughter them. I have a small and very substantial pen made convenient to the slaughter house, so as to bring them into as small a compass as possible, for the greater facility of catching; as soon as one is caught he is brought out of the pen and laid upon his back on some loose planks a little elevated from the ground to admit the blood to escape; he is then stuck and held fast until dead; not permitted to struggle or wallow in his blood or become bruised, as a bruise at that time

will be manifest even after it is cooked and brought on the table. As to the mode of scalding and cleaning, &c. &c. it is unnecessary to give any directions. Unless the weather is so cold as to endanger its freezing, it is suffered to hang out all night so as to become thoroughly cold and stiff, when it will cut up much more smooth and neat. As to the mode of cutting up, I shall say but little. I make six pieces from each hog for salting, the feet should always be sawed off instead of being cut off with an axe or cleaver, as it will leave a smoother surface and prevent any place for the lodgment of skippers. The feet should be cut off a little below the joint. The next and most important matter is the salting. It is almost impossible to find two persons who agree as to the best mode; some use fine, some coarse salt, some cayenne pepper, some sugar, some molasses, some nitre, and some none, and some again prefer brining. But as I have promised to give you my method, I shall proceed to do so. After cutting up my pork, I select my hams and shoulders, lay them side by side, skin down, on some loose planks elevated at one end to permit the blood to drain off freely; they are then salted, or what is called sprinkled, with the best clean Liverpool ground alum salt. After remaining in this situation for two or three days, or until they become perfectly white, they are then taken up piece by piece and laid on a clean table; to each ham and shoulder, according to size, I put two tea-spoonfuls or more of finely pulverised nitre, rubbing with the hand both the flesh and the skin side; it is then well rubbed with salt and laid in a clean tub—after putting in as many pieces, side by side, skin down, as the bottom of the tub will contain, I fill up all the instertices with salt, then another layer of meat and salt, and so proceed until the tub is full. In four or six weeks, in a good cellar, it will have absorbed as much salt as it ever will, (you see from this remark, I do not believe in over salting hams and shoulders.) Ten days or a fortnight, before taking out of the tubs, I have some young green hickory wood cut and burnt by itself, the ashes collected and sifted; after taking the meat out of the tubs and wiping it dry with a clean course towel, it is laid in a wooden box sufficiently large to contain two pieces, the hickory ashes thrown over them and well pressed on with the hand; it very soon forms a hard incrustation over the meat and prevents as well evaporation, drying and dripping, and is also one of the best preventives against bugs and skippers. After hanging in the smoke house for a day or two, the operation of smoking commences, which I continue for three months, or until the first appearance of the *green bottle fly*. My meat is smoked exclusively with green hickory wood; the green oak will answer very well. It cannot be smoked too much, though with the smoke there should be as little heat as possible; the largest pieces should be hung more immediately over where the fire is made. Early in the spring, say the first of April, or earlier, should the weather be warm, or you discover any of those *green coat gentry* about your meat house door, take down your hams and shoulders and pack them away in your salting tubs, placing between each layer of hams or shoulders, pieces of lathes to prevent too much pressure or coming too much in contact, otherwise they will be apt to mould where they press one upon the other. After filling your tubs in this way until about one foot from the top, fill it up with hickory ashes pressed close. These are my ideas, obtained from experience, and thrown together in a very home spun manner, and should they on trial, be found to please the palates of others and be generally adopted, I may hereafter be benefitted, provided the water of Pennsylvania boils hams as well as the water of Maryland, as I sometimes travel from home and am a great lover of good bacon. In conclusion, I must observe, that there is really as much in the proper mode of *cooking* a ham as there is in *curing*. You Pennsylvanians boil too much; the best ham that ever was cured in Maryland or Virginia, may be spoiled in Pennsylvania by injudicious cooking. Hams cured in this way—like pure wine—improve by age and arrive not at perfection until they are over two years old. One thing I omitted to remark in its proper place. A ham, to come on the table in perfection, should never be cut before cooking—the skin should not be taken off—the thinner it is cut the better.

With great respect, and my best wishes for a wider circulation of your very useful paper,

I am your most obd't servant,

T. W. Johnson.

For the Farmers' Cabinet.

Lime.

The discussion respecting the application of lime as a manure, reminds me of the anecdote of the old man giving advice to his son. "Put your lime," he said, "if possible, on your sod before it is ploughed. If you can't put it on before it is ploughed, put it on as soon as possible afterwards. And if you can't put it on after it is ploughed, then put it on the best way you can."

My design, at present, is to communicate a few facts, which have come under my immediate observation, and the result of the experience of others, in the application of lime as a manure.

In this vicinity it is becoming almost uni-

versally the practice, to apply the lime to the sod, the year previous to its being planted with corn. With this method several advantages are connected. *First,* The lime may be hauled and spread, at any convenient time during the season—say, in May and June, between corn planting and hay harvest. *Second,* The crops will derive much more benefit from its being put on the land some length of time before it is ploughed, than to put it on just at the time of putting in the crop. It has been duly ascertained, that one of the principal effects of lime—is, the decomposition and bringing into action, the inert vegetable matter in the soil. When lime is spread on the sod, it comes into more immediate contact with the grass, and grass roots, than when the ground is first ploughed; in fields which have been partly limed on the sod, then ploughed, and the remainder limed at the time of planting with corn. I have observed in ploughing up corn stubble, that the part limed *on* the sod, ploughed up much mellower, than that limed *after* the sod was ploughed; presenting a rich vegetable mould not observable in the other part of the field.

There are no kinds of crops which have come under my observation—namely, corn, oats, barley, wheat, rye, potatoes, clover and timothy, but what are benefitted by lime, with the exception of flax. Where flax was formerly raised to great perfection, a very inferior article is now produced, since the application of lime. This has almost led to the abandonment of its cultivation in many sections of the country.

Oats, however, if the lime is applied fresh the season it is sown, will rather be injured than benefitted by it, in preventing it from ripening. I have seen oats, in fields which had been recently limed, send up an indefinite number of suckers or young stalks from the roots—which, together with the parent stalk, would scarcely ripen if allowed to remain the whole season in the field; and the stubble would sprout up profusely after the crop was taken off. But when the lime has been applied a year or two previous, it is decidedly a benefit to the oats. Lime can be applied with advantage, whether put on fresh, or left exposed to the elements till it becomes cold. This has been exemplified in the application of mortar from old buildings which has been known to produce lasting effects. I have been told by a person who has had much experience in liming, that he has had clover to succeed better, after putting it on fresh slacked and hot, than in any other way.

The Lancaster turnpike, in the vicinity of the Great Valley, is supplied with stone from the quarries of primitive limestone in the south side of the valley. I have observed a field adjoining the turnpike of a thin slaty soil—the subsoil of which is composed entirely of a slate gravel, (and perhaps there are many others of a similar nature and similarly situated;) which has had no burned lime applied to it for perhaps an age, and yet is remarkable for its productiveness—being far superior to many others in its vicinity, which are possessed of a much richer natural soil. Part of this field receives the flood of the turnpike, by which it becomes overspread with the pulverised limestone of the road; and the other part is visited, in dry weather, by clouds of dust—which in my judgment, is the great stimulant to its vegetable productiveness.

If these facts amount to any thing, it appears that lime applied in whatever form, is a stimulant to vegetation. But the form and manner in which it may be most advantageously applied, I leave for others yet to determine. A.

Chester County, November 2nd, 1837.

Agriculture.

MANURES.

This subject is one of the first importance to the farmer, and is as yet but very imperfectly understood among us. What has been your mode of preparing it? Have you used it long or rotted? What effect has it produced? What kinds have you tried, and which do you prefer? Lime, plaster, bones, poudrette, marl, or stable manures—what is your estimate of their comparative value so far as you have used them, and on what description of soils and crops have you found them severally the most effective and valuable.

WHEAT.

What is the kind of soil on which you have cultivated it most successfully? What is the average yield per acre? Is the average less now than formerly, or is it greater? and if either, to what cause is the difference to be attributed? What is your method of cultivation? and if you have adopted a rotation of crops, in what part of the course is the wheat crop placed? If you manure for wheat how do you apply it, and what manure do you prefer? What variety of wheat do you cultivate, and have you found any difference among the kinds in the liability to smut, blast, or be affected by insects? What insects have you found to injure your wheat, and at what stage of its growth? Have you cultivated spring wheat? and if you have tried various kinds, which do you prefer?

THE GRASSES.

The cultivation of the grasses is one of the most important objects that can be brought to the notice of the farmer; yet it is one upon

which little has been said, comparatively, and which is but little understood. Have you made any experiments upon their respective value for hay or for pasture? Do you prefer sowing each variety of grass seed by itself, or mixed? if the latter, what kinds do you sow together? Have you tried the Sanfoin, Luzerne, and Gama grasses, and with what success? What is your method of curing hay; and at what stage of its growth will grass make the best hay? What is the average weight of hay per acre on your farm and the vicinity? How does plaster and other manures affect your grass, and what is the best mode of manuring our farms permanently in grass?

CORN, BARLEY AND OATS.

Any information on the culture of these valuable crops will be acceptable. What is the general time of planting with you; and how do you prepare your ground for the reception of the seed? Do you guard your seed against depredation by scalding and tarring, or do you prefer planting from the ear? What insect attacks corn, and how may they be prevented? Which of the varieties in use do you prefer for seed, and what are the reasons for such preference? But two kinds of barley are cultivated to any extent among us; the two and the six rowed. Different opinions are entertained of their respective value and productiveness, which our farmers by a history of their experience in raising this grain can decide. It is necessary and right that it should be done. Will you assist in doing it? Oats are the most extensively grown of any of the small grain, and are usually the most productive. There are several varieties in cultivation, such as the common oat, the Tartarian, the Siberian, potatoe, and horse mane oat, and it would be well to have their conflicting claims to our preference decided. What is your experience in raising oats? What variety do you prefer, and for what reasons? Which is the most profitable crop, spring wheat, barley or oats. Is there any difference in their exhausting the soil, and if so, which has the most injurious effect? Have you discovered in these grains an inclination to smut, and have you succeeded in preventing it?

THE ROOTS.

The introduction of the culture of roots, such as the turneps, mangel wurtzel, carrots, &c. into England, by rendering the soil more productive, increasing the number of cattle and sheep, and doubling the quantity of grain produced, has at least added one-third to the means of subsistence in that country; within a very few years; and we may reasonably expect corresponding benefits from the extension of their culture in this. Potatoes have long been considered an indispensable article of consumption among us; and the culture is better understood here than that of the first-mentioned; still there is abundant room for improvement, both in the quantity and quality of these roots. What is your method of cultivating the above roots? What do you find to be the average yield per acre; what kind of soil the most suitable for them; what their value for feeding animals; and have you ascertained by experiment which of the kinds should be preferred by the farmer.

HORSES, CATTLE, SHEEP AND SWINE.

These form much of the wealth of agriculturists; and any remarks respecting raising, feeding, or fattening any of these will be considered valuable. We want information respecting the best breeds, and surest method of improving them, whether by importation, or by crossing. The comparative value of each to the farmer should also be made a subject of investigation; and the history of their diseases, with the best remedies for them, should not be forgotten. So large a part of our country is adapted to the dairy business, or the making of butter and cheese, and these constitute such an item in our prosperity, as well as comfort, that we particularly invite contributions on any subject relating to this branch of domestic economy.

DEPREDATORS.

Under this head may be included all those beasts, birds, and insects that prey on the productions of man's care and labor, and materially lessen his profits if not totally destroy them. Of these depredators, insects, such as the Hessian fly, the wheat worm, the wire worm, the grub, the various families of the plant louse, the tribes of caterpillars, in their several ways are the most destructive, and most deserve the investigation of the farmer and the man of science. Any thing that shall teach us how to prevent or destroy any of these depredators cannot be otherwise than acceptable to our readers.

We have barely touched on the multitude of subjects that will suggest themselves to the observing farmer, as topics of research and investigation. Fruits, buildings, farming implements, and articles of domestic economy, are all worthy of a place in our columns,—in short, any thing that can conduce to the prosperity, ease, lessening of severe labor, accumulation of intelligence, and moral respectability of its professors, and the establishment of agriculture on a more elevated basis than has heretofore been accorded to it, shall be most cordially welcomed by us.

It is not expected that any one individual

can be able to treat all the various objects connected with agriculture, or which are hinted at above, successfully; but there are few, if any, of practical or scientific readers, who are not able to communicate much information on some one or more of these topics, or others that we have been compelled to omit, which would be of great utility to our farmers, and impart additional value and usefulness to our columns. We know farmers feel a reluctance to lay down the plough for the pen, but when the season prohibits the use of the former, considerations of public good, should induce them to occasionally use the latter, in communicating the results of their reflection and experience in the pursuit of agriculture. We respectfully request our former correspondents, and our new subscribers, to think of these things.—*Genesee Farmer.*

Potatoes and Smyrna Wheat.

To the Committee on Agricultural Products presented for the several premiums offered by the Trustees of the Massachusetts Agricultural Society:

Gentlemen,—The field on which Potatoes were grown the present season, was broke up in August, 1834. The soil a deep loam, suitable for grain, (Chesnut land.) Early last spring the field was cross-ploughed, and 18 cords unfermented manure, evenly spread, and *deeply* ploughed in; sods harrowed down, then furrowed 3 feet apart, and seed placed 18 inches apart in the furrows, and covered 2 inches deep; hoed twice previous to being in the bud. On the 6th October, the vines or tops generally covering the ground, the cutting of them for fodder commenced. These tops, after drying 6 or 8 days, were packed away in the barn with wheat straw sprinkled with salt, say one peck to the ton, and will probably be equal in value to one half a ton of hay. It is believed, that when hay is as scarce as it is in this vicinity the present season, say worth $20 per ton, potatoe tops will more than pay for the expense of cutting and curing them; they are good food for neat cattle. The harvesting the roots was completed Oct. 12th, when, by careful measurement, the crop was found to be 515 bushels on the acre. The quantity of seed was 28 bushels; 26 the reds of La Plate, 2 the Roxbury whites.

PAYSON WILLIAMS,
JACKSON D. WILLIAMS.

Fitchburg, Oct. 15, 1835.

Worcester ss. Oct. 16, 1835. Then the above-named Payson Williams and Jackson D. Williams made oath that the above statement, by them severally subscribed is true. Before me, EBEN'R. TORREY, J. P.

Expenses of Potatoe Crops.

Breaking up the field,	$4 00
Carting manure,	5 00
Cross ploughing and ploughing in manure,	6 00
Its proportion of 18 cords manure,	20 00
28 bushels seed at 2s.	9 33
Labor in two hoeings,	8 00
Labor in harvesting the crop,	22 00
Labor in cutting and curing the tops,	3 00
	$77 33
515 bushels at 25c.	$128 75
Tops,	10 00
	$138 75. Profit, $68 42

Expenses of Wheat Crop.

2¼ bushels seed,	$4 50
Two ploughings,	5 00
Bushing and rolling,	1 00
Its proportion of manure in 1834,	15 00
Cradling and threshing and cleaning up,	12 00
	$37 50
35 bushels, worth	$70 00
Straw,	10 00
	$80 00. Profit, $42 00

The field on which potatoes were grown in 1824 was well ploughed as early in the following spring as practicable, and 2¼ bushels of the Smyrna or Black Sea Wheat was sown, (second week in May, 1835,) ploughed in, bushed, and rolled.

Crops harvested first week in August; threshed (by horse power) in September, and after being carefully cleaned and measured, was found to be 35 bushels (of 60 pounds to the bushel) from the acre.

A much larger crop would have been grown but for the incumbrance of a granite ledge pervading a considerable part of the field, many rods of which approach within six inches of the surface. The drought of last summer severely pinched the wheat on the ledge.

PAYSON WILLIAMS,
JACKSON D. WILLIAMS.

Fitchburg, Oct. 15, 1835.

Worcester ss. Oct. 16, 1835. Then the above named Payson Williams and Jackson D. Williams made oath that the foregoing statements, by them severally subscribed are true. Before me,

EBEN'ER TORREY, J. P.

Every nation has its traits. The Spaniard sleeps on every affair of importance; the Italian fiddles on every thing; the French promise every thing; the British islanders eat upon every thing; and the Americans talk upon every thing.

Preservation of Potatoes.

The experience of the present year proves that it would be very desirable to preserve potatoes, not only from the effects of the frost, but from the deterioration they are sure to undergo from sprouting and drying up, when exposed to the increased temperature of spring and summer. Potatoes ripe and fit for use, cannot be expected before the first of August, though some of the early varieties may be had for cooking before that time, if proper precautions are taken, and under usual circumstances, old potatoes ere that time of the year will be mostly worthless.

The laws which regulate vegetation are such, that if a seed or plant is kept at a state but little above the freezing point, growth cannot ensue; and hence experience shows that roots placed in the ground, as they have been sometimes by accident, at such a depth that the general influence of the sun can produce little or no effect on them,—can be preserved sound for indefinite periods of time. Profiting by the suggestions these facts afforded, Mr. De Lancy buried some potatoes of the preceding year's growth in his court yard, in a hole two and a half feet deep, under the protection of a south wall, where the sun shone but a little part of the day. The potatoes were buried in March, and about eleven months afterwards, the hole was opened, and to his surprise and pleasure, he found that, two or three of the roots excepted, which were perforated by worms, though sound, all were perfectly hard and firm without having the least symptom of vegetation, and in every respect as fit for planting or the table as new potatoes.

We wish that some of our farmers the coming autumn, would repeat this experiment; since if it should succeed here, one very great means of securing health and comfort, by substituting firm mealy potatoes for the wilted leaden roots inflicted upon us for two or three months every year, would be obtained. Perhaps a soil naturally dry, so that the roots should not be too much exposed to accumulated moisture, would be preferable; and as in the above experiment of De Lancy's, a spot with a northern exposure, or one as little subjected to the influence of the sun as possible should be selected.—*Genesee Farmer.*

A Cure for the Scouring in Calves.

Take a table-spoonful of finely powdered chalk and a like quantity of ground ginger, put it in a bowl, pour boiling new milk on it, say half a pint, stir it well and then give this dose about milk-warm, night and morning, to the calf, and in nine cases out of ten two doses will be sufficient to stop the disease.—*Farmer and Gardener.*

From the Maine Farmer.

Advantages of Fall Ploughing.

Mr. Holmes.—I believe that the advantages of fall ploughing land intended for spring crops, cannot be too strongly urged upon the attention of practical farmers. By the practice of fall ploughing, the farmer is enabled to take advantage of the most favorable season to get in his crops. In this northern region, this is truly a great advantage. The difficulty of procuring labor and the uncertainty of the weather, often makes it extremely difficult to perform this necessary operation so early that the crop may be got in, and receive the full advantage of the season, when our dependence is placed entirely on *spring ploughing;* in consequence of this delay many crops are injured or destroyed. This point is sufficiently obvious to every farmer.

The weather is quite as favorable for ploughing in the fall, as at any other season of the year—and the team is in good condition; and while the ground is open, every opportunity should be improved in thus *forwarding the spring's work.*

Another advantage in fall ploughing is in the destruction of insects, and preventing their ravages. A piece of wheat was pointed out to me, last spring, on ground occupied the year before by corn, and in equally good condition. The seed wheat received the same preparation—was sown at the same time, and by the same person; yet there was a marked difference in the appearance of the grain: one strip of which was quite thin, while the rest was the reverse. I inquired the cause, and was told that owing to the lateness of the season, and the freezing of the ground, one "land" was not ploughed in the *fall;* the other part of the field was fall ploughed. This fact accounts for the difference in the grain; for on the *spring* ploughed land was the thin, inferior grain. The injury was probably done by worms.*

Among the many remedies and preventives which have been proposed to destroy the *Grain Worm,* or lessen its ravages, the Plough seems to be almost entirely overlooked; yet if the judicious use of that instrument will not prevent the *increase* of the worm, I cannot tell what will.

The worm was observed by many farmers leaving the grain while in the field; and by examining the straw and harvest grain very

* A writer in the Farmers' Cabinet says—"Fall or very early spring ploughing does in some way, prevent the *cut worm* from injuring our corn crops." If so, there is no necessity for the general complaint that corn crops are injured by this worm. Very early *spring* ploughing in Maine, however, does not seem *early enough* to effectually destroy the worm, whatever it may do in Pennsylvania; and we therefore give the preference to *fall ploughing* and *winter fallowing.*

few of them can be found—and those *few* appear to be *dead* or *disabled*. It seems evident that the greater number, which left the head in the field, (as they appear ill-calculated for making *long journies*,) take up their abode among the stubble, or in the ground, where they remain through the winter, in a torpid or inactive state. Ploughing in the stubble immediately after the wheat is taken off, or later in the fall, I think cannot fail to have the effect of destroying many of *them*, as well as other insects. If the insects burrow deep in the ground—yet not beyond the reach of the plough—they will be turned up near the surface, and destroyed by the freezings and thawings of winter and spring; if they remain near the surface—among the stubble, or the roots of the grass—they will be turned under and buried so deep that they cannot find their way out in season to do mischief, if ever. To all insects that burrow in the ground, a *rout* by the plough, cannot prove otherwise than disastrous, after they have retired to "winter quarters."

If this view is correct it will be seen that the common method of seeding to grass with the wheat, and not ploughing under the stubble is calculated to give the wheat worm a fair chance to infect all succeeding crops. For if allowed to survive the winter, and emerge a *fly*, its *wings* will bear it to the neighboring wheat fields, in which it deposites the egg—produces the worm—and thus, if *unmolested*, increase a thousand fold yearly.

Then, to rid ourselves of this minute but formidable enemy, *when we seed to grass, we must substitute some crop not liable to be injured or infected by the worm, instead of wheat;—and plough under the wheat stubble*, WITHOUT RESERVE, *until the worm is exterminated.*

To do this, is in the power of every farmer; and I would ask for it your consideration and a *fair trial.*

October 3d, 1837.

Side Hill Plough.

MR. HOLMES:—I have for some time past felt desirous to call your attention and the attention of the agricultural community to the Side Hill Plough. There are several kinds of ploughs so called, but I mean that with a rolling share and mouldboard. You doubtless have seen them and perhaps know much better how to estimate their value than I—but what I have seen of them and the use I have made, and the experience of others much better qualified to judge of their worth than I, have convinced me that they ought to take the place of all other ploughs as possessing all the good properties of the best cast iron ploughs, to which is to be added those of turning the furrow to either the right hand or the left.

They are not patented. They are manufactured by a Mr. Nourse, of Worcester, Mass. and were introduced into the town by Samuel Davis, Esq.

There are now in, and within two or three miles of this village, two dozen or more of them in actual use, and I believe every man who has tried them is entirely satisfied with them, and has either gotten one for his own use or is determined to have one the first opportunity.

They are not only applicable to the side hill but equally to the level grounds, entirely superseding the necessity of a central or dead furrow. I have had my ploughing done for two years past with this kind of plough, and I do not hesitate to say that the ploughing has been as well done as it could have been done with any other plough in use.

I held the plough one half day to brake up land that has been mowed about five years. One yoke of oxen was all the team necessary. The work was done with ease to the cattle, and the man who owned the cattle and who drove them for me, has since purchased one of the ploughs for his own use.

One of our citizens contracted to build, and built a new road of about one mile on the shore of a pond where he was under the necessity of ploughing upon one side of the road altogether—he purchased one of these ploughs on purpose, and now says, he more than cleared the price of it in the time of his team and hands which would otherwise have been spent in travelling without ploughing. Much more might be said in favor of these ploughs, but my only object is to call the attention of those farmers who are about purchasing ploughs to do their fall ploughing. To such I would say—don't purchase until you have seen and are satisfied. All that will be necessary to satisfy you is to try, and I am certain you will buy.

They need no other recommendation in this vicinity—there will be very few other ploughs used in one or two more years.

Yours, very respectfully,

A FRIEND TO AGRICULTURE.

Mt. Vernon Village, Sept 8, 1837.

SEPT. 17, 1837.—I am this moment informed that Mr. Davis has sold 10 of the above ploughs within one fortnight.—*Maine Farmer.*

[Will some one acquainted with the plough noticed above, furnish the Editor of the Farmers' Cabinet with a drawing, and a full and correct description of the same?]

If you want to get rich, work hard and spend little.

Apples for Fattening Animals.

In the autumn of 1833, if I do not misremember, I was first induced to try the experiment—it was to me then an experiment. Having more apples than we needed for other uses, and fully convinced of the evil of making them into cider for common use, I suffered my hogs to run in the orchard and take the apples as they fell from the trees. Before the apples were fully ripened they began to fall; contrary to my expectation, my hogs began to gain flesh, and during the season they became fat with no other feed except the wash of the kitchen. Several that I had designed to keep, before I was aware of it, became too fat for the object I designed. This lot, if I mistake not, weighed as I butchered them from the orchard from 200 to 350 pounds each. The same season I suffered some of my sheep to remain in the orchard, and with equal success. The next season, our fruit was cut off. But the last two seasons, I have made my pork from my orchard, and during these seasons I have confined my hogs exclusively to *sour* apples; and still I have never killed lots of pork that were better fatted, more solid, or of better flavor. To carry the experiment farther, last year I took from my stock an old cow that had given milk through the summer, and fed her exclusively on sour apples. She ate about half a bushel, morning and evening. She fattened well, and made a first rate beef. It is, therefore, no longer with me a question whether apples are profitable for fattening domestic animals; the fact is fully tested.

Harvey Baldwin.

Hudson, O., August, 1837.

Proper Form and Shape of Cattle.

Whatever be the breed, there are certain conformations which are indispensable to the thriving and valuable ox or cow. When we have a clear idea of these, we shall be able more easily to form an accurate judgment of the different breeds. If there is one part of the frame, the form of which, more than of any other, renders the animal valuable, it is the chest. There must be room enough for the heart to beat, and the lungs to play, or sufficient blood for the purposes of nutriment and of strength will not be circulated; nor will it thoroughly undergo that vital change, which is essential to the proper discharge of every function. We look, therefore, first of all to the wide and deep girth about the heart and lungs. We must have both: the proportion in which the one or the other may preponderate, will depend on the service we require from the animal; we can excuse a slight degree of flatness of the sides, for he will be lighter in the forehand, and more active; but the grazier must have width as well as depth. And not only about the heart and lungs, but over the whole of the ribs, must we have both length and roundness; the *hoop'd*, as well as the deep barrel is essential; there must be room for the capacious paunch, room for the materials from which the blood is to be provided. The beast should also be ribbed home; there should be little space between the ribs and the hips. This seems to be indispensable in the ox, as it regards a good healthy constitution, and a propensity to fatten; but a largeness and drooping of the belly is excusable in the cow, or rather, notwithstanding it diminishes the beauty of the animal, it leaves room for the udder; and if it is also accompanied by swelling milk veins, it generally indicates her value in the dairy.*

This roundness and depth of the barrel, however, is most advantageous in proportion as it is found behind the point of the elbow, more than between the shoulders and legs; or low down between the legs, rather than upwards towards the withers: for it diminishes the heaviness before, and the comparative bulk of the coarser parts of the animal, which is always a very great consideration.

The loins should be wide: of this there can be no doubt, for they are the prime parts; they should seem to extend far along the back: and although the belly should not hang down, the flanks should be round and deep. Of the hips it is superfluous to say that, without being ragged, they should be large; round rather than wide, and presenting, when handled, plenty of muscle and fat. The thighs should be full and long, close together when viewed from behind, and the farther down they continue to be so the better. The legs short, varying like other parts according to the destination of the animal; but decidedly short, for there is an almost inseparable connexion between length of leg and lightness of carcass, and shortness of leg and propensity to fatten. The bones of the legs, and they only being taken as a sample of the bony structure of the frame generally, should be small, but not too small—small enough for the well known accompaniment, a propensity to fatten—small enough to please the consumer; but not so small as to indicate delicacy of constitution, and liability to disease.

Last of all the hide—the most important thing of all—thin, but not so thin as to indicate that the animal can endure no hardship; moveable, mellow, but not too loose, and particularly well covered with fine and soft hair.

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* See Farmers' Cabinet, Vol. I., page 136—article Choice of Live Stock.

Devonshire Cattle.

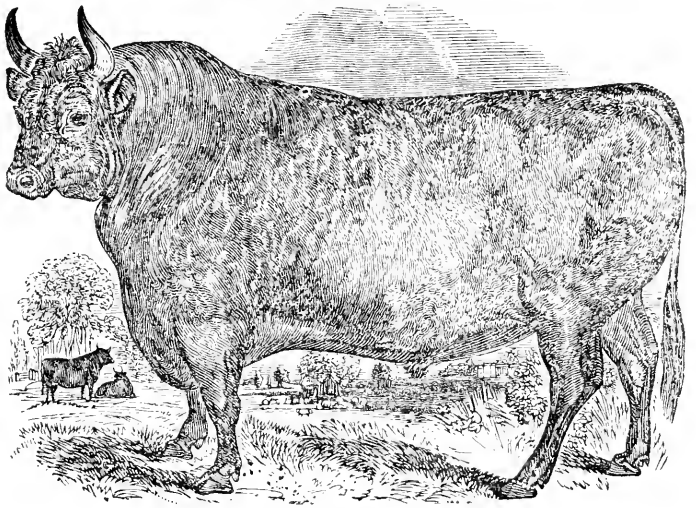

Fig. 20. The Devon Bull.

The more perfect specimens of the North Devon breed are thus distinguished. The horn of the *bull* ought to be neither too low nor too high, tapering at the points, not too thick at the root, and of a yellow or waxy color. The eye should be clear, bright, and prominent, showing much of the white, and it ought to have around it a circle of a variable color, but usually a dark orange. The forehead should be flat, indented, and small; for by the smallness of the forehead, the purity of the breed is very much estimated. The cheek should be small, and the muzzle fine: the nose should be of a clear yellow. A black muzzle is disliked, and even a mottled one is objected to by some who pretend

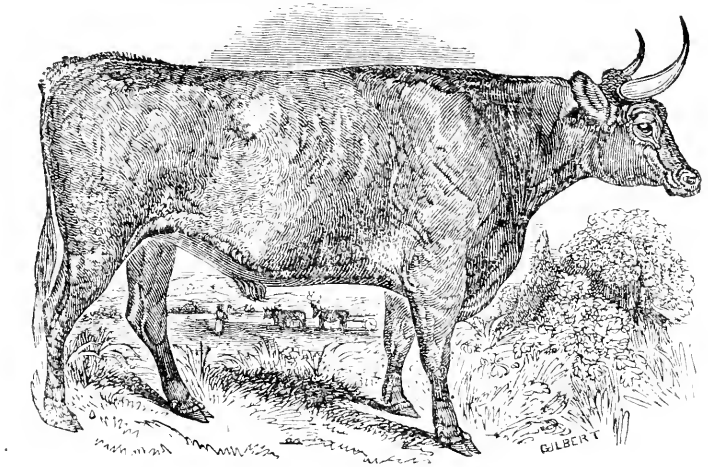

Fig. 21. The Working Devon Ox.

to be judges of the true Devon. The nostril should be high and open: the hair curled about the head, and giving, at first appearance, an idea of coarseness which soon wears off. The neck should be thick, and that sometimes almost to a fault.

Excepting in the head and neck the form of the bull does not materially differ from that of the ox, but he is considerably smaller. There are some exceptions, however, to this rule, and as an illustration of this, we here insert the portrait of a pure Devon bull (be-

longing to Mr. Western,) father of the ox and the cow, portraits of which will be published in the next number of the Cabinet. We may fancy that we trace in this singular and noble animal, the lineaments of the native, and scarcely reclaimed British bull.

The head of the ox is small, very singularly so, relatively to the bulk of the animal, yet it has a striking breadth of forehead. It is clean and free from flesh about the jaws. The eye is very prominent, and the animal has a pleasing vivacity of countenance plainly distinguishing it from the heavy aspect of many other breeds. Its neck is long and thin, admirably adapting it for the collar, and even for the more common and ruder yoke.

The want of the beautifully arched form of the neck, which is seen in the horse, has been considered as a defect in most breeds of cattle. It is accounted one of the characters of good cattle, that the line of the neck from the horns to the withers should scarcely deviate from that of the back. In the Devonshire ox, however, there is a peculiar rising of the forehand, reminding us not a little of the blood-horse, and essentially connected with the free and quick action by which this breed has ever been distinguished. It has little or no dewlap depending from its throat. The horns are longer than those of the bull, smaller and fine even to the base, and of a lighter color, and sometimes tipped with yellow. The animal is light in the withers; the shoulders a little oblique; the breast deep, and the bosom open and wide, particularly as contrasted with the fineness of the withers. The fore-legs are wide apart, looking like pillars that have to support a great weight. The point of the shoulder is rarely or never seen. There is no projection of bone as in the horse, but there is a kind of level line running on to the neck.

These are characteristic and important points. Angular bony projections are never found in a beast that carries much flesh and fat. The fineness of the withers, the slanting direction of the shoulder, and the broad and open breast, imply both strength and speed, and aptitude to fatten. A narrow-chested animal can never be useful either for working or grazing.

To be continued.

Morus Multicaulis Trees.—The editor of the Baltimore Farmer and Gardiner, has from 25,000, to 30,000 Morus Multicaulis Trees, now growing at his residence, with roots of one, two, and three years old, which will be ready for sale this fall, and which he will sell on moderate terms.

For the Farmers' Cabinet.

Onions.

On reading an article in the Cabinet of March 15th, 1837, upon the culture of onions in Wethersfield, I concluded to try the experiment of raising them on Delaware soil.

I dressed an eighth of an acre with four cart loads of well rotted stable manure, being part of a parsnep lot planted last year for spring feeding of milch cows. After the manure was very evenly spread over the ground, it was ploughed in ridges and planted with nine ounces of seed.

I did not pursue the Wethersfield plan of sowing the seed in rows, but put them in hills; supposing it would take less seed, less work, and produce equally as good a crop. The instrument to plant them was made in the following manner. A lath about four feet long with four holes bored through it with an inch auger ten inches apart, which were filled with pegs that projected through the lath about one and a quarter inches; then a handle of three feet long was put in the centre of the lath to carry it by; this instrument was then laid across the bed, which, by stepping on it with one foot on each side of the handle, four holes were made ten inches asunder; then moving it about a foot, and repeating the operation, the bed was soon filled with holes ten inches one way, and about a foot the other. A few seeds were then dropped in each hole, the beds raked and rolled, which finished the operation of planting.

As soon as the young plants began to appear, the beds were raked between the hills with a small rake made of tenpenny nails, which retarded the growth of the weeds, and caused the young onions to advance in size and strength before the time of weeding and dressing them with a hoe had arrived. I regard this little operation of early raking the beds quite an improvement; for part of the ground was not managed in this way, and the process of weeding was much more difficult; besides, in extracting the weeds, many of the young onions would fall down, and some of them were pulled up in consequence of the weeds having acquired a growth equal to the onions.

They were dressed several times through the season by pulling the weeds and using the rake and the hoe. The work being done at intervals, and mostly by children, no very accurate account was kept of the value of the labor, but it did not exceed ten days work for a full hand. They grew very large, some of them measuring thirteen and a half inches in circumference, and many of the hills had three or four onions clustered together; they are excellent for the table, fine

flavored, with none of that rank, strong taste so common to onions raised from sets. One of the beds was measured, by which the average produce was over fifty bushels on the whole ground, which would exceed four hundred bushels to the acre.

Although the produce equalled Wethersfield in amount, I was somewhat disappointed on finding several bushels of them not of a merchantable kind; they had thick necks, sort of evergreens; they would neither die nor dry, commonly called scullions by gardeners.

I see it stated, I think in the American Gardener, that no crop is more difficult to accommodate, with a suitable soil, than the onion, in consequence of its disposition to behave in the manner I have stated. The ground this experiment was tried upon, is rather a stiff clay, but very much softened with lime and manure, yet I presume it is not exactly the kind of soil they like. I intend, next season, to select a more sandy location, for I am rather pleased with the partial success of the operation.

The onion does not seem to want as much manure as other root crops, particularly the potatoe and ruta baga turnep; they require, it is true, considerably more labor, but the value of the crop would, upon an average, be double, and more, if the difficulty I have mentioned could be surmounted.

I suppose that two and a half or three acres of onions could be raised by hiring one additional hand through the summer season; besides it is sometimes profitable to increase the varieties of labor on a farm, when workmen are employed to perform it. In mowing time and harvest, we frequently have spells of wet damp weather, and a field of roots not only gives employment to all hands during such intervals, but pays the expense of an additional hand through the summer, by which the severe operation of gathering hay and grain is very much reduced.

SUBSCRIBER.

Wilmington, 11th mo. 8th, 1837.

N. B. Since reading Observer's complaint in his last essay upon "hollow horn," I have concluded to put my article by for a season.

Observer says some one has told him I intended to "beat him out," and that I have expressed myself in this kind of language, which appears to have tired him and made him weary of the subject. I can assure all whom it may concern, that I have used no such words, nor ever intended to convey to any one such meaning. I said the inconsistency of Observer must eventually defeat all his arguments; but even if I had been so silly as to use a threat or bravo, instead of reasoning fairly, is there any thing in it that ought to make a man abandon the field who felt conscious of his power to maintain it from his own positions? I am ready at any time to show that Observer's arguments are erroneous upon the subject of "hollow horn," as well as upon the "action of the absorbant vessels."

Business makes a man as well as tries a man.

An Essay on Indian Corn,

Delivered by Peter A. Browne, Esq., L. L. D., before the Cabinet of Natural Science of Chester county, Pa.

Continued.

Peter Kalm, professor of economy in the University of Aobo, in Swedish Finland, and member of the Swedish Royal Academy of Science, traveled in America in 1748 and '49, and in a work which he afterwards published, speaking of the Indians of North America, he says: "Their food is very different from that of the inhabitants of other parts of the world. Wheat, rye, barley, oats, and rice, were quite unknown to them. *Maize*, some kind of beans and mellons, made up almost the whole of Indian gardening."—2d vol. p. 95.

"At first the Swedes settlement at New Jersey and Pennsylvania were obliged to buy *maize* of the Indians for sowing and eating,"—p. 111.

"The Indians had their little *plantations* of *maize* in many places, before the Swedes came into this country."—p. 114.

"Before the Europeans came into this country, the Indians *planted maize*, beans and gourds."—p. 192.

Peter Kalm was a pupil of Linæus, and a good Botanist, and therefore his evidence is very creditable upon this subject. He died in 1778, sixteen years after Linæus published his second, and twenty-five years after he published his first edition of Species Plantarum.

"In a work entitled "The British empire in America, containing the history of the discovery, settlement, progress of the state of the British colonies in the continent and islands of America," 2nd ed. London, 1741, vol. 1, p. 184,—the author says, speaking of New England, "Oats, barley, peas, beans, and all other sorts of advantageous grains, are cultivated and flourish here; but the *Indian corn* is most planted. There was no other corn in this country before the English came hither." I shall here insert the account of it given to the Royal Society, by Mr. Winthrop, who was a member. "The natives called it Wiachin, and in some southern parts of America it is known by the name of maiis or maize. The ear is a span long, composed of eight rows of grain, or more, according to the goodness of the ground; about 30 grains in a row. It is of various colors, as red, white, yellow, blue, olive, greenish, black, speckled, striped, and sometimes in the same field and in the same ear. The stalk grows six or eight feet high; that of New England is not quite so tall as Virginia, and at Canada it is shorter than in New England," &c.

At page 185, he says, "The Indians thresh

it as they gather it, and dry it well on mats in the sun, and bury it in holes in the ground, lined with moss or mats, which are their barns."

At page 185, he says, "The Indians boil it until it becomes tender, and eat it with fish or venison, instead of bread: sometimes they bruise it in a mortar and so boil it. The most usual way is to parch it in the ashes, stirring it so artificially as to be very tender without burning. They beat it in a mortar and sift it into a fine meal, which they eat dry or mixed with water. The English mix it into a stiff paste and make bread of it, which they bake all day or at night. The best sort of food which is made of it is called samp," &c.

No Indian corn grows wild *now;* but both that and the kidney bean were found among the natives. The Indians have a tradition that the first grain of corn was brought hither by a blackbird, and the first bean by a crow.

In page 327, speaking of Calvert's first establishment in Maryland, "The infant colony supplied themselves with Indian corn at Barbadoes, which, at first arrival, they began to use to save their English store of meal and oat meal. The Indian women perceiving that the servants of the English did not know how to dress it, made their bread for them, and taught them to do it for themselves. There was Indian corn enough in the country, and these new adventurers soon after shipped off 10,000 bushels for New England to purchase salt fish and other provisions."

In page 428, speaking of the mode of living in Virginia, he says, "The bread which the better sort of people use, is generally made of wheat, the poorer eat *pone** made of *oppone*, or Indian meal."

At page 441, speaking of the productions of Virginia, he says, "The Indians had pease, beans, and potatoes, before the English came among them; but the staff of their food was *their corn*, of which we have given a large description in the history of New England."

What are the inferences to be fairly adduced from this body of concurring testimony? It must be recollected that it emanates from many persons of different habits and propensities, and belonging to different nations, civilized and savage; among whom there could have existed no connivance or collusion: it has been made public at different periods of time, and under various circumstances; and relates to different parts of a widely extended territory, and it is therefore not obnoxious to the objection of having been an ancient error originally fallen into by accident, and unintentionally adhered to and copied by subsequent writers. Standing as it does upon independent ground, each piece of testimony corroborates and strengthens the others; and the whole taken together, establishes in a way that defies refutation that the Indian corn claims this hemisphere for the place of its nativity. Many of the articles to which I have referred, representing the Indian corn to be a plant new in Europe, were published at a time when such an error could not have escaped detection. The discovery of a new world was the great lion or wonder of that day: the accounts given by travelers of an immense country which had been until that period not only unknown, but which many of the learned supposed did not, and could not exist;—of its singular inhabitants, and of its various animal and vegetable productions, was sought for and read with avidity by princes and subjects, by scholars and laymen, and although the Indian Corn was every where asserted to be a native of the Americas and to be unknown in the rest of the world, yet not a solitary individual was found to correct the error if it was one, or throw the slightest discredit on the assertion. This task was reserved for more modern times, and will not again, I hope, find credence with any one who seeks only for the truth. As to the objection that no one has stated that he has seen the Indian Corn growing wild and spontaneously in America, I cannot perceive that there is much weight in it, especially as no one pretends to have seen it growing wild or spontaneously in any other part of the world. By the Indians it was doubtless found growing wild, but at the time that this country was visited by Europeans it was every where cultivated. I am informed by a gentleman residing in the state of Kentucky that there was, some thirty or forty years since, a tradition among the western Indians that the seeds of the plants they cultivated were presented by the Great Spirit: that on a certain occasion the Great Spirit had descended to this earth in the form of a beautiful squaw: that where she first touched the ground with her feet there sprang up the Indian Corn; where she placed her right hand, grew the bean, and where she put her left hand pumpkins and squashes, and where she seated herself on the ground grew tobacco.

In the United States this plant has always gone by the name of *Indian* Corn, (except where *par excellence* it is designated by the name of 'Corn,'*) and there is no doubt but that this name was given to it by the earliest

* This name is still preserved in the South, where a "pone bread" means *Indian corn* bread.

* In one of the Counties of Pennsylvania, a man was indicted for stealing so many bushels of "*Corn*," and upon the exception being taken by Counsel that this was not a perfect description of Indian Corn, it was over ruled by the Court.

visiters, whom, history tells us, called this country, "the West Indies."

Indian names for many preparations of Indian Corn have descended to us: 'samp' in the North, and 'hommony' in the South, are names for a dish of corn coarsely broken and boiled like rice. "Sagamente," is the whole grain with the hull taken off and boiled in like manner. "Sack-a-tash," among the northern aborigines was the name of a dish composed of unripe corn and beans boiled together.

Is not the manner in which the Zea is described by the early botanical writers evidence that the Zea mays was then unknown, and that it has since been admitted into its class and order? The Stem is ranged under the *Culm*, which originally meant a *hollow* stem-like straw.

In describing the female flowers, the conical process upon which the seeds are set, is, (for want of an appropriate term, called a *spike*,) whereas a spike is an inflorescence, in which the flowers are sessile, (sitting down,) placed immediately on the *main stem*, without the foot-stalk, like the mullen. This description answers well enough for the *male*, but not at all for the *female* flowers of the Indian corn, which are not placed on the stem at all, but upon a conical process set upon the same.

The covering of this conical process, and the seed had no terms among these early botanists by which it could be described. It was ranged under the part of "Calyx," or cup of the flower, but comes naturally under no definition of that I have ever seen in a botanical work.

In fact, so little are the classes and orders fitted for the reception of this plant, that one botanical writer (Mrs. Lincoln,) after arranging it under the 19th class monœcia, and order Triandria, mentions it again under the order Dignia; (the grasses.) "This plant," (she says, p. 126,) "botanically called Zea Mays, although of the natural family of the grasses, having a culm-like stalk, and other distinguishing characteristics of grass like plants, is yet placed in the class monœcia."

5. What is the general opinion of the learned?

In the first volume of the Encyclopedia of Geography, by Murray, p. 175, is the following:

"In the west of Europe, maize has the same range of climate as the vine, but reaches further north, on the east side. In its *native American* soil, it forms the chief article of food, from the River La Plate to the Lakes of Canada, requiring a short but warm season of four months; it is well suited to the climate of the new world up to the lat. of 45°."

In 1748, Montesquieu wrote his Espris des Lois. In speaking of the soil of America, he says, "The cause of there being so many savage nations in America, is the fertility of the earth, which SPONTANEOUSLY produces many fruits capable of furnishing them nourishment. If the women cultivate a spot of land round their cabins, the MAIZE grows up presently."

One of the varieties of corn used in the United States still bears the name of the "King Philip Corn," from Philip, king of the Wampanoags, who in 1674 made war with the settlers of Massachusetts. [See Adams' History of New England, p. 118.]

See also an essay of Col. Taylor, of Virginia, on Agriculture; the March number of the Cultivator, edited by J. Buel, of Albany, New York; an essay of S. W. Pomeroy, of Brighton, Massachusetts, and published December 19, 1819, in the Massachusetts Agricultural Repository; Smith's History of Virginia; and Govenor Drayton's View of the Carolinas; in all of which the Indian corn is considered as a native of America.

To be continued.

Farmer's Work.

ON THE USE OF LIME IN RAISING WHEAT.

Lime is not only a necessary ingredient in every soil, which is intended to produce a vigorous and profitable vegetation, but it is wanted to compose a part of the substance of certain plants, and wheat is one of the number. No plant can grow in a soil which is entirely destitute of the earthly ingredients which must constitute its substance; and lime is found by chemical analysis, always to exist in wheat, both in the straw and in the kernel.

It is well known that the lands in N. England, which are at all suitable for any kind of grain, or root crop, will produce good crops of wheat, when first cleared from their native growth of wood. But after having been tilled for some years, such lands yield wheat with difficulty, and it is often found impossible to raise it by any of the modes commonly adopted for wheat culture. In process of time, the soil appears to lose its faculty for producing wheat and our farmers think themselves forced nearly or quite to forego its culture.

The same variations have been likewise observed in Europe. Wheat countries, by continued cultivation, have become almost incapable of yielding wheat. The cause and remedy of this partial barreness, this falling off as regards particular plants, were alike involved in obscurity, till modern discoveries in chemistry threw light on the subject. It has been found that the texture of every soil is defective, unless there is a mixture of

three kinds of earth, viz: clay, sand and *lime;* and that lime in some of its combinations exists in wheat, both in the straw and in the kernel. In some soils, fertile in other respects, lime may either have no existence, or be found in very minute portions, and be soon exhausted. If lime be a necessary constituent for wheat, and does not *naturally* exist in the soil in which we attempt to raise wheat, it must be supplied by *art*, or wheat will not grow. Or, if native lime exists in the soil in small quantities, the land may bear wheat till the lime is exhausted, and then become incapable of producing that plant, till a fresh supply of lime, marl, pulverized bones, or some other calcareous substance is added.

John Young, Esq. in an able work entitled *Letters of Agricola*, p. 299, states as follows, viz:

"It cannot be denied since the plentiful use of lime has been adopted,* lands in Europe will produce wheat, which otherwise were incapable of bearing it. The rye lands of Herefordshire which were reported by Dr. Beale, in the year 1636, as incapable of producing wheat, have been so much fertilized by the subsequent introduction of this fossil manure as to be successfully applied to the growth of that and every other grain. This and similar effects may be referable in part to the subserviency of the earth in the more perfect formation of the vegetable structure; for we know that all birds if confined in a cage and denied all success to lime, will lay eggs with soft shells. So wheat may labor under some such analagous imperfection, unless the carbonate of lime comes within the range of its roots."

Dr. Anderson, a celebrated British writer on agriculture, gave an account of a field, which had a top dressing of lime for the purpose of raising wheat, but the lime by accident was not applied to a small patch in the field, and in that patch there was no crop, while every part of the field to which lime was applied, produced fine wheat. It would be easy to adduce many more instances to prove that lime in Great Britain is considered not only useful, but indispensable, for the production of wheat. A British farmer we believe never undertakes to raise wheat, without the use of lime as a manure, and American farmers, (unless a great change has recently taken place in that branch of husbandry,) rarely makes any use of lime as manure for wheat.

To be continued.

Custom in infancy becomes nature in old age.

* Marshall's Review of the County Reports to the Board of Agr., vol. 2, p. 247.

Cow House or Stable.

The floor under a cow-house should be very tight, so that none of the stale may be lost, which, when mixed with other substances, is of great value as manure. The most healthy stables are those which are open to the east, or have an eastern aspect. It is a common practice to build them too close. The stable should never be completely closed up, however cold the weather may be, although it is desirable that strong draughts of cold or damp air should be guarded against, especially in winter. It may be held as a general rule that stables or cow-houses are too close when on entering the breath is affected, or any smell of urine can be perceived.

It is also very important to keep cow-houses or cattle stables clean and well littered. Dung left in stables soon renders the air unwholesome, and is the cause of disorders. Cows in a stable should be allowed a square space of at least six feet each way for each cow. Two or three ventilators near the ground on the north side afford, at a trifling expense, an excellent way of renewing or sweetening the air in stables in the summer time, and on the south side in winter, without occasioning draughts; and these may be shut when necessary, by means of straw, or, what is better, a sliding door.

It is of no small importance that the floor of a cow-house be very tight, so that none of the stale be lost, which is of great value as manure, when mixed with other substances. A farmer might as well lose the dung as the urine of his beasts.

"The common cattle stalls of our country are so ill contrived, and so straitened in their dimensions, that the cattle are constrained to lie down in part in their own dung. This dries and forms a thick coat on their hind quarters, from which they are not relieved till they shed their hair in the spring. They are thus rendered *uncomfortable.* To be uncomfortable is to suffer some degree of *pain;* and no one will suppose that animals in *pain* can *thrive*, or preserve their plight with the same food equally with others perfectly at ease. Even hogs, though prone to wallow in the mire in warm weather, are always pleased with a dry bed, and thrive better when kept clean."*

The following from the Memoirs of the Pennsylvania Agricultural Society, is extracted from a letter from R. Smith to J. H. Powell, and will be of use in directing the most economical management of dairy cattle.

My barn is constructed according to the best Pennsylvania models. The yard is to

* Colonel Pickering.

the south of it. On the east and west sides are cow stables, containing one hundred and ten well made stalls, ventilated by a sufficient number of windows and double doors. At the tails of each range of cows there is a drain made of strong planks, and so fixed as to receive all their dung and urine. These several drains have a sufficient declivity to carry all the fluid matter to their southern terminations, where they intersect similar drains, which convey all this liquid manure into a cistern, fifty feet long. This cistern is so placed and constructed as to receive not only the urine of the stables, but also the liquid matter of the farm-yard. In it there is a pump, by means of which its contents are pumped into a large hogshead, fixed on a pair of wheels drawn by oxen. To the end of this hogshead is attached a box pierced with holes, in which this liquid manure floats through a spigot and faucet, and is then sprinkled over the ground as the oxen move forward.

For the Farmers' Cabinet.

The writer of this would be obliged if any reader of the Cabinet would give information through the columns of it, where the best apparatus can be procured for boiling or otherwise converting the juice of the Sugar Beet into sugar, and also the best form and dimensions of the building used for that purpose, &c. &c.

Lancaster, November 4, 1837

For the Farmers' Cabinet.

Can any of the readers of the Cabinet inform the public, through the columns of that paper, where a supply of Sugar Beet Seed can be procured, the quantity and price?

Gap, Lancaster Co. Pa.

In order to accommodate our numerous friends, we have procured a quantity of the Sugar Beet Seed, price one dollar per pound. Orders, accompanied by the money, will be promptly attended to, and purchasers may rely on having the genuine Sugar Beet Seed.

Sugar Beet.

That the soil of our state is adapted to the cultivation of the sugar beet is sufficiently proved by the large growth which we see repeatedly noticed in our papers from the interior. Among the last is the product noticed in a Bedford paper of Col. M'Elwee's Beets of the White Silesian or Sugar species, exceeding *nine and a half pounds.* We are told of others having been raised in Bedford county exceeding in weight the above.—*U. S. Gazette.*

Sugar Beet and Mangle Wurtzle.

One thousand and seventeen bushels of Sugar Beets and Mangle Wurtzle were topped and pulled by nine men in *three hours.* This is the production of a little over an acre of ground in Newton Township, Gloucester county, New Jersey. Many of the Beets weigh twelve pounds.—*U. S. Gazette.*

Spring Wheat.

The Spring Wheat noticed as for sale in our last, by Mr. Peirce, is $12 per barrel, the price having been raised from ten to twelve, in consequence of the lateness of the season and the great difficulty of procuring a suitable supply. ☞ Orders to insure attention, must be sent without further delay.

Raising of Calves.

The best method of raising calves, we think is to do so by hand. If taken from the cow as soon as dropped, there will be no difficulty in teaching it to eat. Loblolly made of half a pint of corn meal and a pint of new milk given to it about thrice a day will be sufficient to keep it. It is the easiest thing imaginable to teach the calf to suck up its food; by simply pressing down its head into the pan containing the mixture, with one hand, and inserting the fore finger of the other into its mouth, it will instinctively suck up its beverage. If it be desirable to husband your milk, you may begin to decrease the quantity which you add to your loblolly when the calf is about three weeks old, putting in less milk each day until the calf imperceptibly forgets its taste altogether. When the calf is six weeks old you may turn him out in a grass lot; but if you desire to push its growth, continue its loblolly twice a day; by doing so you will increase its size fully one-third.

Use of Lime.

Certain acids and acid combinations often exist in soil or subsoils, and produce infertility. Lime, by forming new combinations with these bodies, frequently neutralizes their effects. Thus, if sulphate of iron, (known to exist where sorrel grows) or copperas, which is a combination of sulphuric acid with the oxide of iron, exists in the soil, and lime be applied, the lime will combine with the sulphuric acid of the copperas, and form a gypsum or plaster of paris, and thus convert into fertilizing matter, a substance which in excess is injurious.—*Low's Agriculture,* page 62.

ARTICLES.	Philadelphia, Nov. 14.	Baltimore. Nov. 10.	New York, Nov. 14.	Boston, Nov. 9.
Beans, white, per bush	$1 37—1 62½	1 25—0 00	0 14—0 15	1 37—1 75
Beef, mess, new, per bbl.	14 00—15 00	11 00—13 00	11 00—13 00	12 50—14 00
Bacon, western, per lb	8— 10	7— 9	8— 10	.....
Butter, extra, per tub	14— 15	16— 20	18— 21	17— 18
Butter, fresh, per lb. (market,)	18— 25	20— 25	20— 25	25— 28
Hams, per lb	12— 14	13— 13½	12— 14	14— 15
Hog's Lard, per lb	7½— 8½	9— 10	7— 9½	8— 9
Cheese, American, per lb	10— 12	9— 11	9— 11	8— 9
Beeswax, yellow, per lb	26— 27	23— 25	26½— 27½	26— 32
Beeswax, white,	.....	38— 40	38— 40	38— 40
Bristles, American,	42— 65	25— 65	25— 65	.....
Flax, American,	8½— 9	9— 10	6— 7	9— 12
Flour, best, per bbl	9 00—9 50	8 00—8 75	9 00—0 00	8 87—9 00
GRAIN—Wheat, per bush. Penna	1 87—2 03	1 80—2 00	1 60—1 80	.....
do. Maryland,	1 60—1 75	1 60—1 80	1 60—1 75	.....
Rye, per bushel,	1 00—1 12	82— 85	—1 06	1 25—1 33
Corn, do	1 03—1 05	96— 98	1 06—1 12	1 05—1 06
Oats, do	40— 43	33— 34	35— 45	48— 00
Barley, do. Penn	.....	.....	0 00—	0 00—0 00
Peas do	1 00—1 25	00—0 00	— 8	.....
HAY, Timothy, per 100 lbs	0 00—0 00	12 00 pr. ton.	.....	20 00 pr ton.
Meadow Grass,	70— 80	.....	.....	.....
Hemp, American dry rot, ton,	175 00—	6— 7	130 —140	.....
Hops, first sort, 1836, lb	9— 10	— 9	— 10	7— 8
Plaster Paris, per ton,	3 25—0 00	0 00—3 50	2 50—	2 75—0 00
SEEDS—Cloverseed, per bushel,	6 50—7 00	6 00—7 00	.....	15— 16
Flaxseed, rough, do	1 37—1 46	1 37—1 50	8 50—9 50	.....
Timothy,	2 00—0 00	3 25—4 00	12 50—14 00	2 87—3 00
Tallow, per lb	8½— 10	— 10	— 11	10— 11
WOOL—Saxony, fleece, per lb	00— 00	40— 50	75— 80	50— 55
Merino,	45— 50	35— 40	50— 68	45— 47
1-4 and common,	00— 00	25— 30	40— 50	30— 33

Philadelphia Market—November 14.

REMARKS.—FLOUR AND MEAL.—Supplies have increased this week, and prices have again improved 25 cents per bbl. for superfine flour; sales of common to fair brands at $9 50, extra $9 75; sales for export at $9 37½ a 9 50. The stock is light and firmly held at the above rates. Rye Flour has advanced; sales at $6 00 per bbl. Corn Meal, hhds. have sold freely at $22 50 a 23; bbls. at $5 12½; later in the week at $5 06¼; Buckwheat Meal $3 50 per half bbl. GRAIN.—Owing to the limited supplies arriving, Wheat has sold at higher rates. Sales of good to prime lots of Pennsylvania, at $1 95 to 2 03; Southern, $1 90 a 1 95; about 7,000 bushels Foreign, at $1 50 a 1 65; for Odessa, and $1 70 to 1 90 for German. Market now bare. Rye—an import of 5,000 bushels Hamburg, good quality, sold at $1 06. Large sales of domestic, at $1 to 1 07, being 6 cents advance. Sales of Foreign at $1 08 a 1 12½. Corn is scarce and wanted. Sales of flat yellow at $1 to 1 03; prime at 91 to 1 02; New, tolerably dry, at 80 to 83 cents. Oats—sales of Southern at 36; Pennsylvania 40 cents. PROVISIONS.—In Beef, Pork, and Bacon, there is no material change—5 a 600 kegs and tubs of butter have sold at 13½ a 14 cents; sales of Western lard at 9, and Jersey at 10½ a 11 cents per lb. Cheese is steady. RAGS.—Country rags are wanted; sales of No. 1, Leghorn, at 8½ cents per lb. WOOL.—The market has become more animated, and the sales to a fair extent. About 40 to 45,000 lbs of American have been sold, prime fleece at about 45; No. 2, 42½, and common at 30 cents per lb. cash. A large lot of South American sold at 13 cents. CATTLE.—Prices are nearly steady; Beeves at $6 50 to 7 50; Hogs $7, and extra, $7 50 per cwt. Sheep at from $1 75 to $4 25 each.

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THE FARMERS' CABINET,

DEVOTED TO AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

Vol. II.—No. 9.] **Philadelphia, December 1, 1837.** **[Whole No. 33.**

For the Farmers' Cabinet.

Beet Sugar.

Mr. Editor:—I am not quite sure that beet sugar is profitably to be made (i. e. in strict accordance with the principles of political economy,) on a small scale: it is, in manufactories, to be conducted on a large scale, I predict, that it is to become a national branch of industry and produce; but this cannot be any hindrance or objection to the farmer's employing his leisure hours during the winter season, to the production of sugar for his own use, or, eventually, when it shall have become better understood, for the refineries.

For this reason I shall confine my present hints and observations to the producing of sugar on a small scale, with simple means and at small cost, particularly as there are so many throughout the country who have grown the beet root, and will, at all events, be desirous of making an essay at beet root sugar making; also, convinced as I am, that from among the number, must proceed that experience which is to become the basis of large establishments throughout the United States ere many years pass over. From all that has been done in the United States towards making beet sugar, little has resulted, as yet, but much could already be written on the subject that would be useful as a guide to others. This task I cannot assume, though deeply interested; therefore, I can only promise to describe how beet root sugar *can be* made.

PREPARATIONS FOR MAKING THE SUGAR.

The articles required for the most simple and ready mode of manipulating are,

1. A rasp for reducing the roots to pulp.
2. A defecating pan.
3. A filterer.
4. A boiling pan, similar to No. 2.
5. A cooling pan.

Skimmer, cloths, clais, (or wicker frame work,) tub or tubs, and a variety of other small articles which will be required or not, just in proportion to the scale on which it is conducted. Such as will be required simply to *make sugar*, shall be described as we proceed.

The rasp being the first important implement, we will describe such an one as can be easily made, viz: a wooden frame, such as used for a grindstone. A circular piece of wood to form the barrel of the rasp, say one foot in length and of the same size in diameter, or larger if you please, (the heavier the better.) Pass an axle through this piece of wood, and set it to the frame precisely as a grindstone, to be turned by a crank or pedal. Around the barrel or circular wood, nail on sheets of tin, perforated in the manner of a bread grater. To the end of the frame towards which the circular barrel is to revolve, affix a small trough, or box, say nine inches wide by eighteen inches in length; inside of this box is to slide a block, which can be drawn up and pressed down with one hand, whilst the other hand is engaged in putting roots into the box through an opening on the top. The roots to be pressed against the tin grater as it revolves, and thus they will be torn into an impalpable pulp and fall into a tub or box placed under the rasp. After a person has once witnessed the producing of the juice from the root by a proper sort of rasp upon this principle, it will need no argument to satisfy him that the roots can be torn apart in every fibre and reduced to a pulp, by no other contrivance so effectually as the French rasp, which makes nine hundred revolutions per minute, when propelled by steam.

Let us now suppose we are about to make some beet root sugar.

1st. Clean the dirt from the roots by washing, or shaking well one against the other; the latter suffices here, as they come up very clean.

2d. Trim off with a knife the fibrous tape root and *all the crown* of the root, to get rid of all acrid substance.

3d. Rasp them as before described, and thus you obtain your pulp.

4th. Have ready a small frame of four pieces of strip, formed into a square, with its centre about nine by twelve, for light pressure. Lay this frame on a board, which board slants into or towards the tub in which is your pulp. On this frame, then place a piece of coarse linen crash or cloth, five times the size of the centre of the frame, and in the centre of the cloth—which of course will be the inside or centre of the frame—lay a shovel full of pulp, then folding the cloth up from the four sides, you have the pulp, enclosed as it were, in a square flat bag, which will yield under any pressure without bursting, and still retain safely the pulp.

5th. Press your pulp to obtain the juice. This is to be done under any sort of press or pressure that you may choose; the amount of juice obtained will be, of course, according to the amount of pressure; eighty-five per cent. of juice *can* be obtained from the root. A very simple plan for an experiment, is, to place the pulp in a long piece of cloth, spreading the pulp about six inches and roll the cloth up, making it four feet long and wring out the juice by hand, aided by a stick in the centre, doubling the cloth and making fast both ends. If you have a press, place on the bed of it, a zinc, tin, or copper pan, larger than the square bags or wickers, (which latter we shall soon describe,) in order that it may not be injured by the pressure. The sides of this pan need not be over two inches in height. In the centre front of the pan, should be a break or spout for the juice to flow out into a tub beneath. This all arranged, place a cloth filled with pulp on the pan under the press—on this cloth or bag of pulp, place a *clai* or piece of wicker work, similar to the top of a champagne wine basket, or ordinary wicker basket work, made square and flat. This wicker work is to prevent the pulp in the bags from clogging and bursting under the pressure, and to make the juice flow easily and obtain the more of it from the pulp than you otherwise could. On top of the wicker place another bag of pulp, then another wicker, then another bag of pulp, and so continue until your press is filled, when, by applying the pressure, you obtain the juice which flows into the tub under the press.

All being previously in readiness, not a moment should be lost after the juice is obtained, but hasten it into the defecating pan, which is placed over a naked fire, and may be an ordinary copper wash kettle, and proceed to

6th. Defecate the juice.

The juice is now in the kettle over the fire. Keep up a brisk fire until the juice is heated to 150° Fahrenheit, or so hot that you can but place your finger into it without burning it. At this moment is the lime to be added, i. e. having ready some cream of lime, prepared by slacking a piece of pure clean lime *in hot water*, reduced to the consistence of cream; add to your juice at this point of heat, not more than one ounce in proportion to eight gallons of juice; this is, however, to be known better by experience and the state your roots are in.* On such points as this, is your judgment to be carefully exercised. You must stir the lime thoroughly to mix it with the juice, and when you shall have done so, increase your fire, and continue your juice over it until it attains the boiling point, when your fire must be instantly checked or the boiler or kettle as instantly removed from off the fire, and the juice left for perhaps half an hour, or until it has become perfectly clear, and the deposit made in the bottom; then with a skimmer remove the black scum from the surface, and pour off the juice carefully into another pan, boiler or kettle, to be evaporated.† If the juice has now, or previously assumed a dirty appearance, be not discouraged in your first effort; this is always the appearance of it until it changes to molasses.

7th. *Filtering* has not been recommended at this point, but I think it should be done. I will, therefore, describe the manner in which I performed it—to be referred to again—and leave those who essay to make sugar, to filter once only, or twice, as they may deem best. A box of a size proportioned to the scale on which you are working, (unless on a very large scale—in which latter case you will need many filterers, and of the usual size used in manufactories.) I used a flower pot of the capacity of two gallons, as having a hole in the bottom, being conical and of earthenware and readily obtained, it was most convenient and answered the purpose. Prepare a circular piece of wood to fit inside the conical box or pot—which may be square or round—perforate this block in every part, cover one side of it with a piece of linen cloth, then prepare a linen bag or cloth to place inside the filterer, and put the perforated block inside the bag, with its covered surface uppermost, and placing the bag inside the pot, forcing down the block, which is held

* If the roots are fresh and good, I would recommend a trial with much less—even half the quantity. If not so good, or touched with frost, more may be required

† At this point evaporation has usually been carried on, but with two filterings; the latter should here be done. See 7th.

above the bottom by the angle of the pot, and then drawing the bag over the top edges to the outside and securing it, you have a very good filterer. Place in it and fill to within an inch or two of the top, ANIMAL CHARCOAL, (bones burnt or charred as wood is to make charcoal, except that these bones are burnt or baked in iron pots, hermetically closed during the baking,) IN GRAINS; because if in powder, it is not so good for various reasons, and is apt to wash through the filterer. Upon the charcoal in the filterer you pour your juice, at first keeping closed the stop cock or hole (as the case may be,) at the bottom, and retaining the juice in the filterers for a moment, and when opened as it flows from the filterer, you run it into the pan or kettle again to evaporate. You can have as many filterers as you please, all in use at the same time, by having the stop cock of each over a spout which shall conduct the juice to the pan for evaporating.

8th. After filtering, EVAPORATE the juice to twenty-one°* and then filter again, and again run it into the kettle in order to

9th. CONDENSE it to the crystalizing point, which is known by taking a small portion between the thumb and finger, after it has been reduced to molasses, and you may suppose it is near the point at which crystallization takes place, and drawing it out, if on cooling, it appears to snap, it must be removed and left to crystallize.

I beg to offer a few remarks here on this point, which my experiments have proved to me. 1st. If you make but a small quantity of sugar, as a pint, a quart, or I should think even a gallon, i. e. two gallons of syrup when it is at the crystallizing point, I should deem it scarcely possible to separate the molasses from the sugar after it has granulated. I am satisfied that it will require a larger quantity to carry out all the manipulations as they should be to produce beet sugar with success or profit. No estimate of quantity, expense, or profit can be made from working on a small scale; quality of the beets and sugar may be proved. 2d. After the syrup has been, as supposed, reduced to the crystallizing point, and left in a shallow vessel in a cool place for a day or two, and it is found not to crystallize, provided that it has not been evaporated too much, you may easily make yourself acquainted with the proper point by resort to the following:

Take three or four saucers, and in each place one or two spoonfuls of your syrup, hold each one over a small flame, or a spirit lamp, and reduce each one a shade more than the other and all more than the syrup which you have taken them from, try them as directed and carefully note the appearance of each, and the white spots which arise during the experiment—place them all away for a day, so that on resorting to them, you can designate each and recollect its appearance when you were reducing it; or it would be better to note on a paper relative to each, then if you find any or all of them have granulated, take the one which gives the strongest and best formed crystal for your guide, and reduce your syrup to the same point that you did this sample, and you will scarcely fail to make sugar to the amount of fifty per cent. of your syrup, and the remainder will be molasses. The peculiar odor which most of the syrup and sugar has, I cannot tell how you are to remove; but I have seen sugar made here without it. If the process is carefully and skillfully conducted and the roots good, there will be but little of it. One thing is certain, from constant tasting of the juice and sugar, you become reconciled to this peculiarity, and many who would make it for their own use, would not regard it. Tastes are arbitrary, and can we say that if we had eaten beet sugar all our lives, (without being refined,) with this peculiar odor, we would not reject cane sugar if presented to us for our use, because of its peculiarity to the taste and smell?

J. S.

* By a saccharometer, I evaporated about one half of my juice before filtering the second time. Practice must guide you in this if you do not use a saccharometer.

For the Farmers' Cabinet.

Whitewashing Fruit Trees.

In passing through several sections of the county of Chester, the writer of this article has taken notice of a prevailing practice among the inhabitants of whitewashing young fruit trees; and on inquiring why, or what reason they had for so doing, was informed that it was done in order to promote the health and thriftiness of the tree, by protecting it from the depredations of various insects, by which it is often injured in its young and tender state, and to give the bark a lively, fresh appearance. While the seeming plausibility of this theory is admitted, and the exalted opinion the writer of this essay entertains of the good sense, enterprise, and general intelligence of the farmers of this county, yet in relation to the utility of whitewashing fruit trees, would beg leave to give his opinion, that it is not only labor lost, but in reality has a very deleterious effect on the vitality, growth, and well-being of the tree to which it is applied, because it forms a coat over the trunk of the tree, of a dry, costive nature, which effectually prevents the humidity of the night air, and the fertilizing dews, so indispensable to the expansion of the bark and health of the tree, from penetrating, softening, and moistening the outer coat. It is believed, also, to have

another tendency, even more injurious than the former, which is, that the coat of lime deadens the external bark, and in the autumn it peals off, and hence the smooth and lively appearance the trunk of the tree presents; but let it be remembered, and duly considered, that this very outer covering, taken off by the effects of the lime, is that which is intended in the wisdom of the great Author of nature, to protect or defend the tree, in this northern latitude, from the inclemency of a severe and protracted winter. Whatever then has a tendency to remove or take off this covering, necessarily exposes the trunk of the tree more to the action of the severest frosts, which not unfrequently in extreme cold weather proves fatal; or, to say the least, occasions whole orchards to wear a sickly or consumptive aspect, from which they can never be recovered, thus rewarding the well intended though mistaken care and attention of the industrious husbandman with vexation and disappointment.

In throwing these remarks on the practice of whitewashing fruit trees, before the public, the writer has no design, other than to cast his mite into the treasury of agricultural experience, and to induce his fellow citizens to desist from a practice he believes to have its foundation in error. J. C.

New London, 6 mo 25th, 1837.

For the Farmers' Cabinet.

Curing Beef and Pork.

For the information of your correspondent A. and others, who may delight in good salt beef and pork, please insert the following receipt. Several years experience has satisfied me of its excellence.

For Beef—200 pounds.

12 pounds Liverpool salt,
8 gallons water, (pure and soft,)
1 pound brown sugar,
4 ounces saltpetre,
1 quart ley.

These ingredients are to be mixed with the water *cold;* well stirred and skimmed, and put on the beef cold—no fire being used in the process.

Pack your beef in the cask, and between each piece sprinkle a little fine salt; then pour over the pickle, and let it stand until salted to your taste; usually about four weeks are sufficient.

The same receipt answers for pork, using 15 pounds of salt instead of twelve. I have never failed of having the choicest hams by pursuing this method. Both beef and pork should be rubbed with salt, and laid on shelves long enough to become perfectly cool, previous to being consigned to the pickle tub. R.

For the Farmers' Cabinet.

Inquirer—No. 1.

In every branch of rural and domestic economy, in the least susceptible of any improvement, we find various projects and theories advanced, many of which, after appearing before the public, like Macbeth's witches, vanish into air—thin air. This is particularly applicable in the pursuits of agriculture. Yet we believe that amid all the noise and din about experiments and discoveries, many valuable improvements have been attained, and important facts brought to light, of which the great mass of agriculturists, from the want of a knowledge of such facts, derive no advantages. A correct knowledge of such facts is possessed by the few only, or regarded by the many as mere theory. We think, therefore, that correct information on a number of such subjects would be highly beneficial to the great mass of farmers. Hence we design proposing certain inquiries, with the expectation that persons who may be in the possession of such knowledge will make communication thereof—or that others may be induced thereby to try the experiments and communicate the result. We know it is the custom with farmers in general, in the feeding of grain to stock, to give it to them in a whole or unground state; and we frequently see it asserted in the agricultural works of the day, its superiority in feeding stock if first cracked or ground. Now we would suggest as an inquiry, expecting that some person will give us an answer, based on experiment, the following:—In the feeding of grain to the various kinds of farm stock, what are the advantages in feeding to them in a ground over that of a whole or unground state?

Chester County, November 17th, 1837.

For the Farmers' Cabinet.

Potatoes.

The following experiment on the growth of potatoes was made at the U. S. Naval Asylum, on the Schuylkill. The ground was dug up in the spring, and so left until the 9th of June, when it was planted in the following manner. A piece was selected 39 feet by 9; this was divided into five rows, in each row the same number of small holes was made, one foot apart; into each was put a small portion of stable manure.

The 1st row was planted with large potatoes, one in each hole; the 2d with small potatoes, in like manner. Potatoes were then cut as usual for planting; in the 3d row one cutting was put in each hole; in the 4th row two cuttings; in the 5th row three cut-

tings, and then covered with earth. When the shoots began to appear, the ground was raked to destroy the weeds; some weeks after a small quantity of earth was drawn up to the rows; this was all the dressing they had. I believe the less the ground is disturbed the better, provided the weeds are kept down. They were dug in the latter end of September; the result as follows:

PRODUCE.

No. 1.	Large seed, weight,	51½ lbs.
No. 2.	Small seed, do.	33 do.
No. 3.	One cutting, do.	30½ do.
No. 4.	Two cuttings, do.	48¾ do.
No. 5.	Three do. do.	57 do.
		220¼

Note.—They were Mercers, very large and fine; there was no difference in the rows, either in size or quality—but in quantity.

J. B. C.

For the Farmers' Cabinet.

Sugar Beet.

Upper Providence, Montgomery Co. Pa. November 14th, 1837.

Mr. Editor.—Herewith I send you the result of an experiment I made this season in raising the sugar beet. I had seen, from communications in the Cabinet, and learned from other sources, that from five hundred to a thousand bushels and upwards could be raised on an acre. As I was somewhat skeptical as to the amount alleged to have been raised, I determined this season to make an experiment, that I might know whether I could raise any thing near the amount said to be grown by others. I therefore prepared a piece of ground last fall for this and other purposes, by ploughing it as deep as I possibly could with four horses, early in the spring. I manured it well, and ploughed again, rolled and harrowed, and threw it up into low ridges (by throwing two furrows together) at the distance of two feet apart; I then passed the roller over the ridges again, and marked out for dropping the seed, by running a very light furrow along each ridge. Of the ground thus prepared I sowed something less than the twentieth part of an acre with the beet seed; when the plants were up a few inches I thinned them out to about eight or ten inches apart in the rows, and kept them clear of weeds by running the corn cultivator between the rows, and hoeing in the rows. The produce was forty bushels, weighing fifty pounds per bushel, making a product of eight hundred and eighty-six bushels to the acre. I feel now well assured that one thousand bushels may be raised in a good season, and on good ground, on an acre. And of this I feel assured from the fact, that the number of beets that would grow on an acre in rows, two feet apart, and nine inches apart in the rows, would be thirty thousand, which, at 1.666 lbs. apiece, would make one thousand bushels at fifty pounds to the bushel; and this, I think, would be space sufficient to admit of their cultivation and growth. In the piece which I cultivated there were many places in which the plants stood two and three feet apart in the rows, owing to a heavy shower that fell soon after sowing, and which, in some places washed out the seed, and in others covered them up too deep to generate. I did not discover that the beets next those large intervals were any better than where they stood about six or eight inches apart. I had also a portion planted with mangel wurtzel, but they were nearly all destroyed by being overflowed, and covered so deep with mud as to destroy them; those plants, however, which remained, grew about as well as the sugar beets. Another portion I had in with ruta baga; I did not measure either the ground or produce of them, but think they would have produced about half as many bushels to the acre as the beets. Should any of your correspondents have ascertained by experiment the relative value of ruta baga, sugar beet, and mangel wurtzel as a feed for cows and sheep, I would feel obliged if they would communicate the result of their experience through the columns of the Cabinet.

Yours, &c.

Abel Fitzwater.

I have sometimes thought, that it would have a tendency to improve the neglected condition of Veterinary Medicine, in the United States, if agricultural Editors would establish a *Veterinary Department* in their papers, for the reception of histories of cases of diseases of brute animals, and such other matter as properly belongs to it. I do not pledge myself for much assistance in carrying out the plan, if it should be adopted—but there are probably a number of the patrons of the Cabinet, who would be willing to lend the aid of their observations, and experience, and there could, certainly, be much valuable and interesting matter, obtained from transatlantic books and journals.

For the Farmers' Cabinet.

The Veterinarian—No. 1.

VETERINARY COLLEGES.

It is greatly to be deplored, that the people of the United States, possessing as they do, a vast and increasing interest in domestic animals, do not possess a single Veterinary College, wherein the nature and treatment of the diseases incident to those animals can be successfully studied, and systematically taught.

Europe has long been the theatre of extensive epidemic diseases among domestic animals, so destructive in their character, as to force upon the people, the necessity of establishing Veterinary Schools, and attentively studying the nature, and the means of arresting the progress of those fatal maladies. Most of the European states now possess such Colleges, and are reaping the advantages which scientific knowledge, and practical skill in the treatment of epizootic diseases, must necessarily confer. *Veterinary Medicine* has there assumed the rank of a distinct science, and is regularly taught to students, by Professors appointed for the purpose. In many instances, however, the attention has been given, too exclusively to the horse, while a greater interest in cattle, &c. has been comparatively neglected. Until very recently nothing like a scientific work on cattle was to be found in the English Language. The desideratum has at length been supplied by W. Youatt, in a work on the "British Cattle constituting a volume of the *Library of Useful Knowledge*—Farmers' Series." This writer very properly remarks, "if an ox is not, individually, so valuable as a horse, yet, in the aggregate, cattle constitute a much greater proportion of the wealth of the country, for, although Great Britain contains a million and a half of horses, she has to boast of more than eight millions of cattle." Again, "although a tenth part of the sheep, and lambs die annually of disease, (more than four millions perished by the rot alone, in the winter of 1829–30;) and at least a fifteenth part of the neat cattle are destroyed by inflammatory fever, milk fever, red water, hoase, and diarrhœa; and the country incurs a loss, annually, of nearly ten millions of pounds, the agriculturist knows not where to go for information, on the nature, and the cure of the maladies of which they die; and is either driven to confide in the boasted skill of the ignorant pretender, or make up his mind that it is vain to struggle against the evils which he cannot arrest, and lets matters take their course. There are two great sources of the mortality of cattle and sheep, and the loss of agricultural property, and it is difficult to say which is the worst, the ignorance and obstinacy of the servant, and cow-leech, or the ignorance and supineness of the owner."

The loss of live stock from disease, is probably, almost as great in this country as in England, and we certainly cannot, any more than they, escape approbrium of ignorance and supineness on the subject.

It is impossible to estimate the loss of domestic animals in the United States, but it is confessedly enormous. Two of my neighbors, whose farms join each other, have lost each, five cattle from reputed murrain, within the last year. These ten cattle were probably worth about $400. A large portion of this kind of loss, could no doubt be saved by skill and attention—more than enough to remunerate the expense of establishing Veterinary Colleges in all the States in the Union, without otherwise incurring expense to the people. When once established they ought to support themselves.

It is only necessary to arouse public attention to this subject, to exhibit it in its true light, to ensure its accomplishment. Pennsylvania is deeply interested in this matter, and many of her spirited, intelligent and enterprizing farmers, would no doubt, feel proud to set an honorable example to her sister states, by the institution of the first Veterinary College this side the Atlantic. Measures for promoting the object should be speedily concerted. The amount of property constantly exposed to danger, by ignorance and supineness, loudly demands it. The monied resources and enterprize of our agriculturists, are amply sufficient. And there is an abundance of unoccupied talent which might be placed in requisition. The people have only to will it, and the work would be accomplished.

Data are wanting, from which to calculate the numbers of the several kinds of stock, in the United States, or to ascertain the proportion of these which die of disease. The following statement, derived from the writer already quoted, may shed some light on the subject, and interest some of my readers. He states that there are, annually, sold in the Smithfield market, exclusive of dead meat from the country,

160,000 Cattle,
1,200,000 Sheep,
36,000 Pigs, and
18,000 Calves.

This he estimates to be one tenth of the quantity sold in the United Kingdom, the average value he computes to be,

Of Cattle, £10.
" Sheep, 1 10*s.*
" Pigs, 2.
" Calves, 2 10*s.*

The average age of these several kinds of stock, when taken to market, (and consequently, the length of time which capital is invested in them) is supposed to be,

Of Cattle, 5 years,
" Sheep, 2 "
" Pigs, 2 "

The following table will therefore show the estimated amount of capital invested in these several kinds of stock, in England, Scotland and Ireland.

Number.	Value.	Duration of Investment.	Amount.
Cattle, 1,600,000	10*l.*	5 years	80,000,000*l.*
Sheep, 12,000,000	1 10s.	2 "	36,000,000
Pigs, 360,000	2	2 "	1,440,000
Calves, 180,000	2 10s.		450,000
Total amount of Capital invested,			117,890,000*l.*

This estimate can only be considered an approximation to the truth. It must, indeed, be erroneous, inasmuch as it assumes the value of young animals to be equal to those of mature age. Every allowance being made, it still affords conclusive evidence in favor of a better, and more systematic treatment of the diseases of brute animals.

New Garden, 11th mo., 24th, 1837.

P. S.—I was pleased with the inquiry of a Lancaster correspondent, in the last Cabinet, respecting the proper buildings and apparatus, for the manufacture of Beet Sugar. The public feel a deep interest in the matter. A large share of this interest is, however, the effect of novelty; curiosity has been excited without being gratified. Considering the number of individuals, and associations in our country, which possess a knowledge on this subject, it is strange how little information can be obtained. Is this owing to a monopolizing spirit, or to mere indifference? The field is large enough for all who wish to labor; there is no occasion for jealousy, for monopoly. I therefore hope that some one acquainted with the business, will answer the inquiry alluded to, by furnishing drawings and descriptions of the buildings and apparatus, used for a well regulated Beet Sugar Manufactory. As many persons wish to try the experiment, on a small scale in their families, I would also be glad if some one would describe the process, more in detail than has yet been done, with a notice of the obstacles likely to occur and the means of remedying them. For example, how it is known when enough lime has been added? How, and in what stage of the process, is the vast quantity of mucilege and coloring matter to be got rid of? What kind of material makes the best strainer? &c.

I have succeeded in making *quite tolerable* Sugar from the Beet; but I have encountered difficulties which it is very desirable to avoid in future. I shall probably return to the subject when leisure permits.

Bites of Reptiles or Venomous Stings.

FRIEND EDITOR,—If you should think this worthy of notice you may insert it in your Cabinet.

Take a slice of wheat bread and moisten it with sugar of lead,—not having that at hand, water, saturated with pearlash, will answer in its place. When the bread gets dry renew or moisten it again.—For most venomous bites, such as rattlesnakes, take plentifully of sweet oil.

J. B. H.

Bucks County, 1837.

New kind of Clover.

I saw in the N. E. Farmer an account of this clover (*Trifolium incarnatum*) given by JOHN LOWELL, of Boston, in the year 1833. He states: "I sowed it about the last week in April; it was in bloom and fit to cut in fifty days; it is not so coarse as Dutch red clover; better furnished with leaves, and not liable to lodge or lose its leaves in drying. It furnished a fair second-hand crop in the late uncommon dry season." He further says, that he had requested his friend, JOHN PERKINS, to import fifty pounds for himself and a friend, in order to make a more extensive trial. Perhaps the Editor of the Farmers' Cabinet would oblige the farmers, to obtain further information respecting the above clover, and publish it.

M. PENNOCK.

Chester County, 1837.

Any communication on the subject will be promptly and cheerfully published. We hope that some of our New England readers will give the desired information.

For the Farmers' Cabinet.

Pennsylvania Horticultural Society.

The monthly meeting of the Pennsylvania Horticultural Society was held on Tuesday, the the 21st of November, 1837, at the usual place, under the Atheneum.

It being the annual competition for twelve of the best varieties of Chrysanthemums; the Committee awarded the premium to Peter Mc Kenzie, Spruce street, between Schuylkill Fifth and Sixth streets, who exhibited, (viz.,) Early Blush, Blush Ranunculus, Crimson, expanded light bronze Golden Lotus, superb White, Spanish Brown, Blanche Variable, superb Yellow, Discolor, Golden Yellow, and superb Orange.

The premium on Fruit was awarded to Hugh Hatch, N. J., for the best pears, (Holland Green.)

The premium for the best display of Vegetables was given to Edward Kelly, Gardener, at the Naval Asylum. Mr. K. deserves great credit for the very superior Vegetables exhibited that evening,—viz., Cabbage, Beets, Celery, Lettuce, &c.

The premium for the best Cardoon was awarded to Robert Kilvington, Turner's Lane.

The premium for the best Bouquet, to Wm. Chalmers.

The premium for the best display of interesting Plants, in pots, to Robert Buist, who exhibited Verbena Tweediana, Oxalis Bowii, Amaryllis Aulica, Buddleya Madagascarensis, Maxilliaria Picta, Oncidium flexuosum, Tillandsia pallida, Lechenaultia formosa, Thea Bohea, Acacia Thegonocarpa, Epacris grandiflora, Begonia incarnata, Epiphyllum trunca-

um, Lantana mutabilis, Daphne hybrida, Correa speciosa, Erica vernix, Erica gracilis, Metrosidros semperflorens, and Camellia Rosa mundi.

Andrew Dryburgh exhibited Tillandsia amœna, Cactus Ackermania, Fuschia microphylla, Salvia Involucrata, Daphne Indica, Correa speciosa, Hibiscus Rosa Sinensis Lutea, White and variegated Camellias.

John Sherwood, Laurel Hill, exhibited Cactus Ackermania, Epacris Grandiflora, Tillandsia Pallida, Correa speciosa, and Eriocoma fragrans.

Alexander Parker exhibited twenty-nine varieties of Chrysanthemums, in sets, and some pears and apples.

A basket of very fine pears, (German green,) was exhibited by Robert Kilvington.

The room had a fine appearance that evening, from the display of well selected and rare plants. The Maxilliaria Picta, and Oncidium Flexuosum, in full flower, sent by Mr. Buist, are most interesting orchidous parasites from South America, many of them are very fragrant and beautiful to the sight Indeed, most of the plants enumerated above, were of the best kind, and in full bloom. The Eriocoma fragrans, sent by Mr. Sherwood, is a fine syngeneceous plant, from New Holland, and is believed to be the first that has been exhibited to the Society.

Thirty-six new members were elected that evening.

G. Watson, *Rec. Sec.*

Philadelphia, Nov. 27, 1837.

Proper Form and Shape of Cattle.

With all the lightness of the Devonshire ox, there is a point about him, disliked in the blood or riding-horse, and not always approved in the horse of light draught,—the legs are far under the chest, or rather the breast projects far and wide before the legs. We see the advantage of this in the beast of slow draught, who rarely breaks into a trot, except when he is goaded on in *catching times*, and the divison of whose foot secures him from stumbling. The lightness of the other parts of his form, however, counterbalances the appearance of heaviness here.

The legs are straight, at least in the best breeds. If they are in-kneed, or crooked in the fore-legs, it argues a deficiency in blood, and comparative incapacity for work; and not only for work, but for grazing too, for they will be hollow behind the withers, a point for which nothing can compensate, because it takes away so much from the place where good flesh and fat should be thickly laid on, and diminishes the capacity of the chest and the power of creating arterial and nutritous blood.

The fore-arm is particularly large and powerful. It swells out suddenly above the knee, but is soon lost in the substance of the shoulder. Below the knee the bone is small to a very extraordinary degree, indicating a seeming of want of strength; but this impression immediately ceases, for the smallness is only in front—it is only the bone: the leg is deep, and the sinews are far removed from the bone. It is the leg of the blood-horse, promising both strength and speed.* It may perhaps be objected that the leg is a little too long. It would be so in an animal that is destined only to graze; but this is a working animal; and some length of leg is necessary to get him pleasantly and actively over the ground.

There is a trifling fall behind the withers, but no *hollowness*, and the line of the back is straight from them to the setting on of the tail. If there is any seeming fault in the beast, it is that the sides are a little too flat. It will appear, however, that this does not interfere with feeding, while a deep, although somewhat flat chest is best adapted for speed.

Not only is the breast broad and the chest deep, but the two last ribs are particularly bold and prominent, leaving room for the stomachs and other parts concerned in digestion to be fully developed. The hips, or huckles are high, and on a level with the back, whether the beast is fat or lean. The hind quarters, or the space from the huckle to the point of the rump, are particularly long, and well filled up—a point likewise of very considerable importance both for grazing and working. It leaves room for flesh in the most valuable part, and, like the extensive and swelling quarters of the blood-horse, indicate much power behind, equally connected with strength and speed. This is an

*It is sometimes not a little amusing to observe the seeming contrariety of opinion between excellent judges of cattle, and that on the very essential points of their conformation; and yet, when the matter is properly explained, the slight shade of difference there is between them. We have now lying before us letters from two very skilful Devonshire farmers. They have been so obliging as to give us their opinion as to the points of the Devonshire ox. One insists upon that, on which we confess we should lay very great stress, and without which we should reckon any beast almost valueless, namely, small bones under the knee, and a clean neck and throat This gentleman we have the pleasure of knowing; he has been improving the size and weight of the Devonshire ox, anxiously preserving these points: nay, we know that he did steal a cross from one of the finest-boned and lightest Herefords he could procure. The other has sound principles of breeding, but he is a man of the old school: he had been educated in the belief that what the calls he true Devons are unrivalled, and he would deem it a kind of sacrilege to debase their blood by a cross with any other breed; yet experience has yet taught him inspite of all his prejudices, and although he will not own it, that the old Devons have their faults, and, among them, too much flatness of chest and general lightness; he is beside a tillage farmer. He tells us that he does not like a fine neck, because it is accompanied by too narrow and light a breast, and that he does like large bones, because they will carry more meat. Why, these gentlemen were, in a measure, both right, but their observations referred to cattle, which although Devons, were essentially different.

Devonshire Cattle.

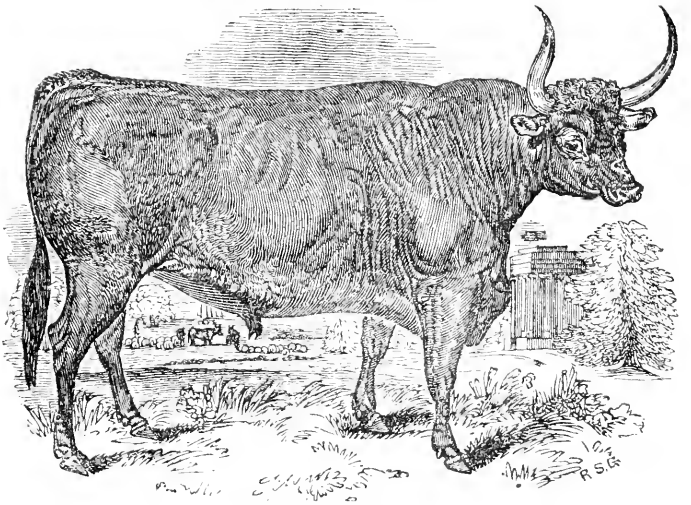

Fig. 22.—Devonshire Ox.

improvement quite of modern date. The fulness here, and the swelling out of the thigh below, are of much more consequence than the prominence of fat which is so much admired on the rump of may prize cattle.

The setting on of the tail is high; it is on a level with the back; rarely much elevated, and never depressed. This is another great point in the blood-horse, as connected with the perfection of the hind quarters. The tail itself is long and small, and taper, with a round bunch of hair at the bottom.

The skin of the Devon, notwithstanding his curly hair, is exceedingly mellow and elastic. Graziers know that there is not a more important point than this. When the

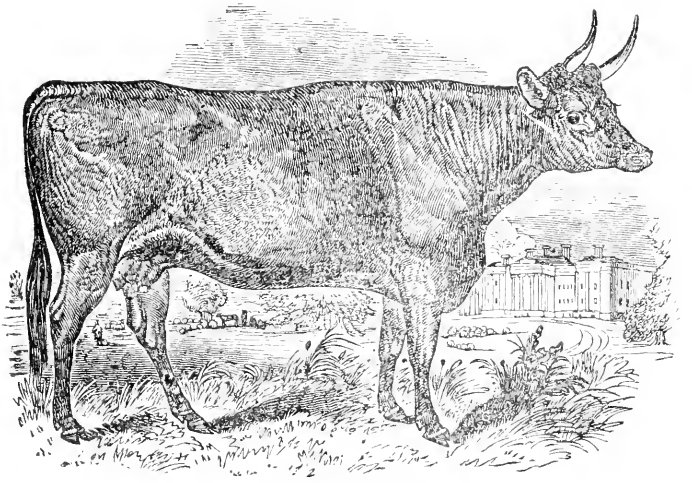

Fig. 23.—Devonshire Cow.

skin can be easily raised from the hips, it shows that there is room to set on fat below.

The skin is thin rather than thick. Its appearanceof thickness arises from the curly hair with which it is covered, and curly in proportion to the condition and health of the animal. Good Judges of these cattle speak of these curls as running like little ripples of wind on a pond of water. Some of these cattle have the hair smooth, but then it should be fine and glossy. Those with curled hair are somewhat more hardy, and fatten

more kindly. The favourite color is a blood red. This is supposed to indicate purity of breed; but there are many good cattle approaching almost to a chestnut hue, or even a bay brown. If the eye is clear and good and the skin mellow, the paler colors will bear hard work, and fatten as well as others; but a beast with a pale skin, and hard under the hand, and the eye dark and dead, will be a sluggish worker, and an unprofitable feeder. Those, however, that are of a yellow color, are said to be subject to *steat* (diarrhœa)

Some breeders object to the slightest intermixture of white—not even a star upon the forehead is allowed; yet a few good oxen have large distant pitches of white; but if the colors run into each other, the beasts are condemned as of a mongrel and valueless breed.

These are the principal points of a good Devonshire ox; but he used to be, perhaps he is yet, a little too flat-sided, and the rump narrowed too rapidly behind the hip bones; he was not sufficiently ribbed home, or there was too much space between the hip bones and the last rib; and altogether he was too light for some tenacious and strong soils. The cut of the working ox, in page 121, contains the portrait of one, embodying almost every good point of which we have spoken.

Mr. Western has kindly enabled us here to add another portrait from his farm. It is a son of the bull given at page 121, and is a faithful representation of an ox beginning to fatten, but his characteristic points not yet concealed. Mr. Western has carefully preserved this breed unmixed for the last thirty years, and all the cattle that he fattens are Devons; he rarely uses them for the plough.

A selection from the most perfect animals of the true breed,—the bone still small and the neck fine, but the brisket deep and wide, and down to the knees, and not an atom of flatness all over the side—or one cross, and only one with the Hereford, and that stealthily made,—these have improved the strength and bulk of the North Devon ox, without impairing, in the slightest degree, his activity, his beauty, or his propensity to fatten.*

*'In the 'Annals of Agriculture,' vol xxx., p 3-4 we have the opinion, in somewhat provincial terms, of a good west-country grazier respecting the best form of the Devon cattle. 'He buys at all times, from Christmas to May-day, North Devons, that are bred from Po tlock to Baddeford, such as are five or six years old. He chooses such as are small-horned, and of a yellow-colored horn rather than white—small bones, as such beasts thrive best—rib bones round, not flat—a thick hide bad—a very thin one objectionable—blade bones, chuck—very thick and heavy in the bosom, as much weight lies there—the heavier in the shoulder the better, but not to elbow out—very wide and square from the points down to the thighs—middling in the belly—not cow-bellied—not tucked up.' As a grazier he is *right*; but this is not the true working Devonshire ox.

There are few things more remarkable about the Devonshire cattle than the comparative smallness of the cow. The bull is a great deal less than the ox, and the cow almost as much smaller than the bull. This, however, is some disadvantage, and the breeders are aware of it; for although it may not be necessary to have a large bull, and especially as those of any extraordinary size are seldom handsome in all their points, somewhere or other present coarseness or deformity, it is almost impossible to procure large and serviceable oxen, except from a somewhat *roomy* cow. Those cows, however, although small, possess that roundness and projection of the two or three last ribs, which make them actually more *roomy* than a carless examination of them would indicate. The cow is particularly distinguished for her full, round, clear eye, the gold colored circle round the eye, and the same color prevailing on the inside skin of the ear. The countenance cheerful, the muzzle orange or yellow, but the rest of the face having nothing of black or even of white about it. The jaws free from thickness and the throat free from dewlap. The points of the back hind quarters different from those of other breeds, having more of roundness and beauty, and being free from most of those angles by which good milkers are sometimes distinguished.

We are here enabled to present our readers with the portrait of a cow, belonging to that indefatigable agriculturist, Mr. Westren. She was rising four years old. With regard to size she is a favorable specimen of the Devon cow. It will be seen at once how much more roomy and fit for breeding she is, than even her somewhat superior bulk would at first indicate. She is, perhaps, in a little better condition than cows generally are, or should be in order to yield their full quantity of milk.

For the Farmers' Cabinet.

On Sowing Parsnep and Beet Seed.

Two or three weeks before I commence digging up my garden in the spring, I tie up separately, in a piece of cotton or linen rag, as many parsnep or beet seed as I wish to plant, and bury them in moist earth, either in my garden or a box, or pot; I examine them occasionally, and when they begin to sprout I plant them; by this method I know every seed that will grow, and have no gaps in my rows; I also gain two or three weeks of my neighbors, who wait till they dig up their gardens and prepare their ground for planting.—Gardeners, try it.

J. B. C.

An Essay on Indian Corn,

Delivered by Peter A. Browne, Esq., L. L. D., before the Cabinet of Natural Science of Chester county, Pa.

Continued.

6. Are there any recent discoveries that will shed any light upon this subject? I have heard of some which I will briefly state. The Messieurs Peale, of Philadelphia, always anxious to enrich their museum, a few years since procured from Peru two very interesting collections of Inca mummies. These mummies, consisting of a man, a woman, and a child, were dug out of the earth in the desert of Atacama, in the valley of the same name, capital of the above province of South America. This place was a celebrated deposit of the dead bodies of the ancient Incas.

The Peruvians entertained the idea, that, after death, they were destined to cross the sea to the west, and hence when they died in the neighboring mountains, their bodies were brought down into this valley to be interred. They also believed that they would require some of the good things of this life to support them on their journey to the "undiscovered country," they therefore enclosed with the bodies portions of provisions.

After the mummies in question were brought to Philadelphia, they were unwrapt, and inside of the envelope were found maté, (an herb) mixed with lime, several small bags of *Indian corn meal*, and *one ear* of *Indian corn.**

Now we know, from history, that Pizarro, in order to facilitate the conversion of the natives, in 1555, forbid all interments in Arica, and from that period, this valley has remained a desert; we have therefore the positive proof that at least 382 years ago, (and how much longer we cannot tell,) Indian corn was the food of the Peruvians.

In the 2d part of first volume of the Transactions of the Geological Society of Pennsylvania, page 145, is a letter from J. C. Johnson, M. D. of Louisville, Kentucky, to R. Harlin, M. D. of Philadelphia, dated the 6th of July, wherein the writer says:—"I send you by Mr. Frazer, the FOSSILIZED CORN, of which I spoke when I first saw you. It is found in the alluvial bank of the Ohio river, about twenty miles below Wheeling, both above and below the mouth of Fish Creek, and extending up the Creek some distance, and four or five miles on the Ohio; it may extend farther, but shows itself only that distance by the washing of the river against the bank.

"The stratum is generally from eight to ten inches thick, and from five to six feet below the surface, and contains nothing but the *corn* grains closely impacted together with the black dust, which you perceive among the corn, has ever been found with the grains. The same stratum has been met with in places distant from this in digging below the surface. This is all that I could learn relative to this interesting and unaccountable deposition. Why, or how did it get from the cob?

"It certainly must have been charred, or it would not have been thus preserved. It could not have been reduced to this black cinder, like the loaves of bread and grains of different kinds found a Pompeii; or rather it could not have resulted from a like cause. I do believe, that if all the corn raised on the Ohio, and all its tributaries, above this point was collected in one mass, it would not amount to one-tenth of this deposition."

If the article alluded to in the above letter is really Indian corn, whether in a fossilized or any other state, it having been found where described, is an unanswerable argument in favor of the position that has been assumed. The fact is, that so much does it resemble grains of corn, that there is scarcely an individual to whom it is presented who does not instantly pronounce that it is the Zea maize; and yet when we take into consideration the immense quantity that is said to be discovered, all belief in it seems to waver. No idea can be formed of an ancient population of this continent dense enough to have cultivated and stored away such an inexhaustible harvest; and against the supposition of its having been the *spontaneous* production of the earth, the large size of the grain is a powerful argument. There is no doubt but the maize was a diminutive grain in its natural state. Dr. Darlington is of opinion that it did not much exceed in size the grains of wheat. The grains upon the ear found inside of the envelope of the Peruvian mummy, are quite small; and the corn raised even at the present day in Peru is far from being of a large grain.

If, for the sake of further inquiry, we were to admit that it was corn, it is not correct to call it *fossilized* corn, in the proper sense of that word, unless bearing the obvious and characteristic marks of vegetable organization, it has undergone one of the three following processes, viz. of *intromission* of the *mineral* matter at present composing it, into the interstices and vacuities of the original organized body, or, second, *substitution of* the present *mineral* matter into the spaces which have been produced by the partial removal of the original organic substance; or, third and lastly, by *impregnation* and *consolidation* of the chemically altered organic matter itself. Now it is obvious that

* A cast of this ear is deposited in the Academy of Natural Science of Chester County.

in this corn (if corn it is,) there has been no *intromission* nor *substitution* of any mineral matter, but that a chemical change has taken place similar to that which transforms wood into jet; and if therefore it is correct to rank jet among fossils, this may properly enough be denominated fossilized corn.

II. Where is it now cultivated?

Indian corn is *now* cultivated extensively not only in America, but throughout a great part of Asia and Africa, and also in several countries of the south of Europe, as in Spain and Italy; and in many of the provinces of France it is said to form almost exclusively the sustance of the inhabitants. [Lieber's Enc. Am. tit. Maize.]

Arthur Young, in his travels through France and Spain, observes, that the regions of maize exhibited plenty and affluence, compared with those where other crops are cultivated.

In speaking of this grain or gigantic grass, Johnson says, it is propagated in England as a curiosity. But it would appear from a pamphlet published in 1828,* by Mr. Cobbett, entitled a Treatise on Cobbett's Corn, that he attempted to raise it England, and in Reese's Cyclopœdia, tit. Maize, an account is given of some experiments in raising this grain in Ireland, by Richard Buckeley. Other experiments are there also alluded to, made respectively by M. Duhamel and M. Amiens, but the place where they were made is not mentioned.

It is calculated† that in England there are about 34,000,000 acres in oats and beans, and between 2 and 3,000,000 in barley. They raise about three hundred thousand cwt. of hops, and make about four millions of gallons of cider annually.

In Scotland, there are about five millions of acres under regular cultivation, of which not more than one million eight hundred thousand are under grain; of which, one hundred and forty thousand produce wheat. Oats is their staple, and the food of its rural population, which they raise on one million two hundred and sixty thousand acres. Barley occupies two hundred and eighty thousand acres, being raised principally for distillation.

In Ireland they raise wheat and barley, but their main objects are oats and potatoes, of the latter as the staple food of a considerable body of the people.

They raise annually about one million five hundred thousand pounds worth of flax.

In Denmark the chill atmosphere of the climate is less favorable to the cultivation of wheat than barley, rye and oats, all of which afford a large surplus for exportation.

In Sweden and Norway they have one million three hundred and sixty-three thousand acres of land under cultivation, but the annual average of grain sown on each farm does not amount to a bushel, and the produce of the whole country does not exceed seventy-one thousand quarters; hence Sweden, until lately, imported grain to a great extent; and such was the scarcity before 1812, that the peasantry often ground the bark, and even the wood of the fir-trees into flour. In 1827, Sweden exported thirty-nine thousand, and in 1828, one hundred and sixty-four thousand tons of grain of every description.

There is no country in Europe which produces a greater amount of valuable agricultural productions than Holland and Belgium. But their climate being humid, the principal objects of culture in the Dutch Provinces are connected with pasturage.

From careful enquiries carried on by the government of the Netherlands, the agricultural capital of the country is estimated as follows:

	Hectacres.	*Francs.*
Wheat	350,000	154,000,000
Rye	700,000	168,000,000
Buckwheat	200,000	32,000,000
Barley	280,000	84,000,000
Pulse	110,000	48,000,000
Potatoes	131,000	41,000,000
Oats	300,000	84,000,000
Orchards	54,000	3,000,000
Vegetables	92,000	55,000,000
Hemp and Flax	210,000	126,000,000
Madder	30,000	21,000,000
Cattle and Animals		150,000,000
		966,000,000

A French hectacre is 2.4736 14 acres English.

France, in regard to internal economy is one of the richest and most flourishing countries in the world. Grain is raised in sufficient quantities to supply their extensive population with food. Maize is mixed with other grain in the southern departments. The following is an average produce of grain from 1800 to 1812:

	Hectolitre.
Wheat	51,500,200
Rye	30,200,161
Maize	6,302,315
Buckwheat	8,400,473
Barley	12,576,603
Potatoes	19,800,741
Oats	32,066,587
	160,946,081

* I have not been able to get a sight of this pamphlet, but have a specimen of the corn.

† See the Encyclopœdia of Geography, title Productive Industry.

Average from 1825 to 1828:

	Hectolitre.
Wheat	60,553,000
Other Grains	114,733,000
Potatoes and Chesnuts	46,238,000
Wine	35,500,000

A French Hectolitre is 22.009667 gallons English.

The grain produced in Spain is of an admirable quality, yet they do not grow grain enough for their own use; they make regular importations.

The agriculture of this kingdom is remarkable for producing wool, wine and barilla. The entire number of sheep is five millions.

They consume twelve million quarters of grain annually, of which they raise two-thirds.

Portugal, though generally fertile, does not produce one-third of the grain necessary to supply its wants. The chief objects of attention are the vine and the olive.

Maize succeeds in Switzerland, 2000 to 2500 feet elevation.—[Geological Dic. vol. 2, p. 58.]

The Missionaries, Smith and Dwight, state that they found rich and luxuriant crops of Indian corn growing in Asiatic Turkey.

III. How much is raised in the United States?

I have not been able to arrive at even an approximation to the amount of Indian Corn raised in the United States, although I have spared no pains to obtain it; a gentleman in Missouri writes to me that "on the meadow lands of Missouri, bordering on the Mississippi River, he saw last summer thousands of acres of Indian Corn in Clark, Lewis and Madison counties, which produced not less than one hundred bushels to the acre, without any use of the hoe."

A gentleman in Kentucky says, "It is impossible for me to state any thing like the exact quantity of Indian Corn raised in our State; it is a principal grain with us, and it is no uncommon thing for our farmers to plant from one hundred to five hundred acres each year. In regard to the quantity exported from this state, I am not prepared to give any very accurate account, but believe it to be small in proportion to all other exports; my reasons are that it is a heavy article, and we live far inland,* and our principal attention has been for many years turned to the raising of stock, and when we reflect upon the vast amount of stock driven from our State to every other of the United States, it would be wonderful if we should export any considerable amount of grain of any kind. In order to give a fair idea of what is thought to be the ability of this and the adjoining State to export corn, I well mention that I have seen within a few days an advertisement calling for 20,000 bushels of corn to be delivered at a single point on the Mississippi river, and believe the price has been for some time from one dollar to one dollar and fifty cents the bushel."

Even in our own State I have been unsuccessful; a gentleman of Chester County writes to me. "I could not venture even to *guess* at an answer to your ninth question. I can scarcely guess at the quantity exported. I will, however, submit to you the following data for a calculation.—Chester County is about fifty miles long, and twenty miles wide. About half the land is under cultivation. About one-tenth of the arable is annually planted with Indian Corn. The average product of this, is about forty bushels per acre, or perhaps (taking the whole county,) not more than thirty bushels per acre. It is probable that one-third of the whole product is sent to market. Taking thirty bushels as the average crop, these data would make about three hundred and twenty thousand bushels of Indian Corn exported annually from this county. This I think is a low estimate."

* Spring Valley, Fayette county.

Farmer's Work.

ON THE USE OF LIME IN RAISING WHEAT.

In our last number, we produced some facts, which had a tendency to prove that lime, in some of its compounds, was not only useful, but *indispensable* for the raising of wheat. Our authorities for this assertion, were derived from the British writers. We will now adduce the testimony of an American cultivator, relative to the value of lime, especially for wheat, and give some practical directions for the application of this indispensable requisite for good farming.

A writer of the New York Evening Post, asserts that "he has experienced the efficacy of slack lime as a manure on ground that was entirely worn out, producing nothing but five fingered leaves and weeds. The ground was tilled, and 40 bushels to the acre was spread over it. It was seeded with grain, and timothy and clover were sown at the same time. It yielded me a fine crop. I mowed the same five years, without adding any manure. The second manuring was still more efficacious, when 60 or 80 bushels were used. Forty bushels, however, is as much as should be used the first time. I know of a farm in New Jersey in a lime stone country, completely worn out. The most that could be obtained for it was fifteen dollars per acre. I presume the purchaser would not now sell it for 50 dollars per acre. It is entirely renewed by lime, and it is a pleasure to look over it.

"The advantage of using lime is, you insure to yourself a certain crop, unless the season is very unfavourable. Ground which has not yielded wheat for many years now produces fine crops. In one instance, forty-five bushels per acre have been produced this season. Your grain of every kind will be at least double, in many instances treble. Your pastures will be very abundant—you may double and treble your stock of cattle. If you have more pasture than you want, plough under your clover—it will mellow and very much enrich your ground. The farmer will then reap abundantly and the old cry of poor crops will be silenced."

With regard to the best mode of applying lime, its quantity, &c., we can give no better directions than are contained in an article, published in the *Memoirs of the New York Board of Agriculture*, and republished in the Farmers' Cabinet, vol. 1, page 131, communicated by Daniel Buckley, Esq. of Salisbury, Penn. from which the following is extracted.

"The method of applying lime, which I have adopted in common with my neighbors, is, in the first place, to plough up a sod field with a strong team, in the spring or fall, harrow it the way it is ploughed, and mark the field into as many squares as you intend to put on half bushels, say 100 to the acre, which will bring the furrows about 20 feet apart each way, and require 50 bushels to the acre. This quantity I have found to be most profitable. When the lime is burnt, and as soon as it is cool enough to handle, it ought to be hauled on the land already marked, and half a bushel to be deposited in the centre of each square, in as compact a heap as possible. If water is convenient, I prefer to slack the lime immediately, rather than to wait for rain, as it becomes finer, and can be more easily spread. As soon as it is slacked, it is immediately spread and well harrowed. This method I prefer for Indian corn, barley, oats, rye and potatoes. On all the above crops, I have experienced a great benefit from lime, the first year after its application. With potatoes I add about 15 two horse loads of barn yard manure to the acre before planting. A second liming is often given and much approved of, after an interval of three or more years. This amalgamates better, and can be more intimately mixed with the soil. There are good farmers who differ as to the quantity of lime, that is most profitably applied. Some say 60 bushels on an acre, some 70, and some more. I have applied 100 bushels on an acre of lime stone land, at a dressing; but have not been able to discover any benefit in using it thus freely, nor any injury, except in the loss of the lime."

It is observed in "Letters of Agricola," that the application of lime is matter neither of mystery or of deep philosophical research. If the necessary quantity be given to land, and properly mixed with the soil, it is a thing of much less moment than we are apt to imagine whether it be applied in its caustic or mild state, and for this reason, that there is a natural progression from the one to the other.

Dr. Cooper, in the last edition of Willich's Domestic Encyclopedia, observes that "Oyster shells are frequently burnt into lime to lay upon land. They are a better manure when ground without burning, owing to the remains of animal matter in them. A good lime compost is the following: spread on any platform under cover 6 inches of mould, then three inches of well burnt lime; slack it with water in which common salt has been dissolved, at the rate of 1 1-2 bushels of salt, to each bushel of lime; cover it with 6 inches more of mould. Before lying it on the land, turn and mix this compost heap, and lay 300 bushels of it on each acre."—*N. E. Farmer.*

Salt as a Manure.

On the subject, respecting the best time for applying the salt to the wheat—should it be sown with the seed? or when the plant is just up? or in the spring? We should be induced, from every reason on the subject, to prefer applying it immediately after the seed is harrowed in; which agrees with the recommendation of Sir James Hollinshead, and the experiments of Sir John Sinclair, and other writers; or it may be applied when the wheat is well up into the ground, not later than February. It would operate early in the destruction of weeds, by killing them when sprouting, and would not injure the wheat plants. We should prefer its application thus early, instead of waiting till the spring, because—First, it would operate with greater advantage on young weeds, grubs, &c. which it would meet with in their most tender state. Secondly, with respect to preservation of moisture, wheat does not require that the moisture of the soil should be so carefully preserved, as some other kinds of grain, as it is generally too far advanced in its growth, before the draughts of summer, to feel any great want of moisture; although if it be admitted in some lands and counties, an increased supply of moisture would be beneficial; and also, if it was thought that the salt applied early in the winter, in any situation, might have lost its full operation, if excessive rains soon followed, and have been too much deprived of its powers of preserving moisture, or promoting putrifaction, this might easily be remedied, by slightly renewing the application in the spring; or may be provided against, by using two thirds of the intended quantity in the winter, and the remaining third in the spring.

Cure for Horn Distemper.

Take one handful of tanzy, two red pepper pods pulverized fine, two spoonfuls of fine salt, a sufficient quantity of rye flour wet with vinegar, to make them into pills about the size of a cherry—give five or six at a time.

The above was given by Mr. Zacchens Hovey, of Pownal, Vermont, with a request that it might be inserted in the Farmers' Cabinet. M. F. L.

Rensellear Co. N. Y. Nov. 18, 1837.

To Correspondents.

We acknowledge the receipt of several communications, but not in season for our present number. We have several articles of interest on file, for the ensuing number, among them a valuable paper entitled "Observations on Insects, with a view to arrest their destructive ravages, by JAMES WORTH, Esq., of Bucks county." Also an abstract of the tenth Report of the Pennsylvania Horticultural Society.

Farmer's Meeting.

At a meeting of farmers, convened at the house of Jacob Gilbert, Hay Market Hotel, in Sixth street, near Philadelphia, on the 7th of 11th month, 1837, JACOB SHALLCROSS was appointed Chairman, and *John P. Townsend* Secretary. It being suggested that the interest of farmers would be likely to be benefitted by their having an opportunity of conversing together on subjects connected therewith, It was on motion, *Resolved*, That the farmers generally in the surrounding districts, be respectfully invited to attend a meeting to be held at the above-mentioned place on 7th day, the 16th of the 12th month, (December) next, at 10 o'clock, A. M., for the purpose of conferring together on subjects connected with agriculture.

Spring Wheat Again.

Some of our subscribers who ordered the spring wheat of Mr. Peirce, in consequence of the notice in No. 31 of the Cabinet, complain of the advanced price now charged for it. We beg leave to assure all who may think themselves aggrieved, that we stated the price as given to us by Mr. Peirce at the time our first publication was made. He subsequently informed us that he had raised the price to $ 12—this we announced to our readers. We now learn that $ 15 per barrel is asked. This is certainly a high price, but nothing in comparison to the advantage of the grain to the farmer, if it answers the expectations of its advocates and friends.

Sugar Beet Seed.

We have on hand a small quantity of the genuine Sugar Beet seed, imported from France. Orders directed, post paid, to the editor of the Cabinet, will be attended to. Price One Dollar per pound. Also for sale a few copies of Mr. Pedder's Report, made to the Beet Sugar Society of Pennsylvania, on the culture of the Sugar Beet, and the manufacture of Beet root Sugar in France." The edition of this work is nearly exhausted.

Arab Cultivation of the Watermellon.

The Camel's Thorn, or *Hedysarum Alhagi*, as the botanists call it, abounds in the sandy and arid deserts of Arabia, India, Africa, Tartary and Persia. Camels feed upon it; but the Arab puts it to another use. The stem of the plant is, in the spring, divided near the root; a single seed of the watermellon is then inserted in the fissure, the earth replaced about the stem of the thorn. The seed becomes a parasite, and the nutritive matter which the brittle succulent roots of the mellon are ill adapted to collect, is abundantly supplied by the deep-searching and tougher fibres of the root of the camel's thorn. An abundance of good watermellons is thus periodically forced by the Arab from a soil incapable of other culture.

Durham Stock.

Fifty head of Durham cattle, belonging to the Ohio Company, were sold on the 20th October, for $36,443. The prices ranged from forty-eight to seventeen hundred dollars. The following are noted among the prices:

Matchem, bought by	A. Renick,	$1200
Young Waterloo,	Gov. Trimble,	1700
Duke of York,	R. R. Leymerer,	1100
Experiment,	Gov. Trimble,	1400
Comet Halley,	R. R. Leymerer,	1500
Nimrod,	E. Florence,	1040
Duke of Norfolk,	Gov. Vance and J. H. James,	1400
Goldfinder,	I. Cunningham,	1095
Blossom, cow,	R. R. Leymerer,	1000
Matilda, cow,	A. Watts,	1000
Moss Rose, cow,	J. Renick,	1200
Malina, cow,	I. Cunningham,	1005
Flora and calf Powhattan,	G. Renick,	1805
Young Mary and calf Pocahontas,	E. J. Harness,	1500
Tees Water and Calf Cometess,	J. J. Vanmeter,	2225

Acknowledgments.—We acknowledge the receipt of a PUMPKIN, of the mammoth species, from our friend JOSEPH E. HOWARD, weighing ninety pounds. Also a quantity of MERCER POTATOES from a subscriber in Edgemont township, fifteen of which filled a half bushel measure.

Persons who wish to procure the *first volume* of the Cabinet, would do well to apply soon, as there are but a few hundred copies remaining.

ARTICLES.	Philadelphia, Nov. 28.	Baltimore. Nov. 28.	New York, Nov. 28.	Boston, Nov. 29.
Beans, white, per bush.	$1 37–1 62½	1 25—0 00	0 14—0 15	1 37—1 75
Beef, mess, new, per bbl.	14 00–15 00	11 00–13 00	11 00–13 50	14 50–15 00
Bacon, western, per lb.	8— 10	7— 9	8— 10	.....
Butter, extra, per tub	13— 14	16— 20	21— 23	17— 18
Butter, fresh, per lb. (market,)	18— 25	20— 25	20— 25	25— 28
Hams, per lb.	12— 14	13— 13½	10— 12	14— 15
Hog's Lard, per lb.	7½— 8½	9— 10	8½— 9½	8— 9
Cheese, American, per lb.	9½— 10½	9— 11	8— 9½	8— 9
Beeswax, yellow, per lb.	26— 27	23— 25	26½— 27½	26— 32
Beeswax, white,	.....	38— 40	38— 40	38— 40
Bristles, American,	42— 65	25— 65	25— 65	.....
Flax, American,	8½— 9	9— 10	6— 7	9— 12
Flour, best, per bbl.	9 75—10 25	9 00—9 75	9 25—0 00	9 50—10 00
GRAIN—Wheat, per bush. Penna.	2 00—2 19	2 00—2 14	1 95—2 10	.....
do. Maryland,	1 60—1 75	1 80—2 00	1 60—1 75	.....
Rye, per bushel,	1 20—1 25	1 08—1 12	—1 25	0 00—0 00
Corn, do.	1 07—1 08	95—1 00	1 12—1 16	1 05—1 06
Oats, do.	40— 43	37— 38	40— 50	55— 00
Barley, do. Penn.	85— 90	... .	0 00—	0 00—0 00
Peas do.	1 00—1 25	00—0 00	— 8	.....
HAY, Timothy, per 100 lbs.	0 80—0 85	12 00 pr. ton.	.....	20 00 pr ton.
Meadow Grass,	70— 80	.....	... .	.....
Hemp, American dry rot, ton,	175 00–	6— 7	130 —140	.....
Hops, first sort, 1836, lb.	9— 10	— 9	— 10	7— 8
Plaster Paris, per ton,	3 25—0 00	0 00—3 50	2 50—	2 75—2 87
SEEDS—Cloverseed, per bushel,	4 75—5 50	6 00—7 00	.....	00— 00
Flaxseed, rough, do.	1 40—1 46	1 37—1 50	8 50—9 50	.....
Timothy,	2 00—0 00	3 25—4 00	12 50–14 00	2 87—3 00
Tallow, per lb.	8½— 10	— 10	— 11	11— 12
WOOL—Saxony, fleece, per lb.	00— 00	40— 50	50— 00	50— 55
Merino,	45— 50	35— 40	37— 00	45— 47
1-4 and common,	33— 36	25— 30	40— 50	33— 38

Prices of Marketing as near the average as can well be ascertained.

Beef,	7½ a 8 by the quarter.	Potatoes,	40 a 50 per bu.
Pork, country killed,	7 a 8	Turneps, white,	25 a 31 do.
Mutton,	6¼ a 8	Ruta Baga,	
Turkeys,	$1 12½ a 1 25 apiece.	Apples,	62½ a 1 00 do.
Chickens,	50 a 75 per pair.	Dried Apples,	1 50 a 1 75 do.
Geese,	75 a 87 a piece.	Dried Peaches,	4 00 do.
Ducks,	42½ a pair.	Cider,	3 50 a 4 50 per barrel.
Pheasants,	1 25 a 1 31	Lard,	12½ per lb.
Partridges,	25	Hams,	16 do.
Butter,	28 a 31 per lb.	Shoulders,	12½ do.
Eggs,	25 a 31 per doz.	Honey,	25 do.

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THE FARMERS' CABINET,

DEVOTED TO AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

Vol. II.—No. 10.] Philadelphia, December 15, 1837. [Whole No. 34.

For the Farmers' Cabinet.

Raising Chickens.

Auburn, Frederick Co. Md., Nov 23d, 1837.

I very much fear you will begin to think me either an epicure or the son of an epicure, it being only a short time since that I served you up a mess of bacon, and now come with a dish of fowl. It has been said it is not good for man to be alone. Bacon, although good alone, is very much better when accompanied with a good round fat pullet. But it is not a pullet that I am about to serve up to you at present, but her brother, though in an altered form, as you will learn in the sequel. It is a fact known to every traveler, that there is no dish presented before him half so often as that of chicken, served up in every form of which it is capable, broiled, fryed, stewed, baked, or boiled, and it is a fact equally well known that there is no dish so often turned away untasted, in consequence of its disgusting appearance or bad culinary preparations. I allude of course to such as we too frequently meet with on our public tables and watering places, (Bedford itself not excepted.) How often is the ears of the hungry and weary traveler assailed the moment the stage draws up to the inn, by the dieing shrieks of the rooster that had but the moment before been picking a scanty subsistence from the dunghill, and in a few moments more graces the head of the table, looking more like that well known waterfowl vulgarly called a fly-up-the-creek, who is indebted alone to the length of his legs and neck for a subsistence, than what it really is. But I have promised to give you something even better than a fat pullet, and I shall now proceed to serve it up; I mean then that favorite dish of the ancient Romans, the "Gallas Spads or Capon," or more plainly the cock altered by castration, and in such high repute was it that it generally graced the board of that most excellent judge of good eating, Lucullus, and if Shakspeare is to be believed, it was a tit bit not only with Jack Falstaff, but with the Justice who is represented—"In fair round body with good capon lin'd." In England, at the present day, at every respectable eating house the first thing that greets the eye of the traveler and heads the bill of fare, is a capon, either boiled or baked. In France they are made doubly useful, not only as an article of food, but a means of production; if I may be allowed the expression they are used as a foster mother for raising chickens, which they do much better than the hen, owing to the large size and thick coat of feathers. The poulterers use a considerable number of them for this purpose,—the moment the hen has hatched her brood they are given to the capon who rears them with all the care of the mother, the hen is cooped and well fed until she gains her flesh and strength and then turned out to lay and set again; in this way the poulterer is enabled to raise a large number of chickens from half the number of hens.—The capon at market sells higher than any of our domestic fowls. What is the reason then in our country where good living is so highly prized, the capon is seldom or never seen? Should you travel from Maine to New Orleans, you would probably never have this question put to you at table, "Sir, shall I help you to a fine piece of capon." I would by no means attribute this neglect of one of the finest dishes in the world to obtuseness of palate, but rather to a want of the necessary information as to the manner of performing the operation on the cock. To obviate this I will subjoin directions, by the observance of which a man of common adroitness can make two dozen capons in an hour. Lay the chicken before you on his left side, with his head towards your right hand, let an assistant hold

him by his head and legs extended; with a sharp knife make a transverse incision of one and a half inches or more in the side just below the ribs. Insert the fore finger, and near the middle of the body, at the distance of about three quarters of an inch from the incision, near the spine, will be found the testicles, which may very easily be removed by the thumb and finger; sew up the orifice and daub a little tar over it to keep off the flies. Care should be taken in cutting through the several integuments lest the viscera be wounded.—The cock should be about half grown. Not one in a hundred will die if the operation be properly performed. After a fair trial both of the bacon and the capon, should you relish them, I may be induced at some future time to serve you up some other dish, which I only hope may be found as agreeable to your numerous readers as was the long and learned dissertation we had some time since upon Hollow Horns.

With my best wishes,
I am respectfully your obt. Serv't,
J. W. J.

For the Farmer's Cabinet.

Remarks upon Farm Buildings.

THE ATMOSPHERE WITHIN A DWELLING HOUSE.

The objects of importance in a dwelling house are a pure and comfortable atmosphere, and so arranged as to procure this, and other necessary comforts for the inmates, with the least possible labor and expense. There appears to be in many houses two grand errors, in regard to the air; these are the want of uniform purity and temperature, where attempts are made to economise, or lessen the usual quantity of fuel; and it is for the purpose of finding a remedy for these, that the following remarks are submitted to the readers of the Cabinet, with a request that if any of them know of any better plan, after a trial of this, such will be published through the same channel. The plan is this, viz., suppose a ten plate stove, or a Franklin, or indeed any other stove, with doors to open or close at pleasure, so as to suffer no air to pass up the chimney while the fire is burning, except what passes through the fire; place this stove with the back, (or part farthest from the door,) next to one of the sides of the apartments intended to be warmed, and within one or two inches of the (outer) wall; but previously to its being so placed, one half or more of the stove is partially surrounded with a kind of casing of sheet iron, made two inches in diameter, or square, greater than that of the stove, with a tube three or four inches diameter, (or other dimensions,) riveted to the middle; this tube passes horizontally through the wall to the outside of the building, and the side to which it is riveted presses against the inner side of the wall, and the other parts surround one half, or more of the stove, within one inch of it; this casing is supported by the tube which fits closely to the opening in the wall, so as to admit no air into the apartment but such as passes through the tube itself. The stove is supported by three legs, or four; two of them under the front part, or hearth, in the usual manner, and the other *one* or *two* pass up through a hole or holes of the same diameter, in the lower side of the casing; the tube should have a valve to turn upon a pivot or fulcrum, at opposite sides of the tube, so as to close it by being placed across at right angles, and thus exclude the air from passing into the apartment around the stove; but when it is placed (or turned) in a line with the tube, air is admitted freely, in consequence of its being made so thin as to occupy but little of the diameter, or cross section of the tube; the valve should have an iron rod attached to it by a joint or fulcrum, and extend into the apartment, and so formed as to enable a person to confine the valve at pleasure at any position between a right angle and a line parallel with the tube; the valve should be composed of a bad conducter of heat, and possess other suitable properties. The operation is as follows, viz., the fire and fuel are placed in the stove, and the valve opened to any required extent; the *current of air* inward through the tube, and casing around the stove increases as the degree of *heat increases* in the stove; and as this air passes through the casing, it becomes sufficiently heated, and is as pure, perhaps, as possible for air to be when heated by artificial means, and by placing a tin or iron vessel of water on the stove, sufficiently broad and shallow, a degree of humidity may be given to the atmosphere of the apartment, equal to that caused by the sun's rays to the atmosphere generally. No air, (except through the said tube) should be admitted into the apartment.

In this manner, each apartment of a house may be heated by thus placing a stove in each; but in the latitude and climate of Pennsylvania, perhaps one stove of proper dimensions, placed in one of the apartments of the first story, above the cellar, would answer to warm sufficiently the other apartments of the same story, and that immediately above, of an ordinary sized house, except the kitchen, which should have a cooking stove, supplied with air on the aforesaid principle, but varied to suit the peculiar construction of the stove, a drum from the pipe of the cooking stove, where convenient, might assist to warm part of the upper story, but the atmosphere of the kitchen apartment, should be excluded as much as possible, from the other apartments.

Each out door of a house should have, during the winter season, a temporary door accompanying it, with the upper half composed of sash and glass, placed at a distance within the house, rather more than the width of the outer door, and both of them constructed so as to admit the least quantity of air when they are closed. The windows, and the whole outer surface of the house should also be constructed so as to admit no air except when desired, and then only at the top of the respective windows. Each stove pipe should have a damper or valve, similar to that in the tube already described, and made to turn on pivots or fulcrums, so as to close the passage of the pipe to any required degree. The top of each chimney should have an arched, or other covering, to exclude the rain from the flue, but so formed as to permit the smoke to pass off freely. Each flue should have a damper or valve, to open and close to any required degree.

Fig. 1.

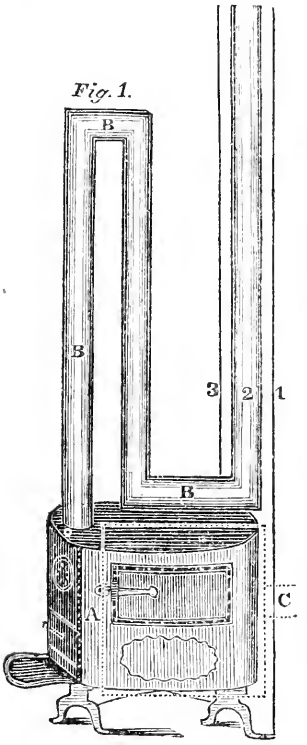

Fig. 21.

A, fig. 1, elevation or vertical projection of a side view of a stove. BBB, ditto. of pipe. C, the end of the horizontal flue or tube, at the outside of the building; the dotted lines show the position of the top, bottom, and two ends of the sheet iron casing, and the tube, 1, shows a section of the outer wall, opposite to the flue of a chimney. 2, shows a section of a chimney flue. 3, shows a section of the inner wall, opposite to chimney flue.

The cut represents a ten plate stove, with the casing placed partly under the arch of a common fire place, and the flue of the chimney; and another part extending beyond the breast, or inner wall of the flue from the fire place into the apartment; and the stove pipe is represented as passing up near the ceiling, and down below the arch of the fire place, so as to discharge the smoke from the stove at the lower end of the chimney flue. The lower end of the pipe may be connected with a piece of sheet iron, bent at right angles, and placed below and around the end of the pipe in such a manner as to prevent the passage of any air up the chimney, except what goes through the pipe. The tube from the casing, passes out of the apartment through the back wall of the fire place, and fits so closely to the wall, as to admit no air into the apartment, except what enters through the tube itself. I have represented this in a fire place, because that is the most convenient situation in houses already built, but they can be placed at any other convenient place, and any other kind of a stove used, by making the casing and tube of a suitable form and dimensions.

P.

November 21st, 1837.

We find the following highly interesting observations on insects, with a view to arrest their destructive ravages, in a paper read before the Agricultural Society of Bucks county, some years since, by James Worth, Esq. The subject is one of vast interest to agriculturists, and we ask for this paper that attentive perusal and consideration that its importance demands.

Observations on Insects.

BY JAMES WORTH.

Entomology, or the science of insects, is, I believe, admitted to be very defective in its most essential part; that is, an acquaintance with the habits of insects. It is with insects as it is with man and all other things in nature: it is their use, or works, or character, that is the primary object. What care we for the portrait of a man, unless for some great or good work that he has done, or the relation in which he stands to us? The print respecting the celebrated English Ox, is indeed a valuable print, but it is only valuable as it shows the essential points of a breed of cattle most easily fattened, and yielding beef of the finest quality. Now what interest have we in the form, or size, or color of an insect, other than to describe a thing that has done to us

certain benefit or injury. I bring this matter before you in order to induce a proper examination of those insects that are so detrimental to the agricultural interests: for when we ascertain the parent, manner and place of depositing the progeny, and general habits of insects, it is no difficult task to destroy, or so cripple them as to render them harmless to our crops; and I know of no way in which we can be more useful to our fellow beings, and better promote our own interests (in a pecuniary point of view,) than to remove such pests. But it is said that man is to govern, and not to destroy any part of the animal creation, further than his immediate necessities require. I would have subscribed to this doctrine in the first state of things, for then all were rightly balanced; there was a perfect adjustment of every part, and therefore each species held its proper rank in the great scale of creation; but how do matters now stand? It would require volumes to explain them fully, and would be deemed preposterous in me to make the attempt, but allow me to make a few remarks as regards the insect tribe. It must be obvious to every man of observation, that many species of insects have increased to an alarming extent, and unless timely checked, I verily believe that they will be the means of producing a famine in our land, and we know not how soon that dreadful event may take place; already we see our fruit and forest trees declining—our wheat crops nearly cut off, corn very uncertain, clover is failing, timothy affected, and even that hardy plant commonly called buckhorn, has not escaped, and our other crops will probably, in turn share the same fate. Look at the immense damage sustained the present season. If a fellow creature takes from us a single bushel of grain, we pursue him to the utmost rigor of the law. and yet, oh! shameful to relate, we suffer this lower grade of animals to rob us of a great portion of our store. This thing has come upon us in consequence of our wanton destruction of the feathered tribe, which is that link in creation that seems intended to keep the insect race within proper bounds, and we are left to do a work which the birds would have done for us; or rather, we are now suffering an evil that would never have happened to us. Then let us at once reform, by reversing our course of action.—The insect tribe has got the ascendancy by man's misconduct, and it devolves upon the present generation to restore the equilibrium. The increase of birds will greatly assist in the work, and I earnestly entreat that some immediate measures may be taken for their preservation. I do think that if every member of the society would absolutely prohibit gunning on his lands, it would have a good effect in discouraging a practice that, to say the least of it, is disgraceful to our nature. I rejoice to learn that in some parts of our country, the landholders have associated for that express purpose, and I understand that an association of that kind exists in Montgomery County, not far from the city of Philadelphia, where the inhabitants were almost as much annoyed by the gunners as by insects: much good has been produced. Now I trust that our society will not be behind hand in this praise-worthy business; and as it will not be entered upon through ill-nature, or with a view to lessen the enjoyments of any one, but as indispensably necessary for the preservation of our crops, in which the whole community are deeply interested, surely no man will be found so lost to a sense of duty and the dignity of his nature, as to oppose such salutary measures.

Do we not remember how the blackbirds formerly followed the plough in search of grubs? Alas! that faithful bird has almost disappeared. The woodpecker and other kinds, so diligent in guarding our fruit trees, are now scarcely to be seen; the little wren, so industrious about our houses and gardens, deserves our peculiar care; even the despised hawk, I have observed to be eminently useful in destroying field mice; indeed, almost every species claim our regard.

I would further recommend to the notice of the society, the common toad, as I am inclined to believe that it is very destructive to night insects. Snakes are also useful in feeding upon the vermin of our fields, and therefore such kinds as are harmless ought to be protected. I might also mention the ground mole.

I will now call the attention of the society to the following insects, to wit:

The Hessian fly, so destructive to our wheat crops.

A little worm found in the lower part of the stalks of wheat and rye, in spring and fall, and about the joints in June.

A worm in the straw above the upper joint, which causes the early change of color of the ear, assuming a ripe appearance, but producing no grain.

A species of louse or aphis. that infest grounds and feed upon the roots of wheat, corn, young trees, &c. and do immense damage.

A species of louse that feed upon cabbage, young leaves of peach trees, &c.

Worm that attacks the roots or lower part of the trunk of peach trees.

The white grub that infests our grounds in great abundance.

Cut worm or black grub, that harbors in the ground and cuts off the young plants early in the season. There is another black grub that appears later, at the roots.

Pea fly, that infests our peas.

Curculio, that produces a worm that enters into several kinds of fruit, and causes the dropping before ripe, particularly the plum, nectarine, apricot, and peach.

Rose bug, so injurious to that beautiful flower, the rose, and some seasons is destructive to grapes, strawberries, early cherries, apples, peaches, and other fruit.

Caterpillar, that feeds upon the leaves of trees and through carelessness often blasts our prospects of fruit.

Canker worm, that infests currant and gooseberry bushes, and quince and other kinds of trees.

Small insect that appears like scales or spots on the trunk, and sometimes extending to the branches of young trees.

A species of spider or webbing insect that causes the salivary disease of animals feeding upon grass or hay infested with it.

Very small black fly that attacks young plants; perhaps it may be the same, or similar to the turnep fly, for I have not examined it sufficiently close to describe it particularly.

Striped bug, so destructive to cucumbers, &c.

Ash-colored bug, that annoys squashes, pumpkins, &c.

The Hessian fly I have already investigated, and described to the society; but allow me to add a calculation of its astonishing increase. There are three complete broods in every year, and each fly deposites from one to two hundred eggs: take the smaller number and say that one fly deposites 100 eggs, which call the first brood; these 100 each bringing forth 100, makes the second brood amount to ten thousand; and each of them producing 100, the third brood will amount to one million—that is, a single fly is increased to a million in one year; or if, as is very probable, that the deposite is two hundred fold, then the increase amounts to eight millions in one year. Now if they were to go on in this way, all our wheat and rye, and barley would be but a morsel to them. Fortunately, however, they have several enemies, and particularly the June brood; but this may not always be the case, and therefore it behoves us to look to the matter before it be too late.

I have also mentioned the pea fly, but I will further observe that on planting my peas the past season, I poured them immediately from where they had been kept closely covered, into a vessel of water, and letting them remain a little while, the flies rose to the surface of the water, and none could escape after being once wet. I think it did not take above fifteen minutes to kill them all.

The peach worm is generated by an insect of something of a wasp-like appearance, and about seven-eighths of an inch long. The male has a dark or black body, with four narrow rings of yellow around it—some yellow about its mouth and thorax—wings transparent or little inclining to yellow, edged and streaked with black—a small bunch of down at posterior, appearing through a glass like a feathered tail. The female is of a beautiful purple or mazarine blue all over, except a rich orange stripe about one eighth of an inch broad, extending around the body with a little interruption, under the belly; and the inner edges of the wings appear light or transparent—the body is somewhat shorter, but fuller than that of the male—deposited eggs on the third day after appearing in the winged state, probably owing to its confined situation in a glass tumbler; the eggs are just discernable by the naked eye, are oval and of a dull yellow color, and were attached to the side of the tumbler with a gluey substance, so that I should suppose that the deposite is most likely generally made somewhere on the trunk of the peach tree; but this is a matter for further investigation. I have furnished Thomas Say, Esq., with a pair of the insects in living state, and he will give them a proper examination, and if not already noticed by some Entomologist, he will furnish a scientific description of them.

The white grub has done great injury this season to our grasses, grains, and roots, and has increased within the last several years, to an extent that ought to alarm us. Indeed such is the present number, that should all arrive to the winged state, and bring forth a full progeny, we may calculate that there will be an increase of at least one hundred (and perhaps several hundred) fold, to feed upon our next year's crops, and if the season should prove as dry as the present, every description of plants may be devoured by this single species of insects.

The curculio might, in a great degree, be destroyed by suffering hogs to pick up the fallen fruit, in which the larva is lodged.

The rose bug may be destroyed by early attention without much labor; it first attacks the rose, having a preference for it; then, as soon as the bugs are seen to collect upon the rose, take a vessel about half filled with water, (a large tin cup is a handy thing) in one hand, and hold it under the infested flower, and with the other hand disturb the bugs, and they will instantly fall into the water, and cannot extricate themselves, and in that way I have collected great quantities of them, which by throwing into hot water were in a moment destroyed; and I am sure that half an hour so spent, for a few mornings, would entirely rid us of that evil.

The caterpillar and canker worm I need say but little about, as by a little attention

the whole of them on a farm may be destroyed in less than half a day, by a single individual.

The other insects mentioned, I hope at some future day to be able to give a better account of. It seems indeed, an arduous undertaking, but if all who are concerned would take a share, the task would become light. May I calculate on the zealous co-operation of every member of the society? But it is said that man is a fallen creature, and doomed "to eat bread in the sweat of his face," and to be annoyed during his pilgrimage here below. I fully believe such to be our situation; nevertheless, I have the most perfect reliance that when man faithfully exercises the powers with which he is endowed, he is restored to his pristine state, and that he has as complete "dominion over the fish of the sea, and over the fowls of the air, and over every living thing that moveth upon the earth," now, as he ever had; that he is still lord of this world. All the evils that are upon us are of our own doings, and the moment we turn from the error of our own ways, we shall be blessed with the proper remedy. But we are not to be mere idle spectators, we must devise all possible means of working: we must be up and doing, and there is a part for each one of us to perform—every member of the society can and ought to do something; those who do not like to write, let them speak, or take their own way of communicating their knowledge; and in that way I am sure they will be useful. And remember that "your own knowledge is as nothing unless others know you to possess that knowledge; besides, if you possess knowledge that others need, (and I have no doubt but that every one of you do,) is it not your bounden duty to offer a supply? And so far from detracting from your own store, the very act of imparting would tend to your improvement. Thus it is, my friends, that I have so freely, on all occasions, tendered my little stock; and although not of much value, yet it has afforded myself both pleasure and profit.

An Essay on Indian Corn,

Delivered by Peter A. Browne, Esq., L. L. D., before the Cabinet of Natural Science of Chester county, Pa.

Continued from page 141.

IV. The varieties of Indian Corn.

Catalogue and description of the specimens in Peter A. Browne's Cabinet of Indian Corn.

A. Yellow Corn.

A a. No. 1. The genuine gourd seed Indian corn, so called from the supposed similitude in shape, between its grains and the seeds of the gourd; the spike contains, when thus unmixed with any other variety, twenty-four rows, which is the highest number of rows on any cob of Indian corn I have ever *seen*. I have *heard* of twenty-six rows. When this corn is mixed with any other variety, its spike gradually diminishes in its number of rows until it arrives at the maximum of the variety with which it is mixed. Examples of these mixtures are seen in

No. 2, of twenty-two rows; No. 3, of twenty rows; No. 4, of eighteen rows; No. 5, of sixteen rows; No. 6, of fourteen rows;* and No. 7, of twelve rows.

A b. No. 8. Is the genuine King Philip Indian corn, so called from the celebrated Indian chief, "Philip king of the Wampanoags." It has eight rows, which is the lowest number of rows on any spike of Indian corn. It is a hardy plant, belonging to a high latitude, the seed was originally obtained from the aborigines of the north.

This variety mixes well with the gourd seed, and Nos. 2 to 6 inclusive are the products of these essays. No. 7 is a mixture of Nos. 1, 8, and 22.

A c. No. 9. The Sioux or yellow flint Indian corn, with twelve rows. The seed was obtained from the Sioux tribe of Indians, who, at the settlement of Canada, inhabited the north, but who are now residents of the west.

No. 10. The Sioux, grown in Pennsylvania. Twelve rows.

No. 11. The Sioux and gourd-seed, mixture. Sixteen rows.

B. White Indian corn.

B a. White flint. *B b.* White flour corn.

B c. White Sacharine, or sweet Indian corn.

B a. No. 12. Genuine white flint. Twelve rows. Virginia.

No. 13. White flint. Ten rows.

No. 14. Early white flint. Twelve rows.

B b. White *flour* corn.

No. 15. From Peru. Eight rows.

No. 16. Pennsylvania. Eight rows.—Called in Maryland, Smith's early white.

No. 17. New Jersey. Eight rows.

No. 18. New-York. Ten rows.

B a. & B b. Mandan Indian Corn.

No 19. A mixture of No. 12 and No. 15. Grown in the Indian Village of Mandan.

B c. White Sacharine or sugar corn.

No. 20. The early Sacharine, twelve rows, grains shrunken.

C. Hæmetite, or blood red Indian corn.

No. 21. Common sized hæmetite, with 12 rows and red cob.

No. 22. The red cob with white grains.

No, 23. The red cob with yellow grains

No. 24. The red cob with brown grains.

No. 25. The red cob with white gourd seed.

* Called in Maryland the Dutton Corn.

No. 26. The red cob with gourd seed and yellow flint.
No. 27. White cob with red grain.
No. 28. Speckled red and yellow grains on a white cob.
No 29. The same on red cob.
No. 30. The dwarf hæmetite, commonly called Guinea corn.

D. Blue corn.
No. 31. Blue corn. Ten rows.

E. No. 32. The corn of Texas; each grain is enclosed in a pod or husk, and the ear in a husk.
No. 33. Corn found in an envelope of a Mexican mummy.
No. 34. Corn grown near Sheffield, Yorkshire, England, in 1835, from seed raised by Wm. Cobbett.
No. 35. The famous Dutton corn.

A former collection made by me, and presented to the royal Academy of France, (Paris,) contained forty-two varieties.

V. Of the varieties of Indian corn, which kind is preferred for cultivation?

Mr. Taylor says, that in selecting Indian corn regard should be had to three circumstances.

1st. The most stalk.
2d. The largest cob.
3d. Longest grain.

To which I will add, 4th, early growth and quick culture.

Upon the size of the stalk he sets a high value. 1st, because it produces some economy in labor; for one man can gather far more grain, stalk, blade, top, shuck and cob, in the same time when the plant is large than when it is small.

2d. It produces a greater quantity of fertilizing matter to be returned to the soil.

3d. The longest and thickest cob (if the length of the grain is equal) produces the most corn.

4th. Length of the grain, (supposing the cob to be equally long and large) decidedly settles the superiority of the farinaceous product.

5th. The earliest corn, and that which comes quickest to maturity, is most esteemed by the horticulturist, as it commands the best prices for the table, but it is generally dwarfish.

VI. Capability of preservation and retention of power of germination.

That Indian corn, when well dried, will keep for many years and preserve its capability of germination, is stated by most writers upon the subject; but none of them that I have consulted, specify the particular time it may be kept, or set any limit to its re-productive property. The ear or spike of corn found in the envelope of the Mexican mummies will serve to put this question to the test, for Mr. Peale has obligingly consented that the experiment may be tried upon a few grains. The result will be communicated.

To prevent the seeds of corn from germinating they should be kept *dry;* no seed can germinate without *moisture.*

No germination takes place in pure carbonic acid, hydrogen, or nitrogen gas, or very rarified air, nor do these gasses destroy the seed; they merely prevent its developement into a plant.

Nor will any germination take place in a temperature below the freezing point of water.

VII. The method of cultivating Indian Corn in the United States.

Col. John Taylor, of Caroline county, Virginia, gives us the following account of the method of cultivating Indian Corn in Maryland, Virginia, and North Carolina; [Arator Balt. 1817; p. 101.]

"The rows are never ploughed but in one direction, cross ploughing being wholly abandoned. Their width is five and a half feet.—The field being once thrown into the position of ridges and furrows, never requires to be laid off again. The furrow is left as deep as possible, and when the field comes again into tillage, the list or ridge is made upon this furrow, so that there is a regular alternity between ridges and furrows. If the soil is of a friable nature, a large plough drawn by four horses, and cutting a sod about 12 inches wide and 8 inches deep, is run on each side of this old furrow, and raises a ridge in its centre, on which to plant the corn. The old ridge is split by a large trowel-hoe-plough, having a coulter on the point, two mould-boards, drawn by four horses, and cutting ten inches deep. If the soil is stiff or tough with turf, then first plough with four horses, ridges or lists on the old water furrow, with four furrows of the same depth and width. On the summit of this ridge or list, a deep and wide furrow is run with a trowel-hoe-plough and two mould-boards, in which the corn is planted, and covered between two and three inches deep with the foot. The planting is guided by a string carried across the ridges, with coloured marks at the distance apart intended for the corn. This furrow is a complete weeding of the ridge, previous to planting, which it should barely precede. The corn receives no more ploughing until it is thinned and hand-hoed along the rows, about two feet wide. After this, a deep furrow is run on each side of it, by a large plough, drawn by two horses, with a mould-board, causing the earth thrown out of it to meet the corn, though the furrow is a foot from it. Thenceforth the tillage consists of a streak or furrow, of a mere weeding plough called a 'skimmer,' cutting with two wings, twenty-four inches, drawn by one horse; and of a central, deep and wide furrow made with a trowel-hoe

plough and two mould boards, drawn by two horses; to be repeated when necessary. The whole to be concluded with a narrow weeding or hand-hoe, along the slip, in the direction of the row, not kept completely clean by the skimmer."

The advantages of this method of cultivating corn with high ridges and deep furrows, Mr. Taylor states [p. 102,] to be, "that the corn is planted immediately over the furrow of the preceding crop, and by completing the reversal of the ridges early in its culture, it grows upon a depth of tilth three or four times exceeding what is attained by planting and cross ploughing in the usual mode. Its roots are never cut in one direction, and this great depth of tilth thus early obtained, by superceding the occasion for deep ploughing in the latter period of its growth, saves them in the other. The preservation of the roots and their deeper pasture, enables the corn much longer to endure drought. The litter of enclosed ground, thrown into the deep furrow upon which the corn list is made, is a reservoir of manure, far removed from evaporation; within reach of the roots, which will follow it along the furrow; and calculated for feeding the plant in droughts. The dead earth brought up by the plough from the deep furrow, is deposited on each side of it, without hurting the crop on the ridge, and with the bottom of the furrow remains for several years to be fructified by the atmosphere, so as to escape the present loss sometimes accruing from mingling too much dead earth with the soil by deep flat ploughing; and yet to mellow and deepen it more rapidly. And much labor is saved in planting the corn, whether the hoe is used after a string, or the string is carried across furrows previously made on the ridge.

In all lands unable to produce forty bushels of corn to the acre, the proper distance is five and a half feet square, with two or three stalks at each station, except in poor spots, where one will suffice. If it can produce that crop or more, he plants it at the distance of five feet six inches by 2 feet 9 inches, leaving two stalks in sandy and three in stiff lands.

The ridges upon which the corn is to be planted should run north and south, to equalize the benefits and injuries derived from the sun.

In regard to curing the blades, which are called fodder, he observes [p. 192,] that it must be carefully preserved from the sun, and from rains and dews. If it is shocked, there should be a flue from the side the wind generally blows at that season, and up the centre, to admit of a free circulation of air. The ends of the blades must be laid forward.*

To be continued.

*"The Indians of our country had an opinion that the best time for planting Indian corn, was when the leaves of the white oak, (Quercus alba) first made their appearance; or, according to their expression, are the size of a squirrel's ears.—Mrs Lincoln's Bot.

On Yoking Oxen.

A great diversity of opinion exists as to the best method of harnessing oxen; it has been made a subject of almost as much dispute as the propriety of working them. The most ancient, and until within about the last century the only mode, was the yoke, which nature seems to have pointed out in the strength with which the animal is furnished about the head: he uses it for defence, and when extraordinary exertion is required at labor, he, when yoked, puts his nose as close as possible to the ground, thus evidently pulling by the muscles of the neck. Throughout the south of Europe where oxen are generally used for labor, it is the sole method known of attaching them to the plough or cart; but they are there universally worked in pairs, whereas in this country they are sometimes used singly in carts, or one before the other in the plough, in which cases the yoke is certainly awkward. Its cumbersomeness, when they are yoked singly, suggested the idea of horse-collars and harness, which being found to answer the purpose for light work, has been very extensively adopted, as an improvement on harnessing pairs is of very doubtful value.

The French method of yoking oxen was introduced into Ireland a good many years ago by the Earl of Shannon, and an improvement on it has been effected by giving to each beast a separate yoke, or forehead-board, under which the animals step more freely than when bound together, and can besides be worked singly, as represented in the annexed cut.

The yoke consists of a flat piece of ash about eight inches wide in the middle, reduced to three at the ends, and proportioned in length to the size of the ox, the object being just to clear his sides from the traces, or chains, as at figure No. 25. This board is lined with woollen cloth and stuffed with hair; to an iron staple affixed at either end is hooked a long trace, or chain, which reaches from the extremities of the swingle-tree.

Figure No. 26 represents the back-band, which is of ash, about 14 inches long and 3 1-2 broad, concave within and stuffed with hair so as to lie with ease across the back; at either end hangs a short chain, to which the traces are hooked up.

When four oxen are yoked, the draught is in like manner with long traces, and those of the leaders are supported by a strap across the shoulders of the hinder cattle. It is how-

ever desirable, in the choice of oxen under this yoke, that their horns should point upwards so as not to interfere with the trace:

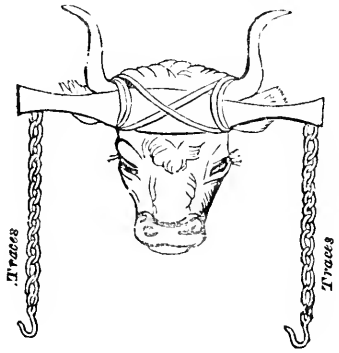

Fig. 25.

It will be observed that the draught from this yoke is solely from the neck, and not at all from the horns, to which the board is only strapped to prevent it from falling off; so that in this manner the ox rather pushes than pulls. The intelligent reporter of the King's County, from whom this description is taken, says, "that the cattle are very easily broken to this method; that they step out very light and free, and though severely pressed, to prove the experiment, on a broiling summer's day, in a very heavy fallow, and up-hill for a long pull with the coulter buried to the beam, they worked quite easy without puffing or lolling out the tongue, which would have severely distressed the best trained and strongest bullocks if harnessed in the usual way from the shoulder." The plan has, in fact, been admitted to be an improvement on the common mode, but such is the force of prejudice, that it has not been adopted by the neighboring farmers.

When worked in collars, they are generally driven two abreast, and often without winkers; and in most places throughout Ireland, instead of collars, a twisted rope is used with straw back-band, called *suggans* and *gads*, which, though rather offensive to the eye, is nevertheless as safe and easy to the beast as the collar, and much less expensive. In harness, a horse-collar turned upside down answers the purpose. Woollen collars have been tried for oxen, and two kinds, differently formed, have been used; but there is great difficulty in fitting the shoulders of an ox,—and the hardness of the material employed, when they are not nicely fitted and closely made, hurts the blades. A drawing is added, in case of any one choosing to try them, as there certainly would be a considerable difference in expense; but the old plan would probably be found the most advisable, though those here represented have been recommended by Marshall "as incomparably preferable to any other ox-collar that he had made use of." He is, however, of opinion that fig. 27 —which is convex, and is, in the fullest parts, from 1 to 3 inches thick, according to the size and shape of the ox's shoulder—deserves the preference, as being firmer than fig. 28,—which is made in the form of ninepins,—as the iron bow by which they are connected is apt to become twisted.

Fig. 26.

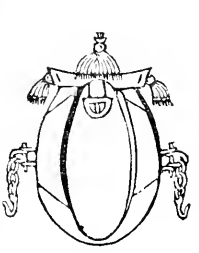

Fig 27.

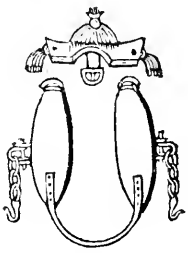

Fig. 28.

No. 27 appears to bite on the fleshy part of the shoulder, and leaves the bones full room to play. The fault in No. 28 arises, however, merely through some defect in the workmanship. The idea of their construction arose not alone from their being more cheap than stuffed collars, but also from the observation that, when a horse galls, it generally proceeds from some knot or lump in the stuffing; but let the straw collars be ever so hard, yet, if they are quite smooth, they seldom gall; and the truth of that remark is said to have been fully proved on the shoulders of his own oxen, "for they became as fine and polished as the wood itself."

The world is an echo which returns us our own words; for which reason, if one would be well spoken of in the world, he must speak well of the world.

Mangel Wurtzel.

To the Editor of the Friend:—

Knowing thy interest in agricultural affairs, and thinking many readers of "The Friend" would feel a similar interest in the very interesting particulars detailed in the accompanying statement; I send thee the following relation of them, drawn up at my request by the friend himself, and of the accuracy of which there can be no doubt. I think the produce of the cow beet so great and so well adapted to feeding cattle, particularly on small arms, that I am desirous of giving a wider circulation to the accompanying particulars in order to induce our country friends to give them further trials. C. W.

Particulars relative to a crop of beets, (Mangel Wurtzel,) raised in the season of 1837, on the farm of Isaac C. Jones, called Rockland, on the banks of the river Schuylkill, in the neighborhood of the city of Philadelphia, viz:

Net measure of the ground on which they stood was 67 square poles. Add for the headland or turning ground, 4 do. Total, 71 square poles, being nine less than half an acre.

The produce on the above mentioned ground, excluding the leaves, and confining it entirely to the roots, amounted to four hundred and thirty bushels, agreeably to the measurement of Joseph Berry, the farmer who attended to their culture for the said Isaac C. Jones throughout the season. On weighing a portion of these beets, it was ascertained they would average fifty-five pounds per bushel, making an aggregate of twenty-three thousand six hundred and fifty pounds, or a little over ten amd a half tons (of 2250 pounds each,) being at the rate of twenty-three and two-third tons to the acre, or nine hundred and sixty-nine bushels.

Many of the above mentioned beets weighed from seven to thirteen pounds. One that was particularly measured and weighed, produced the following result, viz:—Twenty-seven inches in circumference, and weighed thirteen and a half pounds.

The produce would have been considerably increased had not many of the seed proved defective, and the plan of transplanting resorted to; but the latter, if well done, answers an excellent purpose.

The above-mentioned ground was accurately measured by said Joseph Berry, and the subscriber, this 11th month, 8th, 1837.

Isaac C. Jones.

Never shrink from doing anything which your business calls you to do. The man who is above his business, may one day find his business above him.

From the Farmer and Gardener.

Brooks' Silk Spinning Machine and the Silk Culture.

We have always been sanguine with respect to the ultimate success of the silk culture in this country: our opinion was grounded in our honest belief of its great profits, itshappy adaptation to ours oil and climate and to the interests and wants of our people: but there was one difficulty which always presented itself to our mind, and made us fear that some years would have to revolve around before it would be fully established. ☞ *We allude to a want of a market for the cocoons.* Almost any farmer with his own domestic force, could gather leaves, feed and attend the worms, and produce a crop of cocoons; but the latter without a market near at home or the means of converting them into silk, being of a nature that forbid compression, and occupying much space, would not in that state bear distant transportation to find a market. And as matters stood a few years since, the only good effected in submitting the cocoons to the operation of the Italian reel, the one most approved, was to transform the delicate fibre from its conic shape into raw silk, which had again to be submitted to the operation of *twisting* before it could be said to be generally merchantable. All these difficulties, however, are, in our estimation, entirely removed by the introduction of the excellent machine invented and successfully put into practice by Mr. Adam Brooks, of Scituate, Massachusetts. Of this machine, and its wonderful performance we had often heard, but could not from any description of its mode of operation, fully comprehend its very great use and peculiar fitness for the purposes of the American agricultural public. We had contemplated a jaunt to the eastward next spring, for the purpose of examining the operation of one of Mr. Brooks' machines, and of gaining such practical knowledge as would enable us to go into the silk culture the ensuing year, having already provided ourself with an abundant supply of the morus multicaulis trees, the best variety of the mulberry for the feeding of worms and production of silk .The opportune arrival of Mr. Brooks in our city, however, last week, has saved us all that trouble and expense. We prevailed upon him to take his machine out to our residence in the country, where he put it into operation, and worked up about half a peck of cocoons, to the entire satisfaction of every one present, not only winding off the gossamer silken fibre from the cocoons, but at the same time converting it into a most beautiful *sewing silk*, doubled and twisted, equal in evenness and fineness to the best Italian, and greatly superior in elasticity and strength. This was all done with perfect ease, and so simple is the

machine in its construction that any woman can obtain a competent knowledge of it in two or three hours.

One great object in the construction of this machine, arising from its simplicity and fewness of parts, is, that it but seldom, if ever, gets out of order, if well treated; and another not less important is, that should it by any accident become deranged, almost any ingenious mechanic can at little cost put in repair. These are *desiderata* which must largely contribute to bring it into general use, and render it a favorite with every one engaged in the silk culture. With one of these machines, no farmer need be at a loss for a market for any silk he may raise, as his wife and daughters, without neglecting their other occupations, with the aid of a lad to turn the wheel, can manufacture all he may make into good sewing silks. His silk thus fabricated, as every one knows, will readily find a market near at home, in almost every village; but should a market not be thus convenient, it can easily and at little expense be transported to any of the larger cities, where he is sure to find a ready market and good prices. One of these machines, moved by a hand power, attended by a female and lad, as above stated, can readily turn out from one-half to two-thirds of a pound of good sewings in a day. The value of the cocoons in their raw state is *four dollars* per bushel, that is $4 per pound, a bushel making a pound; when manufactured into sewings, it will be worth from $7 to $11 per pound, according to the care and skill with which it may be fabricated. Let us now, then, attempt an approximation to something like a calculation of the profits; and in order to do so we will presume that a farmer has an acre in culture. We have in our unpretending manual assumed, that an acre is competent to furnish foliage sufficient to support 540,000 worms; that calculation was based upon the supposition that they were to be fed upon the leaves of the *White Italian Mulberry;* but from our experience we have no hesitation in affirming, that one acre planted in the *Morus Multicaulis*, or *Many Stalked Chinese Mulberry*, will furnish leaves enough to feed 1,000,000 of worms at the first feeding, and if the eggs be *kept over*, as they can be by being placed in an *ice house*, the same acre of trees will furnish foliage enough to feed a *second crop* of an equal number of worms.—But let us wave the feeding of the second crop, and this will be the result.

A million of worms will produce 333 1-3 bushels of cocoons, which will yield 333⅓lbs. of silk, which silk when made into sewing silk will be worth at $7 per pound, the minimum or lowest price, $2333 33 1-3; if we deduct the expense of manufacture, as follows: two women, or girls, are competent to attend four machines, with the aid of 4 boys to turn the wheels: in 6 months, with easy work, these can convert into sewing silks, 333 1-3lbs. of silk. I set down the wages of the two women at $3 per month, which for the 6 months they will be occupied, will amount to $36; allowing their board to be worth $10 per month, it will be $110; the wages of the boys at $5 per month, is $120, their board at $10 per month, is $240; cost of the services of two women to reel 333 1-3 lbs. of silk into skeins, say two months, board $40, wages $12; interest on cost of 4 machines, say, first cost $40 each, transportation, $5=$180; interest per annum at 6 per cent., $10.80; cost of cleansing, coloring, and doing up into separate skeins, if done at a dye-house, $1 per pound, on two thirds, say 222 lbs.=$222; cost of cleansing the balance of 111lbs. 25 cents=$27.75, or, for the whole process, $249.75; cost of feeding the worms, if fed on morus multicaulis leaves, $41.63.

Now let us see how the account will stand:

RECAPITULATION.

ONE ACRE OF SILK IN ACCOUNT WITH CULTIVATOR. Dr.

For wages of two women 6 months,	$36 00
For board of do. " "	120 00
For wages of four boys, " "	120 00
For board of " " "	240 00
For cost of two women to reel,	52 00
For interest on cost of 4 machines,	10 80
For cost of cleansing, coloring, &c.,	249 75
For cost of feeding the worms,	41 63
Balance as per contra,	1,463 15⅓
	$2,333 33⅓

Cr.

By value of 333⅓lbs. of sewing silk, at $7 per pound,	$2,333 33⅓
	$2,333 15⅓

By balance or clear profit of one acre, in the silk culture, the silk converted into sewing silks, $1,463 33⅓

The agricultural reader will perceive, that in this estimate we have taxed the acre in silk culture with *laborers*, and the board of such laborers, as though the cultivator had been compelled to call in *extra help*, whereas we believe that there are few who would engage in the business but would have the necessary help within themselves, for all purposes except feeding the worms, and this expense, from the circumstance that the leaves can be gathered and the worms fed just as well by children from 7 to 10 years of age, as by grown persons, it only being necessary to employ one careful hand in the cocoonery to give a general superintendence over them, may be

much reduced. And what more beautiful or interesting employment could a farmer ask for his wife, daughters and sons, than that of tending to silk worms, an occupation that the empresses and nobility of the *east* monopolized for centuries. He will also perceive that the cost of dyeing, cleansing and separating the skeins forms a heavy *item*, because it is presumed that this work is to be performed at a dyeing establishment; now the truth is, that any good housewife with the directions contained in the work we had the honor of publishing a year or two ago, may save to her husband all this expense, saving and excepting about ten cents per each pound of silk, for dye-stuffs, making $22.20.—If, then, we subtract these expenses, which may be saved, it will make a difference in favor of the cultivator of $795.55. That the dyeing, cleansing and separating the skeins may be as well done in each cultivator's family, we have no hesitation in affirming; for Mr. Brooks exhibited to us samples of sewing silk, which had not only been spun by his wife, but cleansed, dyed and put into skeins also, and we do not ask too much for it when we say, that it will lose nothing by comparison with the very best Italian sewings we have ever seen. He also shewed us some specimens of silk handkerchiefs which had been made by his lady, and wove on a common loom; these for softness, fineness, and high finish, were equal to any imported article in the market. The stamping of the figures on these were executed by Halliday, of Lynn, Mass.

It may not be inopportune before we conclude to make a few remarks in explanation of our former *estimate* of the cost of attendants during the process of feeding, which occupies about six weeks at farthest. As we have before premised, that estimate was based on the supposition that the leaves were to be gathered from the white Italian Mulberry, and as the leaves of the Morus Multicaulis is nine or ten times larger than those of the former, the expense is consequently reduced in a proportionate ratio; but as we like to make *full allowances*, we have only in *this estimate* reduced the expense one half.

In our Manual we stated that the legislature of Mass. had granted a premium of 50 cents on every pound of *reeled* silk; they have subsequently repealed that act, and now grant a premium of $1 on every 10lbs. of cocoons raised in this state; 50 cents per pound on all silk raised and reeled in the state, and 50 cents for all silk grown, thrown or twisted in that state: thus giving a premium of $1 per pound to the prolucer and manufacturer of sewing silk, an amount fully equal to all the labor, where it is done as it should be, in one's family. This act of high and exalted patriotism acts as an incentive among her citizens and is producing the happiest effects upon the interest and well being of that ancient commonwealth. Should not her noble example urge upon the legislatures of the other states of the confederacy to make enactments granting similar bounties? We think it should.

We cannot close this article without mentioning that Mr. Brooks will deliver Reels in Baltimore, competent to perform the work of converting cocoons into sewing silk, for from $10 to $15; his residence is in South Scituate, Massachusetts, where he manufactures them extensively. He has already received *premiums, medals, and certificates of excellence*, from the following Institutions.

"The Agricultural Society of Plymouth county, Massachusetts."

"The State Agricultural Society of Massachusetts."

"Philadelphia Agricultural Society."

"Kennebec (Maine) Agricultural Society."

"New York State Agricultural Convention."

"Fair at Boston, Massachusetts," and the "New York American Institute."

There is much truth in the following advice, given in the Boston Courier; and it might be adopted with benefit in our sections of the country as well as New England:—

Advice Gratis.

A few days ago we heard a hearty and thrifty looking farmer inquiring, in a store in State-street, if the gentleman knew of a place in a store where he could put one of his sons. At the risk of being thought impertinent, we asked him if he knew of a place in the country where a boy was wanted to turn up the sod. He said he did not then; he wanted a hand a while ago, but he hired this man, pointing to his companion, a hale, hearty man of thirty-five.—This led to some further conversation in which we learned, that the farmer thought it best to send his sons into the city, to learn to trade, particularly if they were not of stout constitutions, and supply their places by hiring men to work on his farm.

In this opinion the honest farmer is by no means singular, but we apprehend that the advocates of his doctrine lie under a sad mistake. The love of speculation and the hopes of accumulating an independent fortune, or, at least, a competency, without actual personal labor, are the curse of New England.—To country boys at 15 or 16, the difficulties of trade and the dangerous uncertainties of shop-keeping are inconceivable. They see nothing but ease and happiness in the employment of the well-dressed clerks of the counting house, and forthwith they must leave the farm, where money is turned up in every

furrow, and health sparkles on every blade of grass, to throw away half a dozen years of the spring of life behind a counter. Their minority is closed, and they must then enter upon the world with little or no improvement in their moral, intellectual or physical habits, with no capital but their integrity and good name (if luckily they have been able to pass through such a dangerous apprenticeship without loss of these qualities) wherewith to commence business, and with the knowledge of no profession, but one that is full of competitors, and which offers them no prospect of independence. The city is crowded with shopkeepers, and there is no branch of what may be called *trade* that is not overdone. If a young man obtains credit for a small stock of dry goods, or hardware or groceries, ten chances to one he is unable to meet the *first* payment, and if he should be so fortunate as to have turned his stock and made a small profit by the revolution, the second or third period of payment finds him unprepared and he must either *clear out* (as the phrase is) and seek a living at New York or some other remoter place, or he must write "*Agent*," under his name, on the sign, and struggle with his debts and his bad luck a little longer. The result of this latter arrangement need not be told. Every body knows how few of those who *fail*, ever recover from the shock which broken credit produces; and how hard it is for an "*Agent*" of this description ever to recover the character of a *principal*.

How happy would it be for hundreds and thousands of our young men, if they could be persuaded that a few acres of ground are a better capital, than as many thousands of dollars procured by writing their names at the bottom of a negotiable note; and what years of misery might be saved, if men would believe that a dollar actually earned by honorable and healthful labor, as farmers and mechanics, is worth a hundred in prospect to be gained in trade and speculation.

Barley Flour.

Flour made from barley is becoming an article of diet, in various parts of the state. It makes the finest of cakes, and when prepared in like manner, is by many preferred to buckwheat. Farmers are making the same discovery with regard to this grain that they have in regard to apples. They find it to be as unlike economy to send their Barley to the brewers to be converted into beer to make paupers and criminals for them to support, as to convert their apples into cider to create an appetite in their chidren for stronger drink. Apples are now considered about as valuable as potatoes to fatten hogs; and barley, ground, is a most valuable food for all description of stock.

For the Farmers' Cabinet.

Winter--To the Husbandman.

The song of 'the husking' is o'er,
The corn-crib of plenty doth tell;
The garner o'erflows with its store,
And the barns with rich provender swell!
The toils of the husbandman, earth
With crops of abundance hath blessed;
Now, the plough-boy to school hastens forth,
And the plough hath its 'season of rest.'

The herds from the pastures have come,
(No longer with green herbage crown'd,)
To the barn-yard, their long winter home,
Where a carpet of straw is spread round;
And well have their riches deserved,
The care which the farmer bestows,
Who hath snug and warm stables reserved,
To shield them from pitiless snows.

The hickory piles, towering high,
Give promise to brighten the hearth;
While they bid us turn Charity's eye
To the poor and the needy of earth.
And the generous mug overflows
With cider, all sparkling and clear;
Which at eve, when *without* the wind blows,
Within is the farmer's 'good cheer!'

The housewife hath willingly sought
The 'wool and the flax' of the field,
And clothing in carefulness wrought,
Her household from winter to shield.
While the rich golden butter and cheese,
Thrice rich, as the work of her hand!
Shows that luxury follows not ease,
But with *industry* goes through the land.

And oh! if the lovers of ease,
Who seek it in pleasure's turmoil;
Who try all that pledges to please,
And have disappointment for toil;
Would turn to some homestead at night,
And see the true peace of that hearth
Where contentment and competence light
A smile more enduring than mirth:

Sure, then, would the gayest admit
That happiness dwelleth at *home*,
And never was treasured as yet,
In the heart that for pleasure doth roam.
There seated beside the bright fire,
The helpmate her knitting doth ply;
While with book or some story, the sire
Makes time seem *too* swiftly to fly.

The children, a group, cluster round,
All smiling through roses of health;
Oh! where can those riches be found,
Surpassing the husbandman's wealth?
And ah! if there's gratitude due
From *all*, to the Father of love,
How oft should the farmer renew
His thanks for these gifts from above!

E. C. S.

Cedar Brook, Plainfield, N. J.

Hemp and Sun Flower Seed Oil.

From a communication in the Cuyahoga (Ohio) Plough Boy, we learn that Hemp and Sunflower seed are being used for making oil for lamps, and it is said to be superior to any oil save sperm and equal to that. Each kind of seed yields one gallon to the bushel. The Sunflower is said to be superior to the hemp seed and owing to the price for hemp seed, it is thought to be inexpedient to make it into oil. But the Sunflower yields about 160 bushels to the acre and therefore is believed to be very profitable. The cost of expressing the oil is 25 cents per gallon, which would leave a good profit.

The Native Grape.

We are not yet well acquainted with all the varieties of fruits in the American forests, nor how they may be improved by cultivation. We have ourselves found in the woods better grapes, than that called the Isabella. A correspondent of the Cincinnati Daily Express says:

"I am cultivating some new native varieties of grapes, that are entirely free from the hard pulp generally prevalent in our native grapes, and for the table, quite equal to the foreign grape: I have not yet tested the quality of all of them for wine. I have one variety resembling the Noiren of Burgundy, that promises to make a superior wine, both red and white, but its produce will be comparatively small. The most celebrated of the Madeira wine merchants was recently in our city, when a bottle of each of these wines (red and white) was set before him, together with two bottles of Madeira, very old of my own importing, red (Tinton) and white. No intimation was given that either was domestic, but a gentleman at the table requested him to select the best; he decided in favor of the domestic.

Milk Cows should be well Kept.

The keeping of cows in such manner as to make them give the greatest quantity of milk, and with the greatest clear profit, is an essential point of economy. Give a cow half a bushel of turneps, carrots or other good root, per day, during the six winter months, besides her hay; and if her summer feed be such as it should be, she will give near double the quantity of milk she would afford, if only kept during winter in the usual manner and the milk will be richer and of better quality.

The carrots, or other roots, at nineteen cents per bushel, amount to about eighteen dollars. The addition of milk, allowing it to be only three quarts a day for three hundred days, at three cents per quart, amounts to twenty seven dollars. It should be remembered too, that when cows are thus fed with roots they consume less hay, and are less liable to several diseases, which are usually the effects of poor keeping.—*Farmers' Assistant.*

Specimen of the "Down East Women."

At the late fair at Boston, was presented a very large carpet, manufactured from odds and ends, bits of old cloths, flannels and stockings, in short every thing in the shape of woollen rags, from a ravelled thread up to a bed blanket, the work of Mrs. Abigail Welsh, of Newburyport. At the distrnce of five feet, which is near enough for well sized people to look, it has the appearance of a rich Turkey carpet of a handsome pattern and it will last for years a beautiful carpet. The value of this kind of work may be perceived by the following estimate of cost, which we find in the Transcript:

Cost of tow cloth for foundation,	$2,67
Dying the rags and old stockings,	2,00
Thrombs placed at Lowell for border,	2,00
	$6,67

The carpet was made during odd hours, after the labor of the family was performed, in four months, and for the trifling sum above stated, with the toil saved from the hours of idleness, an elegant and almost everlasting carpet produced.—*Nantucket Inq.*

The Sun Flower.

The sunflower is a plant of much greater value than is generally known. Instead of a few being permitted to grace a parterre, and considered only as a gaudy flower, experience warrants my saying it should be cultivated by every planter and farmer as part of his provision crop. It can be turned to profitable account on all our Plantations; for certain purposes it is more valuable than any other grain known to us; in as much as it can be made to yield more to the acre in exhausted soils, with little labor, and with greater prospects of success.

Its seed are wholesome and nutritious food for poultry, cattle and hogs, and very much relished by them.

From the seed an oil is obtained, with great facility, as delicate, it is believed, as that of olives.

They are also pectoral. A tea made of it is quite as effective as flaxseed, or any other, in catarrhal affections.—On one occasion tea sweetened with honey, was of so much more service to me than the prescription of my physician, that I attributed my early restoration in health to its agency alone. Certainly

a favorable change did not occur until I used this tea, which I did upon the recommendation of a citizen of one of the upper counties of North Carolina.

Its leaves and stalk, in the green state, are preferred to any other provender. I have thrown green grass and fodder into one heap and sunflower leaves in another, to try the cattle and they have ever commenced eating the latter first; this I have tried often with the same result. The whole plant, cut up in the green state, and boiled with cotton seed, or a little meat, affords a delicious food for cattle or hogs. To be convinced of this let one taste the bruised leaves or stalk of the plant; he will find its flavor aromatic, like that of the parsnip, with more sweetness.—*Southern Agriculturist.*

For the Farmers' Cabinet.

MESSRS. EDITORS:—

Permit me to suggest to your Correspondents the expediency of signing their proper names and address, that they may be communicated with by mail; I have obtained much advantage from this source. Also, in *all statements* relative to crops to give a full description of the *nature* and *quality* of the soil. I am gratified to find your useful Cabinet growing more and more interesting.

Yours respectfully,

DAVID L. DODGE.

Cedar Brook, Plainfield, N. J., Dec'r., 1837.

From the London Mechanics' Magazine.

Practical remarks on Keeping Bees.

Sir,—Having been requested by some person desirous of keeping bees, to give, through the medium of the Mechanics' Magazine my opinion as to the best method of managing these useful insects, I beg to solicit the favor of the following observations being inserted.

I have kept bees nearly twenty years, and practised various plans with a view to gain the greatest produce in honey and wax with the least trouble, but more particularly with a view to the preserving the lives of the bees, and feel confident that the story-fying system, which I believe Wildman practised, is the best. I tried for six or eight years the plan Mr. Nutt advocated, which, by-the-bye, is as old as any of the plans known, but without meeting with any thing like the success of the common cottage hive. A strong stock in the latter had produced me an early swarm and cast, the swarm produced in a good season upwards of forty pounds of honey, and the cast fifteen pounds, the stock being kept five or six years. The honey thus procured is always of good color, and fit for sale; and when after six seasons the parent stock is destroyed, the honey, being dark, may be used to make meed, or sweeten wine with, a strong swarm being kept to supply its place. This plan requires the destruction of the bees, and is therefore censured as inhuman; but to me is not more so than destroying beavers or cats for their skins, or catching fish to manure the land with; the consumer never considering how produce is procured, and should therefore, be considered the most culpable, if such acts are breaches of humanity. The hives I now prefer are flat, having wooden tops fixed on with wires. The inside should be twelve or thirteen inches clear, and about seven inches high, the top having a centre hole, and three or four others round it near the outside, each hole being two or three inches diameter, and fitted with nice bungs. If no swarms are wanted, a large glass, or small straw hive may be put on the top about the end of March, or a small glass to each hole, previously pulling out the bungs, gently turning them round first, each glass having a bit of paper pasted on it, stating its weight when empty; such glasses being kept from the light, by an empty hive being placed over them. Every ten or twelve days they should be examined and when filled may be removed, and others put on, as long as the season permits. If a stock is weak, a new swarm or a cast may be put on the top of it, and the entrance closed till eight or nine o'clock the following night. These stocks may be preserved seven or eight years, but should be kept in a house or shed; and when the winter begins, the bungs having been replaced, should be covered over with sacking or other warm articles. Glasses may be put on a swarm immediately after hiving them, removing them in three or four weeks, to enable the bees to procure enough for the winter. The boards above mentioned should be made of pine plank, half an inch thick. The bottom boards should be made of the same, one inch or one inch and a half thick, having a piece projecting for the bees to light upon. By pursuing this plan, any number of stocks may be kept with but little trouble, and the bees saved; but the placing the glasses on empty hive is essentially necessary. I am, Sir,

Your obedient servant,

G. L. SMARTT.

Enfield, Feb. 10, 1837.

Statistics of Eggs.

M. A. Legrand, of Paris, says the number of eggs exported from France, from having been less than two millions in 1813, increased in 1822, to nearly fifty-five millions. In 1824, ninety and a half millions. In 1835, 75 millions were exported to England, 60,800 to Belgium, 49,693 to the United States, and nearly as many to Spain and Switzerland. In Paris every soul eats over 115 eggs a year! in all the rest of France over seven millions are consumed. What hens the French must have?

ARTICLES.	Philadelphia, Dec. 16.	Baltimore. Dec. 12.	New York, Dec. 12.	Boston, Dec. 13.
Beans, white, per bush.	$1 37–1 62½	1 25—0 00	0 14—0 15	1 12–-1 25
Beef, mess, new, per bbl.	14 00-15 00	11 00–13 00	11 00–13 50	14 50–15 00
Bacon, western, per lb.	8— 10	7— 9	8— 10	.....
Butter, extra, per tub	12— 14	16— 20	21— 23	20— 23
Butter, fresh, per lb. (market,)	18— 25	20— 25	20— 25	25— 28
Hams, per lb.	12— 14	13— 13½	10— 12	14— 15
Hog's Lard, per lb.	9½— 10	9— 10	8½— 9½	9— 10
Cheese, American, per lb.	9 — 10½	9— 11	8— 9½	8— 9
Beeswax, yellow, per lb.	25— 26	23— 25	26½— 27½	26— 31
Beeswax, white,	.....	38— 40	38— 40	38— 40
Bristles, American,	42— 65	25— 65	25— 65	.....
Flax, American,	7½— 8	9— 10	6— 7	9— 12
Flour, best, per bbl.	9 00—9 25	9 00—9 25	9 25—0 00	9 50—9 62
GRAIN—Wheat, per bush. Penna.	1 95—2 00	2 00—2 10	1 95—2 10	.....
do. Maryland,	1 60—1 75	1 80—2 00	1 60—1 75	.....
Rye, per bushel,	1 05—1 08	0 90—0 00	—1 25	1 30—0 00
Corn, do.	75— 90	95—1 00	1 12—1 16	1 02—1 07
Oats, do.	40— 42	37— 38	40— 50	52— 56
Barley, do. Penn.	85— 90	... .	0 00—	0 00—0 00
Peas do.	1 00—1 25	00—0 00	— 8	.....
HAY, Timothy, per 100 lbs.	0 80—0 85	12 00 pr. ton.	.....	20 00 pr ton.
Meadow Grass,	70— 80	.....	.....	.....
Hemp, American dry rot, ton,	175 00–	6— 7	130 —140	.....
Hops, first sort, 1836, lb.	9— 00	— 9	— 10	6— 8
Plaster Paris, per ton,	3 25—3 37½	0 00—3 50	2 50—	3 00—3 25
SEEDS---Cloverseed, per bushel,	4 75—6 50	6 00—7 00	.....	14— 15
Flaxseed, rough, do.	1 40—1 41	1 37—1 50	8 50—9 50	.....
Timothy,	2 00—3 25	3 25—4 00	2 50–14 00	2 87—3 00
Tallow, per lb.	11— 11½	— 10	— 11	11— 12
WOOL---Saxony, fleece, per lb.	00— 00	40— 50	50— 00	50— 55
Merino,	46— 48	35— 40	37— 00	45— 47
1-4 and common,	33— 36	25— 30	40— 50	33— 38

Prices of Marketing as near the average as can well be ascertained.

Beef,	7½ a 8 by the quarter.	Potatoes,	40 a 50 per bu.
Pork, country killed,	6 a 8	Sweet Potatoes,	75 a 1 00 per bu.
Veal,	6 a 8 cents per lb.	Apples,	50 do.
Mutton,	6 a 8	Dried Apples,	1 50 a 1 75 do.
Dried Beef	12½ a 15 per lb.	Dried Peaches,	4 00 do.
Turkeys,	$1 12½ a 1 25 apiece.	Cider,	a 3 00 per barrel.
Chickens,	75 a 1 50 per pair.	Lard,	14 a 16 per lb.
Geese,	1 00 a 1 25 a piece.	Hams,	16 do.
Ducks,	75 a 1 25 a pair.	Shoulders,	12½ do.
Butter,	25a 38 per lb.	Oak Wood,	5 25 a 6 00
Eggs,	a 18 per doz.	Hickory Wood,	6 50 a 7 50

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THE FARMERS' CABINET,

DEVOTED TO AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

Vol. II.—No. 11.] Philadelphia, January 1, 1838. [Whole No. 35.

For the Farmers' Cabinet.

Horned Cattle.—No 1.

There happily appears to be an increasing disposition amongst the farmers of eastern Pennsylvania, to improve their stock of cattle by the introduction of English Short Horned and other improved breeds; and by raising more frequently and with greater care than formerly from their own stock, rather than depend on purchasing from droves to replenish their farm yards. This spirit was clearly manifested at the recent sale of imported short horn Durhams by the celebrated breeder, Mr. Whitaker, of England. Out of thirty-five cattle then disposed of, sixteen were purchased by farmers in this section of the state. Believing that something may be contributed in aid of this laudable spirit, by throwing together such notes as I have collected in an excursive perusal of the subject, together with such remarks and reflections as some experience and observation have enabled me to make, I shall ask the favor of your valuable pages for their communication to the public.

For the best and most highly approved kinds of cattle we must look to England, that country having taken the lead of all others in raising and improving stock. They have several varieties, each of which has its advocates; the most noted are the Durhams, Devons, Herefords, Ayreshires and Alderneys, each kind having peculiar advantages. For milk alone, perhaps the best Ayreshire and Alderney cows are not surpassed, and as working cattle, the Herefords and Devons excel; but for the combined advantage of milching and fattening freely, I am convinced that the improved short horns are unequalled, and fully believe them well adapted to the extensive ranges of pasture lands which our middle and western states afford. Some people are prejudiced against this breed under the supposition that they are too delicate for our rough climate and will necessarily degenerate. This I am assured is a mistaken opinion; an inference founded on false premises. They have within a few years been rapidly spreading over the northern counties of England and the Lowlands of Scotland even to the very borders of the mountain districts, and the climate there, is, during the winter, quite as severe as with us, if not more so.

I fully and freely admit that they require care and attention, plenty of good feed and kind treatment, but these are requisite with every class of animals where improvement is wished, or a high state of perfection to be maintained. How far are these essential points studied by our farmers? This is a question which every man who undertakes the raising of stock should ask himself, and I am sorry to say that in many, very many cases, the answer would expose great deficiency, and clearly show the reason of so many animals being scrubby, half starved and unprofitable.

It is a prevailing, almost a universal fault with our Pennsylvania farmers in this vicinity, to stock too largely, and when we have a dry autumn, an event that frequently occurs, their fields are pastured bare, leaving nothing to protect the tender roots of the grass from the severe frosts of winter. The cattle too are stinted in food, exposed without shelter day and night until we are almost in mid-winter, and thus instead of entering on this hard and trying season in good order, they are half starved and more than half perished; their milk is dried up and their offspring consequently stunted! Nay, more, the constant anxiety to keep a large number, leads to the consumption of the food so rapidly that before

spring the poor beasts are put upon still shorter allowance, and as soon as the snow disappears, are turned out to pick up what they can, and crop down the grass so early as to injure, and greatly diminish the source of supply for the ensuing season.

But I will not exhaust your patience by dwelling longer on the very erroneous practice of our stock farmers, and dairy men most particularly. Any of them who may take the trouble to reflect, and observe, must admit that half famished cattle, exposed to cold and wet weather, cannot thrive, and must be less profitable than if well fed and housed.

A Penn Township Farmer.

For the Farmers' Cabinet.

Curing Hams.

It is said that in a multitude of counsel there is wisdom. Many receipts have been given how to cure hams. The following is my method.—It is plain, simple, and easy to follow. For every ham,* shoulder, or jowel, I take as many handsfull of fine salt, and as many large tea-spoonfuls of pulverized saltpetre; this is put into a tub and well mixed together; then pour in as much molasses as will give it the appearance of good brown sugar. With one hand full of this mixture rub each piece of meat on both sides, and then pack them down in a cask: if any mixture remains pour it on the meat. Let them remain fifteen or eighteen days. Then take equal proportions of strong ley and pickle that will float an egg or a potatoe, pour it into the cask until your meat is covered; place a weight on to prevent it from rising, and let it remain fifteen or eighteen days; then take it out and let it drain for several days. Hams and shoulders should be hung with the hock downwards. A frame smoke house is much superior to either brick or stone, for smoking meat. Green hickory or sugar maple makes the best smoke. Hams cured according to this receipt are very superior. Try it until you find a better, and then publish it.

J. B. C.

*Hams weighing from 12 to 15lbs.

For the Farmers' Cabinet.

To make Currant Wine—Very Superior.

To every quart of currant juice, add three pounds of sugar, and water sufficient to make one gallon; let it remain in the tub all night, next morning remove carefully all the scum, then put it in the cask (preserving a small quantity to fill up as it ferments) which will require from six to eight days, then place the bung in slightly, for three or four days, then drive it well in, and let it remain.

Note.—The better the sugar the better the wine; I use broken down lump. Wine made after this receipt will keep many years and improve with time—if you have more wine than the receipt calls for, put it in—no brandy is required to give it a body, or to preserve it. I would recommend to every person that sends a receipt to the Farmers' Cabinet, for making wine, to send a bottle of wine and let the Editor be the judge of it.

J. B. C.

Dec. 14th, 1837.

☞ The above communication was accompanied by a bottle of domestic currant wine, of a very superior order, the very best we have tasted for several years; and our friends, some of whom are good judges, pronounce it excellent. The receipt is simple, and to all who are disposed to manufacture their own wine, we say, *try it.*

For the Farmers' Cabinet.

Remarks upon Agricultural Buildings.

No. 2.

WINDMILL TO RAISE WATER.

Water may be raised by the power of wind (as a first mover) either by a Vertical or a Horizontal Wind-Mill.

When a vertical mill is used upon a pump tree already placed in a well, the tree itself forms the vertical fixed axle upon which the hollow Box turns which carries the axle of the wind-wheel round in a horizontal direction, to face the wind as it shifts or changes its course. The axle of the wind-wheel is formed into a crank and wrist to operate on the valve and bucket-rod so as to make a stroke, and cause a portion of water to be raised at each revolution of the wheel, the centre of the wrist being at all times over the centre of the opening or tube at the centre of the pump tree. One end of the horizontal axle carries the wind-wheel, and the other turns in and against the extremity of a horizontal cylindrical hole, formed in the hollow box, and another portion of the axle between the crank and wheel turns in a horizontal cylindrical hole formed by two semicireles, confined together by screwbolts. Both bearings of the shaft and also the wrist are of perfect horizontal cylindrical forms, and turn in corresponding holes; the two former in the box, and the latter in the rod, near the upper end of it. The cylindrical hole across the rod may be formed of two semicircles, confined together by screw bolts and nuts. The wrist and part of the crank are within the tube of

the pump tree at each revolution, and are out of it at the other part of the revolution; the remainder of the axle between the crank and box revolve immediately above the pump tree.

The box also carries a vane placed at the opposite side from the wind-wheel, which serves to keep the wheel always facing the wind.

When the water is raised by the wind acting on the wind-wheel, with sufficient force to turn it, together with the axle, crank, and wrist, and thereby lower and raise the rod, bucket and valve of a lifting pump, the portion of water raised at each stroke runs out in the usual manner at the discharge pipe.

The different parts may be composed of any suitable substance, and the dimensions be such as the quantity of water in demand may require.

Where the opening or tube through the centre of the pump tree is not cylindrical, a compound motion may be communicated to the rod, while the bucket and valve do not partake of the same vertical and horizontal motion, but move simply in a vertical direction; this is effected by introducing a universal joint to connect the rod and bucket either in the usual form of a portion of a ball and socket, or in any other convenient manner. Another convenient mode is to place a pivot at the lower end of the pump tree, and three or more horizontal friction wheels, at or near the mouth of the well to preserve the tree in a vertical position, and at the same time allow it to turn freely in a horizontal direction by the force of the wind on the vane.

The wind-wheel, axle, crank, wrist, rod, &c. are formed in the manner already described, but the axle turns in the pump tree and a semicircular cap confined over the bearing of the axle, by screws; and the vane is attached to the pump tree at the opposite side from the wind-wheel. A circular or other trough or reservoir surrounds the pump tree and receives the water from the discharge pipe as it is raised in the pump by the wheel, crank, rod, bucket, valve, &c. as aforesaid.

Explanation of Fig 29., which is a *plan* or *horizontal projection* of the different parts of the vertical wind-mill, described above, except the wheel, which is supposed to be placed on the shaft at 3 3—and the vane which is supposed to be placed at 7 and attached to the hollow box 2 2, so as to extend a sufficient distance in the direction of the dotted line between 7 and 8. The wind-wheel extends a sufficient distance from the shaft or axle; the dotted lines between 9 9, show the direction of two of the radi; the others meet the shaft or axle at the same angle. The operation of the wind upon the vane 7 8 brings the wind-wheel 9 9 facing the wind. The

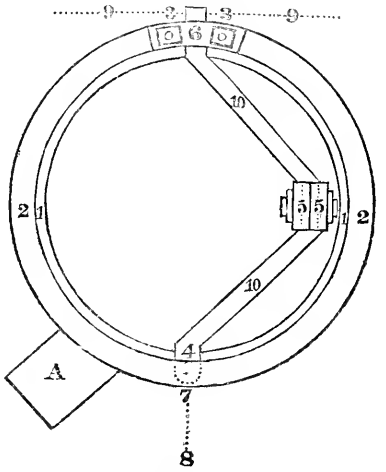

Fig. 29.

wind then turns the wind-wheel, and shaft or axle 3 3 4—crank 10 10, and wrist-which is in the position of the dotted lines near 5 5, but which is concealed from view by the upper end of the rod, 5 5 The dotted line between 4 and 7 represents the position of one end of the shaft or axle—1 1 represents the upper end of the pump tree, and A the discharge pipe. P.

Chester County, Pa., Dec'r. 5th, 1837.

N. B. I have described the vertical wind-mill *only* because that is generally considered the most powerful, and is suitable for the application of the crank to produce an alternating motion in the rod, bucket, and valve; but where desired, a vertical alternating motion may be given to them by a horizontal wind-mill, the vertical shaft of which turns in the vertical pump tree, and by means of a screw or inclined plane formed upon the periphery of said shaft, or upon a cylinder attached to the shaft or axle, to extend half way round the periphery, or other suitable distance; this forms what is sometimes called a broken screw, and is made to act on a projection formed on the valve and bucket-rod so as to raise them during part of the revolution of the shaft or axle, and they descend by means of their own weight during the other part of the revolution; when the screw or inclined plane or projection aforesaid are not in contact, or a groove may be made in a spiral form around one half or other portion of the periphery in one direction, and in a contrary direction around the other portion of the periphery, and the projection or cog upon the rod inserted into it; a revolution of the vertical axle or cylinder then causes the projection or cog and rod to which it is connected, together with the bucket and valve of a lifting pump

to lower and rise, a distance equal to the eccentricity of the groove. The sails are attached to arms, and are so constructed as to present the edges to the wind when facing or moving towards its course, and their sides when moving with it, and may move either on vertical or horizontal hinges or fulerums.

For the Farmers' Cabinet.

Can Wheat be transformed in Cheat?

Mr. Featherstonhaugh contends that it *can*, and, in proof thereof, says, that M. Conway, of Rapid Ann, Madison county, Virginia, gave him a plant which, as far as the heads went, was a perfect specimen of *cheat* or *chess;* but having been carefully drawn from the field, with all its roots attached to it, without any visible fracture, and in the most natural manner, he saw the skin of the kernel of the seed from which the plant had proceeded, and that it was of *wheat*, and nothing else.* But Botanists say that this supposed transmutation of wheat into cheat is a natural impossibility and vulgar error.

Doctor Darlington,† under the head of Bromus,—rye bromus, vulgo,—cheat, chess, says, "This well known troublesome grass is a naturalized foreigner; and obstinately accompanies our crops of wheat and rye. Frequently when the wheat has been injured by the winter, or other cause, the bromus is very abundant; and many farmers are so little acquainted with the laws of nature—and therefore prone to absurd mistakes—that they imagine the wheat has been *transformed* into bromus or cheat."

It is a pity some of your intelligent readers who are *practical* farmers, dont endeavor to probe this matter to the bottom, and let us know the result. P. A. B.

To the Editor of the Farmers' Cabinet.

Blight in Pear Trees.

Dear Sir,—Amongst all the communications which I have noticed in your valuable paper on the subject of this disease, there is but one, which, in my opinion, approaches to an explanation of the true cause, by refering it to the gradual decay, and inevitable death, to which every vegetable, as well as animal, is doomed, and that grafts which are now admitted to be mere enlongated parts of the parent stock, inheriting all its qualities and infirmities, are sooner or later involved in the same fate.

In accordance with the opinion which is entertained by the most enlightened vegetable Physiologists, every existing variety of fruit tree must one day become extinct. In this view of the subject, experience, the great test of truth, will bear us out.

An attentive observer will discover evident works of declining vigor and incipient decay in all the older cultivated varieties of the pear, indicated by the yellowness of the bark, the sickly paleness and softness of the leaf, the brittle and spongy structure of the young shoots, contrasted with the more healthy appearance and condition of the same parts in the seedling, or those trees which have recently originated from seeds—(as for instance the Seckle pear.)

The appearances then which are called Blight, I consider to be the natural consequence of the sudden arrest of the sap, and would be produced by any cause suddenly extinguishing life—as it is always observed to follow the development of the leaves, and often after the fruit is nearly matured. The proximate cause of death may be very rationally ascribed to the expenditure of vital energy and exhaustion which follows these functions.

I do not contend that even seedlings may not suffer from blight; vegetables as well as animals being subject to premature death; but I do not insist that this result in the latter case is of comparatively rare occurrence.

The most delicious and beautiful pear I ever saw (the particular variety to which it belonged, I never could discover,) was introduced into Northumberland County, about forty years ago, and extensively cultivated; but which had become so sickly as to bear but once or at most twice, when exhaustion and death invariably followed.

This pear was so great a favorite with me that I preserved it alive by annual engrafting after it had become extinct elsewhere, and the last tree of this variety probably existing at the time, died in my garden a few years ago.

I have several other kinds in the same garden which give promise of a long life. They are engrafted upon seedling stock, having observed that a frequent case of death arises from the stock having been taken from the roots of old trees which were themselves the progeny of suckers for many generations back.

If we have not a remedy for that, (which I consider to be incurable,) we have an unfailing resouree provided by a bountiful Providence, in the seeds, by which new, equally good, and hardy, varieties may be regenerated.

The length of time required to bring a seedling to maturity has deterred most cultivators in this country from making the experiment. To those who may be inclined to try it, I would suggest that the period may be very much abridged by ringing, so as to force out the fruit bearing buds at an early age, to ascertain the quality of the fruit.

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* See the Monthly Am. Jour. of Geology, &c. of June 1832, p. 561.

† Flora Cestrica, p. 69.

If scions from the bearing branches are then engrafted upon seedling stocks of a proper size they will bear fruit the fourth season, and if planted in a favourable soil will rival, I am convinced, in health and vigor, any other of our fruit trees.

You will perceive by the above remarks that I am not a competitor for the prize—at the same time you are at liberty to make of them what disposition you please.

Very respectfully your ob't,

Jos. Henderson.

Brown's Mills, Mifflin Co. Pa. Dec. 18, 1837

Note.—In justice to the gentleman, whose communication is referred to, I would have quoted his name could I have laid my hands upon the paper containing it.

OBSERVER, No. XIII.

ON WHITE-WASHING FRUIT TREES.

The opinion expressed by I. C. in the last Cabinet, respecting the white-washing of fruit trees, appears to deserve further examination. The practice may be too indiscriminately pursued by some of our Chester county farmers; yet, if they abuse, or empirically use, the application, such abuse, or misuse, of it will not justify the sweeping denunciation of I. C. He objects to the practice, because "it forms a coat over the trunk of the tree of a dry costive nature, which effectually prevents the humidity of the night air, and the futilizing dews, so indispensable to the expansion of the bark and the health of the tree, from penetrating, softening, and moistening the outer coat."

Now I do not know this to be the fact. I have not observed lime to form such a coat as I. C. describes. Nor do I know that the humidity of the night air, and fertilizing dew, are "indispensable" to the expansion of the bark, for, I have known trees to grow, and their bark to expand, in situations where those *indispensables* were, in a great measure, excluded. Admitting the truth of these positions, the evil would be of very short duration, according to I. C.'s own showing, for, says he, "another tendency, even more injurious than the former, is, that the coat of lime deadens the external bark, and, in the autumn, it peals off." "But, let it be remembered, and duly considered, that this very outer covering, taken off by the effects of the lime, is that which is intended, in the wisdom of the great Author of nature, to protect, or defend the tree, in this northern latitude, from the inclemency of a severe and protracted winter."

Here, again, I do not know the fact, because it has not fallen within my experience. The external cuticular layers of vegetable, like animal bodies, successively become dead, while new layers are continually forming underneath to supply their place. These dead layers may frequently exfoliate and fall off, as they are seen to do in the younger branches of the buttonwood, (platanus accidentalis,) or it may remain attached, but rent in fissures by the expansion of the wood, giving the tree a rugged and unseemly appearance, as in the oak. And I will appeal to I. C. himself, whether it will not hold true, both in the orchard and the forest, that if we take any two trees of the same species and age, those of the most healthful and vigorous growth, will present the smoothest and thinnest dead coat of cuticle. If our ordinary fruit trees become unhealthy from any cause, the cuticle ceases to exfoliate as it should, becomes more rough, and does not expand properly, the bark is covered with parasite plants, destructive insects find shelter among the crevices, and insectivorous birds in seeking for these, increase the injury. But, if this state of the bark results from an unhealthy condition of the tree, it becomes, in time, the cause of new diseases. The tree is *bark-bound;* it cannot thrive.

The existence of this state of things has been proved a thousand times, by splitting the outer bark of the trunk, from the branches to the ground, and allowing it to expand. By commencing the incision at the origin of an ill-thriven branch, I have seen the growth of that branch rendered seven-fold greater than any other on the tree.

Now, if I rightly apprehend the object of white-washing fruit trees, it is not, merely, to allow the incrusted bark to expand, but, to remove the incrustation—to cause the binding cuticle to exfoliate. At the same time, we obliterate the clefts in the bark, where moss and insects are disposed to collect, and escape the annoyance from birds seeking feed in those places. And, as a consequence, we "promote the health and thriftiness of the tree." If my experience does not deceive me, the use of white-wash does most happily effect these purposes. When these indications are fulfilled—when the bark becomes smooth, and the tree flourishing, the practice need not be continued, and might become injurious.

If, as I. C. asserts, a thick cuticular covering is intended in the wisdom of the great Author of nature, to protect the tree against the severity of our northern winters, why has he not provided for the beech and the maple, as well as for the oak? Or, why has he planted the cork tree (quercus suber) with its enormous thick coat, in the genial climate of the south of Europe, instead of the bleak mountains of the frigid zone?

Again; I. C. objects, that "whatever has a tendency to remove or take off, this cover-

ing, necessarily exposes the trunk of the tree more to the action of severe frosts, which not unfrequently, in extreme cold weather, proves fatal." If the trunk is endangered by this cause, how do the younger trees, and the tender branches escape? I would thank I. C. for authenticated facts to show that white-washed trees are more frequently destroyed in this way than others. I have not observed it to be so.

The bark on the trunk of fruit trees sometimes splits during intense frost. But, whether this is caused by the expansion of the wood, or the contraction of the bark, I conceive it more likely to happen where the bark is hard and unyielding, than where it is soft and pliable.

For these and other reasons, I cannot agree with I. C. that white-washing fruit trees "is not only labor lost, but, in reality, has a very deleterious effect on the vitality, growth, and well-being of the tree to which it is applied."

Young trees (fruit trees and others) which grow rapidly, and make much wood late in the season, are subject to *blister on the south side, just above the ground, when the frost is severe, and the ground covered with snow.* This was remarkably the case during the memorable snow and frost of 1831. In all the instances which I have observed, it occurred on the side of the *twelve to two o'clock sun, and below the surface of the snow.* It may, perhaps, be explained by considering that the sun melts the snow around the tree, leaving a vacant space where the combined energy of the direct and reflected heat of the sun's rays produces a considerable degree of warmth at noon-day, and leaves it fully exposed to the frost at night. The use of lime, by rendering the tree more thrifty, and the bark thin, may, perhaps, increase the liability to this accident.

New Garden, 12th mo., 18th, 1837.

Philadelphia, Dec. 20th, 1837.

To the Editor of the Farmers' Cabinet.

Dear Sir—By giving publicity to the following communications from Mr. Stonebraker, Col. Frisby Tilghman and others, which were first published in the Hagerstown Torch Light, describing the operations of my Reaping Machine, you will confer a favor on me, and convey, it is hoped, some useful information to the Farmers of Pennsylvania. As no other machine for reaping grain with horse power has ever been more perfect in its operations, it is presumed that a general interest will be felt by farmers, and others to become acquainted with its construction; for this purpose an engraving is now in course of preparation, which with a description of the machine will be in readiness for your next number.

The public are respectfully informed that machines for the next harvest will be manufactured under my superintendance in Easton, Talbot county, Maryland, where all orders will be attended to until further notice.

Obed Hussey.

Wheat Cutting Machine.

Mr. Bell:—Dear Sir: will you please give this a place in your paper, for the benefit of wheat growers. As the subject is of public interest it is hoped that other papers will circulate it through the grain growing districts of the country.

I procured a Reaping Machine this summer of Mr. Hussey, the inventor, which I have used through my wheat harvest. It was in constant use every day, and performed its work to my satisfaction, and far better than I had any expectation of when I first engaged it of Mr. Hussey. When the ground is clear of rocks, loose stones, stumps, &c. and the grain stands well, it cuts it perfectly clear, taking every head, and if well managed scatters none; but leaves it in neat heaps ready for binding. When the grain is flat down the machine will of course pass over it; but if it be leaning, or tangled only, it is cut nearly as well as if standing, excepting when it leans from the machine, and then if the horses are put in a trot it will be very well cut. But in cutting such grain much depends on the expertness of the hand, who pushes off the grain, in making clean work, and good sheaves. I found the machine capable of going through any thing growing on my wheat land, such as weeds and grass, no matter how thick.

After my harvest was over, I cut my seed timothy, with the same neatness, and ease that I did my grain. As respects the durability of the machine, I can say this much for my machine, that not the least thing has given out yet; it appears as strong as a cart, and but little liable to get out of order, if well used. I was advised by Mr. Hussey of the necessity of keeping some of the parts well greased; this I have punctually attended to, and no perceptible wear yet appears, beyond the ordinary wear of any other machinery.

It is immaterial to the machine whether the speed be a walk, or trot; although a walk will make the most perfect work. My speed was a common walk, but a trot is sometimes necessary to counteract the effect of a strong wind when blowing from behind, in order to incline the grain backwards, on to the platform, to make good bundles. A quick walk is required to make good work in very short and scattering grain. The machine performs well, up or down hill, provided, the surface be not too broken. By its compactness and ease of management, rocks and stumps, too high to be cut over, can be easily avoided. Although a rough surface is very objectionable, yet I have cut over very rocky ground with no material difficulty. I can say one thing which to some may appear incredible, but it is not the less true; the cutters

of my machine have not been sharpened since I have had it; nor have I yet seen any appearance of a need of it in the quality of its work. How many harvests a machine would cut without sharpening is hard to say. I propose sharpening mine once a year only. I have used two horses at a time in the machine, and sometimes changed at noon; they worked it with ease, the draught being light. I took no account of what I cut in any one day, with this exception; in less than half a day I cut six acres, and was often detained for want of the requisite number of binders; by which much time was lost. My machine being something narrower than those generally made by Mr. Hussey, I could cut but about one acre in going two miles, this at the moderate gait of two and a half miles per hour would amount to twelve and a half acres in ten hours, and at four miles per hour, a speed at which the work is done in a fine style, the amount would be *twenty* acres in ten hours. I should judge my quantity per day to range between ten and fifteen acres, yet I am decided in the opinion that I can cut twenty acres in a day, of good grain, on good ground, by the usual diligence of harvest hands, with a little increase of my usual speed, and a change of horses. Two hands are required to work the machine, a man to push off the grain and a boy to drive, besides a number of binders proportioned to the quantity cut. As the machine can be drawn equally fast in heavy or light grain, the number of binders is necessarily increased in heavy grain, except an additional speed be given in light grain. Under every circumstance the number of binders will vary from four to ten; and when the usual care is practiced by the binders there will be much less waste than in any other method of cutting.

I speak with more confidence of the merits and capacity of Mr. Hussey's reaping machine from the circumstance of having pushed the grain off myself for several days, in order to make myself practically, and thoroughly acquainted with it before putting it into the hands of my laboring men. The land in this county being rather rocky, and uneven, it is hard to say what may be the ultimate advantage of these machines to our farmers, but from what little experience I have had I am resolved not to be without one, or two of them, I can therefore recommend the machine with confidence, especially to those who have a large proportion of smooth ground in cultivation. It is undoubtedly a labor saving machine, and worthy of their attention. JOHN STONEBRAKER.

Hagerstown, August 15, 1837.

MR. HUSSEY—

Sir—Your Wheat Cutting Machine was used by me in securing my clover seed; with one man, three boys and two horses, we cut about twelve acres per day. The operation was in every respect complete—the clover was well cut, and deposited in proper sized heaps, and no raking required, further than to remove the heaps of cut clover from the track of the machine, the whole operation was easily performed by the hands and horses. In the operation of cutting wheat, I followed the machine for about two acres in the field of Mr. John Stonebraker, during the late harvest, and can vouch for the operation in securing his wheat in the manner described by him in his publication.

The late improvement made by you in your machine has added greatly to the beauty and facility of its operation.

Yours respectfully,

F. TILGHMAN.

Rockland, September 15, 1837.

We the subscribers certify, that we seen Mr. Hussey's wheat cutter in operation in the clover field of Col. Tilghman, and fully agree with him in the description given of the operation of the machine.

WILLIAM H. FITZHUGH,
JOHN R. DALL,
THOMAS EMORY, Eastern Shore, Md.
WILLIAM HOLLYDAY,
THOMAS E. TILGHMAN,
RICHARD T. HOLLYDAY,
FRISBY TILGHMAN, Jr.

For the Farmers' Cabinet.

Indian Corn.

There has, within a few years, appeared in this section of country, a species of Indian corn, (Zea mays,) with the history of which I would like to be better acquainted; and I will return thanks to any of your numerous readers who are able and willing to gratify my curiosity. It is commonly called the "Texian" or "forage" corn, and will be immediately identified when I mention, that besides the general husk which envelopes the whole ear, *each grain is embraced in a similar covering*. I have heard it asserted that it grows wild some where in the far west; and one gentleman with whom I recently conversed, assured me that it was the original Indian corn in its wild and native state! As to its having been seen growing wild, that might very well be, from the seed having been dropped by a passing bird; but the suggestion that it was the Mays in its wild and native state, I was not inclined to believe; nevertheless a fact in relation to it has been recently made known to me by two persons that is sufficiently curious to justify my troubling you on the subject. I have now before me a small ear of corn of the kind of which I am speaking, viz. the *Texian*, with the grains enveloped in a husk, and an ear of corn which I am assured was gathered from a stalk raised from a seed taken from the identical Texian ear, which has no husk on the grains. When this was shown to me a few weeks since, I had my doubts whether the ear without the husk on the grain had not been produced by the plant having grown

in the neighborhood of other corn; and these doubts were strengthened by the circumstance that the grains were of several varieties, viz. sacharine, yellow gourd seed, white gourd seed, &c. &c.; but since then the following certificate has been placed in my hands; and I must confess that, as at present advised, I do not know what to think of it.

P. A. Browne.

December 22, 1837.

—

"I do hereby certify that last spring I planted in my garden back of my house, No. 477 Sassafras street, Philadelphia, two grains of Indian corn of that variety which has a husk on each grain, commonly called Texian corn; there was no other corn planted in my garden, nor any in the neighborhood, that I know of. Two stalks grew, both had corn ears on them, but one only came to perfection. The ear that grew upon this one was about six inches long, and was well filled with grains, but had *no husk on the grains.* The shape of the grains resembled the Texian corn.

"M. McCloskey."

Note.—A gentleman from Pemberton, N. J., left with the editor of the Cabinet, some few weeks since, two ears of corn plucked from the same stalk, the grains of one enveloped in a separate husk; the other ear having the appearance of the common flint corn, except the shape of the grain, which resembled the Texian corn.

For the Farmers' Cabinet.

Horticultural Society.

The Monthly Meeting of the Pennsylvania Horticultural Society was held on Tuesday, the 19th December, in the room under the Atheneum.

The premium for the best display of interesting plants was given to Isaac Buchanan, who exhibited Azalia Indica alba, Justicia Speciosa, Rosa Smithii, Plumbago Capensis Capsicum bachatum, Eupherbia Poinsettii, Daphne Indica, Astrapae Wallichii, Camellia imbricata, Althæ flora, &c.

The premium for the best display of fruit was given to Hugh Hatch, N. J.

The premium for the best display of vegetables was awarded to William Chalmers, senr.

Robert Kilvington, Turner's lane, exhibited some fine specimens of Sea Kale and blanched Dandelions.

Benjamin M. Hollinshead exhibited a very fine specimen of Valparaiso squash.

Alexander Parker exhibited olea fragrans, Daphne Indica, Ardisia Selanacea, A. Crenulata, Rochea folcata, Crassula imbricata, Tasilago farfara, Lachenalia tricela, Lauristinos, white and yellow Indian Chrysanthemums.

The display of plants and vegetables were limited at the meeting owing to the season of the year and the danger of bringing out fine exotics. The plants exhibited by Mr. Buchanan were healthy and very superior in appearance.

G. Watson, *Record. Sect'y.*

For the Farmers' Cabinet.

Borer in Apple Trees.

In looking over the New American Orchardist not long since, I come across the following, which I thought would apply to the case of your correspondent H., of Burlington, in the preservation of his favorite young apple tree. As he is desirous for any suggestions that might tend to the further resuscitation of his tree, I send it, thinking at least that it may be interesting to him, and, perhaps, not only tend to the renovation of the injured tree, but prevent any more from becoming victims to the same malady.

"*Section* XII. Noxious Insects, etc.—*Subs.* 2d. BORER.—The borer is a destructive worm which perforates the wood of the apple and quince at the surface of the earth or a little below, where the bark is tender. If the insects have once entered the tree, they may be dug out, or destroyed by introducing a sharp flexible wire, and the aperture must afterwards be filled with clay or mortar. The eggs which produce this insect are deposited from the last of April to the beginning of June. To prevent their attacks and secure the trees effectually, nothing more is necessary than to surround it, a little before the season when the eggs are deposited, either with a small conical mound of unleached ashes, or clay, or mortar, or with a wrapper of brown paper, as recommended for the peach. For small trees, a solution of two pounds of good pot ash in seven quarts of water, applied with a brush, from the height of a foot quite down to the surface, is a very cheap, easy, and effectual mode of preserving trees from their attacks, provided the application is made at the suitable season."

A.

Chester county, Dec 9th, 1837.

For the Farmers' Cabinet.

In No. 10 of 2d vol., page 147, I have discovered an error of the engraver, in the figure accompanying the written specification, which is different from the original.

The original figure represented one side of the stove, and dotted lines showed the partition of the top, bottom, and two ends of the casing, and also represented the stove pipe as terminating upwards a short distance higher than the lower side of the arch of the fire-

place, so as to discharge the smoke into the chimney flue 2 a little above the sheet iron which surrounds the pipe immediately at the arch, to prevent the passage of heated air out of the apartment.

The error consists in changing part of the figure from a side view in a horizontal direction, to a diagonal one, showing one side, end, and top of the stove; but not making a corresponding change in the dotted lines, showing the upper parts of the two ends, and part of the upper edge of the farther side of the casing, which is not concealed by the horizontal portion of the stove pipe.

P.

23rd Dec., 1837.

Steam.

The chief value of boiling, or *steaming the food for animals*, seems to consist in rendering it more easy of digestion, and thus, perhaps enabling them to retain a greater portion of its nutriment than when it is used in a crude state. For old horses especially, whose teeth being worn, are incapable of effectually grinding the corn which their work may render necessary to their support, and whose powers of digestion are weakened by age, this is an incalculable advantage. Being softer than dry food, it is besides more readily consumed, and consequently allows more time for lying down and taking rest, a difference of more importance in its favor than may be generally imagined, for a horse takes from three to four hours to masticate 14 lbs. of hay, but a mash of potatoes of double that weight may be eaten in forty minutes. But for young and working cattle, in the full enjoyment of their health and strength, it may admit of doubt whether the constant use of such soft food may not weaken the powers of digestion, and relax the tone of their muscular fibre; for it has been found, from very careful trials, that, when only a small quantity of roots is given, the health and condition of the animals are improved by giving them in a raw state, as, in that form, they have a kindly effect upon the bowels; and, besides promoting the digestion of grain and straw, which they do in a remarkable manner, they impart to the animal an additional degree of life and spirit. In cases, however, where they have formed the chief article of food, boiling or steaming has been found to possess a more fattening quality, for it has the effect of depriving vegetables of a part of their watery juices, leaving only the farinaceous and other solid portions: thus potatoes lose about an eighth of their weight by the evaporation of water, when they are steamed, and about one-sixth if kiln-dried or baked, in which state they are, from the chemical change which they have undergone, more nutritious than when raw. There is, however, very essential difference in the quality of nutritive matter obtained from various qualities of the potato; for although when dried, the fibrous, or solid, matter may be of equal weight, yet it has been shown by various experiments that the product of starch, which constitutes the most nutritious portion of their substance, varies from one-fifth to one-seventh of their product.

The superiority of the method of fattening cattle with food thus prepared has been proved by many experiments; and it is even said, that some persons having, in pursuance of a suggestion of the Bath Agricultural Society, boiled the oats for their horses, and given them the water to drink, have ascertained that a bushel given in that manner will maintain a horse in better condition than two in the common way. So broad an assertion may well be received with hesitation: yet the experiment is worth a trial; and, if used with caution, and mixed with a certain quantity of dry food, there can be little doubt that steaming a portion of horse provender, whether mixed with roots or not, will be found an economical plan. Mr. Curwen recommends it to be given warm; and no one at all acquainted with stable management can be ignorant of the comfort of a warm mash to a horse after extraordinary fatigue; it also improves the appearance of the coat, and the seeming condition; but it is not natural to the animal; and, notwithstanding the experience of Mr. Curwen, it may yet be doubted whether, as a constant practice, it would not be too relaxing. At the utmost, the mere chill should be taken off.

The objections usually urged against steaming, are the expense, the trouble, and the difficulty of preparing the feeds for several teams. But an ordinary *steam-apparatus* may be put up for a mere trifle, and food enough for a dozen to twenty horses be got ready, with little difficulty, in a short space of time, and with a very moderate quantity of fuel. When the cattle are not sufficiently numerous to justify the erection of a steaming-shed, the copper commonly placed in the corner of every wash-house may be replaced by an iron boiler, and used for this purpose in the following manner.

In the top there are two holes, one for receiving a funnel to supply the boiler with water, and the other for admitting the neck of a leaden pipe, which conveys the vapour to the steamer; the funnel is furnished with a steam-tight plug, and the boiler should be kept about two-thirds full. Adjoining the boiler, a strongly rivetted box, of sufficient dimensions to contain the intended quantity of food, is placed upon a frame of equal

height with the top of the boiler. from which the steam-pipe passes into it a few inches above the bottom, and just under a rack of laths, made strong enough to support the food, which is to be placed upon it, and close enough to prevent its falling through the intervals. The front of the box opens by either sliding or falling doors, sufficiently large to allow the food being put in and taken out, and sufficiently tight to prevent the escape of the steam; and in the top there is a small but heavy trap-door, the weight of which keeps it down, unless the pressure of the steam be too great, in which case it is forced open, and allowing a portion of the steam to pass, thus acts as a safety-valve. The steam penetrates through the rack into the whole mass of materials in the box, and, when condensed, drains down again, as water, with the oozings of the vegetables, upon the bottom, from which it is conveyed away by a waste-pipe communicating with the boiler. In placing the food care should be taken to put the roots at the bottom, and those articles which lie closer—such as hay, straw, bran, or chaff,—at the top, so as to allow a free passage upwards for the steam. A large basket may be placed underneath the box, into which the food may be raked when ready; or a tub, with a cock at the bottom, to let off water, may be used both for that purpose, and for washing the roots previously to their being steamed. The interior of the box may be divided by sliding partitions, reaching as far down as the rack, for the convenience of separating the different kinds of foods, if that should be thought necessary: the steam-pipe may also be made to pass along its whole length, and being perforated with small holes, will thus distribute the vapour equally.

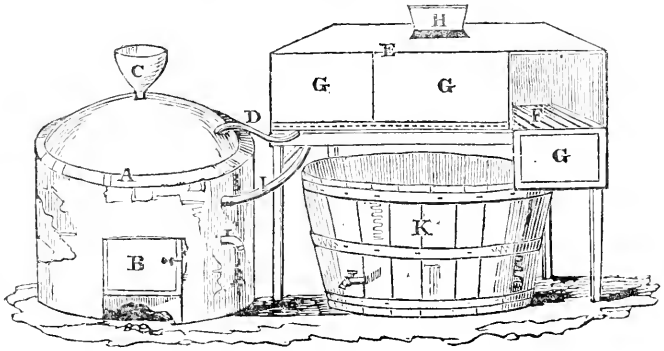

Fig. 30.

A, Boiler. B, Furnace. C, Funnel.
D, Steam-pipes. E, Steamer. F, Rack.
G, Doors. H, Trap. I, Waste-pipe.
K, Receiving-tub.

There is no occasion for the box being so large as to prepare all that may be required at one time, as a very large portion of different materials may all be steamed within an hour. The annexed figure will fully explain the plan of the machine, the whole cost of which would probably not exceed forty dollars.

For the Farmers' Cabinet.

On Ploughing.

There is no part of the practical operations of the Farmer that deserves more attention than ploughing. If his land is not thoroughly turned over, and that done with judgment, he sustains more loss than many have an idea of. Land can very often be drained or rendered moist, during a large part of the year by this means, and by preserving the soil of a uniform depth, the land will be rendered much more productive. In ploughing upland, care should be taken to keep the land as level as possible, and I have for several years past thrown back the clearing up furrows and then struck out sowing lands, in order to secure a uniform depth of soil. These furrows judiciously drawn I have found useful in draining my land. I have adopted this plan with my grain and grass, and have derived great advantage from it. The crop has been uniform. There were no bald streaks through my field indicating where the clearing up furrows were, the grain from which is usually imperfect and light, and the yield from which in general is very inferior to the rest of the land if it is rich. I have seen fine fields of grain and grass upon which there must have been a loss of one-eighth of the crop from this cause alone, as neither would grow upon the bald substratum. The soil being removed, there was nothing to sustain the plants. If the plan I recommend had been adopted, the crop would have been uniform, and there would have been no streaks to designate the lands. The depth of

ploughing should, in my opinion, depend upon that of the soil. The plough should at all times run from six to eight inches deep, and I have not been able to convince myself that there was any advantage obtained from going deeper. The plants that we usually cultivate, have heretofore yielded abundant crops under this system, and I cannot imagine any good reason why we should not be satisfied. If a farmer has more manure than his land will accommodate by the use of it after the commonly approved methods, deep ploughing and mixing the substratum of sand or clay with his manure and soil may not do any harm, but I take it to be an extravagant system, calculated to wear out horses and exhaust the patience and the purse, without any decided practical advantage. When we find that soil and manure generously put on and well mixed will yield heavy crops for three years, and good ones for two years more, I think we should be satisfied and not run the risk of breaking the beams of our ploughs, and the hearts of our men and our horses, to search for a soil which when found will be no better than that we already have. The productiveness of a crop very much depends upon the cultivation the land has previously had. If it has been carefully ploughed and grass or weeds should grow up with or get the start of the crop, they will always keep above it, and the desired crop must be proportionally inferior. In land in which artificial grasses are cultivated, the roots of the weeds and of the natural grasses should be destroyed by tillage before the seed is sown, otherwise they will prevail and the former cannot make a crop. Practical men will, I think, admit this to be of more importance than deep ploughing. PENN.

Agricultural Society of Butler County.

The regular meeting of the Agricultural Society of Butler county, Pennsylvania, was held in the Borough of Butler on the 12th December. The following named gentlemen were elected officers for the ensuing year. Hon. John Bredin, President—Johnson White, Esq., and Col. Wm. M'Junkin, Vice-Presidents—James Potts, Secretary—Hon. John Gillmore, Gen. R. McNair, J. McCurdy, Esq., Johnson Knight, Joseph Murrin, R. H. McKee, Isaac Pearson, S. R. Williams, C. Buhl, Esq., Henry Sefton, John Jack, John Dodds, J. McCandless, Esq., and Thomas Seaton, Directors. Committee appointed to award premiums at the next October exhibition—William Cunningham, John Welsh, Esq., John L. Maxwell, Robert Hayes, Gen. Robert McNair, John Dodds, Esq., and George Miller, Esq. The President, Judge Bredin, delivered the Annual Address, in accordance with a resolution adopted at a former meeting.

We hope that the example of the farmers of Butler county will be followed in every other county in the State. County Societies, properly organized, and efficiently sustained, must exert a salutary influence.

From the Genesee Farmer.

Successful Cultivation of Roots.

My business is to work, and not to write for the press, but as you ask communications from the farmer, I will in my plain way state what I have experienced in the cultivation of the Potatoe, Ruta Baga, and Mangel Wurtzel, Carrot, and Sugar Beet—manner of feeding, storing, &c., and the quantity of roots I raised this season.

POTATOE.

The Potatoe with me for ten years, the last excepted, has been a fair crop, but by adhering to the old method of tillage, has been more expensive than is necessary, as I find by the course I have adopted this season. I planted three acres the 29th and 30th of May; first ploughed, then manured with coarse barn-yard manure; then ploughed again and harrowed. Struck out the rows three feet apart with a one horse plough, say five inches deep; dropping the seed eighteen inches apart—turned back the furrow, and the work was done. For hoeing first and second time, the cultivator, so gaged as to fill the whole space between the rows, was passed through, followed by the hoe, giving a slight dressing, but making little or no hill, and the whole labor, after the ground was fitted, did not exceed three and a half days' work per acre. By the use of the plough the seed was planted deep; the potatoe never takes a downward direction. The cultivator loosened and mellowed the earth so as to allow the roots to extend, and to occupy nearly the whole row. *Get an expanding and contracting cultivator. Get one! get one!!* The product was over 430 bushels per acre, 1300 bushels from the three acres.

THE RUTA BAGA,

I had cultivated to a considerable extent for three years with success. This year I planted three acres in drills, twenty-one inches apart, 26th and 27th June. So soon as up, I sifted house ashes and plaster, mixed in equal quantities, at the rate of fifteen bushels per acre, with wire sieves, row by row, over the whole. The effect more than answered my expectations: that little pest, the turnep bug or fly, or its ravages, was not seen at all, and the growth was most vigorous. One acre of the piece had been planted with carrots, only about one-fourth of which

was standing, by reason of the insect, bad seed, or both, and ruta baga was planted in all the vacant places in the rows. They were thinned out, and hoed twice; they soon covered the ground, and the work was done. The product is over 1000 bushels per acre—3000 bushels the whole, notwithstanding one acre was partially seeded with carrots, and produced 200 bushels. About one acre of the land is fine sandy loam, and the remainder is slate washed from a ravine, all highly manured. The ruta baga I think draws more from the atmosphere, and less from the soil, than any other vegetable; for I have always found it retained the dew longer, and held it in greater quantities, than any thing else. It leaves the ground in finer condition than any other crop, and cannot be too highly valued. The carrot is excellent for fattening cattle, milch cows, &c., but is not so sure a crop, and requires much more labor in tillage. It does not always come up well, and is very liable to be destroyed by the insect.

THE MANGEL WURTZEL.

Of this root I planted one and a half acre on the 29th and 30th of May, (too late by ten days,) in drills twenty-one inches apart. Thinned once and hoed twice—tillage same as the ruta baga, (ashes and plaster omitted.) About two-thirds of the piece was planted with seed which proved to be a mixed kind of all the beet family; the other one-third part was the pure seed. The crop was fine, and if all had been of the same kind, the product I think would have been one-fourth larger. But as it was, the yield may be considered a fair one—over 800 bushels per acre, and the whole 1250 bushels. See the importance of having genuine seed, for I have no doubt the product was 200 bushels less than it would have been had all the seed been pure mangel wurtzel. I am much in favor of this root for feeding—probably is equal to any, except the sugar beet.

THE SUGAR BEET.

Of this I had only seed to plant six rods of ground. It seems to be well adapted to our soil and climate. The growth was much greater than any thing I have seen of the beet kind. I have no doubt it will prove most valuable for feeding cattle, as well as for sugar. The product was over 80 bushels, and at the rate of about 2100 bushels per acre, or 63 tons. I rate all by weight, 60 lbs. to the bushel, for otherwise most of the roots could not be measured with any degree of accuracy. Here follows a statement of the produce of seven and a half and six-one hundred and sixtieth acres of what may be considered first rate corn land, and in a high state of cultivation.

	Whole product.	*Per acre.*
3 acres potatoes,	1300	433½
3 do. ruta baga,	3000	1000
Carrots,	200	800
1½ do mangel wurtzel,	1250	800
6-160th sugar beets,	80	2100
7½ acres 6 rods.	5830 bushels.	

Five thousand eight hundred and thirty bushels, at 60 lbs. per bushel, give 346,800 pounds, or 176 1-5 tons. The potatoes 13 tons, ruta baga 30 tons, carrots 24 tons, mangel wurtzel 24 tons, and the sugar beet at the rate of about 63 tons per acre. This crop last year would have brought more than $2,300. What the price may be this year I know not. It is not my purpose to sell any, but to feed all to my cattle; so I have my own market, and trust I shall turn them to good account.

I am now feeding thirty-one head at the rate of one bushel each per day, with hay nights and mornings, in their stalls, with corn and other coarse fodder through the day. I shall add to their allowance as shall seem proper, and change from one to the other now and then. All the cattle eat greedily, and are doing well.

—

Barn Cellars, Storage of Roots, and Manner of feeding.

I have two barn cellars under the barn floors, which together hold 3000 bushels. They have each a small door at the back end, and scuttels through the floor—are well pointed and proof against frost. By opening the door and scuttels I can dispel the foul air or gas at pleasure, for large quantities of roots stored in cellars must be ventilated, or they will heat and spoil. These cellars are filled by drawing the loaded cart on the floor, and dumping the load through the scuttels; and the cellar is filled with very little labor.

The remainder of the crop were pulled and buried directly on the ground, much as potatoes, in heaps of about thirty-three bushels, leaving a small passage at the top, in order that the gas may pass off, without which they will not keep. In these two barns I stable thirty-eight head of cattle, thirty-one of which are beef cattle, one pair of working oxen, and five milch cows—all convenient to feed from the cellars. The roots are thrown upon the barn floor—cut with large English hay knives, which can be done by a smart man at the rate of a bushel per minute, and are passed to the manger with a scoop shovel. I have heard of cutting machines for root's—never saw one, nor do I wish to. A good pair of hands, knife, and willing mind, is all the cutting machine I want. Every farmer should have a barn cellar; the cost is but little, and the advantage

great. No one can know their value until he has one.

With good cattle, well constructed, clean well littered stables, plenty of roots, and good hay, with card and curry-comb applied every day, I can have fine cattle and good beef. Those roots should be extensively cultivated. They are within the reach of every man who farms any land, even one acre, and can be guaged to his wants. The poor man with his one acre and one cow, can at least plant six rods, and till it when he will do nothing else. See my eighty bushels of sugar beet from like quantity.

Let all raise according to his wants and means of feeding, depending on his own market, and omit raising a portion of other produce which costs him five times as much in both labor and land. This fact I have made plain in the exhibit of the entire product of two acres of ruta baga, buried directly on the ground as I pulled them, in heaps of say thirty-three bushels, weight one ton, standing as thick as cocks of hay in common meadows of one hundred each. Twenty to one! To see is to be convinced.

The point to gain is to be able to take the greater produce with least labor from the land, and to return the whole or an equivalent back again. Keep cattle, raise roots, &c., make manure and one important point is gained; for with manure I can raise roots, and with roots fed to cattle I can make manure and can pay back to the land as much as I received from it. I intend in due time to communicate the result of the feeding process this winter, and offer you something on other subjects, provided this effort in your opinion is worth the use of ink and types. Do with it as you please, and I am content.

I am, sir, respectfully, your ob't serv't.

JNO. SANFORD.

Marcellus, N. Y., Dec. 12, 1837.

Indian Wheat.

This is a new article and is a species of buckwheat. It has lately produced abundantly, up to a hundred and even a hundred and twenty bushels to an acre! The grain is valuable for stock yards, especially swine, and buckwheat cakes are celebrated throughout the land. Such an article in addition to our present stock, would be very valuable to the farmer, and would go to multiply his resources in unfavorable years. Samples of the grain, and small parcels for seed can be obtained on application to Mr. Colman, the State Commissioner for an agricultural survey.—*Haverhill Gaz.*

Nobody ventures on the high sea of public life, without becoming sooner or later seasick.

Cows.

The following statement of the cost, expense, and the avails of a cow for 14 months, made by a gentleman of this city, who has been a practical farmer, and who is no bad cultivator, shows how profitable cows may be, with proper management. A farm of one hundred acres, by such calculation and management as stated below, supposing it kept only twelve cows, would afford an annual income of at least $1600.

Dr.—Cost of cow and calf,	$20 00
Paid for pasturage,	15 00
1 1-2 tons of hay at $15,	22 00
One ton of corn stalks,	6 00
30 bushels bran at 20c.	6 00
266 lbs. oil cake at 1c.	2 66
40 bush. turneps and potatoes at 20c.	8 00
8 bush. potatoes at 42c.	3 36
Cr.—By calf sold,	$5 44
10 qts. of milk per day, for 14 months, at 5c. per quart,	210 10
Cow sold for beef,	45 84
	$261 28
Nett profit,	$178 26

N. E. Farmer.

An Extraordinary Calf.

There is at present on a farm near Baltimore, a calf which was got by a full bred Durham bull, out of a three-fourths Durham and one fourth Devon cow, which, at six days old, weighed 142 lbs., at sixty-one days old, his weight was 332 1-2 lbs., and at three months old, he weighed 457 1-2 lbs. These respective weights were accurately ascertained in the Western hayscales, and prove incontestibly that the *cross* has by no means impaired or lessened the bulk of this fine animal; indeed we know it to be the opinion of one of the most intelligent breeders in this country, the Hon. CHARLES A. BARNITZ, that for all the purposes of the dairy, one-fourth Devon blood in a milch cow, is a great addition to the butteraceous qualities of a milch cow, it being his opinion that this proportion of admixture increases the *richness* of the milk without subtracting in the least from its *quantity*. This fact was most satisfactorily proved by his celebrated butter-cow, Flora, which when fresh in milk, gave 20 lbs. of butter per week. Flora was sold about two years since to Major Frederick Haines, of Marietta, Pa., who was recently offered $400 for her. She is 3-4ths Durham and 1-4th Devon, and is besides one of the most perfect models of a cow to be found either in this country or in England. Her present owner has a fine heifer calf out of her, which we hope may inherit all the good qualities of her

far-famed dam, for surely no one is better entitled than the Major to the possession of first rate animals, as no one has exerted more sagacity or zeal in their obtainment.

But to return to the calf in question: in addition to his immense weight, he is a perfect model of what the genuine Durham should be in all the points that give that noble race character and caste. If the reader should ask who is his breeder, we must answer, sub rosa, that he may be found in the person of "Mine Host" of the Fountain Inn. —*Farmer and Gardner.*

Agricultural Societies.

It is with no ordinary feelings of pleasure we perceive by our exchange papers, that the agricultural communities throughout the country, are becoming sensibly alive to the propriety, nay necessity, of establishing Agricultural Societies. This feeling augurs well for the interests of husbandry, and should be cherished by every one, however remotely he may be connected with the cultivation of the earth. Farmers and planters form, after all, the great interest upon which all others must mainly rely for individual as well as national welfare; they are indeed the bone, sinew, and muscle of the country; for however beneficially the labors of other departments of human life may be exerted, the *country* would cut but a sorry figure if the labors of the plough were suspended, or any sudden disaster were to blight the products of the earth. Such being the case, it behoves those engaged in a calling at once so dignified and important, to exert every means within their power, to fulfil the high obligations confided to them. In England prior to the creation of agricultural associations, the condition of agriculture was most lamentably defective, and the earth did not produce more than a moiety of its present yield. The reader is most sensibly impressed with this truth, in reading Mr. Arthur Young's tours, as well as in the writings of the lamented Sir John Sinclair. But we need not go out of our own country to find instances of the kind, as it will be admitted by all intelligent men, that notwithstanding the small number of such societies which now exist in America, their influence has been widely and fortunately felt. Show us the county in which such an institution is located, and is now in healthful action, and we will show you a section of country in which evidences of the improvement of the soil and of stock, increase of product and of profit abound. The very circumstance of meeting together to confer upon subjects connected with the culture of the earth—to consult upon objects and measures, in which each feels a common interest, tends to bind the whole together by ties of almost fraternal strength, to infuse into each a spirit of enterprise and emulation, which in the race for rivalry never fails to end in the achievement of private and public good. Such assemblages may be compared to meetings upon *neutral ground*, where discussions of the highest moment may be carried on with the utmost advantage to the parties to it; where instead of the introduction of antagonist principles, creating collisions, heart-burnings and dissentions, the communion of brethren upon matters of the profoundest import to all, serve to bind them closer together, and awaken none but the most friendly feelings. Here the opinions and intelligence of States or counties may be concentrated—here the practice of one district is laid open to the inhabitants of another, and here, however well versed a farmer or planter may be in the mysteries of his calling, he may learn something that will prove of advantage to him on his return home; for the wisdom of the world belongs not to any single individual, however gifted he may be.

These being our views, we would respectfully urge upon our agricultural readers throughout the country, in every county where there is not a society already formed, to go to work with a holy zeal, and rest not until they have succeeded in forming one.—*Farmer and Gardener.*

Shaker Barn.

The English agricultural journals are warmly praising a mode of curing hay by ventilating the stacks or mows, and thus preventing mould or must; it will be seen by the following extract from the same writer's papers, that ventilation is no new thing among the shakers.—*Gen. Farmer.*

"The great object of agricultural curiosity at Hancock, is their magnificent circular stone barn, two stories in height, and ninety-six feet in diameter. The great mow is in the centre, and is said to be capable of containing four hundred tons of hay. The door, or drive way, is on the outside of the circle, and the team goes round and comes out of the same door by which it enters. By all passing in the same direction, several teams can stand on the floor and be unloaded at the same time. In the centre of this mow a large mast or post is erected, reaching from the ground to the roof, which is crowned with a small cupola. Slats, or pieces of plank, are secured around this post, at a small distance from it, to prevent the hay from coming in contact with it, and the hay at the bottom being raised from the ground, a perfect ventilation is kept up, and the steam from the new hay is effectually carried off."

January.

Stock.—If cattle are fed with straw, it should be done with necessary attentions and limitations. The celebrated Arthur Young observed, that "the best farmers in Norfolk are generally agreed that cattle should eat no straw, unless it be cut into chaff mixed with hay; but, on the contrary, that they should be fed with something better, and have the straw thrown under them to be trodden into dung;" and I am much inclined to believe, that in most, if not in all cases, this maxim will prove a just one. See that your cows are of the best breed. Give them roots as well as hay, and they will give you more than an equivalent in milk for their extra keep. Provide pure water for your milch cows, and not oblige them to go a mile, more or less, after it, manuring the highway, and running the gauntlet of dogs, teams, the horse and his rider, the sleigh and its driver, with more annoyances than Buonaparte met with in his retreat from Moscow. See also that the master-beasts do not tyrannise over their weaker brethren, and if any are inclined to domineer, take them into close custody, and deprive them of the liberty of the yard, till they will give indemnity for the past, and security for the future. Cut or chaff your hay, straw, corn-tops, bottoms, &c., with a straw cutter. If you give your cows good hay, roots, and comfortable lodging, you may make as good butter in winter as in summer, and become rich by sending to market the product of your dairy.

December.

In this chilly and inclement season of the year, when winter comes brushing down upon us; when man and beast are shivering in the wind, and each passer-by is heard to cry, "O, bless my heart how cold it is!" The farmer of economy and forethought is, no doubt, prepared to make the best of it. It is fit and proper that all our buildings be tight and snug as a lady's china closet. A farmer may have ventilation sufficient for his cattle and his fodder, without practising that slovenly habit we see in some, who would, forsooth, be reckoned as patterns of good husbandry. Loose boards and shingles, broken hinges and swinging doors upon our barns, do not indicate any thing very favorable of the occupant. Tools scattered here and there, window glass broken, and cattle astray, are unpleasant sights to one that prides himself upon good husbandry. *Argus* was said to have had an hundred eyes, and only two of them were asleep at one and the same time. What an excellent farmer he might have been, to keep ever on the look-out, and see that every thing was as it should be! But every farmer can be Argus enough to see to his own affairs, if he will only bestir himself. *Attention!* Let not this word be a military technical altogether. It stands at the head of the husbandman's vocabulary, and its important signification is well understood to every diligent, active and persevering agriculturist.—*N. E. Farmer.*

Notices.

To Subscribers.—As many of our patrons commenced taking the Cabinet with the second half volume, (No. 13, Vol. 1.) the period for which they have subscribed will, of course expire with the next number. Those who wish to renew their subscriptions are requested to give us early information. Subscribers who live remote from the city are requested to pay the amount of subscription for the ensuing year to any post-master willing to receive it, as all post-masters are hereby authorized and most respectfully requested to act as agents for the Cabinet.

The following gentlemen will receive orders and payment for the Cabinet.

R. Lamberton, Esq., Carlisle, Penn.
Wm. W. Murray, Esq., Middletown, N. J.
Geo. Reynolds, Wilmington, Del.
Matthew Smith, Chambersburgh, Penn.
Daniel Fenton, Trenton, N. J.

Several communications on hand will receive early attention.

Cabinet, Vol. I—Bound.

Those persons who wish to obtain the first volume of the Cabinet can do so by making early application. The edition is nearly exhausted. Price, neatly and substantially bound, one dollar and twenty-five cents. Subscribers who commence taking the work at No. 13, Vol. 1, are informed that we can complete that volume by supplying the first twelve numbers, at fifty cents.

Spring Wheat.

The Italian Spring Wheat may be obtained of Henry B. Hirst, No. 21 Arcade, west avenue, in quantities to suit purchasers, warranted genuine and of this seasons growth.

There is no rule in the world to be made for writing letters, but that of being as near what you speak face to face as you can.—*Steele.*

A man of wit, who is naturally proud, abates nothing of his pride or stiffness for being poor; and on the contrary, if any thing will soften him, and render him more pliant and sociable it is a little prosperity.—*Bruyere.*

ARTICLES.	Philadelphia, Jan. 1.	Baltimore. Dec. 28.	New York, Jan. 1.	Boston, Dec. 28.
Beans, white, per bush.	$1 28–1 62½	1 25—0 00	0 14—0 15	1 12–-1 25
Beef, mess, new, per bbl.	14 00–15 00	11 00–13 00	14 00–15 00	14 50–15 00
Bacon, western, per lb.	8— 10	7— 9	8— 10	.....
Butter, extra, per tub	12— 14	16— 20	21— 23	20— 23
Butter, fresh, per lb. (market,)	00— 00	20— 25	20— 25	25— 28
Hams, per lb.	12— 14	10— 13½	10— 12	14— 15
Hog's Lard, per lb.	9½— 10	9— 10	10— 11	9— 10
Cheese, American, per lb.	9 — 10½	9— 11	8— 9½	8— 9
Beeswax, yellow, per lb.	25— 26	23— 25	26— 27	26— 31
Beeswax, white,	.....	38— 40	38— 40	38— 40
Bristles, American,	42— 65	25— 65	25— 65	.....
Flax, American,	7½— 8	9— 10	6— 7	9— 12
Flour, best, per bbl.	8 75—9 25	9 00—9 25	8 75—9 00	9 50—9 62
GRAIN—Wheat, per bush. Penna.	1 85—1 95	0 00—2 10	1 85—2 00	.....
do. Maryland,	1 60—1 75	1 80—2 00	1 60—1 75	.....
Rye, per bushel,	1 05—1 08	0 90—0 00	—1 18	1 33—1 37
Corn, do.	75— 76	75— 78	1 10—1 12½	1 02—1 07
Oats, do.	40— 43	37— 38	40— 50	52— 56
Barley, do. Penn.	85— 90	.....	0 00—	0 00—0 00
Peas do.	1 00—1 25	75—1 00	— 8	.....
HAY, Timothy, per 100 lbs.	0 80—0 85	12 00 pr. ton.	.....	18 00 pr ton.
Meadow Grass,	70— 80	.....	.....	.....
Hemp, American dry rot, ton,	150 —160	6— 7	130 —140	.....
Hops, first sort, 1836, lb.	9— 10	— 9	6— 6½	6— 7
Plaster Paris, per ton,	3 25—3 37½	0 00—3 50	2 50—	3 00—3 25
SEEDS—Cloverseed, per bushel,	5 00—6 50	5 50—6 00	.....	14— 15
Flaxseed, rough, do.	1 40—1 43	1 37—1 50	8 50—9 50	.....
Timothy,	2 00—0 00	3 25—4 00	12 50–14 00	2 87—3 00
Tallow, per lb.	11— 11½	— 11	— 11	11— 12
WOOL—Saxony, fleece, per lb.	00— 00	40— 50	50— 00	50— 55
Merino,	46— 48	35— 40	37— 00	45— 47
1-4 and common,	33— 36	25— 30	40— 50	33— 38

Prices of Marketing as near the average as can well be ascertained.

Beef,	7½ a 8 by the quarter.	Potatoes,	40 a 50 per bu.
Pork, country killed,	6 a 8	Sweet Potatoes,	75 a 1 00 per bu.
Veal,	6 a 8 cents per lb.	Apples,	75 do.
Mutton,	6 a 8	Dried Apples,	1 50 a 1 75 do.
Dried Beef	12½ a 15 per lb.	Dried Peaches,	4 00 do.
Turkeys,	$1 12½ a 1 25 apiece.	Cider,	a 3 00 per barrel.
Chickens,	75 a 1 50 per pair.	Lard,	14 a 16 per lb.
Geese,	1 00 a 1 25 a piece.	Hams,	16 do.
Ducks,	75 a 1 25 a pair.	Shoulders,	12½ do.
Butter,	25 a 38 per lb.	Oak Wood,	5 00 a 6 00
Eggs,	a 20 per doz.	Hickory Wood,	6 50 a 7 50

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See Notice to Subscribers on page 191.

THE FARMERS' CABINET,

DEVOTED TO AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

Vol. II.—No. 12.] **Philadelphia, January 15, 1838.** **[Whole No. 36.**

To the Editor of the Farmers' Cabinet.

On Population and Cultivation.

The progress of agricultural science during the last quarter of a century, has occasioned many estimates of the amount of population a given quantity of land may be made capable of supporting.

With this question is intimately connected that of the area or number of square miles of cultivable soil a country may possess.

Thus, an approximation may be made to the prospective population, production, power, and wealth of any country. The tendency of the human mind to dive into futurity, may be satiated by a fair calculation The seats of Empire in after ages, may be indicated, more extensive than those of Alexander, Augustus or Tamerlane. Facilities of communication may be so extended, that a continent can be advantageously united in one vast Republic.

Already have the predictions of European statesmen, that our Federal Republic would fall in pieces by reason of its extent, and, the inconvenience of communication, been falsified by the Steam-Boat and Locomotive Engine.

The dream of the Poet—

"Westward the march of Empire takes its way,"

is realized.

Maclaren, a British writer of authority, has recorded the opinion, that this Continent, though less than half the size of the old, contains an equal quantity of useful soil, and a much more than equal quantity of productive power. He estimates that in America there are upwards of four millions of square miles of land, each capable of supporting two hundred persons, and nearly six millions of square miles, each capable of supporting four hundred and ninety persons.

The above estimate of the capability of America, to support a dense population, would give us ten millions of square miles of fertile soil, averaging three hundred and seventy-four persons to the square mile, and an aggregate of three thousand seven hundred and forty millions of inhabitants. The existing population of America is estimated at thirty-seven millions, which, if we adopt these data, would give three and seven-tenths inhabitants to each square mile of productive soil.

The most improved and best cultivated portions of the earth, as Great Britain, Holland, and Belgium, average about two hundred inhabitants to the square mile of their whole area. Pennsylvania contains about thirty, and her best cultivated agricultural counties, as Montgomery, about one hundred.

In Great Britain only sixty-four thousand square miles, or one half the entire surface, has yet been brought under cultivation,—so that her present population is nearly four hundred inhabitants to every square mile of cultivated soil. Her political economists estimate that the land now in cultivation could be made to produce sufficient bread, vegetable, and meat, for seventy millions of inhabitants, or nearly three times the existing number.

The elaborate report of the Secretary of the Treasury of the United States, of Dec. 5th, 1837, exhibits a view of the production, and consumption of wheat flour and meal, of grea interest to the Farmer. He estimates our population at fifteen millions, and the consumption of each individual to average a pound of flour or meal per day. "At the price of 3 cents per lb. for wheat flour and only 1½ cents per pound for meal from the cheaper varieties of grain, which is not far from the average of 1834 and '35, the cost of bread alone (if only one half the population used wheat

flour, and the other, materials less costly) would be about one hundred and twenty-four millions of dollars." This is exclusive of the "vast quantity of grain which is distilled, or employed in the arts, or consumed by domestic animals."

But at the increased cost of last year, estimated in the report at 80 per cent., the value of bread stuffs alone, consumed by our own population, would be about two hundred and twenty-four millions of dollars. The data furnished by the Secretary of the Treasury, while they show the enormous domestic consumption of bread stuffs, exhibit at the same time the comparative insignificance of the foreign markets, the exports to all of which during the most productive years have been but about fourteen millions of dollars.

Let the Agriculturist remember, 1st. That the increased consumption of grain has for several years more than equalled the augmented production. 2ndly. The abstraction of hands from rural labor for manufacturing, and labor upon public improvements. 3dly. The shortness of the last crop, as compared with average seasons, in several important sections. 4thly. The fact that improvements in husbandry are necessarily adopted very gradually. These may be considered reasons sufficient to account not only for the present high price of produce, but a fair calculation may be predicated thereon, that there must be at least two consecutively productive seasons before prices can be reduced to a low standard.

This should operate as a stimulus to every man connected with the cultivation of the soil, by judicious experiments with the various descriptions of manures, and other methods of cultivation, to extract from the earth the full amount it is capable of producing. For even in this "Pennsylvania of ours," though preeminently a farming state, scientific agriculture has not progressed in a comparative ratio, to its importance.

But another duty would remain, namely; to communicate to others the information gained by judgment and skill. To effect this the Periodical Agricultural press of our country affords an excellent medium. The establishment of such papers indeed, constitute an important era in Agricultural history. For who can estimate the vast amount of every species of improvement in cultivation, the results of individual exertion for ages, that has been lost, for the want of convenient methods of communication.

Your Friend,
Morris Longstreth.

Valley Green, 1st mo. 1st, 1838.

Forget not that in all your plans and operations there are two worlds.

For the Farmers' Cabinet.

Horned Cattle.—No. 2.

Early maturity is a valuable property in cattle, and this depends greatly, observes Mr. Aiton, of Scotland, on the way in which they are fed. The cows in the dairy districts of Scotland, when meagerly fed, never had calves till they were three, and frequently not till they were four years old; but since they have been better fed they always have a calf at two years, and some of them even younger.

Aptitude to fatten is a valuable quality in cattle. It is accompanied, says Mr. Bakewell, with smallness of bone, and the celebrated John Hunter remarks, that small bones are generally indicative of corpulency. Hence the importance of avoiding coarseness in cattle from which we wish to breed.

The short horns possess fattening qualities in an eminent degree, and in addition to their smallness of bone compared with the size of their carcass, the docility of temper, for which they are remarkable, contributes to their laying on flesh and fat rapidly. It is well observed by English writers that good tempered animals feed more freely than ill-tempered, vicious ones.

"Formerly," says Mr. Aiton "very little regard was paid by farmers to the breeding of cattle. The nature of the bull they thought a matter of no importance! When large bulls are put to cows of much inferior size, and ill-fed, the result is a race of large-boned, ill-shaped animals, generally inferior to both parents.

The male parent amongst quadrupeds has greater influence than the mother in the size and shape, as well as of the character of the progeny.

Dr. Cline remarks, "that crossing has only succeeded in an eminent degree, in those instances in which the females were larger, than in the usual proportion of females to males."

In improving stock be careful to select and couple together males and females as nearly perfect in shape and quality as they can be procured, without much regard to whether they are related or not, but always take care not to couple a male and female, both of which have the same defect.

"The most pure and perfect race of animals may be debased by improper mixture, or injured by improper treatment. Indiscriminate matches in breeding, and inattentive management in rearing, are alike capable of producing a worthless progeny."*

A careful cross of the Durham bull, with our best native stock, provided they are of good size and form, and not stinted or abused, produce cattle of exceedingly fine qualities,

* Dr. Coventry on Live Stock.

whether for fattening or milk; and in beauty, little inferior to the full blooded short horns.

They are also I think a more robust animal than the native English, and are probably better adapted to our climate. But let it always be borne in mind by those who attempt to raise fine stock, that without good feeding and kind treatment, no race of animals can be prevented from degenerating.

A Penn Township Farmer.

The Veterinarian.—No. 2.

STONE OR URINARY CALCULUS.

The urine of all animals appears to be an excretion, consisting of a large portion of water, and containing such noxious, and effete matter, as would interfere with the healthy performance of the vital functions, if they were not eliminated from the blood. Nearly all the fluid and soluble substances, taken into the stomach, are conveyed to the blood, along with the more nutritious parts of the food. The internal absorbents are, also, constantly taking up the effete, and useless molecules, which it is their office to remove from every part of the animal organs, and pour them into the common receptacle—the blood. Thus, a great quantity of adventitious and incongruous matter, is constantly combined with that all essential and vitalizing fluid.—An outlet for the excess of aqueous fluid becomes indispensable, to prevent an injurious accumulation in the blood vessels. A secerning organ, capable of separating the noxious material from the blood, is no less necessary, to preserve it in a healthy condition. Both the grand purposes are fulfilled, in an eminent degree, by the kidneys. To enable them the better to perform their office, the emulgent arteries, which supply them with blood, are unusually large in proportion to the size of the organs.

From these remarks the reader will at once perceive, that the kidneys serve the purpose of a *sluice-gate* or *safety valve*, to the blood vessels, maintaining an equilibrium in the quantity of blood. But they do more, they exercise a selective, or discriminating office, so as to preserve the blood pure and homogeneous.

The office of the kidneys, being to separate extraneous matter from the blood, it follows, that the qualities of the urine will vary with the qualities of the food, and of the products furnished by the digestive and assimilating organs.

When the urine is separated from the blood, by the kidney, it is received into the funnel shaped cavity, or *pelvis* of that organ, from whence it is conveyed, by a small fleshy tube, the *ureter*, to its proper receptacle, the *bladder*, where it continues to accumulate until necessity or convenience requires its expulsion through the *urethra*.

A urinary calculus, or stone, is a portion of sedimentary matter, deposited from the urine during the passage from the kidneys, and concreted into a solid form. Calculi may, therefore, form in any of the passages named, or, at least, in any of them which serve as receptacles; such as the pelvis of the kidney, and the bladder. They may also be found lodged in either the ureter or urethra. I shall, therefore, consider stone, as existing—1st, in the kidney.—2d, in the ureter.—3d, in the bladder—and 4th, in the urethra. I must, however, caution the reader, that in all these conditions, the disease is the same—the manifestations only differ, according to the situation and functions of the affected organ.

Perhaps the most healthy urine contains a portion of the matter of stone—but, so long as it continues small in quantity, and the solvent power of the fluid remains sufficient to hold it in solution, no harm can result.—Whenever the solvent power becomes diminished, or the sabulous matter superabundant, a sediment will be formed, either in the state of fine *sand*, or, concreted into *stone*. In the former state, it may still pass off, with the urine, without injury. When the urine possesses a tendency to form stone, that process is greatly facilitated by the presence of any foreign, solid substance, in the urinary passages. Thus, a globula of mucous, or a coagulum of blood, would form the central nucleus of a stone, when a calculus would not have been formed without such a nucleus.

1st. Renal Calculus, or Stone in the Kidney.

Perhaps there are no symptoms which sufficiently indicate the existence of stone in the kidney—especially in brute animals.—Sometimes it exists without the animal being observed to be unwell. A case related by Youatt, was mistaken for *red water*, or *inflammation of the kidney*, which was truly the case—the stone having produced inflammation in that organ. "Great pain was always expressed when the urine was voided; at other times there appeared to be colicy spasms: there was excessive tenderness on the loins—and there was some heat." The animal was *killed to save the carcass*, when the kidney was found "enlarged to nearly twice its natural size, and much inflamed.—Its cavity was filled with a yellow, muco-perulent fluid, in which were a great many calculi; some were scarcely larger than sand, but three were the size of a kidney-bean."* The inflammation had spread to the neighboring parts. The reporter supposed this to be the only case recorded.

A somewhat similar case occurred within my knowledge. A friend of mine killed a cow for family beef a few years since. The ani-

* British Cattle, page 517.

mal had not been observed to be previously unwell, yet, on examination, one kidney was very much enlarged, and contained about *seventy* calculi. One of the number, now before me, is of an irregular form—measures an inch and a half in its longest diameter, and more than four inches in circumference, and weighs nearly an ounce. The others were smaller, varying from a small pea, to that of a large bean. Inexplicable as it may appear, the forms and appearance of the calculi justify the belief, that they once formed a single mass, and that it was broken to pieces, during the life of the animal, by some cause *inherent in itself.*

The irritation of a stone will often produce inflammation of the kidneys, with severe pain, and high febrile excitement. Whether the cause is ascertained or not, their symptoms should be combatted with copious, perhaps repeated bleeding, and a free use of purging salts. The case only admits of palliative treatment.

For the Farmers' Cabinet.

Remarks upon Agricultural Buildings. No. 3.

BARN AND STABLING.

I think there is much room for improvement in buildings for these purposes so far as they have been presented to my observation, and I have thought the following remarks, if not correct in every part, may be the means of exciting enquiry upon the subject, so as to perfect them, eventually, in the greatest possible degree.

The accompanying description will probably be sufficient to explain the subject. Fig. 31 is a *horizontal projection or ground plan* of the basement story, which should be large enough to contain all the horses, and animals usually denominated horned cattle, on a farm. *This* is supposed to be one hundred and twenty feet long and to contain sixty head; it is also supposed to be forty feet wide, with an entry through the middle the whole length, and a range of stables on each side of the entry, the whole length so constructed that the animals stand in them with their heads towards the entry. The entry receives hay from the bays above through vertical flues which extend from the joists above the entry to the roof. Stairs extend from the entry to the floor or floors above. There is a door at each end of the entry, and a glass window above to admit light when the doors are closed.—There is also a glass window at each end of both stables to admit light to the stables, and also air when necessary. All the windows about the stables and barn should be guarded by screens or bars. The doors of the stables are at the opposite side from the entry, one door serving for two animals to pass in and out. The floors of the stables, and that of the entry, together with the surface of the ground around the building, so far as animals are in the habit of frequently walking upon it during the winter season, should be paved with stone, and the interstices filled with lime and sand mortar, and made as smooth as possible. The entry perfectly level; the stables to descend from the entry at the rate of one inch, in every ten feet, and descend from one end to the other at the same rate, so that all the fluid substances which are dropped upon the stable floors shall run to the lower ends, and from thence in suitable channels into a cistern made water tight at the bottom and side. The contents that run from the stables into the cistern is to be pumped up from time to time into a hogshead placed upon a sled or axle with low wheels, so that the same may be taken to grass land and discharged upon it as evenly as possible. The surface of the pavement around the building should also descend in every direction from it at the same rate of one inch in every ten feet. The stables should be cleaned each day when the animals are turned out to drink, morning and evening, and the contents thrown directly from the stables into muck wagons, a wagon for each range of stables, and hauled direct to grass lands and deposited in small heaps upon it which are to be spread evenly upon the land as soon as vegetation starts in the spring, or it may be deposited in a house or shed under roof, and hauled and spread upon grass lands in the spring, before the volatile parts are in any considerable degree lost by fermentation. By placing a horizontal railway for each wheel to run upon, parallel with the building, so as to bring the wagon near each stable door, the wagon may be moved along upon the railroad by one man, even when loaded to the extent usually done for an ordinary team to haul (or draw it) upon a common road.

One animal is let out of the stable to drink at a time, and may be allowed to walk upon a platform, attached to a lever, the movable end of which is over a well of water, and under the axle of a vertical wheel, and connected with a cord, rope, or chain, which coils upon the axle and is attached to it. Another rope, cord or chain, coils upon the wheel of this axle, by the uncoiling of that from the axle aforesaid, produced by the descent of the lever with the animal upon it.

A bucket with a valve in the bottom, opening upwards, is attached to the lower end of the cord, rope, or chain, upon the wheel aforesaid, which is filled through the valve, and when raised by the curling of the rope upon the wheel as aforesaid to a sufficient height, a hook, attached to a trough or reservoir seizes one edge of the bucket, and prevents it from being raised too high, while the opposite side

and bottom are raised sufficiently high to cause the water to run into the reservoir.—When the animal has drank and moves off the platform, it rises together with the lever; and the bucket descending into the well by its own weight uncoils the rope from the wheel and causes the other rope to coil upon the axle; the moveable end of the lever and platform has now risen to its highest position, ready for another animal to move upon the platform and raise a supply of water to drink, in the same manner as the one had done previously, (already described) and so on to any extent required. Each apartment may be cleaned while the animal which had immediately before occupied it has gone to drink. By giving the animals a portion of superior food immediately after they have all returned to the stables from drinking, they will soon get accustomed to pass from the stables, draw water, drink and return to the stable without any personal attention whatever. By placing the well at the opposite end of the building from the cistern, in a line with the middle of the entrance, forming the lever with an angle over the well, to move on a fulcrum, at the nearest corners of the building,—one lever will answer for the animals in both ranges of stables.

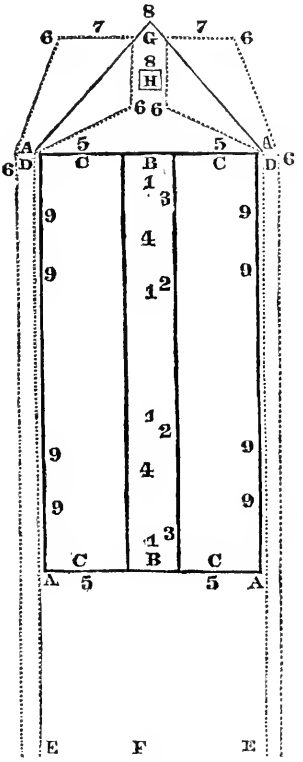

Fig. 31.

Explanation of Fig. 31.

A A A A are the four corners of the basement story of a barn forty by one hundred and twenty feet. B B the entry eight feet wide and eight feet high with a double door at each end to close an opening six and a half feet square. A range of window glass is placed over each door to admit light when the doors are closed. Hay is received into the entry at 1 1 1 1 from the vertical flues above, and stairs terminate at 2 2 or 3 3 from the floors above, the centre of which are over 4 4. 9 9 9 9 9 9 9 9 are under the sides of the barn floors. C C C C are two ranges of stables with doors in the sides between A A A A, equal in number to half the number of animals to be accommodated in the stables.—Each range of stables has two glass windows over 5 5 5 5 to admit light and air when required. The dotted lines D E D E show the position of the rail-ways for the muck-wagons to run on. E E shows the position of the two houses or sheds for the wagons to be in when not in use. They may also be used to contain the contents removed from stables during the time the ground may be unfit to haul it to the field or meadow. F shows the position of the cistern. G the well, and A G A the lever with the fulcrum at A A. The dotted lines around between 6 6 6 6 6 6 show the edges of the platforms, and H the reservoir between them. The axle is placed between 7 7 and the wheel is between 8 8. The stables should be rather lower than the entry, and higher than the surface opposite out side of the building.

By adopting the foregoing plan and having the animals well supplied with dry litter for bedding at night, (which can be placed under the manger during the day) and admitting an additional supply of air, by opening the doors and windows when that from the flues and stairways is insufficient, a purity and equality in the temperature may be obtained in the atmosphere of the stables, far superior to plans in general use. P.

Dec. 12th, 1837.

For the Farmers' Cabinet.

The Ring Bone.

It not unfrequently happens that that noble animal, the horse, is rendered entirely useless by affliction with the above disease, from a want on the part of the owner of a proper knowledge of the treatment necessary for its removal. The following is an effectual remedy, and has been known to cure many cases of long standing. If used in the first stages of the disease no vestiges of it whatever will be left. It has never, to my knowledge, before been in print, but believing that whatever tends to the interest of man, or the me-

lioration of the condition of man or beast, should be publicly known, I send you the following:

Directions.—Bake a cake of chopped rye about an inch and a half thick, and of length and breadth sufficient to cover the ring bone. Moisten the ring bone completely with aqua-fortis of the best quality, (this may be done with a feather,) and then rub it over with hog's lard. Take the cake as hot as can be handled, split it in two, and pour a little of the aqua-fortis on the inner side of one of the halves, and tie it on while hot, with the inner side on the lump. Let this remain on for about twelve hours, and when taken off rub it over again with hog's lard. It will be necessary while the application is on the foot, that the horse be tied up to prevent him from biting it off. The first application to be made on the first day of last quarter of the moon, and repeated every other day till three applications are made. This seldom fails of effecting a cure, but if necessary repeat it again at the succeeding last quarter.

A German.

Chester County, January 9th, 1838.

For the Farmers' Cabinet.

Remarks on the influence of age upon Grafts and Cuttings and other Vegetables which are cultivated otherwise than from seed.—Depredators, &c.

The correct system of advancing useful knowledge, not only in relation to agriculture, but upon all subjects, is to proceed from the *known* to the *unknown*, and as the *Cabinet* is intended to be a vehicle to convey information from one section of country to another, which will either directly or indirectly augment the number of *established facts* and diminish the number of *conjectures* upon the subject of agriculture in all of its departments, a *subject* wherein the whole human race is interested; I shall make a few remarks relating to the natural decay of vegetables, and upon the subject of the rotation of crops, showing the *supposed* influence which one crop has upon the growth of the immediate succeeding one, and also the influence upon the depredators which may have come into existence during that period.

If the theory here advanced be incorrect, no one will be more pleased than myself to see the error pointed out; and if correct, I should be equally pleased to see the subject extended and illustrated by a statement of experiments from persons better qualified for the task. All are *interested* in each advancing step toward making *agriculture* a complete *science*.

1st. Vegetables are limited in the duration of life, and a graft or slip partakes of the natural decay arising from age in the parent tree; the same remark as regards depreciation will apply to other vegetables which are cultivated both from the seed and otherwise, such as the potato, onion, &c.; therefore, grafts, slips, (or cuttings,) potatoes, onions, and other vegetables which are thus cultivated, should be extended from the best kinds which have passed through but a small portion of the supposed natural duration of life.

2nd. A leading object in all agricultural and horticultural societies should be to cultivate annually from seed of the best quality (the first matured large seeds) all the variety of vegetable plants beneficial to man, and in a quantity that will reasonably ensure a new kind sufficiently valuable to be extended afterwards at pleasure. A memorandum should be faithfully kept showing the length of time which may have passed since each variety had been continued from the seed. In this way no one would be deceived, and the improved kind would probably command a price ten times greater than the expense of producing it.

3rd. The roots of a crop while undergoing decomposition in the earth furnishes food for the succeeding crop, and a repetition of the same kind of crop for several succeeding years serves to increase certain kinds of depredators, such as flies, worms, &c., but when vegetables of a different character, alternate with each other, the depredators themselves die for want of support, and furnish food for vegetables; therefore plants of a similar character should never follow each other without a sufficient interval to cause the death of such depredators as feed upon them, unless these depredators can be destroyed by other means.

The other means which are naturally presented to the mind, when investigating the subject, are temperature and such substances as will destroy animal life without injury to vegetables; thus we have a variety of means to increase the fertility of soil by such vegetables as draw nourishment from the atmosphere, the roots of which afterwards become decomposed in the earth, and furnish food for the succeeding crop, such as the red clover, beets, turneps, parsneps, carrots, and other plants with tap-roots and broad leaves; also, the onion, potato, and artichoke, the cabbage, pumpkin, mellon, squash, bean, pea, &c., may also, to a considerable extent, combine these properties when the fruit, leaf, stalk, and root are all returned to the earth decomposed.

We also have a variety of means to destroy depredators and convert them into food for vegetables, such as the frost of winter upon the embryo of the cut-worm, as exemplified by the benefit arising from autumn and winter ploughing. The destruction of the peach-worm by warm water and a variety of other cases.

In substances of the ordinary temperature, either of the plant or depredator, and which do not injure vegetables, but destroy these pests, we have lime in a caustic state (unslacked lime,) ley of wood ashes, (potash,) tobacco in the leaf or powder, (snuff,) or combined with water or other substance, and a variety of other articles of a similar character.

For the above, and many other reasons, I draw the following conclusions.

1st. Land for Indian corn should be ploughed in the autumn or winter preceding the planting.

2nd. A crop of Indian corn, barley, oats, wheat, or other plants with a fibrous root should not be cultivated two seasons in succession upon the same land without an intervening crop of a different character. I shall probably in another communication make some farther remarks upon this subject.

P.

Chester County, Pa. 30th Dec., 1837.

For the Farmers' Cabinet.

Thatching.

In what part of Pennsylvania, or elsewhere in the United States, is thatching most practised and best understood! What material is most in use and most valuable for that purpose? For how many years does ordinary thatching continue to cast rain? I would ask for a comparison between that covering and shingles, various kinds, say the cheapest, at first cost, in point of durability and economy, but am aware that that depends on the comparative absence or abundance of the two materials, but would be glad to see such an estimate as the case would admit of.

Are not cottages in Europe, in which wood fires are used, frequently thatched! The idea with us is that it would be dangerous to attempt to associate a wood fire and a thatched roof—but I have heard that *the town of New Harmony is a thatched town!* Again, can the process of thatching be so *described* as to be understood by a printed description—or by a diagram? What is the charge per square yard or otherwise, for thatching, the material being on the spot? The answer to this will enable one to contrast the expense of nailing on shingles with that of thatching, the materials being on the spot.

What is the nature of the *frame-work* necessary for thatching?

Frame-Work.—Could a man be had in Pennsylvania to come into Maryland to thatch some tobacco and out houses, and what would he charge per square yard FOR INSTANCE?

TOBACCO—*as connected with the preceding inquiries.*—Some years since the planters of Maryland generally fired their tobacco to make it *bright*, and to cure more in a given space. The practice has been nearly abandoned, for three reasons: Fired tobacco has ceased to command an advanced price—the smoky flavor injured the sale—next scarcity of wood to fire with—and thirdly, the danger of loss of houses and tobacco by firing. Still brightness of color is a *desideratum*. To consult profit and economy, says an esteemed correspondent, "Houses should be built to cure quick and without injury, and for this reason they should be built *long* and *narrow* and *high*. If you build 24 feet wide, the old way, with sheds all round ten feet wide, you have such a volume of green tobacco, or such a thick mass for the air to penetrate, that ten to one but each year you lose from $50 to $100 by "*house-burned tobacco*," unless you have an uncommonly dry fall, as this has been. I have lost in the last ten years more tobacco, by having it "*house-burnt*," than would build double my number of tobacco houses. My plan is to house, or hang all round the edges of the sheds, and when cured, stow away in the roofs. Were I to build now, I would build not more than 18, or at most 20, feet wide, and 18 or 20 feet high. I need not tell you, that there is evaporated 11 pounds of water from every 15 pounds of *green* tobacco. Therefore, a common tobacco house 40 by 24 cures 3,000 pounds of stripped tobacco, and, say, 3,000 pounds of stalks; making 6,000 pounds when cured; which must make something not far from *eighty thousand pounds of water* to be carried off by evaporation from a common sized barn. It is self-evident that to get such an evaporation off speedily, the house should have every chance to let it escape without having recourse to any expedient for that purpose that will let in rain, water, or external moisture. "*House-burnt*" tobacco is caused by the humid evaporation of the plant settling on its leaves. Where it can't escape fast enough from the house, the evaporation settles on its leaves; they become wet, turn black, rot, and crumble into dust.

The question is whether thatching would not make the roof so *tight* as not to allow this evaporating moisture to escape as rapidly as it would do from a house covered with shingles?

I have understood that Mr. TUCKER, on West River, one of the neatest and most judicious and successful cultivators of land in Maryland, cures a part of his tobacco in houses thatched by himself, probably with rye straw. But there is on the estate of Doctor James Tongue a grass of most luxuriant growth, reaching to more than six feet in height, with slender, pliant, and tough stem, which appears to be most admirably adapted to the purpose of thatching. It grows on

marsh land, on the head of tide water, near Tracey's landing.

After all, the great object would seem to be to *admit air* and *exclude moisture.* Would not numerous venetian windows, with sliding shutters, to be closed on the approach of driving rains, answer a good purpose?

If any apology were necessary for seeking the information here solicited for one of my sons, who has "turned planter," on a small scale, on the subject of thatching, believed to be best understood in Pennsylvania, the writer might alledge that twenty years ago, "solitary and alone," without subscriber or correspondent, he *started* the old American Farmer, which was followed by the establishment of agricultural societies in almost all the States, and by much more able journals, especially the Farmers' Register, the ablest that has appeared in any country. Who would now attempt to calculate the addition that has been made to our stock of agricultural knowledge and wealth by the publications which are now diffusing their light all over the country?

Should any of your readers favor me with any information on the subject of my inquiries, with their permission, it shall be communicated for the Cabinet.

J. S. Skinner,
Post Office, Baltimore.

January 8th, 1838.

Experiments in the Culture of Silk.

The following letter from Mr. E. Newcomb, of Polsley's Mills, (Va.) to the editor of the Silk Culturist, details the manner and results of some experiments in silk making, which will be found useful to new beginners:

Dear Sir—Having been an attentive reader of the Silk Culturist, as well as many other periodicals on the subject of culture and manufacture of silk, and feeling a deep interest in their success in the United States, and having read of various experiments in feeding worms, and of various fixtures for the worms to wind their cocoons on, I have been induced to try some experiments myself. Although a beginner in the business, it may possibly be some satisfaction to some of your readers to hear the results of my experiments. About the 20th of May last, I hatched about 200 silk worms and fed them about five weeks, when they commence dspinning and made good cocoons.

On the 4th, 5th, and 6th of June, the second crop hatched and fed 30 days, and were healthy, and made 4,000 good cocoons. On the 13th, 14th, 15th, and 16th of June, the third crop hatched, and fed well, and were healthy until about the 26th day after hatching, at which time many of them were attacked with a disease called the yellows, which carried off half of them; the remainder spun their cocoons, 3,000 in number, but they were small and light. The above worms were from last year's eggs. The fourth crop hatched on the 29th July, and fed about 26 days, and were very healthy and made large cocoons. The fifth crop hatched on the 7th, 9th, 11th, and 13th of August, and spun in 26 days after hatching, and were healthy and made good large cocoons. Of the fourth and fifth crops, which made 42 knots of silk on Dales' reel, four threads of which made good sewing silk. The fourth and fifth crops were from eggs of this year's produce.

It appears that eggs will not hatch *regularly* the *same season* which they are *laid.* Having read various opinions on that subject, I thought I would try some experiments, and accordingly obtained a few eggs about the 12th of August, in 1836, and exposed them to the common atmosphere, and not one of them hatched that season.

Although some of the same stock from which I got them did hatch, (to the number of about 200,) about six weeks or two months before. About the 20th of May, I exposed the few eggs last mentioned, together with about 4,000 of the same stock, and in about a week after, they all hatched out, that is, they hatched on the 4th, 5th, and 6th June.

I left about 6 or 8,000 eggs, deposited this season, on the hurdles, in hopes that they would hatch, as they were sent for the *two crop* or *white worm,* and 300 of them hatched. About the same time I examined those that were in the cellar, and found that 2 or 300 of them had hatched also. I then exposed 6 or 7,000 of those in the cellar to the common atmosphere, but not another worm of them hatched this season.

The plan I have adopted for feeding frames is similar to that of Mr. Whitmarsh, of Northampton, Mass., with this difference, that instead of having all the hurdles of one size, I have them arranged in the following manner: My hurdle frame is about three feet wide, divided as follows: the first hurdle, for the worms when first hatched, is a thin board thirteen inches wide; the second hurdle is a frame covered with millinet, which is two feet wide, with a paper slide underneath. The third hurdle is a frame covered with net work, four feet wide; and the fourth hurdle is six feet in front covered with net work, and a slide underneath as above. This plan is designed for successive crops, and answers a good purpose, with one exception, which is, that when the worms are spinning, some of the worms are inclined to spin between the net work and paper slides, and by drawing the slides in order to clean off the litter, you will disturb the worms in their la-

bor, and those so disturbed are lost. But in order to obviate that difficulty, I dropped the slide one and a half inches lower, so that they could not reach from the net work to the paper slides below. I have tried Mr. Whitmarsh's plan for the worms to spin on, and I have substituted small lath for his net work, and the worms appear better pleased with the lath than the net work. I have tried the plan of seven-eighth inch holes in one and three-fourth inch plank. The holes answered a good purpose, but are two expensive unless made by a machine for that purpose.

I have invented a plan, which pleases me better than any I have seen, or read of. It is to take a thin plank, five-eighths of an inch thick, and seven or eight inches wide, with legs about one and a half inches long at the bottom edge of the plank, and form shelves by running grooves in each side of the plank, about seven-eighths of an inch apart, and take a thin board, from one-eighth to one-fourth of an inch thick, and slit off pieces wide enough to fill the grooves, and to project about seven-eighths of an inch, so as to form small shelves. This gives them just room to form their cocoons. The worms appear better pleased with this plan than any other I have tried; and no litter can fall from one worm to another, and of course the cocoons are kept entirely free from any litter whatever.

I have made a silk reel after Dales' plan, and have succeeded in reeling about three pounds of silk, and have manufactured about 500 skeins of sewing silk, a part of which is said to be as good as most of the imported. The above silk was manufactured on the common wheel, but I intend to get a small spinning machine, before I manufacture much more. I do not expect to make much silk next season, but the following year I am in hopes I shall be able to make from 40 to 50 lbs. of silk, if I have good luck with my trees and cuttings, as I have Italian and Chinese trees and cuttings sufficient to stock about three acres of land, which I have lately purchased for that purpose. I shall have about 3,000 Italian trees two years old for sale this fall, or next spring. I would sell them this fall if called for. I have about 160,000 silk worm eggs for sale also, both of which I will sell as reasonably as they can be had at any regular market.

Hogs and Manure.

Mr. Cooke:—If you think the following worthy, you may trouble your readers with its appearance in your paper.

I think that branch of the "farmer's work" which embraces the fattening of pork, and making manure therefrom, is not enough attended to by farmers in general. If properly managed, it will afford the greatest profit from the same expense and labor.

My plan is this:—Yard the hogs through the year. Give each hog to work upon ten loads of mud from the swamp. Give them potatoes, apples, and waste food from the house, enough to keep them in good thriving order *all the time*, till about September. Then attend them regularly, giving them all they will eat, perhaps some extra food, for about four months.

In this way, the expense will be about $20 or $25 per hog, for the whole time of growing and fattening.

Some men, thinking to avoid expense in keeping, permit their hogs to "run at large," or in a large pasture. This is a bad practice; the hogs "run away" so much of their flesh, that it requires nearly as much to keep them in a thriving state, as if they were yarded.—If it did not, the pasture would be much more profitable for other stock. More than this, the hogs will convert about four loads more of mud into good manure, which will more than twice pay the extra cost of yarding.

THE RESULT—COST.

Cost of growing and fattening each hog,	$25 00
Cost of hauling mud to the yard, 10 loads,	1 00
	$26 00

PROFIT.

There will be eleven loads of first rate manure, (the hog making one at the lowest calculation,) which if applied to the benefit of a corn crop, and the soil, will at least be worth $2.25 per load. This may seem a high estimate, but every experienced farmer must admit it.

Which will amount to	$24 75
Which sum deducted, leaves *cost*,	$1 25

The hog, if he has done well, will weigh four cwt., which, at present prices of pork, is worth ten cents per lb., $40 00

Who can make $1.25 nett him $40.00 in any other branch of agriculture.—*Am. Silk Grower.*

From the Maine Farmer.

Barn Yards ought not to be used as Cow Yards.

Mr. Holmes:—It is agreed among farmers, that manure is to farming, what money is to war. There is a very common practice among our farmers, and many of the best allow themselves in it, which is much to their disadvantage; that is, to yard their cattle through the summer in their barn yards.

According to my observation, it is a besetting agricultural sin in this State, and this county in particular. All experience has shown that folding land is not only the cheapest, but best mode of manuring our land. Pasturing is

partially doing it—and who has not experienced the difference between pasture land, and mowed land, when broken up? A first rate farmer said to me, a few days since, "I could not raise crops, if I did not alternate,—first pasture, then till, then mow."

A stock of twenty head of black cattle would manure, fit for any crop, the fourth of an acre in a half of a month. If you have a light fence, it might be shifted every half month, and you will have 3 acres manured for any crop. These acres added annually to your manured tillage land, would be felt in a few years, and make you, perhaps a thriving farmer when you might not have been before.

Make your calculation upon almost any tilled crop, and see what the profits will be.

If put to Ruta Baga, it will probably, with a little top dressing, produce you eighteen hundred bushels, and the land left in good order for a crop of wheat or other grain. If put to potatoes, it would probably produce nine hundred bushels; and that amount of roots would make your stock shine, if prudently given to them during the winter. I presume you need no long arguments to convince you of the loss of substituting a barn yard for folding yards, or as they are called, cow yards.

W.

Winthrop, Oct'r, 1837.

For the Farmers' Cabinet.

The following tables show the quantity of rain which has fallen in each year, for the last twenty-eight years; from 1810 to 1824, both inclusive, from the books of the late P. Legoux, at Spring Mill, nine miles N. W. of the city of Philadelphia; and for the last thirteen years from the guage kept at the Pennsylvania Hospital. The snow in all cases, was melted and measured in the guage. The average quantity fallen for twenty-eight years, is 36.99; and the average quantity for the last thirteen years, is 39.66 inches.

	Inches.
1810	32.656
1811	34.968
1812	39.300
1813	35.625
1814	43.135
1815	34.666
1816	27 917
1817	36.005
1818	30.177
1819	23.354
1820	39.609
1821	32.182
1822	29.864
1823	41.851
1824	38.740
1825	29.570
1826	35.140
1827	38.500
1828	37.970
1829	41.859
1830	45.070
1831	43.940
1832	39.870
1833	48.550
1834	34.240
1835	39.300
1836	42.660
1837	39.040

Statement of the quantity of Rain for the last thirteen years.

	1st mo. Inches.	2d mo. Inches	3d mo. Inches.	4th mo. Inches.	5th mo Inches.	6th mo. Inches.	7th mo. Inches	8th mo. Inches.	9th mo. Inches	10th m. Inches.	11th m Inches.	12th m. Inches	Total Inches.
1825	.84	3.26	4.63	.83	1.72	3.59	2.06	3.70	2.61	1.25	1.36	3.72	29.57
1826	1.11	2.13	5.80	3.87	.19	4.65	3.68	2.75	2.00	5 83	1.85	1.28	35.14
1827	2.86	3.55	1.23	2.83	2.50	2.09	2.97	5.75	.79	5.91	4.76	3.26	38.50
1828	2.05	2.75	3.35	3.82	3.49	2.69	5.33	1.51	4.62	1 39	6.71	0.26	37.97
1829	5.37	3.75	2.87	4.99	2.68	3.44	4.35	4.61	2.01	2.30	3.97	1.51	41 85
1830	1.63	2.06	4.11	1.81	3.75	5.99	4.07	3.87	2.93	4.31	5.35	5.18	45.07
1831	6.02	2.41	3.17	5.20	1.07	3.56	4.17	5.39	5.33	4.51	1.88	1.20	43.94
1832	4.58	2.66	1.90	2.98	5.40	1.55	2.62	5.69	1.40	3.41	2.59	5.09	39.87
1833	3.97	1.21	2.22	0.70	5.88	5.28	4.15	3.39	3.82	10.05	2.18	5.67	48.55
1834	2.49	2.22	2.02	2.83	3.52	3.99	4.35	0.62	3.57	3.29	3.01	2.33	34.24
1835	2.75	1.81	3.83	4.33	1.99	6.27	6.55	2.05	2.63	1.22	3.19	2.68	39.30
1836	7.62	2.99	1.75	3.47	2.28	7.31	2.91	1.97	1.82	3.59	3.34	3.61	42.66
1837	2.50	3.58	3.76	2.83	4.86	2.83	5.89	4.06	2.28	0.66	3.23	2.56	39.04
	43.79	31.44	40.64	40.49	39.33	53.24	53.10	45.36	35.81	47.72	43.42	38.35	515.70
	*3.37	2.65	3.12	3.11	3.03	4.10	4.08	3·49	2.75	3.67	3.33	2.95	39.66

* The bottom line shows the average of each month for thirteen years.

39.66 inches, average per annum for thirteen years.

36.99 inches, average per annum for twenty-eight years.

Fig. 32.

Patent Elastic Cattle Tubes.

In consequence of negligence or accident, cattle or sheep are *choked or blown*, or the stomach is rendered incapable of discharging its contents; a remedy must be speedily applied, or the animal is lost. The usual remedy for this disorder, has been to stab the animal with a penknife, or other sharp instrument, which is both cruel and dangerous, and attended with fatal consequences in a majority of cases.

To relieve cattle thus affected, effectually, it is not only necessary to free the gullet of all matter which may settle in it, and the stomach from the gasses which accumulate there, but also, to destroy the action of the fermenting mixture, which is their generating cause; this can be effected by the application of this simple and useful instrument, in the following manner.

The mouth piece, which accompanies the tube, is placed between the jaws of the animal, and buckled on firmly, after which, the tube is introduced through the aperture into the gullet, when by a slight pressure, the offending matter (if a solid) is forced downwards, (if a gas) it is immediately discharged through the hollow of the tube.

The introduction of this instrument, may be effected by the help of an assistant, who should hold the horns of the animal while the operator is skilfully employed in introducing the tube, the assistant bringing the head and neck into such an attitude as to make the passage nearly straight, which will facilitate the operation, and render relief immediately.

These tubes are for sale by the manufacturers, Messrs. Fitnam & Murphy, No. 48½ North Sixth Street. They are made in a neat and substantial manner, price three dollars and fifty cents. Every farmer should possess one: and we would urge those who have not already furnished themselves with so valuable an instrument, to call on the manufacturers and examine for themselves.

An Essay on Indian Corn,

Delivered by Peter A. Browne, Esq., L. L. D., before the Cabinet of Natural Science of Chester county, Pa.

Concluded from page 152.

VIII. Is the Indian corn capable of being improved by culture?

Thomas N. Baden, Esq. who resides near Nottingham, Prince George County, Maryland, has demonstrated that the Indian corn can be greatly improved, both in quality and quantity, by cultivation. I will first give you his own words.

Near Nottingham, Prince George's Co.
January 26, 1837.

Sir—I received yours of the 14th, making enquiry respecting the "Maryland corn," which you understood I had raised. I have the pleasure to say, that I have brought this corn to its high state of perfection, by carefully selecting the best seed in the field for a long course of years, having special reference to those stalks which produced the most ears,

When the corn was husked, I then made a re-selection, taking only that which appeared sound and fully ripe, having a regard to the deepest and best color, as well as the size of the cob. In the spring, before shelling the corn, I examined it again, and selected that which was the best in all respects. In shelling the corn, I omitted to take the irregular kernels at both the large and small ends. I have carefully followed this mode of selecting seed corn for *twenty-two or twenty-three* years, and still continue to do so. When I first commenced, it was with a common kind of corn, for there was none other in this part of the country. If any other person undertook the same experiment, I did not hear of it; I do not believe others ever exercised the patience to bring the experiment to the present state of perfection. At first, I was troubled to find stalks with even *two good ears* on them, perhaps one good ear and one small one, or one good ear and a "nubbin." It was several years before I could discover much benefit resulting from my efforts; however, at length the quality and quantity began to improve, and the improvement was then very rapid. At present, I do not pretend to lay up any seed without it comes from stalks which bear, 4, 5, or 6 ears. I have seen stalks bearing eight ears. One of my neighbors informed me that he had a single stalk with *ten perfect ears on it*, and that he intended to send the same to the museum at Baltimore. In addition to the number of ears, and of course the great increase in quantity unshelled, it may be mentioned that it yields much more than common corn when shelled. Some gentlemen, in whom I have full confidence, informed me they shelled a barrel (ten bushels of ears) of my kind of corn, which measured a little more than six bushels. The common kind of corn will measure about five bushels only. I believe I raise *double, or nearly* so, to what I could with *any other corn I have ever seen.* I generally plant the corn about the first of May, and place the hills five feet apart each way and have two stalks in a hill. I can supply you with all the seed you may need, and I suppose I have now in my corn house fifty, and perhaps more stalks, with the corn on them as it grew in the field, and none with less than *four*, and some *six or seven* ears on them. I will with pleasure send you some of the stalks, and also some seed corn, if I can get an opportunity.

Early last spring I let George Law, Esq., of Baltimore city, have some of this seed corn: he sent it to his friend in Illinois, with instructions how to manage it. A few weeks since, he informed me that the increase was *one hundred and twenty bushels on an acre;* that there was no corn in Illinois like it, and that it produced more fodder than any other kind. I have supplied many friends with seed corn, but some of them have planted it with other corn, and will, I fear, find it degenerate.

I have lately been inquired of if this corn is not *later* than other kinds? It is rather *earlier;* certainly *not* later. Corn planted in moist or wet soils, will not ripen so quick as that which is planted on a dry soil. In the former, there will be found more dampness in the cob, although the kernel may appear equally ripe in both. In the two last years, the wet seasons have injured much corn that was too early "lofted" or housed.

I believe I have answered most of your enquiries. I hope I have not exaggerated—I have no motive for doing so. I raise but little corn to sell, as tobacco is my principal crop. Should I fail to send you some seed this spring, I will next summer gather some stalks with the corn, fodder, and tassels, as they grow, and send to you, that you may judge yourself of the superiority of this over the common kind of corn. Yours, &c.

Thomas N. Baden.

In order to form a proper estimate of the exceeding utility of adopting the plan of Mr. Baden, let us take a case—for instance, the fine county of Chester in Pennsylvania, to which we had reference before when speaking of the quantity of Indian corn raised in the United States. If instead of thirty bushels to an acre, (which was stated to be the average crop, Chester county could produce one hundred and twenty bushels to the acre, the annual produce in this article alone, would be four-fold; and instead of exporting three hundred and twenty thousand bushels, the farmers of Chester county would send to market one million two hundred and twenty-eight thousand bushels annually!

And if Chester County, in point of soil and agriculturists, is a fair sample of our state, and in the other counties there could be a similar increase, there is scarcely a possibility of calculating the immense advantages that might thus be derived from the careful cultivation of this single plant!

But the calculation does not stop here: if Mr. Baden's *principles* be correct, they apply to all other grains as well as they do to Indian corn, which might by care and attention be made to double, treble, and quadruple their present crops! Is it not worth while to try the experiment upon other grains? And will not the intelligent farmers of our country follow up the experiment of Mr. Baden upon our favorite plant?*

*The rows of grain found upon the cob in the spike or ear of corn are always *even.* An anecdote is told of a negro slave belonging to Virginia, who, being at work shelling corn, inquired

IX. Its cultivation compared with other grains.

Mr. Taylor asserts that Indian corn produces more food for man, beast, and the earth, than any other farinaceous plant.

That Indian corn in a proper climate for it, produces more farinaceous matter to the acre than wheat, he proves as follows:

"The highest product of Indian Corn in the United States is one hundred bushels to the acre, whereas the highest product of wheat is sixty bushels per acre. Fifty bushels of corn to the acre is invariably produced by land well manured, and well cultivated; whereas half that crop of wheat is extremely rare, and in districts where the average crop of wheat is five bushels, that of Corn is fifteen bushels to the acre."

Mr. Taylor also contends that Indian Corn is the least impoverishing crop. The cornstalks infinitely exceed wheat straw in bulk, weight, and capacity for making food for the earth, and English farmers consider wheat straw as their most abundant resource for manure. But to the stalks of Corn must be added the blades, tops, shucks, and cobs, each of which will nearly balance the litter bestowed on the land by wheat. He further contends that the quality of the sustenance thus returned to the earth by Indian Corn is of a better quality than that of wheat, and that it incurs less risk of loss by evaporation.—Wheat straw he says he has known to lose two-thirds of its first weight. The shucks and cobs of corn lose nothing by evaporation. The rind preserves the stalks and the top from the operation of the atmosphere, which upon the blades has only the effect it has upon grass, turning them into hay.

X. The different uses to which the Indian Corn can be applied, also recommend its cultivation to the agriculturist.

1. The *stalk* contains a large portion of saccharine matter. Attempts have been made in France to extract this matter for the purpose of making sugar; but the modes hitherto used have not been crowned with success, owing to the expensiveness of the process.

According to Humboldt this manufacture is carried on with complete success in Mexico.

The *stalk*, *top*, and *leaves* are used for fodder for cattle, when dried, and sometimes the whole plant is used for the same purpose in a green state. When this is intended it is sowed broadcast and cut before it goes to seed.*

of his master, if there were no ears of corn that had odd rows. His master gave for answer, that if he would bring him an ear of corn with an odd row he would give him his freedom. The negro made no remark, but a year or two afterwards he reminded his master of his promise, and produced an ear that had nine rows. The Virginia gentleman regarded the ear with astonishment—counted it several times before he could believe the testimony of his own eyes; at length he demanded of the negro how it had came to pass. If I tell massa, said the fellow, he will not give me my freedom. Upon being assured that he should have his freedom at all events, he confessed that he had, in the earliest state of its growth, unclosed the husk and cut out a row, after which he closed it up again, and it presented when ripe, the unnatural appearance of a spike of corn with an odd row. He had, it appeared by his own confession, been trying this experiment upon many plants before he could succeed. His master gave him his freedom, but kept the odd ear of corn a great many years to show to his acquaintances, to whom he was fond of relating the anecdote.

*A story is told in Virginia, but I will not vouch for its accuracy. It is a common practice on the plantations to give the slave a little spotof ground, which he is allowed to cultivate for his own profit. On one of these patches an old negro had planted Indian corn for what is called "roasting ears," and as he tended it with great care it was in the most flourishing condition, and promised an abundant harvest. It was the pride of his heart, the object of his thoughts by day and his dreams by night. He had already in his own mind calculated the profits it would yield, and had determined upon some of the fine things he would purchase with the proceeds. It so happened, however, that just about the time that the female flowers were ready to receive the fructifying powers of the male ones, the owner of the little cornfield had an unfortunate quarrel with an old crone whose lodge was in the neighborhood of his favorite little spot. His antagonist was noted for having the free use of her tongue, and on this occasion was more eloquent than she was wont. After venting upon the man all the maledictions she could recollect or invent, proceeded to curse his favorite patch of corn, and in the most solemn manner declared, that it should not yield him a single ripe ear. Strange to tell, when the time of harvest arrived, the poor slave found that the malicious prophecy was true to the letter, he had not a single perfect spike to serve him for seed the following year. Among the negroes this circumstance gained the old wench the fame of being a dealer with the devil; and ever afterwards the negroes in all the country round worshipped her through fear, as the Indians do evil spirits. But so much was she shunned, that the grass grew rankly before the door of her hut; and when 'Aunt Molly" died at the age of ninety-six, the whole black population of the country considered themselves as relieved from a heavy burden.

How she effected her purpose she would never disclose; but the owner of the plantation, and

The *ashes* of the *stalk* contains a large proportion of alkali.

2. Of the *husks* a very beautiful paper is made in Italy.

3. The *cob* may be ground, and with or without the grain, used to fatten cattle. An oil is also extracted from the cob.

4. The *grain* is used as food for man and cattle.

It also yields oil:—"The oil of Indian corn is used in Cincinnati as a substitute for sperm or whale oil. It is said to produce an equal quantity of light, to be quite as transparent, and free from disagreeable odour, in addition to which, it is not subject to freezing, having resisted the greatest cold during the present season—say 6° below zero. The yield of oil is said to be half a gallon to the bushel, without destroying the qualities of the grain for distillation."—*Penn. Inq.*

5. It also yields *spirit*. My Kentucky correspondent informs me that he has known four gallons of high proof spirit to be distilled from a single bushel of corn, of the yellow variety, spangled with red; the seed of which came from Hunterdon County, New Jersey.

The late Peter Miner, of Albemarle county, Virginia, made some experiments, of which the following have been communicated: He had ten bushels of meal of the *corn* and *cob* ground together, weighing 367 pounds, and ten bushels of *pure corn meal*, subjected to the process of distillation; and the result was, eighteen gallons of spirit from the latter, and thirteen from the former. Now if the corn corbs had been destitute of all value, the product of the former, estimating the quantity of pure corn meal at five bushels, (which is the general rule, to allow one half in the bulk to the cobs,) ought to have been nine gallons only; but thirteen having been obtained, four of them must have been extracted from the cobs.

On the Culture of Ruta Baga.

As the ruta baga and all other root crops are gaining especially in this country, I will give you the result of my experience. I have raised the ruta baga more or less for seven years past. My usual way has been to sow on new timbered land without ploughing. I have succeeded some years admirably, and some not so well. I have never attempted a crop of turneps that would not have cleared me $25 per acre. Some years the crop has cleared over $100 per acre.

I propose to give you the result of 1¼ acres that I have raised this year. The field was wheat stubble, timbered land, which was not ploughed for the wheat crop; the soil a black sand mixed with loom. The piece was ploughed in the spring, and left until the first week in June; it was then ploughed and harrowed, the roots, &c. cleaned from the ground, and four ounces of seed sown broad cast and well harrowed. After they got into the rough leaf, they were thinned and cleaned from weeds. This is all the cultivation, with the exception of a few hours in August, pulling weeds around stumps, &c.

The result was, I gathered 800 bushels, at 15 cts.	$120 00
Dr. to expence preparing ground, and sowing,	$6 00
Dr. to 4½ days weeding and thinning,	4 50
" 6½ days gathering,	5 00
	$15 50
The nett proceeds of 1¼ acres of land,	$104 50

No farmer would be wise in selling turneps at the price stated above. I count them equal to corn in the ear, that is, a bushel of turneps are equal to a bushel of ears of corn.

Experiment in the Culture of Carrots.

I want to say a few words on raising Carrots, as this year is my first experiment. A friend of mine last winter was advising me to sow some carrots. From his experience he believed he could raise more carrots than turneps from the same land, and he believed they were worth more. Being a friend to the ruta baga, I was slow to believe the carrot could be made as profitable. He succeeded in getting me to promise to sow an acre by his giving me the seed. I sowed about 3-8ths of an acre in the same field where I sowed my turneps the year before. I sowed about the 10th of May. I had so little faith in the crop, I would not sow more than half the seed my friend gave me. I gave what I had left to one of my neighbors. My carrots came up very well, but I was so faithless in the crop that I neglected them until after I had hoed my corn. I examined them, and thought it not worth while to weed them, but I was overpersuaded by my hired man. We spent nearly four days work in hoeing them—the weeds had got such a start that we destroyed the carrots altogether on one third of the piece. This is all the cultivation they had. This fall, to my astonishment, on gathering them, I found I had a little more than 200 bushels. It was not uncommon to

indeed all well informed white persons, suspected her of having secretly stripped the plants of all the male flowers before the female ones were impregnated.

The point of this story will readily be perceived by the intelligent agriculturist, viz.: that if they wish to cultivate Indian corn for *fodder alone*, or for making sugar, they can deprive it of the power of going to ear, and make it throw all the juices into the stalks and leaves.

find them weighing from 7 to 9 lbs. I was led to weigh some of them by seeing a piece in the Farmer of some one showing you some that were very nice weighing 2½ to 3 lbs.

Cr. by 200 bushels Carrots, at 25 cts.	$50 00
Dr. to preparing ground and sowing,	$2 50
" weeding and thinning,	4 00
" six days gathering at 75 cts.	4 50
	$11 00
Nett proceeds of three-eights of an acre of land,	$39 00

I have made calculations according to the prices that I sold them in the field. I find them to be very valuable for milch cows. I shall make some experiments in feeding turneps and carrots and the result I shall record.

Yours respectfully, A. Ford, Jr.

Union District, Michigan, Dec. 11, 1837.

Hints to Correspondents.

Too much of the Editor's space, and too much of the writer's and reader's time is very often consumed in long preambles, and apologetic (half of them affected) introductions. The better way is for the writer to do as we like to see a good horse do, *come down at once to his work*, and say in the plainest language what he has to communicate.

Another hint.—Whatever may be his subject, the writer should always give *date and place*, if not his real name—especially if promulgating theories or giving facts. The bearing and application of what is said depend much on time and locality. For example, at page 218, Vol. I, of Farmers' Cabinet, under the head, "Importance of Manures," speaking of the use of plaster of Paris, the writer says, "in the River counties it has been formerly used for half a century." Now what river does he mean—Pocomoke or Nanticoke—the Raritan or the Rapidan? J. S. S.

To the Patrons of the Farmers' Cabinet.

Change of the Publication.

At the solicitation of many of our subscribers, we have been induced to make a change in the publication of the Farmers' Cabinet. Hereafter it will be published on or about the 15th of each month. Each number will contain 32 pages, being double the size of those heretofore issued. By this arrangement the subscribers will receive as much reading matter as they do at the present time, and in the same form. It will allow more time for the collection and preparation of materials for each number. There will also be a saving of one half the postage to those who receive the work by mail, as it is chargeable with newspaper postage only—that is one cent on each number within the state of Pennsylvania; and under one hundred miles from the place of publication, out of the state—and one and a half cents per number to any other part of the United States. ☞The next number therefore will be issued about the middle of February.

The Silk Worm.

A small pamphlet has been lately published on the growing of the Silk Worm, by Mr. J. Strong, of Germantown, near Philadelphia. This little work comprises the results of several years practical operations and experiments in the business, and contains, in small compass, many useful directions to those who may engage in the business. The pamphlet may be obtained of H. H. Hirst, 21 Arcade.

To Subscribers.

Subscribers who live remote from the city are requested to pay the amount of their subscription for the ensuing year to any post-master willing to receive it, as all post-masters are hereby authorized, and respectfully requested to act as agents for the Cabinet. ☞Any gentleman may constitute himself a special agent by forwarding *five dollars*, free of postpage, for which we will supply *seven copies*, as may be ordered, for one year.

The following gentlemen, among others, will receive orders and payment for the Cabinet:

R. Lamberton, Esq. Carlisle, Penn.
Wm. W. Murray, Esq. Middletown, N. J.
Geo. Reynolds, Wilmington. Del.
Matthew Smith, Chambersburgh, Penn.
Daniel Fenton, Trenton, N. J.
Samuel Prior, Salem, N. J.
Geo. W. Coppuck, Mount Holly, N. J.
Linton Rogers, No. 58 Second st., Pittsburg.
F. Woolman, Burlington, N. J.

☞Sucscribers will please recollect that the next number of the Cabinet will not be issued until the middle of the next month, February.

Cabinet, Vol. 1—Bound.

Those persons who wish to obtain the first volume of the Cabinet, can do so by making early application. The edition is nearly exhausted. Price, neatly and substantially bound, one dollar and twenty-five cents. Subscribers who commenced taking the work at No. 13, Vol. 1, are informed that we can complete that volume by supplying the first twelve numbers, at fifty cents.

ARTICLES.	Philadelphia, Jan. 15.	Baltimore. Jan. 14.	New York, Jan. 13.	Boston, Jan. 13.
Beans, white, per bush.	$1 28–1 62½	1 25—0 00	0 14—0 15	1 12—1 25
Beef, mess, new, per bbl.	14 00–15 00	11 00–13 00	14 00–15 00	14 50–15 00
Bacon, western, per lb.	8— 10	7— 9	8— 10	.....
Butter, extra, per tub	12— 14	16— 20	21— 23	20— 23
Butter, fresh, per lb. (market,)	00— 00	20— 25	20— 25	25— 28
Hams, per lb.	12— 14	13— 13½	10— 12	14— 15
Hog's Lard, per lb.	9½— 10	9— 10	10— 11	9— 10
Cheese, American, per lb.	9 — 10½	9— 11	8— 9½	8— 9
Beeswax, yellow, per lb.	25— 26	23— 25	26— 27	26— 31
Beeswax, white,	.....	38— 40	38— 40	38— 40
Bristles, American,	42— 65	25— 65	25— 65	.....
Flax, American,	7½— 8	9— 10	6— 7	9— 12
Flour, best, per bbl.	8 75—9 25	8 87½—0 00	8 00—9 00	9 50—9 62
GRAIN—Wheat, per bush. Penna.	1 60—1 75	0 00—2 10	1 85—2 00	.....
do. Maryland,	1 60—1 70	1 80—1 82	1 60—1 75	.....
Rye, per bushel,	0 98—1 06	0 90—0 95	—1 18	1 33—1 37
Corn, do.	75— 76	75— 78	1 10—1 12½	0 94—0 98
Oats, do.	40— 43	37— 38	40— 50	52— 55
Barley, do. Penn.	85— 90	... .	0 00—	0 00—0 00
Peas do.	1 00–1 25	75—1 00	— 8	.....
HAY, Timothy, per 100 lbs.	0 80—0 85	12 00 pr. ton.	.....	18 00 pr ton.
Meadow Grass,	70— 80	.....	.....	.....
Hemp, American dry rot, ton,	150 —160	6— 7	130 —140	.....
Hops, first sort, 1836, lb.	9— 10	— 9	6— 6½	6— 7
Plaster Paris, per ton,	3 25—3 37½	0 00—3 50	2 50—	3 00—3 25
SEEDS—Cloverseed, per bushel,	5 00—6 50	5 50—6 00	.....	14— 15
Flaxseed, rough, do.	1 40—1 43	1 37—1 50	8 50—9 50	.....
Timothy,	2 00—0 00	3 25—4 00	12 50–14 00	2 87—3 00
Tallow, per lb.	11— 11½	— 11	— 11	12— 13
WOOL—Saxony, fleece, per lb.	00— 00	40— 50	50— 00	50— 55
Merino,	46— 48	35— 40	37— 00	45— 47
1-4 and common,	33— 36	25— 30	40— 50	33— 38

Prices of Marketing as near the average as can well be ascertained.

Beef,	7½ by the quarter.	Potatoes,	40 a 50 per bu.
Pork, country killed,	6 a 8	Sweet Potatoes,	75 a 1 00 per bu.
Veal,	6 a 8 cents per lb.	Apples,	75 do.
Mutton,	6 a 8	Dried Apples,	1 50 a 1 75 do.
Dried Beef	12½ a 15 per lb.	Dried Peaches,	4 00 do.
Turkeys,	$1 12½ a 1 25 apiece.	Cider,	a 3 00 per barrel.
Chickens,	75 a 1 50 per pair.	Lard,	14 a 16 per lb.
Geese,	1 00 a 1 25 a piece.	Hams,	16 do.
Ducks,	75 a 1 25 a pair.	Shoulders,	12½ do.
Butter,	25 a 38 per lb.	Oak Wood,	5 00 a 6 00
Eggs,	a 20 per doz.	Hickory Wood,	6 50 a 7 50

J. Van Court Printer, corner of Bread and Quarry St. rear of 96 N. Second.

THE FARMERS' CABINET,

DEVOTED TO AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

Vol. II.—No. 13.] Philadelphia, February 15, 1838. Whole No. 37.

PUBLISHED BY JOHN LIBBY,
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To our Patrons.

In our last number we announced our intention of changing the Cabinet from a semi-monthly, to a monthly paper,—the change has accordingly been made, and the present is the first number issued under the new arrangement. Our patrons receive the same amount of matter, and in the same form—the advantages arising from the change, and briefly referred to in our last publication, are mutual between the publisher and his subscribers. As yet we have had but one complaint; and as every person with whom we have conversed has cordially approved of the alteration, we presume we shall have no more. We avail ourselves of this opportunity of expressing our thanks for the liberal patronage afforded to the enterprize in which we are embarked; and we would also tender our acknowledgments to those correspondents whose communications have from time to time enriched the pages of the Cabinet. Their aid is still needed, and we cherish the hope that they will continue their favors. Communications from gentlemen in all parts of the country, who feel an interest in the promotion of Agricultural knowledge are requested.—Detailed accounts of experiments, and communications on all subjects of general interest to farmers, improvements, &c., are respectfully and anxiously solicited. In this important work we look to intelligent and enterprising individuals for aid; as well as to the officers of Agricultural Societies.

In regard to our subscription list we have no cause to complain, although it is not as large as could be desired, or, as might reasonably have been calculated on from the importance of the work to which the Cabinet is entirely devoted, and the very low price at which it is published. But we have been encouraged of late, by the many tokens of approbation that we have received from all quarters, and from the fact that we have had more voluntary subscriptions within the last three months, than during the fifteen months preceding.—The demand for the first volume has also increased, so that the surplus copies of that volume remaining on hand are nearly all taken up. Still we need the active co-operation of all the friends of our enterprise. If the Cabinet is calculated to promote the cause of Agriculture, and consequently individual prosperity, the benefits arising from it will be increased in proportion to its circulation.—Again, a work, from which advertisements, the life of newspapers, are wholly excluded, necessarily requires a very heavy list of paying subscribers. Such a list we need—such a list, we think, the Cabinet ought to have. If its friends will but exert themselves in its favor, the work, so far as regards the necessary circulation, is accomplished. We wish its friends in every section to make an effort to increase its circulation. Any gentleman may constitute himself a special agent by forwarding five dollars free of postage, for which we will furnish the work to seven subscribers for one year. Let every one exert his influence among his friends and neighbors, and the effort will tell upon our subscription list, and enable us to expend a greater amount in prosecuting the primary objects of the work, than our present means will justify. In proportion to the increased circulation of the Cabinet, the means of rendering it more extensively useful, are placed in our possession. We therefore ask with confidence the aid and assistance of all, by contributing to our pages, and enlarging our circulation.

JOHN LIBBY

Philadelphia, Feb., 1838.

Agricultural Society.

We take great pleasure in informing our distant readers that the Philadelphia Society for the Promotion of Agriculture, has been revived under the most favorable and encouraging auspices. A list of the officers appointed for the present year, will be found in another page. This Society was chartered by an act of the Legislature in the year 1785, and has, consequently, been in existence for the period of fifty-three years.—For various causes it has been suffered to languish, and has in fact lain dormant for years together. Whenever it has been prosecuted with a zeal commensurate to the importance of the cause of agriculture, it has not only, we have been credibly informed, been well sustained, but has exerted the happiest influence on the agriculture of the country. It numbered among its officers and members some of the choicest spirits of our nation—many of them were practical men, and all of them deeply imbued with the spirit of agricultural improvement, rejoiced at every opportunity of advancing the interests of a science, so intimately blended with our national prosperity and welfare. The early communications made to the society were published in the newspapers of the day, and of course are now mainly lost to the public. But the papers presented of later years have been published from time to time, in a form suitable for binding, (being of the same size as the Cabinet) constituting, the "Memoirs of the Society." These volumes contain a vast fund of agricultural matter—and sustain a deservedly high reputation both in this country and in Europe. We have heretofore extracted articles of great value from these volumes, and shall avail ourselves of the privilege of doing so hereafter. We rejoice, and we know that the intelligent and liberal minded farmers of the country will rejoice, at the reorganization of this society. The spirit of agricultural improvement is abroad, and, standing on high ground, sustained by gentlemen of intelligence, of practical experience, of persevering industry, and untiring zeal—alive to the great importance of acting promptly and efficiently in a cause in which all are interested; we say, that we rejoice at the resuscitation of this society, at the infusion of new life, and vigor, and energy, in its operations; that we regard it as the harbinger of better days—that we look forward with confidence to the period, and that not a distant one, when its influence shall be seen and acknowledged in an improved state of agriculture, and the general advancement of the science.

For the Farmers' Cabinet.

Horned Cattle.—No. 3.

Having, in the last number, treated on the importance of selecting stock, and breeding from the most perfect in form and approved in quality, I must beg your indulgence and the patience of your readers, with a few more remarks in continuance of the subject:—

Mr. Dickson on short-horns says, "experience proves that they not only possess disposition to fatten, but that they consume less and less food in proportion as they attain weight and fatness," and again, "disposition to fatten insures another valuable property, *early maturity.* This property is almost peculiar to short-horns. Three years is the longest period, and very frequently oxen are fed off at two years of age." "I have frequently," he continues, "seen Mr. Robertson have two and a half year old steers sold for £26, (with exchange, near $1.30,) each, and brought to the weight of 72 stone, or 1008 lb. The late Mr. A. Wilson used to bring two years old, to 80 stone, and sold them for £28 each, and Mr. L. Rennie, of Phantasie, has always realized £30 a piece for his two years old steers."

These, be it observed, are examples of what has been done in Scotland, where neither soil nor climate have any advantages over those of Pennsylvania. They prove very clearly that short-horned cattle, at two years old, can be made fit for the butcher; but of course, in accomplishing this object, proper management is requisite; and in addition to early maturity, English writers assure us that they yield beef of fine quality, (and who are better judges of roast beef!) a fact which some of our countrymen have disputed; their opinions, most probably, being founded on prejudice, rather than experience.

For the grazier, disposition to fatten and early maturity are the chief means to insure profit; and these qualities the improved short-horns possess in an eminent degree.

Let us now inquire how well they are suited to the dairy or milch farm. For this purpose the short-horns of England have had to fight their way through prejudice, ignorance, and

obstinacy. Many contended that they were only fit for the grazier and butcher, and sustained their arguments by instances wherein the only or chief care was to improve their feeding points; entirely neglecting their milk. In such cases, the milching qualities of cows would doubtless fail. The calves running constantly with their dams, and the pail never being used, must cause the milk to dry up fast, and gradually to diminish the powers of lactic secretion.

Mr. Dickson assures us that they usually give from 16 to 6 quarts a day, throughout the season, and they are such constant milchers that they seldom remain dry above six weeks or two months before calving.

He quotes instances in which they have not gone dry at all, and in confirmation of this, I have myself a three quarter short-horn cow, which after her first calf milched till the week previous to calving again. The quantity and richness of her milk is alone such as to make her a valuable beast, while she carries more fat and flesh than three common cows together, although feeding on the same pasture. She has now a calf from a full blooded Durham bull, two months old, and of remarkable size and beauty, yet she gives six to eight quarts per day more than it sucks. The practice, however, of dairy men in the vicinity of London, Liverpool, and other large towns of England, is sufficient to settle the question and satisfy the most sceptical. "In these dairies," says the writer quoted so frequently, "it is difficult to see cows of any other breed than short horns or crosses with them."

They are milched till about eight years old and then fed off fat for the butcher. These cows *can* be fed off fat. They thus give a return in flesh, for part of their original high price; whilst they remunerate their owners in the mean time for their food by an abundance of milk.

A Penn Township Farmer.

For the Farmers' Cabinet.

Remarks upon Agricultural Buildings, Barn and Stabling.—No. 3.

Continued.

The upper story of a Barn, should extend beyond the side walls of the basement, so as to shelter the stable doors and the rail-ways, and be high enough to convey provender (except grain) for the animals, from the time they are removed from pasture in autumn, till they are returned to it again in the spring. The timber and other materials of which the building is composed, should be of sufficient strength to support its contents, and the whole frame well braced. The timbers should be arranged so as to allow the barn to be filled, and the animals afterwards supplied with the contents, with the greatest possible convenience. If the horizontal joists, which extend across the building and rest upon the side walls, and caps can be procured of sufficient length to extend the whole distance from the extremity of one overshoot, (or projection,) to that of the other, such should be preferred, and all other timbers so far as practicable, should also be of sufficient length without splicing.

The overshoots should be supported entirely by the walls between the stables and railways, so that there will be no obstruction, opposite the stable doors.

Each barn floor should be lighted by a glass window, placed at the opposite side of the building from that where the loaded cart or wagon enters it. The windows should be well guarded by bars or wire screens.

A glass window should also be placed in each gable end, for the double purpose of admiting both light and air into the building; these should also be guarded by bars or screens. One half of each window should be made to rise and lower, and where they cannot conveniently be approached, this can be performed by means of cords or wires.—Those in the end, should be placed as near the upper part of the building as convenient, and that for each floor, also near the plate at the lower ends of the rafters. In constructing the angle of the roof, care should be observed not to make the rise too great, and thereby expose it unnecessarily to the horizontal force of winds; nor so little as to expose it to injury from the vertical pressure of deep snows; perhaps for the latitude and climate of Pennsylvania, the relative length of a horizontal line from the lower end of one rafter to the other, and a vertical line from the middle of this to the summit of the two rafters, might be in the same proportion as the numbers, eight and three. The vertical line, half the horizontal line, (aforesaid) and the length of one rafter will then, be in the same relative proportion as the numbers three, four, and five. The roof should receive support in a vertical direction over the side walls of the basement story, and diagonally from the studs (or posts) at the sides of the entry. The plates at or near the lower ends of the rafters should be connected by ties which extend from one to the other across the building, at the sides of each bay. These ties should be connected to the plates, and also to the vertical and diagonal posts which support the purlines and roof, and the rafters connected to the purlines and plates in such a manner, that the acute and obtuse an-

gles of intersection serve as braces, and where the connection of different parts are not sufficiently strong when attached in the usual manner by the aid of mortices, tenons and pins; or projecting shoulders, either square or diagonal with pins, keys, or wedges; *sufficient strength may be obtained by using iron straps, screw bolts and nuts, or spikes.* By placing the ties across the building at equal distances asunder, and using a space between two of them for the barn floor, from which a bay at each side may be filled, and afterwards the floor may be filled except sufficient room for the team and loaded wagon to pass in. This unoccupied part of each floor afterwards serves, as a convenient place to thresh and clean grain, shell corn, and grind grain, by the aid of portable machines for this purpose, driven either by animal, wind, or water power, used at any convenient distance from said machines, and portable connecting parts (either shafts, ropes, bands, or chains,) used when necessary. Agreeable to this arrangement of ties, a barn with two floors (as this is supposed to have,) will have seven ties across from one plate to the other; and of the six spaces between them, the two floors will occupy, the second from each end, one of these ties will be at the centre of the building between two bays, or across the middle of a double one; two of them at the ends of the building and one at each side of a floor.

Each tie is prevented from sagging between the plates, by four of the aforesaid vertical and diagonal posts which support the purlins and roof. Each post is inserted with a tenon into a mortice in a joist and a purline, with two braces connected with it and the purline.

Each tie may be connected to the posts by four horizontal screw bolts and nuts or otherwise. The purline at the upper end of the diagonal posts, may be placed equi-distant between the other and the summit of the roof, or in any other convenient position to support the roof in the best manner. Each barn floor should be twice the width of an ordinary wagon load of hay or grain, and the entrance into it closed by two doors, together as wide as the barn floor, and as high as the under side of the plate, so that one side of the floor can be filled from the other, after the bays are filled from each side of the floor. The doors may move upon hinges in the usual manner or slide in grooves or upon friction rollers, parallel with the sides of the barn, and one of them be closed after that side of the floor is filled, and the other one only used as a passage to the unfilled part of the floor; or what is still more convenient, a small door, say three or four feet wide, and six and a half feet high, made in one of the doors for an ordinary (or common) passage in and out. A stair way goes from each floor to one side of the entry below, and should not be so wide as to interfere with the passage-way in the entry. A vertical flue is made over the entry in each bay to pass hay and other provender down, (for the animals in the basement story,) of convenient dimensions, say four feet square composed of four vertical posts each connected to a joist at the lower end, and to a rafter at the upper end, and connected together by horizontal rounds placed four feet asunder, or other convenient distance. A ladder opposite (or near) a post at each side of a floor serves to pass up and down to and from the bays.

The bridge wall for the road-way into the barn, extends two or three inches under the barn floor joists at one end, and extends on each side of the road-way a sufficient distance from the barn, to make the road-way (when filled with earth) a suitable angle of elevation toward the barn. The walls should be of sufficient thickness and of a suitable form not to be displaced by frost or outward pressure of the earth, the side next to and parallel with the side of the barn should be vertical or nearly so; not to interfere with the rail-way.

By adopting the aforesaid arrangement, the upper story (for the provender) can be made of any convenient length, without interfering with the basement story below for the animals. The flues and stair-ways, serve to convey pure air to the basement story, and by placing a sliding (or other) door at the lower end of the flue, and making them and the stair entry and stable doors to fit each opening when closed; a temperature may be obtained sufficiently uniform for the health of all the animals in the basement story, by admitting more or less air to them by opening or closing the doors and windows to any required degree, and by using shutters to each window, any required degree of light may be admitted.

The sides of the building above the basement story should be weather-boarding.

The ends and the whole of the basement story between the doors and windows upwards from a foot or two above the ground, may either be frame and weather-boards, or stone or brick laid in lime and sand mortar. The remainder should be stone, laid in lime and sand mortar, and deep enough to be out of the reach of frost, the external surface guarded by paint or cement.

The operation of the machinery is as follows, viz: A rope is passed over a pully in each of the blocks 1, 2, and 3, and one end attached to the horizontal axle of the vertical wheel 4; the other end of the rope has a hook made fast to it, to ascend and descend with the

rope. Another rope is passed over another pully in blocks, 1, and 3, one end of which is attached to the axle of the wheel 4, and a hook to the other end of the rope. A third rope is passed over the other pully in block 3, and is also connected to the axle of a hook as aforesaid. These hooks descend far enough to be attached to the wagon body; these over 2, and 3 to the ends of it, rather farther from the centre of the floor than the middle of the load. The rope descending from 1, to the side of the load next to the centre of the floor, is passed under the load and attached to the other side of the wagon body. Another rope is made to uncoil from the wheel while the three aforesaid coil upon the axle of it, by means of a horse or other power, attached to the rope which is upon the wheel, and made to move from the building, (drawing the rope under the friction pully 5, at or near the lower end of the road-way,) a sufficient distance for the load to be discharged over the tie M, M, into the bay, when a small downward force is applied by the hand of a person to raise the rope at the under side of the load, and thereby cause it to make part of a revolution sufficient to cause the load to fall into the bay, the hooks at the ends of the load serving as a pulleman.

By shifting the machine, the opposite bay can be filled or other floors used in like manner.

The wagon body can be attached and detached to and from the running gears in a few seconds, by means of screw or spring bolts.

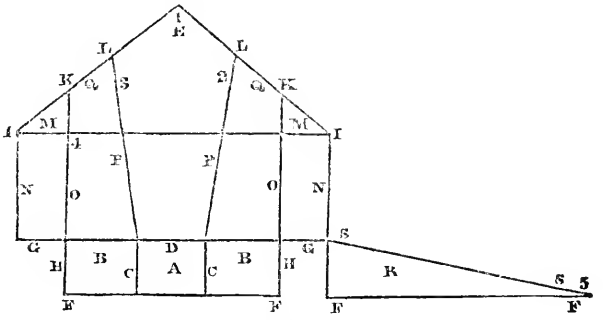

Fig. 33.

Explanation of figure 33, which is an *elevation or vertical projection* of one end of a barn showing the frame and machinery for unloading a wagon.

A, shows the position of one entry door.—B, B, two stable windows.—C, C, mangers. D, window above entry door.—E, window in gable end.—F, F, F, F, ground line.—G, G, joists which extend under the floors, the whole width of the building which here is supposed to be fifty six feet, eight of which on each side are supposed to overshoots, or projections beyond the stable walls.—H, H, stable walls.—I, I, plates.—K, K, lower purlins, which also serve as plates.—L, L, upper purlins.—M, M, ties.—N, N, vertical posts under lower plates.—O, O, vertical posts under lower purlins.—P, P, diagonal posts under upper purlins.—Q, Q, rafters.—R, bridge-wall.—S, S, road-way.

1, Shows the position of a block suspended to the summit of two rafters, in which two vertical pullies turn upon one fixed shaft or rafter.

2, Shows the position of another block, suspended to a purline or rafter: this block has one vertical pulley turning within it.

3, Shows the position of a block also suspended to a purline or rafter, and has three vertical pullies to turn within it upon one fixed shaft.

4, Shows the position of the centre of a wheel and axle.

5, Friction pulley.

P. S. The lower part can be varied to accommodate the sheep, while the upper is constructed as above described.

Chester Co., Pa., Dec. 15, 1837. P.

HAY ON BARN FLOORS.

When hay, particularly clover, is thrown on the floor, much of it, and the most valuable part, too, breaks and crumbles into such small pieces, that the fork will not take them up. In most barns, this is entirely wasted or shoved out into the yard, where but comparatively little of it is picked up by the stock. "I," says an aged farmer, "keep my barn floor as clean as my wife's parlor, and every day shovel into an old sleigh or box, standing by, all the leaves, seeds, and fine parts of the hay. This makes superior feed for my cows: if moistened with water, and a small quantity of bran or meal added, and given about the time of calving, nothing appears more nourishing to them.

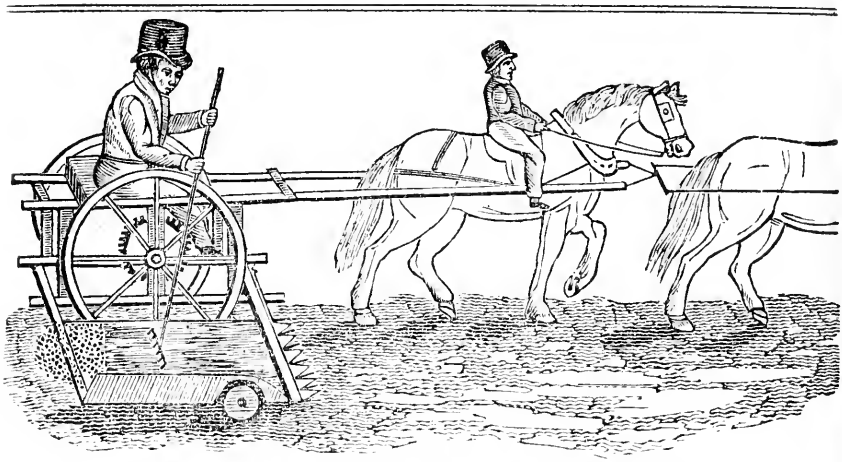

Fig. 34.

Hussey's Mowing and Reaping Machine.

The accompanying engraving represents Mr. Hussey's improvement on a reaping machine, invented by himself. The original machine was invented in 1833, in Cincinnati, Ohio. In 1834 it was used in Moscow, Livingston, Co. N. York, and with what success will be shown by the following extracts from a communication from Dr. Wm. C. Dwight, and published in the newspapers of that vicinity the same year.

"The machine has been very fully tried, and I am gratified to be able to say, that it has as fully succeeded; hundreds of farmers from the different towns of this, and the adjoining counties have witnessed its operation, and all have not only expressed their confidence in its success, but their gratification on the perfection of its work. It saves all the grain. To use the language of a gratified looker on, an old and experienced farmer, 'it cheats the hogs. Five acres of heavy wheat on the Genesee flats were harvested in two hours and a half. The horses go at the rate of four or five miles an hour, and when the growth of straw is not too heavy, a fair trot is not too much." In 1835 several machines were used in Illinois and Missouri. The following extracts are from certificates published in the papers of that country.

"In the morning I cut five acres of wheat, in two hours and a half, with two horses at a time and changed. In the evening I cut ten acres of rye in three hours and a half, with four horses at a time and no change; I cut oats too much lodged to be cradled, nearly as clean as if they had been standing."

Stephen Everham.

In Missouri William J. McIlroy, states that he cut with four horses three acres of grass in one hour, the ground was measured, and the time noted by the company present, the same corroborated by several witnesses in the public prints.

In 1836 the machine was introduced into Maryland, by the instrumentality of the Board of Trustees of the Agricultural Society, for the Eastern Shore. The following is extracted from their report which was extensively published.

"The favorable accounts of the operation of this implement in several of the Western states, induced the Board to invite Mr. Hussey to bring it to Maryland, and submit it to their inspection. It was accordingly exhibited in Oxford, Talbot Co., on the first of July in the presence of the board, and a considerable number of other gentlemen. Its performance may be justly denominated perfect, as it cuts every spear of grain, collects in bunches of the proper size for sheaves, and lays it strait and even for the binders. It was afterwards used on the farm of Tench Tilghman, where one hundred and eighty acres of wheat, oats, and barley were cut with it.

We deem it a simple, strong, and effective machine, and take much pleasure in awarding unanimously, the meritorious inventor of it a handsome pair of silver cups.

Robert H. Goldsborough, S. Stevens, Samuel T. Kennard, Robert Banning, S. Hambleton, sen., N. Goldsborough, E. N. James, L. C. Chamberlain, Martin Goldsborough, Horatio L. Edmonson, Tench Tilghman.

In 1837, Mr. Hussey improved the machine with a design to facilitate its operation on stony land. It was the improved machine, as represented in the engraving, which elicited the high commendation bestowed upon it by Mr. Stonebreaker, Col. Tilghman, and others

as published in the Hagerstown Torchlight, and republished in the 11th No. of this volume. A considerable part of the improvement consists in the general arrangement, while the grand principle in the cutting apparatus remains unchanged. It is the opinion of intelligent farmers, that the improved machine will eventually supersede the original, therefore it is not deemed necessary to describe the original at present. Accordingly the following description will refer to the improved machinery only.

The main body of the machine consists of a frame composed of two sills, connected by two cross rails. In these sills are steped six posts, three in each sill. On the tops of these posts and parallel with the sills, are framed two top rails, which extend at one end, and form shafts for a horse, these shafts are also connected by cross rails, corresponding with the sills. The main axle is hung to the middle posts of the frame in boxes, in which the axle turns, while the ends are square, and fixed in square holes in the hubs of the wheels.—These wheels are not unlike wagon wheels, being three feet and three inches high. This frame follows behind the horses like a horse cart, both the horses and the wheels travel on the stubble, and close to the standing grain. Two narrow planks are placed across the sills, one forward, and the other behind the wheels; these plank extend on one side five or six feet beyond one of the wheels, and are connected by other planks, from within two inches of the wheel to their extreme ends, forming a table or horizontal platform, at a distance from the ground equal to the highest of the stubble.—The ends of the plank which cross the sills are fixed to the sill by a hinge, which permits the extended platform to rise and fall according to the inequality of the ground; the extreme end of the platform being supported by the small roller, seen in the engraving. On the front edge of the platform are firmly fixed a row of strong spikes, pointing forward, and about three inches apart, these spikes are formed of two pieces, one upper and one lower piece, and joined at the points, forming corresponding slits through all the spikes, to accommodate the cutter or saw. The cutter is formed of blades in form of lancets points, fixed side by side on a rod of iron, which gives it the appearance of a saw; this is run through the slits in the spikes and attached to a pitman, moved by a crank, which gives the blades a vibratory motion from one spike to the other. The crank being connected by cog wheels to the main axle, regulates the motion of the cutters according to the speed of the horses. It will be readily understood, that if the wheels are driven close to the standing grain, the platform with the cutting apparatus will extend into the grain, the straw as the machine progresses will be received between the spikes, and be cut off by the vibratory motion of the blades. In the process of cutting, each blade passes between two pieces of iron, so that the straw is held both above and below, the edge that cuts it; the impulse given to the butt of the straw by the forward motion of the machine, incline the heads backwards. The grain by this means accumulates in a heap on the platform, and is pushed off behind with a rake. The performance of this operation is not unlike padling a boat. The binders are placed at equal distance from each other round the field, to bind, and throw the grain out of the track before the machine comes round again. The machine is raised, or lowered, by raising or lowering the boxes of the main axle on the posts to which they are attached. One horse is sufficient in light grain, yet two are preferable in all cases, on account of the facility of turning by the power of the head horse, as well as for light draught when speed is required.

For the Farmers' Cabinet.

Remarks upon the Application of Lime, to prevent the waste of Water in Canals or other Water courses.

Where the sides and bottom of a canal or other water course, is of so porous a texture, as to be incapable of holding water, they may be improved by the use of lime slacking within the subterranean channels. The expansion of the lime during the process makes the bottom and sides sufficiently solid to hold water. The process is merely to place pulverized unslacked lime in the bottom or sides of the canal in the immediate vicinity of the leakage, either upon dry earth or upon plank confined by stones placed upon them, or by stakes driven diagonally over the edges of the plank into the earth, and then filling a section of the canal or water course, as rapidly as possibly, so that the water will convey the lime into the subterranean channals, before it is expanded to the full extent. If one operation be insufficient to complete the work, the process is to be repeated as often as may be necessary.

P. S. I should be much pleased if some one in a situation to do so, would make experiments with unslacked pulverized lime, forced by a powerful press or by pounding within the interstices, between the different fibres of seasoned wood, before being used for fence posts, pavements, or rail road sills, and hereafter inform the readers of the *Cabinet* the result, as a guard against decay and the effect when used, between wood brick or stone, to give stability to pavements.

Agriculture is the nursery of patriotism.

For the Farmers' Cabinet.

Smearing Sheep.

It is probably not known to many of the readers of the Cabinet, that in Scotland—a leading sheep country, Sheep are *smeared* or coated with a mixture of tar and grease, late in the fall, in order to destroy the lice, ticks, &c. which infest them and to act as an additional protection during winter. Equal parts by measure, of good Virginia tar and of Palm oil or butter are melted together—the wool is laid open by the hand along the back and along each side at the turn of the back, and a thin strip of the mixture nearly cold, laid in each opening—probably the size of a large hen egg, to each sheep. The grease neutralizes the tar, so that it in no way, injures the wool but washes out clean, at washing time, without any difficulty. Immediately after the application, the wool becomes soft and oily, and grows rapidly, and the sheep being freed from the vermin that annoy them so much, take on flesh better. In the lowlands, where they are not so much exposed, and are not generally furnished with sheds, they are *poured*, that is, a mixture of spirits of tar, tobacco juice, a decoction of broom (Scottice, *broom bree*') and sulphur birum is poured over them, parting the wool as in smearing.

I do not know how long it is since *smearing* and *pouring* were first adopted in Scotland, but one or the other is now considered indispensable. There is not a doubt but smearing would be found equally advantageous here, where sheep suffer so much from the severity of the winter weather, particularly if at all exposed to the wet. The increase in the yield of wool pays the expense, leaving the improved health and condition of the sheep, as a profit to the farmer. I shall try it by and by, and give you the result.

T. A., Jun.

Vermillion, Co. Indiana, Feb. 1, 1838.

For the Farmers' Cabinet.

Live Fences.—No. 5.

In my last communication upon this subject, I stated that if I should discover any plant that answers the purpose better than the *Washington Thorn*, (Crataegus Populifolio) I might perhaps be able to make a communication on the subject.

Since that time I have discovered some fences composed of this plant, which seem to be in a state of decay and have been informed by those who have better opportunities for personal observation, perhaps than myself, that in many situations, particularly in soils composed principally of clay or in that of red sand stone, mixed with clay it does not generally answer so well as some other kinds of thorn. I have also been informed, that the principal cause of death in this plant is from injury produced from a fly, which deposits an egg or nit in the most tender parts of the branch, the place of deposit becomes enlarged and dies the next season; the following process is recommended as a remedy or preventive, viz:—Instead of trimming the hedge at or near the termination of each annual growth, this process is performed at the close of winter and every part which is thus cut off is immediately burned. The reasons which are given for this are, viz.—The egg or nit, will be deposited near the ends of the respective branches in the most tender part which can be removed and burned at the close of winter, so as to prevent injury to the plant either from frost or the fly, whereas trimming at the beginning of winter, might expose the branches thus trimmed to the severe frost of winter, so as to be injured by it; and where they are trimmed at or near the termination of each annual growth, the egg or nit will afterwards be deposited in the growth of a previous year, and which cannot be removed without diminishing the height and strength of the fence.

Immediately after the last frost of each winter will, according to this view of the subject, be the proper time to trim the fence and burn the parts which are cut off.

From all the information, I at present possess upon the subject, I would say as a general rule, that persons desirous of cultivating plants for *live fences* should pay particular attention, and fix upon (or select) such kind as observation may show to be best fitted for the particular kind of soil where the fence is to be placed.

First upon the list, probably, may be placed the different kinds of Thorn, which are natives of the vicinity.—Plants which produce sprouts from their roots in large quantities when cut or broken by the plough, are unfit for the purpose in cultivated lands; therefore I should doubt the propriety of using the Locust Tree (which has been recommended) for such situations; yet in other situations, particularly where the fence will be in the shade of trees. I suppose this plant and perhaps several others would be preferable to the Thorn; but of this I cannot speak with certainty; because, I have not seen any one of them in such situations, but only judge from the relative rapidity of growth, and other properties.

In regard to the treatment of the Thorn, I know of no better plan than that stated in my former communications upon the subject, (see pages 131, 146, 177, & 201, of the first volume of the Farmers' Cabinet.) The seeds

of some kinds are said to require a more powerful action of frost upon them than the kind there described, and that some of the seed require a frost of a second winter, in the latitude and climate of Pennsylvania to prepare them for growing. A portion grows the first year, and another portion after lying in the ground one year, and undergoing the process of two winters' freezing, will also grow. Perhaps all might be made to grow the first spring, if the seed were submitted to an artificial freezing process much more intense than that from the natural temperature of the climate.

If, I should hereafter learn any thing further relative to cultivating materials for *live fences*, or any process to prevent the destruction of them deserving a place in the Cabinet, I intend to forward the same for publication, and hope others will also forward any information they may possess on the subject.

Chester Co. Pa. Jan. 12, 1838.

To the Editor of the Farmers' Cabinet.

Wheat vs. Cheat.

McFarlane's, P. O. Allegheny Co. Pa.
Jan. 17, 1838.

Dear Sir:—In page 164, Vol. 2, No. 11. of the Farmers' Cabinet, there is an inquiry, "can wheat be transformed into cheat?" I agree with Mr. Featherstonhaugh, that it *can*; Dr. Darlington seems to be of a different opinion, and rather ridicules the idea; as I am not willing to go into a discussion on the laws of nature (nor am I capable) with that gentleman, who no doubt has investigated the matter, I will only state one fact that occured with myself, and others can draw their own conclusions.

I think it was in the year 1819 or 20, that I prepared a piece of ground for wheat, on what we call second bottom, of the Monongahela River, a rich sandy loom, giving it a good dressing of manure, viz., lime, stable, and barn-yard, &c. It was put on separately, in different sections of the field; my seed was of good quality—white smooth chaff, there were a few grains of cheat and also cockle in it; to be particular to have clean seed, I took it to a neighboring mill and put it twice through a rolling screen. The quantity sown was six bushels, and put in about the last of September. The season was favorable and promised to my view an abundant crop; it grew very rank and in the month of May, I flattered myself that I was going to have an extraordinary yield. But it was all visionary; when it began to shoot, I could not find an ear of wheat in a rod. I believe, had I plucked all the ears of the six bushels sown, they would not have produced one gallon of wheat. It was perfect cheat, and was from four to five feet in height. I cut it about the middle of June, and it made excellent hay.

Your's respectfully,
R. C. Mc Farlane.

To the Editor of the Farmers' Cabinet.

Can Wheat be transformed into Cheat?

Dear Sir:—I have carefully read the Farmers' Cabinet for which I subscribed some time since, and find that some of your correspondents—farmers I presume, deny that wheat will, or can be transformed into cheat. I have had more or less experience in farming for upwards of fifty years, and from personal observations was led to believe, long since, that some grain can and will be tranformed into cheat, but the experience of last summer confirmed me in this opinion. The circumstances were briefly these.—In the spring of 1836, I obtained about half a pint of (skinless) oats; the grain had no husk like the common kind; they were sown in a part of my garden, which I had owned, and planted with different kinds of vegetables for nearly forty years; no grain having been sowed within a quarter of a mile, or housed or stacked near it. The oats grew finely until nearly ripe, when they were beaten to the ground by a heavy shower of rain, I did not take the trouble to cut them, but on examining the heads they proved to be the same kind as were sown. In the fall, the seed left on the ground came up, but I expected they would perish in the winter—in the spring, however, they put forth and grew finely, and when the heads came out, not a single grain could be found, but as fine and flourishing cheat as I had ever examined. It came up last fall again, and at this time has a fine appearance. It shall not be disturbed, and we shall see what it will turn to next summer. Now I should like to know how it came to be all oats the first year, and cheat the next, if grain must always produce the same kind as that sown. Perhaps Dr. Darlington, or some other gentleman skilled in these matters, can impart the desired information.

G. W.

Martinsburgh, Va. Jan. 18, 1838.

P. S. If you sow clean flax seed on new cleared ground, why does the greater part turn to what is generally called yellow seed, wherever brush heaps have been burned? This I have noticed in my own as well as in other fields.

No farmer ought to undertake to cultivate more land than he can stock, and manage to advantage. It is better to till twenty acres well, than one hundred in a slovenly manner.

For the Farmers' Cabinet.

Peach Trees preserved by the application of Tar.

The following described process, is said to be one of the very best to preserve peach trees, it is considered a complete protection, against the attack of the peach fly and worm, upon the body of the Tree, immediately above the surface of the ground, and beneath as far as to the roots; and, I see no reason why it should not, also, be a protection to the whole body of the tree, and the large branches and other parts, wherever gum is discovered to be issuing. It may possibly be useful when applied to other trees. The process is as follows, viz.—In the months of May and September, of each year remove the earth from the body of the tree as far as the roots, and apply a coat of tar, and immediately place fresh earth around, (to press against the tar) the earth is made to extend as high as that which had previously been removed; the application should commence before the tree is one year old. Perhaps immediately above the earth, a few inches high, and over this, sharp sand to the height of a few inches more would be found useful.* R.

Chester County, Pa. January 23, 1838.

For the Farmers' Cabinet.

Winter Wheat Sown in Spring.

J. Lieby—Dear Sir:—The Cultivator of December contains the result of an experiment made at Snow Hill, Maryland, of sowing winter wheat in spring. From the statement it appears that the result was highly satisfactory. On, or about the first of March last, about a bushel of the common red chaff, winter wheat was sown, it "sprung up, grew luxuriantly, and came to perfection about seven to ten days later than usual; when such grain is seeded in the fall, say September or October." The wheat sown, (one bushel) produced ten, and according to the testimony of the correspondent of the Cultivator, Geo. Hudson, the grain was very fine. The farm lies open to the Atlantic, soil rather poor and sandy. On a kind soil the yield would probably, have been much greater. Please give publicity to this fact as it may be of service to many of your readers, and thereby oblige a subscriber.

S. W. Williams.

[In connection with this subject we would call the attention of our readers to a "suggestion," in the first volume of the Cabinet, page 374. It is there stated, and on high authority, that the sowing of winter wheat in spring, has been partially adopted, with the happiest results in some parts of Tennessee. For the benefit of our readers, and with the hope that some of them may make the experiment, and communicate the result, we re-copy the article. It is as follows: in winter (the earlier the better, we presume) the seed grain is put into casks, and sufficient water added to soak and cover it. It is then exposed so that the water become frozen, and is kept in this state as far as practicable until the soil is fit for its reception in the spring. It is a well known and established fact, that the operation of frost upon the seed of winter grain has the same effect as if it was sown in autumn.—As wheat and rye sown at the setting in of winter will grow and mature. The advantages which are experienced from sowing in the spring, are, 1st. that the grain is not subject to be winter killed; 2d, it escapes the Hessian fly in autumn, and possibly it may escape it in the spring; 3d, the ground being fresh stirred for spring sowing, the growth will be more vigorous; and 4th, as it will come into ear late, there is at least a probability that it may escape the grain worm. The advantages are so manifest, that the experiment is worth a trial. We hope that many of our subscribers may be induced to try it on a small scale, say, by sowing from a peck to a bushel of the grain prepared in the above described manner.]

GRAIN WORM.

Mr. Holmes:—All statements relative to the injury the Grain Worm or Weevil, so called, does to wheat—the time when done, and how prevented,—the several metamorphoses of the insect, &c. &c. should be well authenticated, and writers should be very careful that they give nothing but *facts*, least the interest of the Farmer be thereby prejudiced.

I will suggest one idea on the subject which I have learned from farmers who have lived where the worm has long done injury, which is, that wheat sown previous to the 20th of April, or after the 20th of May, escapes their ravages; the one, (if I may so express it,) gets before them, and the other comes after them. The injury is uniformly done in a short time.—*Maine Farmer.*

A wise government will not be slow in fostering the agricultural interest.

* The sand can be preserved at a uniform height, by four boards nailed together in a vertical position around the tree, so as to form a box without top or bottom. This may be placed on the ground with each side equi-distant from the tree, and within five or six inches of it.

Ashes is placed within this box, to the height of a few inches, and afterwards sand upon the ashes to the height of a few inches more. The box is suspended to the branches of the tree during the winter season, and fresh ashes and sand added in the spring annually, as aforesaid.

For the Farmers' Cabinet.

Brief Remarks by a plain Farmer.—No. 1.

There is no calling, the proper management of which is more generally misunderstood than that of *farming*; while at the same time there is no business in which a man can engage, more dignified, that will insure as much real comfort and true independence, and afford greater certainty of profitable returns than agriculture. I admit that no man can by farming, whatever may be the price of agricultural produce, become suddenly *rich*. An idea of this kind should never enter the head of any farmer,—but his gains are nevertheless, "*sure* and *certain*;" that is, if his affairs are promptly and judiciously managed. I hope, now that the dignity of the calling is acknowledged, and the certainty of profitable returns made manifest, that more attention will be paid by farmers to their true interests, and that instead of making their sons professional gentlemen, and sending them to our large towns and cities, to become merchants and traders, (I say nothing of the thousands who are ruined by this course,) bring them up at home,—let them be well instructed both *practically* and *theoretically* in all that appertains to agricultural knowledge;—let them be fully impressed with its importance—in a word let them be made *practical Farmers*, tillers of the soil,—men who are not above their calling, for it is one of which no man should be ashamed; their individual happiness will be promoted and the interests of the country advanced;—we shall not have so many lean doctors of medicine, briefless lawyers, or ruined merchants and tradesmen. I will now proceed to give a few observations which may possibly be of service to some of your readers. I wish to be understood as not laying claim to *originality*, but shall avail myself freely of the *experience* and *advice* of agricultural writers. In Sir John Sinclairs' Code of Agriculture, published in Hartford in 1818, we have an interesting paper on the most

Essential means for carrying on the Improvement and Cultivation of a Farm.

Industry, prudence and economy, are essential to insure success in any business whatever. A regular *system* is also indispensably necessary, and in none, more so, than in that of farming. *Capital*, to a sufficient amount is also a very desirable object, though not so particularly requisite here were land is comparatively cheap, as in the old country, England for instance, where the farmer pays annualy in rents, onorous taxes, and odious tithes as much per acre, as he need here pay in this favored country for the land itself. Still, capital, to a certain extent, in this country is not only desirable but even necessary; not merely for stocking a farm, but where there is any "deficiency in respect to this important particular, the farmer cannot derive sufficient profit from his exertions, for he may often be obliged to dispose of his crops at an under value, to procure ready money; or he may be prevented purchasing the articles he may require, though a favorable opportunity may present itself."* A disposition too general among farmers is that of taking *large farms*, without having the means of having them properly stocked, and thoroughly cultivated,—capital is too often, invested almost wholly in the land itself. This is a radical error. It makes many a person *poor upon a large farm*, who might live in comfort, and acquire property upon a *small one*.† Every tenant in order to be secure, must have a surplus on which to rest, beyond the ordinary expenses of labor, to meet any contingency which may occur. He who farms within his capital is thereby enabled to avail himself of any opportunity of purchasing to advantage; while he is not compelled, if the markets are low, to sell with loss. Franklin has justly observed, that there is a difference of ten per cent., between "*Will you sell*, and *Will you buy*!"—and it is want of attention to this well-founded axiom, that prevents the farmer from being empowered to wait for the question "*Will you sell*?" The farmer is a sturdy bargainer, but if his customer be aware that a sale is absolutely necessary to the affairs of his competitor, the buyer is sure to carry his point. The credit, the show of a little capital, confers an advantage on the farmer in these contests, and can alone put him upon a level with his antagonist. ‡

Economy and prudence are essential to success. Judge Peters, in his valuable "Notices to a young Farmer," published some years since by the Philadelphia Society, for Promoting Agriculture, says:—"Do not commence with erecting costly buildings; but apply your time, efforts, and pecuniary means to your farm." Want of calculation in this respect has been the ruin of many.—Comfort and convenience must be studied. If compelled to sell, a poor farm must be parted with at a low price, however magnificent and costly the buildings. A small farm well stocked, and convenient buildings,—who can, who would desire more! The subject of *farm accounts* will be taken up in my next, if you see fit to publish the present article.—

* St. Clairs' Code, page 36.

† Ib. 37.

‡ Reports of Select Farms, Vol. 1, page 20.

With the best wishes for the prosperity of your valuable Journal.

I remain your friend,

SAMUEL W. SMITH.

Duchess Co., N Y., Jan. 17th, 1838.

Society for Promoting Agriculture.

At a meeting of the PHILADELPHIA SOCIETY FOR PROMOTING AGRICULTURE, held at the Philosophical Hall, on the 23d of January, the following gentlemen were elected officers for the ensuing year:

President—NICHOLAS BIDDLE.

Vice Presidents—Dr. JAMES MEASE, JOSEPH CLOUD.

Curators—CHARLES ROBERTS, ROBERT A. PARISH.

Treasurer—A. S. ROBERTS.

Secretary—KENDERTON SMITH.

COMMITTEE OF CORRESPONDENCE—R. A. A. PARISH, RICHARD PETERS.

On motion of CHARLES ROBERTS, it was *Resolved*, That all communications on Agricultural subjects, approved by the Society, be published in the Farmers' Cabinet.

☞The meetings of the "Agricultural Society," will be held on the 3d Wednesday of every month, at 11 o'clock, in the rooms of the Philosophical Society, in Fifth, below Chesnut Street. Applications for membership may be made to either of the above named officers, or at the Office of the Farmers' Cabinet, No. 45 North Sixth above Arch Street.

For the Cabinet.

The Society of St. George's and Appoquiniink hundreds for the Promotion of Agriculture.

Pursuant to adjournment, a meeting was held at Cantwell's Bridge, Del., on Monday, the 1st day of Jan. 1838, for the purpose of forming an Agricultural Association. A constitution having been presented by the committee appointed for that purpose, at a previous meeting, was adopted, after which a committee was appointed to nominate officers for the Society, which reported the following named gentlemen, who were duly elected officers for the ensuing year, viz.—Gen. Richard Mansfield, *President;* A. R. Pennington, and A. Snow Naudain, *Vice Presidents;* Benjamin Gibbs, *Recording Secretary;* Jas. S. Naudain, *Corresponding Secretary;* Daniel Corbit, *Treasurer; Directors* J. M. Smith, J. M. Woods, G. W. Karsher, Joshua Clayton, Robert Cochran and Charles Tatman.

On motion, it was ordered that the above proceedings be published in the newspapers of the county, and in the Farmers' Cabinet.

DANIEL CORBIT, Chairman.

P. S. NAUDAIN, Secretary.

Horticultural Society.

The monthly meeting of the Pennsylvania Horticultural Society, was held on Tuesday the 16th January, in the room under the Atheneum.

The Committee on Plants and Flowers awarded the premium for the best display of Plants in pots to Robert Buist; who exhibited Astrahea Wallichii, Acacia thegonocarpa, Verbena Tweediana, Daphne odorata, and D. Hybrida, Bletia Tankervillia, Eucomis Undulta, 2 Erica Mediterranea, Camellia Japonica flora pleno Striata, C. alba, C. Clivéana, C. Decora, C. Chandelerii, C. Derbyana, C. Lady Humes Blush, C. Paniflora, C. Speciosa, C. insignis, C. pompone, Goodyera discolor, and Poinsetii pulcherrima.

The premium for the best bouquet to Robert Kilvington, gardener to Wm. Loyd.

The Committee on Vegetables awarded the premium to William Chalmers, sen., gardener to Mrs. Stolt, for the best display of Vegetables that evening, having exhibited along with various other articles a basket of new potatoes, which is very unusual at this season.

William Graham, gardener to the Almshouse, Blockley, exhibited some fine bunches of asparagus.

William Hobson, gardener, Kingsessing exhibited a plate of very fine mushrooms.

Mrs. Hibbert exhibited two very fine plants of Azaleo Indicaalba and purpurea.

Col. R. Carr, exhibited a bonnet made by the Florida Indian Women of the fibres of the Squash. *

The display of plants was very fine especially the Cawellias, many of them were new, never having flowered in the country before.

The Vegetables were good considering the season, the Potatoes, the Asparagus, and Mushrooms, were unusual at the season, and do great honor to their predecesors. The Society is monthly increasing in numbers, and is getting more and more interesting every month from the laudable ambition of our gardeners and amateurs.

G. WATSON, Record. Sec.

Philadelphia, Jan. 22, 1838.

SPRING WHEAT.—We have been requested by a gentleman, who has taken great pains to introduce the genuine Italian Spring Wheat in this region, to state that a different article, (Italian Winter Wheat,) is offered and sold in various places, at a very high rate, as the Italian Spring Wheat, those interested will therefore be on their guard.

*An ingenious delicate summer bonnet.

Post Masters' Notice.

Post Masters are hereby authorized and respectfully requested to act as agents for the Farmers' Cabinet, in their several neighborhoods. They have it in their power to benefit the community essentially by disseminating Agricultural Knowledge, and this can be done in no way so readily and successfully as by the circulation of agricultural papers.—These papers being afforded at a low price, and embodying the experience of intelligent and practical farmers, the result of experiments, &c., are worthy of universal patronage. We return our thanks to those Post Masters who have heretofore acted as agents—and especially to those who have occasionally furnished us with valuable facts for publication; we hope their number may be greatly enlarged the present year.

For the Farmers' Cabinet.

Split Hoofs.

Horses being more liable at this season of the year, when traveling over rough and frozen clods, to get their hoofs split, I send you the following description and diagram of a shoe, which has been found preeminently useful in effecting cures. The construction of this shoe is remarkably simple. It consists only, in addition to the common shoe, of a bar across the hinder part, on the under side, immediately before the corks.

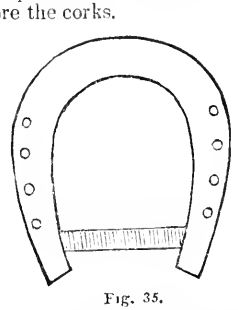

Fig. 35.

In the cure of the Split Hoof, it is necessary that the shoe be kept firmly fastened on. The edges of the crack, should be pared down a little to prevent them from rubbing together, and a little pitch should be poured in to keep out the dirt.

In the bandaging of hoofs, as was formerly the practice, if the band is drawn sufficiently tight to hold the hoof together, and prevent its moving, it almost invariably deadens the hoof, so as to entirely prevent its cure. But by the above simple means, cures have been effected after bandaging entirely failed. As the cure proceeds from the hoof growing out sound from the upper side; it necessarily requires a considerable length of time for its performance. A GERMAN.

Chester County, Jan. 17th, 1838.

Smut in Wheat.

That the prescription of brine and lime, or chamber ley and lime, will answer the end designed of preventing smut, we do not doubt; for the practice here recommended has obtained in Western New York for more than twenty years, and we do not recollect a single instance in which it has failed where properly conducted. From whence the practice originated we know not; but in this state it was first adopted on the eastern shore of the Cayuga Lake, and that region had, for a long time, the reputation of producing the finest wheat in the State; and it was extensively purchased for seed in other but less favorable districts. For a number of years past, smut has hardly been heard of, and seemed eradicated; and in consequence of this the preparation of seed wheat by liming has fallen into disuse. It must be again adopted, where seed perfectly pure cannot be obtained, and even in such cases its use is safe, as it can possibly do no harm. It was at one time supposed by many farmers, that gypsum would answer the purpose of lime, for drying the brined wheat, and preventing smut, and in some cases was substituted for it. The result in the most of these instances, was, the evil appeared aggravated in a ten-fold degree. We have seen an experiment of this kind tried, that to us, was perfectly conclusive. A field was sown with wheat all brined, and with the exception of that required for a few lands, all thoroughly limed.—The remainder was dried in plaster instead of lime, and sown the same day with that on which lime had been used. At the time of harvesting the line between the two kinds was distinctly marked, no smut being found on the part that was limed, while the plastered part was almost worthless. Spring wheat, it has been found by experience, is more apt to be smutty, than that sown in the fall, and hence the greater necessity of properly guarding against the disease. As many are intending to cultivate this grain to considerable extent another year, the propriety of paying particular attention to this subject is evident, that the character of this region for wheat and flour, may not suffer. Whether in autumn or spring, we advise our farmers to be very careful as to what wheat they sow, and if there is the least danger of infection to apply the brine and lime at once.—*Genessee Farmer.*

Choose those animals or vegetables to propogate from, that possess the properties you wish to the greatest perfection.

Be not above your profession, and always consider it as the first that any man can follow.

On Tilling Ground.

"With timely care I'll sow my little field,
And plant my orchard with its master's hand,
Nor blush to spread the hay, the hook to wield,
Or range the sheaves along the sunny land."

The labors of the field rank first in point of utility. To these all classes of human beings from the king on the throne to the peasant in the cottage are indebted for the necessaries of life. They also lay the surest foundation for national independence and wealth. Nor is agricultural labor properly considered less honorable than it is necessary and useful. Adam in innocency was a gardener, and his fair Eve assisted him in that occupation. Vulcan the blacksmith, had divine honors paid to his memory, for forging tools of husbandry; as also Bacchus for his skill in raising the vine and expressing its juice: and Ceres a notable housewife of old, for her skill in making bread. Cincinnatus was taken from the plough to be general of the Roman armies, and dictator over the commonwealth, and as soon as his country could dispense with his services, he contentedly returned to his plough again. Diocle-sian voluntarily resigned the government of the Roman empire, to follow the occupation of agriculture, and declared from experience, that in point of real happiness, he had gained much by the exchange. Gideon marched from his threshing floor to deliver Israel, as a general in chief. Elisha was ploughing when he received his sacred commission as a prophet of the L ord.

Our great and good Washington, and our venerable Lincoln, were practical farmers; the latter, if I have been rightly informed, used before the revolution to drive his own team, and labor with his own hands.

The pursuit of agriculture, with diligence and prudence seldom fails yielding, if not wealth, a moderate independence. For the farmer who is not in debt, and the produce of his farm is sufficient with industry and frugality to support his family, is really as independent in his circumstances as though he were worth a million.

This calling is the least dependent of any, and the least exposed to fatal accidents, affords on the whole the greatest sum of contentment. Gilbert Burns, of Scotland, himself a laboring farmer, remarks in a letter written in the year 1800: "I have always been of opinion, that if a man bred to the habits of a farmer's life, who possesses a farm of good soil on such terms as enables him to pay all demands, is not happy, he ought to look somewhere else than to his situation for the cause of his uneasiness." This Mr. Burns, a man of superior cast of understanding, was a small farmer on *lease lands*;—and if such a situation afford contentment and happiness to one of the first rate sense, much more might a country farm in our country free from incumbrances, and belonging exclusively to the occupier. A farmer in those circumstances, did he truly estimate his lot in life, would see a hundred reasons for gratitude to one of complaint.

A practical farmer whose livelihood depends on his calling—should make it the pinnacle of worldly ambition to excel in it. If he neglects his farm for almost every thing else, he is generally a miser both in interest and credit.—Solomon, the wisest observer of men, tells us of his disgust at the sight of a slovenly farmer. "I went by the field of the slothful—and lo, it was all grown over with thorns, and nettles covered the face thereof and the stone wall was broken down." Owner where art thou! Perhaps dozing away thy time in slumber and sloth; or spending it at the tavern; or perhaps dreaming of promotion, or engaged in the business of some petty office. Better mind thy own proper business; else "shall thy property come as one that traveleth, and thy want as an armed man." A farmer on the other hand, who keeps his lands and stock in excellent order need not be ashamed even were Solomon, himself passing by. Every passing traveler no sooner casts his eyes over such a farm than he honors the proprietor in his heart. The proprietor moreover is sure to receive for his pains something that is more solid than plain honor—a comfortable, decent livelihood, for which he is indebted to him only whose is the earth and the fullness thereof.

It is not the abundance of land, but the thorough and skillful cultivator of it, that fills the barn with hay, the cribs with corn, and the mansion house with plenty. For one to crave a larger farm than he can cultivate to profit, is therefore an expensive folly; for whatever a neglected field is worth, the interest of the capital together with the yearly taxes, will at length eat the field up.

If a farmer neglects his farm, his farm will neglect him. The husbandman must first labor else he partakes not of the fruit. He must be vigilant else carelessness will waste and lose what industry gains. He must be economical and frugal else his outgoes exceeding his income, he is sure finally to come out of the little end of the horn. He must not feel above his business, else he will find himself below it. He must always mind to do every thing in its season, else he will have double work and half crops. Finally, he must study agriculture as a practical science, and make use of the means in his power to increase; else will he neither shine in his calling nor reap the profits from it, which he might and which others actually do.

Farmers venerate the hoe, the scythe and the sickle. If you exchange the implements of husbandry for means of livelihood, you venture where there are several blanks to a prize! "Look over your lands, and see what parts may be cultivated to more advantage—how you can raise more grain and flax, keep more cows and sheep; fat more cattle—sell more beef and pork, and other articles of produce. Study agriculture; carry it to the greatest perfection. It is the basis of our wealth, of manufactures and commerce.

The Grain Worm.

THIRTY DOLLARS PREMIUM.

"Wheat is, in many parts of the country subject to injury from an insect or worm, whose appearance is comparatively recent, and whose habits are not well ascertained. He is making dreadful havoc in the wheat regions, producing in many cases, an entire destruction of extensive fields of the most promising appearance, and has advanced at the rate of about forty miles a year. The same insect, it is believed, has attacked barley, rye, and oats, with alarming success. The cultivation of barley has on this account been abandoned in some parts of this State, (Massachusetts) and so has the cultivation of wheat in what have heretofore been deemed some of the most productive wheat regions in New York."

The above is from the Rev. Henry Colman. Other writers have spoken of the great ravages of this insect, and thousands of farmers have sowed in hope and rejoicing in the promise of their grain fields, but in harvest, instead of a rich reward for their industry, they have received nothing. Agricultural Societies have solicited the best information on this subject, and many experiments have been tried, and remedies recommended, but none have been made known, on which farmers confidently rely. The insects have extended their ravages far and wide, and whole districts of many hundred thousand acres of the most promising grain have been destroyed.

This subject is of the highest importance, not only to farmers, but to the whole community, and further experiments are necessary, in order, if possible, that a perfect preventative or security may be discovered, as it would be of incalculable worth to the country, and for the purpose of stimulating to fresh inquiries, and calling forth the best information that can possibly be obtained on this subject, we hereby offer a premium of THIRTY DOLLARS to ANY PERSON who shall produce in writing, for publication in the Yankee Farmer, the most satisfactory history of this insect, describing minutely its habits, its mode of operation, and the surest remedy against its depredations.

The premium will be awarded by the decision of three eminent and experienced agriculturists. Communications on this subject may be addressed to CHARLES P. BOSSON, Publisher, North Market Street, Boston, Mass., or S. W. COLE, Publisher, Middle Street, Portland, Me.—*Yankee Farmer.*

Insectiverous Birds.

These are to the farmer and the gardener of great value. They were designed by the Creator to check the too great increase of insects, and no farmer ought to suffer them to be wantonly destroyed on his premises. The number of insects destroyed by the robin, swallow, sparrow, mock-bird, and other small birds, is astonishing. One little family will destroy several hundred in a single day. Some little time since a pair of small birds built a nest on a lilac, which grew close to one of my windows. In the time of incubation there was a long and severe storm, and strong wind. The eggs were in danger of being blown overboard by the writhing of the bush. Conscious of this, the female kept on the bush to prevent any accident which might follow on her leaving it, to collect food. Her mate, like a good provider, was busily engaged during the day in collecting food, (insects,) which he carried to his companion, and which she received of him with apparent affection. This circumstance excited particular attention, and of course this little society was closely observed. In a short time the eggs hatched, but the roughness of the weather, or the tenderness of the brood, prevented the female from leaving her young. During this time, the male, with surprising industry, brought small insects, in the larva state, to the nest, but was not allowed to feed the nestlings. The female received the food and divided it among her little charge. When the young gained sufficient strength, the male was permitted to feed them, and from this time both parents were mutually and incessantly employed in collecting small insects from every quarter, and on a moderate calculation to the number of about 700 in a day.

One cause of the increase of many insects so destructive to vegetation, is the decrease of these little friends to the agriculturist.—Should a few of them innocently trespass on the farmer, to the amount of a few cents, let him remember that he is greatly indebted to them for services rendered, and not to wage a war of extermination.

They are not merely useful in destroying insects—for they call the farmer and the gardener to his business, cause the groves to resound with music, and usher in the morning with melodious praise.

Remarks on the General Principles of Husbandry.

1. Whatever may be the nature of your soil, and situation of your farm, remember, that there is no soil so good, but it may be exhausted, and ruined by bad tillage, and that there is none so bad, that cannot be rendered fertile by good tillage, even barren heath, if it can be ploughed, and swarded.

2. The true art of husbandry consists in suffering no crop to grow upon your land, that will so far exhaust your soil, as to lessen the value of your succeeding crop, whatever profit such a crop may afford you.

3. To avoid this, suffer no one crop to grow two years successively, upon the same piece of ground, excepting grass, and buck-wheat, without the fertilizing aid of rich manures to support the strength of the soil; and even then, a change of crops will generally do best, excepting onions, carrots, and hemp.

4. Every plant derives from the earth for its growth, such properties as are peculiar to itself; this plant, when followed successively for two or more years upon the same ground, will exhaust the soil of those properties peculiar to itself, without lessening its powers to produce some other plants; this fact is most striking in the article of flax, which will not bear to be repeated oftener than once in seven years, and is common to all crops, with the exception of those noticed as above.

5. To avoid this evil, arrange your farm into such divisions as will enable you to improve all the variety of crops your lands may require, in such regular succession, as to form a routine of 5, 6, or 7 years, according to the nature, quality and situation of your farm.

6. This method will make poor land good, nd good better. Try and see.

Silk Culture.

Much allowance is to be made for the coloring given by enthusiastic men, warmly engaged in a new and untried pursuit; but after all deduction, facts enough have been presented to show conclusively that the silk business is capable of being made exceedingly profitable. And perhaps the most important fact of all is, that the culture has not only maintained its ground, but has been advancing in Connecticut for many years, and that under every disadvantage of imperfect machinery and want of capital, it has brought a far greater amount of money into a small town possessing no great natural advantages, than was ever realized for any one article of produce, from a similar extent of the most fertile bottom lands on the Connecticut.

Pruning.

Cut and set all such fruit as you wish to propagate by the slip; such as currants, goosberries, raspberries, &c. Plant out such fruit trees as you wish to remove, together with your grape-vines, particularly such as you have propagated from your standing vines. Prune your currants, goosberries, raspberries, &c. remove all dead stalks, and support your bushes by frames.

Hollow Horn.—The disease called hollow horn, may be prevented it is said, if the following precautionary plan be adopted and adheared to:—once a fortnight pour a teaspoonful of spirits of turpentine in the *cavity* or *cup*, just behind the horns of *neat* cattle.

Feeding Animals with Hay.

A great loss is frequently sustained by feeding animals not sufficiently often, and giving them too large quantities at a time. In this way, by having a great pile of fodder for a long time before them, which is rendered more and more foul and offensive by their constantly breathing upon it while rooting it over and over, it is imperfectly eaten and a large part perhaps wasted. To prevent this, hay should be given frequently and in small quantities, especially when placed in racks and mangers, as it should always be when fed out. For where hay is scattered over the ground, a greater or less quantity is always wasted; and if the ground be at all muddy, half of it, at least, is almost sure to be trodden under foot and spoiled.

J. J. T.

Knowledge is Power.—In no department is Bacon's celebrated maxim "knowledge is power" more applicable than in Agriculture. Hence no farmer can be counted skilful in his profession, who does not avail himself of the information to be derived from the experience of others in husbandry, by the perusal of books that have been written on the subject. It is absurd to imagine that the communication of knowledge by printing, which has promoted the advancement of every other art, should be of no use in Agriculture.—*Peters.*

If you separate science from agriculture, you rob a nation of its principal jewel.

A large farm, without skill, capital and industry is a plague to its owner. It is like self righteousness, the more you have of it the worse you are off.

Spring Wheat is mor liable to Smut than the red-chaff.

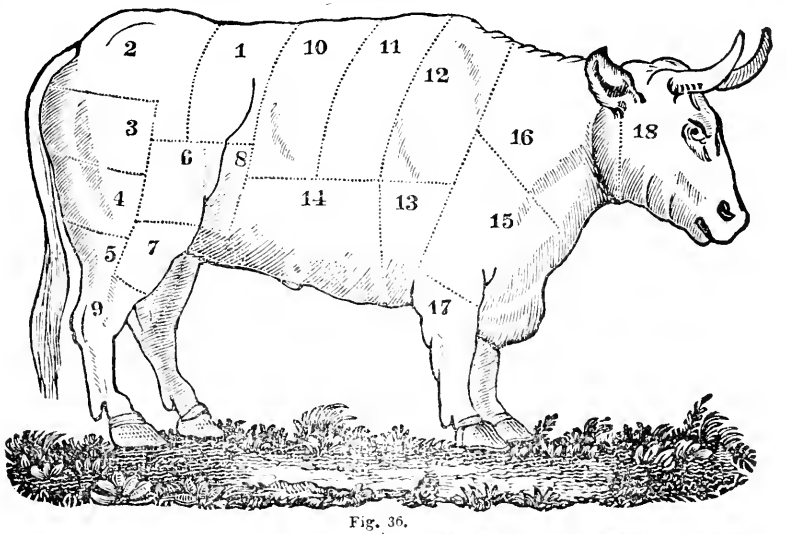

Fig. 36.

For the information of some of our readers and especially our young friends, we publish the above cut, which represents the method of dividing an ox for the table in most parts of the United States—in some sections however the method is varied, dividing into smaller pieces, but the manner of cooking is the same.

References to the Figures.—1 Sirloin; 2 Rump; 3 Edge Bone; 4 Buttock; 5 Mouse Buttock; 6 Veiney Piece; 7 Thick Flank; 8 Thin Flank; 9 Leg; 10 Fore-Ribs—five-Ribs; 11 Middle-ribs; four ribs; 12 Chuck—, three-ribs; 13 Shoulder or leg of mutton-piece; 14 Brisket; 15 Clod; 16 Neck or sticking piece; 17 Shin; 18 Cheek.

Method of Cooking.—*Hind Qarter.* Sirloin, roasted—Rumps roasted, or steak, or stew—Edge-bone, boiled—Round, alamode, boiled, or savory salted beef—Veiney piece, steaks or roast, or baked or salted—Thick flank steaks, or corned—Thin flank the same—Legran, boil, soup, or stew—Leg, soup or stew. *Fore Quarter*—First cut, 2 ribs, roast—Second cut, 2 ribs, roast—Third cut, 2 ribs roast,—Fourth cut, 2 ribs, roast.—Chuck rib, boil or stew, or for making gravy.—Shoulder of mutton, piece-steaks, bouilli—Shoulder Clod, boil or soup, or beef sausages—Brisket, oil or bouilli, or stewing, or salted—Rattler in boil—Sticking piece, boil or soup—Neck, gravy—Shin, soup, excellent Scotch barley broth, stewed—Head, soup, stewed—Tail, soup, stewed—Heels, with the head, boiled, jelly, soup.

Let your stock of cattle, horses, &c. be of the best sort, and more remarkable for strength than fashion.

Remarks on Gardening.

BY T. BRIDGEMAN.

The mode of laying out the ground is a matter of taste, and may be left to the gardener himself; the form being a thing of trifling importance in the production of useful vegetables, or whether the ground be laid out in beds of four or ten feet wide, provided it be well worked, and the garden kept neat and free from weeds.

Those who have not a garden already formed, should, however, fix on a level spot where the soil is deep; but as we have not always a choice, I would recommend the reader to that which is within the reach, and ought to be the object of every man, namely, to *make* the most of what he has.

Previous to entering on the work of the garden, the gardener should lay down rules for his future government. In order to this, he should provide himself with a blank book. In this book he should first lay out a plan of his garden, allotting a place for all the different kinds of vegetables he intends to cultivate. As he proceeds in the business of planting his grounds, if he were to keep an account of every thing he does relative to his garden, he would soon obtain some knowledge of the art. This the writer has done for the last nine years.

One great article to be attended to is, to have a supply of good old manure and other composts ready to incorporate with the earth; also a portion of ashes, soot, tobacco dust and lime, for the purpose of sowing over seed beds in dry weather; this will tend in a great measure to destroy insects which sometimes cut off the young plants as fast as they come up.

If the ground cannot be all manured as it should be, it is of primary importance that those vegetables be provided for which most need manure. Good rich manure is indispensably necessary for the production of Brocoli, Cauliflower, Cabbage, Lettuce, Spinage, Onions, Radishes and Salads in general.

In the event of a scanty supply of manure, those kinds of vegetables which are raised in hills or drills, may be provided for by disposing of the manure immediately under the seeds or plants.

The next important matter is to have the ground in suitable condition to receive the seed. I would wish it to be understood, that I am an advocate for early sowing and planting, even at the risk of loosing a little seed, provided the ground be fit to receive it. A light sandy soil will be benefitted if worked when moist, as such treatment will have a tendency to make it more compact; on the contrary, if a clay soil be worked when too wet, it kneads like dough, and never fails to bind when drought follows, and this not only prevents the seeds from rising, but injures the plants materially in their subsequent growth, by its becoming impervious to the moderate rains, dews, air and influence of the sun, all which are necessary to the promotion of vegetation.

Much depends on the manure used on particular kinds of soils. The great art of improving sandy and clayey soils, is to give the former such dressings of clay, cow dung and other kinds of manure, as will have a tendency to bind and make them more compact, and consequently more retentive of moisture; and to the latter, coats of horse dung, ashes, sand, and such other composts as may tend to separate the particles and open the pores of the clay so as to cause it to approach as near as possible to a loam.

The nearer the ground approaches to a sandy soil, the less retentive will it be of moisture; the more to a clayey, the longer will it retain it; and the finer the particles of which the clay is composed, the more tenacious will it be of water, and consequently be longer in drying, and the harder when dry; but earth of a consistence that will hold water the longest, *without becoming hard when dry*, is that of all others, the best adapted for raising the generality of plants in the greatest perfection. This last described soil is called loam, and is a medium earth, between the extremes of clay and sand.

The work of drilling may be performed in various ways; in some cases a plough is used, in others a small hoe, or a dibble drawn along the edge of a board or line; it is of little consequence which way the work is done, if it be well done. While I leave the gardener to make his own choice of tools, I would suggest that he be provided with two or three drilling machines; these, every handy man may make for himself; they should be in the form of a garden rake, with a stout heavy back and five teeth two inches broad, and tapered so as to enter the ground and leave drills two inches deep. If one be made with the teeth eight inches apart, another twelve, and another fourteen, they will be useful in making drills for various seeds, and drills thus made, serve, instead of straining a line, for every row in planting Cabbage, Lettuce, Leeks, &c. The line being strained at one edge of the bed, and the drilling machine drawn strait by the line, makes five drills at once. If they are straight they may be kept so, by keeping one drill open for the outside tooth to work in until the ground be all drilled.

Gardeners practice different methods of covering up seeds, some do it with a hoe, others with a rake or harrow; some draw a portion of the earth to the side of the bed, and after sowing the seeds, return it regularly over the bed; in some particular cases a sieve is used, in others a roller. Rolling or treading in seeds is necessary in dry seasons, but it should never be done when the ground is wet.

There is nothing that protects young crops of Turneps, Cabbage and other small plants from the depredation of the fly, so well as rolling; for when the surface is rendered completely smooth, these insects are deprived of the harbor they would otherwise have under the clods and small lumps of earth. This method will be found more effectual than soaking the seed in any preparation, or dusting the plants with any composition whatever; but as the roller must only be used previous to, or at the time of sowing the seed, and not even then if the ground be wet, it is necessary that the gardener should have a hogshead always at hand in dry weather, containing infusions made of waste tobacco, lime, soot, cow dung, elder, burdock leaves, &c. A portion of these ingredients, or any other preparation that is pernicious or poisonous to insects, without injuring the plants, thrown into a hogshead kept filled up with water, if used moderately over beds of young plants in dry weather, would, in almost every case, insure a successful crop.

If it be necessary at any time to sow seeds in dry weather, it is recommended to soak the seed in water mixed with sulphur. This practice, with attentive watering, will cause the seed to vegetate speedily.

If it should be requisite to transplant any thing when the ground is dry, the transplanting should be always done as soon as the earth is fresh turned over, and the roots of the plants should be steeped in mud made of

rich compost, before they are set out.

I have in most cases recommended seeds to be sown in drills drawn from 8 to 12 inches apart, in preference to sowing broadcast, because the weeds can be more easily destroyed by means of a small hoe; and which, properly used, greatly promotes the growth of young plants.

Asparagus.

Asparagus plants may be raised by sowing the seeds in the fall as soon as ripe, or in March and the early part in April. It requires some of the best ground in a garden. The seed may be sown in drills, ten or twelve inches asunder, and covered half an inch with light earth. When the plants are up they will need a careful hoeing, and they should afterwards be kept free from weeds. The seed sown in the fall generally make the strongest plants, and will be fit to transplant into beds when they are a year old.

A plantation of Asparagus, if the beds are properly dressed every year, will continue to produce good buds for twenty years, or more.

New plantations of Asparagus may be made in the months of March and April. The ground for the bed must not be wet, nor too strong or stubborn, but such as is moderately light and pliable, so as it will readily fall to pieces in digging or raking, and in a situation that enjoys the full sun. It should have a large supply of good dung, three or four inches thick, and then be regularly trenched two spades deep, and the dung buried equally in each trench, twelve or fifteen inches below the surface. When this trenching is done, lay on two or three inches of well rotted manure all over the surface, and dig the ground over again, eight or ten inches deep, mixing this top dressing and incorporating well with the earth. The ground being thus prepared and made level, divided into beds, four feet and a half wide, with alleys two feet wide between each bed.

At each corner of every bed let a firm stake be driven in the ground, to serve as a mark for the alleys. Four rows of Asparagus are to be planted in each bed, and ten or twelve inches distance to be allowed between plant and plant in the row; and let the outside rows of each bed be eight inches from the edge.

Strain your line along the bed eight inches from the edge; then, with a spade, cut out a small trench or drill close to the line, about six inches deep, making that side next the line nearly upright, and when one trench is opened, plant that before you open another, placing the plants upright ten or twelve inches in the row.

The plants must not be placed flat in the bottom of the trench, but nearly upright against the back of it, and so that the crown of the plants may also stand upright, and two or three inches below the surface of the ground, spreading their roots somewhat regularly against the back of the trench, and at the same time drawing a little earth up against them with the hand as you place them, just to fix the plants in their due position until the row is planted; when one row is thus placed with a rake draw the earth into the trench, over the plants, and then proceed to open another drill or trench, as before directed; and fill and cover it in the same manner, and so on till the whole is planted; then let the surface of the beds be raked smooth and cleared from stones.

Some make new plantations with the seeds at once; this may be done by preparing the ground as before directed, and planting a few grains of seed in each place allotted for a plant; they should be afterwards thinned, leaving the strongest plants to stand at the same distances every way as before.

A plantation of Asparagus, thus raised, will produce buds fit to cut the third spring after sowing, but will be very large and fine the fourth year.

WINTER DRESSING OF ASPARAGUS BEDS.

About the beginning of November, if the stalks of your Asparagus turn yellow, which is a sign of their having finished their growth for the season, cut them down close to the earth, carry them off the ground, and clear the beds carefully from weeds.

Asparagus beds must have an annual dressing of good manure; let it be laid equally over the beds, two or three inches thick, after which, stretch a line, and with a spade mark out the alleys from eighteen inches to two feet wide, agreeably to their original dimensions.

Then dig the alleys one spade deep, and spread a considerable quantity of the earth evenly over the beds; observe to make the edges of the beds straight, full, and neat, and to finish your work in a becoming manner, giving a moderate rounding to the beds, especially if the ground be inclined to wet.

The alleys should be afterwards filled up with leaves, or litter well trampled down, would in some measure prevent the frost from entering that way to the Asparagus roots. The Seedling Asparagus should also have a slight dressing; that is, to clear the beds from weeds, and then to spread an inch or two in depth of dry rotten dung over it, to defend the crown of the plants from frost.

SPRING DRESSING OF THE BEDS.

This work should be done from about the latter end of March, to the middle of April. For the purpose of digging or forking these beds, you should be provided with a proper

fork, having three short tines, perfectly flat, and about an inch broad; however, in want of such, it may be performed with a small short pronged dung fork.

In forking the beds, be careful to loosen every part to a moderate depth, but taking great care not to go too deep to wound the crowns of the roots.

The above work, of forking these beds, is most necessary to be done every Spring, to improve and loosen the ground, and to give free liberty for the buds to shoot up.

The beds being forked, they must afterwards be raked even; observing, if you do not rake them immediately after they are forked, to defer it no longer than the first week in April, at which time a few Radish seeds may be scatterd over them, to pull up while young.

Asparagus plants will not produce buds large enough to cut for general use, in less than three years from the time of planting. But in the fourth year, when the shoots are three or four inches high, they will bear extensive cutting. The best way of cutting, is to slip the knife down perpendicularly, close to each shoot, and cut it off slantingly, about three or four inches within the ground, taking care not to wound any young buds coming up from the same root, for there are always several sheets advancing in different stages of growth.

From the Concord Freeman.

Salsify, or Vegetable Oyster.

Mr. Gourgas.—In an editorial notice of the Horticultural Register, in your paper a week or two since, I observed an allusion made to this delicious vegetable. It seems singular, that a plant which thrives so well in our own climate, which requires no greater attention than the generality of common garden vegetables, and which is so exceedingly delicious, should be a greater stranger with our farmers and at our markets, than many exotics of high price and less worth—yet so it is. With the wish to introduce it to the notice of others, allow me to furnish a few remarks upon its cultivation and use, the substance of which will be, perhaps, but a mere repetition of what has already been before the public.

The Salsify is a hardy perennial, of English origin, having a long, white, tapering root, very much like that of the common parsnep; by some methods of cooking, it is made to assimilate in taste of the oysters, and has thus received the second, and appropriate name of "*Vegetable Oyster;*" but when simply boiled like the beet or carrot, it possesses no flavor of this kind, or if any, so faint is it, that one would need to be reminded of the oyster in order to recognise any similarity of taste between the two. The seed should be sown in a deep rich soil, early in May; the ground should be deeply spaded, so that the roots may meet with no obstruction in their growth, and let it be well manured; sow your seed in drills, about the same distance apart as you do beets, or parsnips; cover it about two-thirds of an inch deep with mellow, clean earth, which should be pressed down hard with the flat of a hoe, so that if wet weather comes it may not be washed away, or if a dry time succeeds, it may the better retain its moisture: when fairly up, thin them well, and keep the surface of the ground thoroughly cleared of weeds the season through. The roots should be pulled about the middle of October, and packed away in the cellar in moist sand—they will keep well till the month of May.

There are various ways of cooking this vegetable, which it will be well to notice briefly, for the benefit of those who are unacquainted with it. First—cut the roots cross-wise in three pieces, boil them till soft; then mash and thicken them with flour, and fry them in butter. Second—par-boil them, cut them lengthwise, and fry them in butter; it is by this mode of cooking that they are made to resemble [in taste] the oyster. Third—they may be simply boiled and eaten as other roots, or, after being boiled, sliced up and fried as an accompaniment to any roast dish. The best I have ever eaten were those which were boiled, and after being dished had some some meat gravy or melted butter turned over them; as it regards the cooking, however each one must be his own judge of the best way.

I really wish our farmers would take to raising this delicious vegetable, for it requires no extra trouble, yields plentifully, and is *seldom destroyed by insects.* I believe if they once get a taste of it their tables would seldom be set without a good substantial dish of it on. But if they should not happen to fancy it particularly for home consumption, nothing will sell in the Boston market more readily, or for a better price; a rod or two of ground planted with it, would yield *treble* the profit of the same sized piece sown with onions or any other ordinary vegetable. The demand for it in the city has been and is nothing like supplied. This, if nothing else, should be some inducement to farmers and gardeners to take hold of the business this coming season. J. D. E.

A French writer says, that "the modest deportment of those who are truly wise, when contrasted with the assuming air of the ignorant, may be compared to the different appearances of wheat, which, while its ear is empty, holds up its head proudly, but as soon as it is filled with grain, bends modestly down, and withdraws from observation."

Celery.

VARIETIES.—*White Solid—Rose Colored Solid—North's Giant Red—Italian—Celeriac, or Turnep Rooted.*

Those who may want Celery for summer use, should sow some seed of the White Solid in a slight hot bed early in March, but as plants raised in this way are ap to run to seed, it is much better to wait a fortnight, and sow some in a warm border. The seed for a general crop should be sown the last week in March, or early in April, in low but rich mellow ground; if it be sown in drills half an inch deep, and raked in even, it will produce strong plants by hoeing frequently between the rows.

The early sown plants should be picked out into a nursery bed of rich earth as soon as they are two or three inches long, there to remain about a month, after which they will be fit to transplant into the trenches.

Choose for this purpose a piece of rich ground, in an open exposure; mark out the trenches by line, 10 or 12 inches wide, and allow the space of three feet between them, which will be sufficient for the early plantations. Dig each trench a moderate spade deep, laying the dug out earth equally on each side, between the trenches; lay three inches deep of very rotten dung in the bottom of each trench, then pare the sides and dig the dung and parings with an inch or two of the loose mould at the bottom, incorporating all well together, and put in the plants. Previous to planting, trim the top of the plants, by cutting off the long straggling leaves, and also the ends of their roots. Let them be planted with a dibble, in single rows, along the middle of each trench, five or six inches between plant and plant, as soon as they are planted give them a plentiful watering, and let them be shaded until they strike root and begin to grow.

The main crops may be planted in the same way, but in trenches four feet distance from each other, and an inch or two further from plant to plant; or in beds made in the following manner, which for the ease of preserving the plants in winter, will be found extremely convenient, besides a greater quantity can be raised on a given piece of ground.

Lay out the ground into beds of four feet wide, with alleys between, of three feet; dig the beds a spade deep, throwing the earth on the alleys; when done, lay four or five inches of good well rotted dung all over the bottom of the beds, dig and incorporate it with the loose earth, and cover the whole with an inch or two of earth from the alleys; plant four rows in each bed at equal distances, and from six to eight inches apart in the rows; after which, give them a plentiful watering and shade them.

The plants must be hoed occasionally until grown of sufficient size for earthing, which is done with the assistance of boards, by laying them along the rows, to support the leaves while you are putting in the earth from the alleys, and removing them as you progress in the business.

The earthing should never be done when the plants are wet, as this is apt to make Celery rusty, but should be performed gradually in fine weather as the plants progress in growth, repeating the earthing every two weeks, at which time care should be taken to gather up all the leaves neatly, and not to bury the hearts of the plants. When they are grown two feet high, and well blanched, they are fit for the table. As Celery will grow three or four feet high in one season, it will be necessary to delay the planting of that which is intended for winter use until the latter end of July, but the trenches should always be got ready soon enough, to avoid a serious drought, which often delays the plantings till too late in the season. The blanching of Celery for winter use may be delayed until October.

The Celeriac or Turnep Rooted, may be planted either on level ground or in shallow drills, the roots of it swell like a Turnep and may be preserved in sand through the winter. The French and Germans cut it in slices and soak it a few hours in vinegar; by such simpe preparation, it becomes as mellow as a Pine Apple, and affords a delicious and very nourishing repast.

Sugar Beet.

To the Editor of the Farmers' Cabinet.

Having somewhere seen a recommendation to sow the seed of the Sugar Beet so late as May, which I think is almost a month too late, I will state how I raised a few last year, some of which were very fine plants. Having no room except in my garden, I dug the land over, burying a little manure in each trench as I went on. When I had dug enough for one row, I stretched the line across the bed, and set my boy to put in, with a small setting stick, two or three pods into holes at nine inches distance from each other. Then I dug again till I had done two feet more, when we put in another row; and so on for ten short rows. This was done on the 10th of April last; but in an early spring, I think the first of April would be late enough. The seeds nearly all came up, but a few of the plants perished, and from what cause I do not know, as I was busy with other things, and did not notice them until it was time to

thin them out in May. I soaked some seed, and sowed again in the vacancies, but this sowing never came to above half the size of those sowed in April. I should have mentioned before that I soaked the seed of the first sowings several days before they were put into the land. The first sowing grew pretty large. I have a few saved for seed, one of which measures 18 inches in length, 20 inches in circumference, and is 2 inches in diameter, at the point of the root, though it is now shrunk considerably. A few years ago, I raised a few of the common Mangel Wurtzel and sowed them about the middle of April. The largest of those was 2 feet long, and 1 foot at least in circumference. A few of that sowing missed, but I do not attribute it to early sowing; perhaps badness of seed might be the cause. A slight frost did not affect them; therefore I recommend that they should be sown not later than the middle of April, and, in an early spring, I think the first of April quite late enough. In my operations, I partly followed Cobbett's directions for raising beets, which I will copy from his English and American treatises on gardening:

"Beets should be sown in the fall; but, if not, as soon as the ground is free from frost, and is dry in the spring. The ground should be rich, but not from fresh dung, which causes side shoots to strike out in search of it, and thereby makes the root forked, instead of straight; and, as in the case of carrots, a forked root is never considered to be a good one. The ground should be deeply and well broken, and all the clods ought to be broken into fine earth, because the clods turn the point of the root aside, and make it short, or forked. The ground being well and deeply broken, drills should be nicely made about two feet apart, and the seed laid along the drill at the depth of about an inch and a half, and at about a couple of inches from each other, it having been previously soaked about four days in soft water, if sown in spring. The earth that came out of the drill should be put back upon the seed, and pressed down upon it with the head of the rake. When the plants come up they should be thinned to about 9 inches apart in the row; the ground should be nicely flat-hoed and kept clean during the summer. In October the roots should be taken up, the leaves cut off within a quarter of an inch of the crown, the roots put to dry in the sun for a week or more, and then put away in some dry place, or packed in sand, like carrots, for winter use. Beets may be transplanted, and will, in that way, get to a very good size, but they are apt to be forked. Ashes of wood, or compost mould, is the best kind of manure for them. If not wanted till spring, they may be preserved thus:—After drying a few days in the sun, lay a little straw on the ground on a fine dry day, place ten bushels of them, (picking out all the cut and bruised ones,) in a conical heap upon the straw: put a little more straw smoothly over the heap, then cover the whole with six or eight inches of earth, and place a green turf at the top to prevent the earth being washed by rain before the frost sets in. The whole heap will *freeze* during the winter; but the frost will not injure them, nor will it injure carrots, preserved in the same way. If you have more than *ten* bushels, make another, or more heaps, for fear of heating, before the frost comes. When that comes, all is safe till spring; and it is *the spring*, that season of *scarcity*, for which we ought to provide."

The above is a compilation from both Cobbett's Treatises, as I found each of them rather defective in some particulars.

I am, respectfully, &c.,

C. W. H.

Near Germantown Jan. 30, 1838.

For the Farmers' Cabinet.

A FARMER FOR ME BOYS!

Song for the Harvest Home.

By A. McMakin.

A Farmer's the man for me, boys!
A Farmer's the man for me;
While the ploughshare goes,
Or the heifer lows,
True lord of the soil is he,
True lord of the land is he, boys!
A Farmer—a Farmer for me.

Ere the sun shines over the lea, boys!
Ere the sun shines over the lea,
In the waiving main,
Of the golden grain,
He is happy as man can be,
He is happy as man can be, boys!
A Farmer—a Farmer for me.

With no care to mar his joy, boys!
No care to lessen his joy,
The toils of the day,
Pass quickly away;
At night he is merry and free,
His night is merry and free, boys!
A Farmer—a Farmer for me.

No drone of the hive is he, boys!
No drone of the hive is he,
But with lusty flail,
Doth the sheaf assail,
And gathers from every tree,
And gathers from every tree, boys!
A Farmer—a Farmer for me.

For the Farmers' Cabinet.

Treatment of Wounds on Horses.

Having seen a communication, extracted from the Maine Farmer, requesting information in regard to the treatment of wounds on horses, and having had some experience of the value of the following remedy, I confidently recommend its use. It is a solution of saltpetre and blue stone. The saltpetre should be first dissolved in warm water, in such proportions as to be moderately strong to the taste, and blue stone added, until the solution is *slightly* tinged. This, and nothing else, is to be used as a wash, two or three times a day. It purifies the wound, destroys proud flesh, produces granulations immediately, and heals the worst wounds in a surprisingly short time. I have had horses badly kicked and otherwise hurt, in mid-winter, and mid-summer; their cure was equally rapid, and afterwards no scar was visible. The wound requires no covering—flies will not approach it, and dressing it with a small mob of rags, tied to a stick, is very little trouble. Wounds do not require to be sewed up under this treatment, at least I never saw any advantage from it, as the stitches uniformly have torn out. The skin will approximate as the wound heals.

PENN.

For the Farmers' Cabinet.

Farmers Work for February.

MR. LIBBY:—February is a month in which farmers will find sufficient employment for all their time—their interests will require their undivided attention. It is a mistaken notion that it is a slack time—there are many things claiming the notice of considerate men. If there be leisure, (and that there are leisure moments in every season, no one will pretend to deny;) that leisure time ought to be devoted to the improvement of the mind, and the cultivation of those social principles which bind, or ought to bind, neighborhoods together. The cultivation of these principles are all important to the domestic peace and happiness of neighborhoods, and the well being of society. A good farmer, while he cultivates the soil, will also cultivate all those means of social improvement within his reach. Now is the time to attend to your stock. It has been said that an animal well summered is half wintered, and with equal propriety it has been replied that one well wintered is half summered. Every farmer will understand this. At this season, stock of all kinds require particular care. Cows, says Mr. Fessenden, "which are shortly expected to calve ought to be lodged at night in some convenient place under cover for a week or two, previously, as it might be the means of saving the life of the calf, and perhaps of the dam likewise. The day and night after a cow has calved, she should be kept under cover, and her drink should be luke warm. Let her not be exposed for some time to the dampness of the night." At this time cows should be fed with the best and most nourishing food. Pure water is an essential article for cows. Dr. Anderson says, that one person acquired great wealth, by attention to things of this nature. One of his principal discoveries was the importance of having an abundant supply of the purest water, and on no account would he permit an animal to set his foot in it, nor allow it even to be tainted by the breath of animals."

All cattle should be warmly housed, regularly fed, and well watered. Turneps, potatoes, magle wurtzle, and ruta baga may be fed to stock at this season to great advantage. If steamed, so much the better. But they should not be kept exclusively on roots; and turneps should on no account be given to sheep at this season. Some few of my neighbors have fed the sugar beet, and I am informed that cattle invariably prefer this to any other root. If, as its friends allege, it contains so large a proportion of sacharine matter, which is the fattening principle, and so great a yield on proper soil, as I have seen stated in the Cabinet, it will be a most valuable article for the keeping and fattening of stock, and its introduction into this country will be a public benefit, although a pound of sugar may never be made from it.* I design to satisfy myself next season by a thorough experiment.

Poultry should in winter, be well and warmly housed, Cobbott, who notwithstanding his peculiarities was essentially a great man—a keen observer, and close reasoner, says in his "journal" of a residence in this country, "January 4th, patched up a boarded building which was formerly a coach house, but which is not so necessary to me, in that capacity, as in that of a *fowl-house*. The neighbors tell me that the poultry will roost out on the trees all the winter, however, I

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* For stock, the sugar beet is an invaluable article,—it is easily raised in large quantities, and is all that its advocates represent it to be. Some of the best mutton ever brought to this market was fattened principally on the sugar beet, and like every good article has met with a ready sale, and at an advanced price. For milch cows, we are informed, it is excellent—improving the quantity and quality of the milk. We are collecting facts for publication, in reference to the culture of the sugar beet in this country, its peculiar adaptation to our soil and climate, and the result of experiments made in feeding it to stock.—Editor.

mean to give the poor things a *choice.*" Under date of March 15th, he says; "*Young Chickens*—I hear of no other in the neighborhood. This is the effect of my *warm fowl-house!* The house has been supplied with eggs all the winter, without any interruption. I am told that this has been the case in no other house hereabouts. We have now an abundance of eggs. More than a large family can consume. We send some to market." It would have been better if this extract had been made at an earlier period, but it is not now too late. The information is important. My own experience confirms the above. I adopted the plan recommended, with some slight improvements, with the best results. The greatest difficulty to guard against is vermin, and I would esteem it a favor if some of your correspondents would point out a suitable and efficient remedy.* The demand for poultry and fresh eggs is great in all our cities and large towns, and with proper care and attention, to this branch, I am well satisfied the farmer will reap a rich reward.

Respectfully,

David Hill.

Amwell, N. J. Jan. 27, 1838.

Hints for March.

BY FREDIRICK BUTLER.

We suppose that you have now collected your wood and fencing stuff for the next season; your hemp and flax are in great forwardness, and your threshing was all closed early in February. You have cut your scions for grafting. Cut up your wood, and house it, or pile it up for the summer, and next winter; the difference in the saving, between green and dry, or seasoned wood, will nearly pay the expense of sledding, besides the extra trouble of kindling fires; both which are objects worthy of attention.

CLOVER AND RYE SEED.

If you have neglected to sow clover, at seed-time, upon your winter grains, you may now sow to advantage, as soon as the ground is bare; (the sooner the better,) or upon a light snow—both will answer well. You may harrow down your corn-hills, or light potatoe grounds, as soon as the surface is free from frost, and sow your spring rye, it will generally do better, than after a ploughing, as late as the first of May.

TOP DRESSING.

Dress with stable, compost, hog-pen, or such other well rotted manure as you have, such grass grounds as you have neglected in autumn; three loads now may be equal to two then; but it is best to secure a good crop even now. Your winter-grain should now be dressed with plaster, if it was neglected at seed-time; your mowing grounds, which are upon a dry soil, will pay you well for a bushel or two of plaster, or a few bushels of lime, or leached ashes, to the acre.

ORCHARDS.

Your orchards continue to claim your attention; finish trimming as fast as possible, and cart or sled off the brush before the ground becomes soft and poachy—give to each tree a top-dressing of your best chip, stable, or compost manure; your fruit will richly repay, besides the extra profits upon your grass under your trees; whether mowing or pasture, together with the growth of your trees. No farmer ever paid too much attention to his orchards, nor probably ever will.

FENCES.

Look to your fences, and see that they secure your orchards, grass and grain lands against your horses, cattle, and sheep. If your fences are bad, you have toiled in vain; all is at hazard; all is bad.

FRUIT AND SHADE TREES.

Commence setting your fruit and shade trees; these, if omitted in December, generally succeed best, (when set in the spring,) as soon as the frost is out of the ground.—Whenever the frost will permit, plough your hemp and flax ground, together with such land as you design for peas. Frequent ploughings greatly benefit these crops, and your peas cannot be sown too early to prevent the effects of the bug, and insure you a good crop.

WATER-COURSES.

Look to your water-courses, and change their direction to receive the benefit of the spring rains; the frequent changing of your water-courses, will render your mowing even, and prevent one part from becoming too rank, and lodging, before the other part is grown fit to cut, and thus turn to your best profit, that which if neglected, would become waste and damage.

STOCK.

Now is the time to nurse your stock with potatoes, carrots and other roots, (better if well steamed;) even your cattle and cows will pay you as well for the use of the curry-comb as your horses, and if you nurse them well in the spring, they will repay you with interest through the summer. Let your sheep range upon your old stubble fields, where you have not sown clover for mowing—green herbage is the most natural feed for

* Wage a war of extermination against rats, mice, and all vermin, whenever and wherever they may be found.

this animal at this season; but if you have no such range, potatoes and carrots, (not turneps,) may be used as a substitute. Secure them carefully against your grain, mowing, or young clover grounds, which you design for mowing; the damage they will do you by feeding on these, would be greater than they could repay.

Some farmers complain that red clover, when sown for mowing upon their orchard grounds, causes the trees to wither and decay. This may be remedied by sowing plaster of Paris upon your clover; your orchards will flourish as well as upon English mowing; one bushel to the acre in the spring, or fall, annually, will answer. It is of no consequence to inquire, why a crop so fertilizing as clover, should injure the orchard, nor why the plaster should prevent it; facts are stubborn things, and are generally, all that are of importance in good farming. Others have found from experience that red clover may grow to advantage upon orchard grounds, without injuring the trees, provided the clover is fed off before it blossoms; and thus fertilize their orchard grounds by feeding their clover. From this it appears, that the injury arises from the heads, or blossoms of the clover; but the manner in which the blossom produces this effect, is again inexplicable, and so in fact are all the operations of nature. One useful fact that shall enable the farmer to produce two spires of grass where only one had grown before, is of more real value, than a whole volume of nice philosophical disquisitions upon the operation of nature, in producing this grass; the first may be done; but the latter no man ever discovered, and probably never will.

PLOUGHING.

The season is now opening to commence your ploughing; every farmer, and every farmer's boy, feels perhaps as if he knew how to hold and drive the plough, better than the man who writes; all this may be true; he knows that he should never turn his furrow wider than the plough-share will cut clean; but always as much narrower, as the stiffness of the soil shall render necessary, to lay his furrows smooth and light, and free from clods; in all such cases of narrow furrows, the extra expense of ploughing, will be saved in the expense of harrowing, with this advantage to the crop, that the harrow pulverizes only the surface; but the plough, when properly directed, renders the earth mellow, to the whole depth of the furrow.—This again involves the question, how deep is best? To this I shall reply particularly, as it has become one of the most important questions in field husbandry. When you turn in a stiff, or clover sward, for corn, or potatoes, let your plough cut to the depth of 8 or 10 inches, if the substratum is not an impenetrable substance; you will thus lay the foundation for a deep soil for ever, in your after tillage. Your corn, and potatoes, when planted, will lie below the dead earth raised from the bottoms of your furrows, and will strike their roots into the rich mould which you turned down from the surface. The sun, air, and rains, together with such manure as you may apply, either in the hill, or by way of top-dressings, about the hills, will all fertilize the dead earth so turned up, and render it food for plants. The frosts of the next winter will further improve this dead surface, and thus, by the next season, when commixed with original mould, by a deep ploughing of the same depth, the whole will become a deep, rich, and fertile soil, and may ever afterward be ploughed to the same depth for the culture of any crops. The same is true, in a degree, of stubble grounds, ploughed, or ridged in, in the summer, after harvest; or of turnep ground fed by sheep, or of clover, or buck-wheat grounds, ploughed in, as fertilizing crops; but where you plough your fallows for wheat, rye, oats, barley, or turneps, you will never succeed in deepening your soil below the natural mould, unless you have first begun as above; because these crops strike a shallow root, and will be left to feed on the dead earth which you have brought up to the surface. These are the outlines, or first principles of good ploughing, and the minute attention of every farmer, will soon discover the mode which shall be best adapted to his different soils, and different crops, with this general principle, to deepen his soil at every ploughing, as far as the nature of the substratum, or under soil, and the safety of his crop will admit; and therefore in this way, he may soon bring his farm into a deep tillage. The success of one half of any one of his fields, under a regular deep tillage, compared with the other half under a shallow tillage, will be the most convincing argument in favor of deep ploughing, that can be laid before the practical farmer. Try and see.

This being the life of a farm, it is impossible to be too particular in improving it. I shall conclude this article with the following remarks.

1. The depth of your soil being determined as before, plough flat, or ridge, directly according to the *nature* of your soil.

2. If your soil is naturally dry, plough flat, and as level as possible, this will give an equal diffusion of moisture throughout your field; but if your soil is moist, plough into wide ridges of 18 to 24 feet, and if it is a wet soil, let your ridges not exceed 6 to 12 feet. The object of ridge ploughing, is to improve the furrows between the ridges, as

drains for the water, therefore multiply your drains, by narrowing your lands, or ridges, according to the moisture of your soil; and so *vice versa.* This is the best, if not only method of equalizing moist and wet lands.

3. In ploughing high hills, and steep acclivities, it is generally practised to plough directly up and down, with a furrow both ways: (up and down,) this is attended with two evils; 1st, it is very fatiguing to the team to carry a furrow up the hill; and 2d, it exposes the lands to be washed, and gullied in the furrows, which is sometimes ruinous.

4. These evils may be remedied by carrying a furrow down the hill only, and by inclining this furrow to the left hand, directly in proportion to the descent of the declivity—and suffering the team to re-ascend the hill without a furrow. This will lessen your day's work, not one half, but about one third, because your team will travel so much faster, both up and down the hill, when they carry but one furrow.—In this way, the steepest hills may be ploughed without a single furrow left open to the wash, except the last one, and the saving in the strength of the team, and in the value of the crop, which will arise from the extra goodness of the ploughing, will doubly compensate for the loss of time. In this way, the steepest hills, on which cattle can travel, may be ploughed to advantage, by striking the furrows transversely, or in a direction inclined to the left hand, directly in proportion to the steepness of the declivity.

5. In this way, one third or one half the strength of team will perform the work.

6. Where the descent is gentle, and not exposed to wash, let your ridges range exactly with the descent, that the surplusage of moisture may pass off easy, and regular, in the furrows.

7. If your business drives, and your land is light, you may fully compensate for the loss of time by widening your furrow slice: your plough-share will cut one fourth, one third, or even one half more, than in ploughing directly up and down, according to the steepness of the declivity, and the obliquity of your furrows.

8. All this, together with the general width of your furrow slice, must depend upon the judgment of the husbandman, directed by the quality of the soil. If the soil is hard and stiff, cut narrow; but if it is light and loose, cut your furrow slice as wide as the share will cut clean, and no further; all beyond this is cut, and cover, which is bad ploughing.

9. Plough all your lands as much as possible when the dew is on, in the morning, especially sandy, or light loamy lands, (when ploughed in summer,) and even in moist weather, if the season is dry; but as a general rule, improve a dry time, both for your ploughing, hoeing, and for your seed-time; your crops will always repay your attention, some extraordinaries in your soil excepted, and the surface will derive most benefit from the harrow in dry weather.

HARROWING.

No instrument of husbandry requires the judgment of the farmer more than the harrow: it is capable of doing the most good, and hurt, at the same time, of any other instrument.

1. The harrow, in field husbandry, answers to the rake in gardening, and cannot be made to pulverize your tillage lands too fine; but if this is done after your seeds are sown, it will cover them often too deep, and thus injure your crop; and in flax and hemp, often double the labor and expense in pulling; and in your grass seeds, by covering too deep, will destroy their growth.

2. Make it a general rule to level, and pulverize, as much as is necessary with the harrow, before you cast your seed, and then cover lightly with the harrow, according to the hardness, or stiffness of the soil—when the lands are light, once over will answer; but when they are stiff, twice may be necessary.

ROLLING.

The field Roller is an instrument much used in Europe, and in some parts of our own country; and its good effects much extolled by the best writers, and upon the following principles, viz.

1. When used upon sward ground broken up for corn, it compresses the furrows to the earth beneath, and thus it guards the corn against the effects of droughts, by equalizing the moisture.

2. When used upon a stiff soil, it breaks clods, and thus pulverizes that surface which could not be done with the harrow.

3. When used upon stony grounds laid down to mowing, it presses the stones into the earth even with the surface, at the same time that it breaks the clods, and thus prepares the way for the scythe in a cheap, and easy method.

4. When used upon a light, sandy, or loamy soil, at seed-time, it gives permanence, and consistence to the surface, which guards against drought.

5. When used in the spring, upon such winter grains as are exposed to be winter-killed, by the heaving of the frosts, it presses the earth to their roots and thus secures the crops.

These and many other advantages are ascribed to the roller; but upon this subject I

have no experience,—so far as it goes to break clods and press in stones, it will doubtless do well.

Sowing Locust Seed.

Considerable difficulty has been experienced in propagating the locust from seed from the circumstance of their not readily vegetating. This may sometimes be owing to the fact that they do not always come to perfection here, but this is generally in consequence of not taking the necessary care in preparing them. The following method, for this purpose may not be generally known, or if known is not attended to. It will ensure success, and cause the seeds to grow as readily as beans, or Indian Corn. Place a quantity of the seed in a vessel holding a quart or two, pour on boiling water, and let it stand 24 hours. Then decant it, and it will be found that a considerable number are softened and swelled by the operation. These are to be separated from the rest, and planted; and to the remaining unswollen ones another portion of hot water is to be added, which also is to remain 24 hours, and a selection made to be planted as before. In a few days nearly the whole of the seeds will be thus prepared.—*Genesee Farmer.*

[The external surface of Locust seed is both tough and combined with a portion of oil, which prevents the necessary mixture from reaching the germ at the usual temperature of the earth, unless surrounded with a substance which will extract the oil. Potash, soda, or the ley of wood ashes would probably effect this, when below the temperature of boiling water. The seed might be surrounded by the soda, or pot-ash in the earth, all in a dry state, at the natural temperature, which might be better than the boiling water; where seed are thus started in their growth by an artificial heat and moisture, might afterwards perish for want of a corresponding moisture in the earth, sufficient to continue that growth, as we sometimes see exemplified in grain, when sown in dry ground, after being steeped. Dry grain, which receives the necessary moisture from succeeding rains, generally succeeds best.]

TO READERS AND CORRESPONDENTS.

Several articles, among them one on MARL, are necessarily deferred. They will appear in our next. Correspondents are requested to forward their communications at an early day.

COMPOSITION FOR RENDERING BOOTS AND SHOES WATER PROOF AND DURABLE.

Take one pint of boiled linseed oil, two ounces of common beeswax, two ounces of spirits of turpentine, and half an ounce of Burgundy pitch: let them be carefully melted over a slow fire. With this mixture new boots and shoes are to be rubbed, either in the sun or at a little distance from the fire, with a sponge or brush. This operation should be repeated, without wearing them, as often as they become dry, until they are fully saturated, which will require four or five times brushing: by this the leather becomes impervious to water. The boot or shoe thus prepared, lasts longer than common leather, it acquires such a pliability and softness that it will never shrivel nor grow hard, and in that state, is the most effectual preventative against colds, catarrhs, cholics, &c. It is necessary to remark, that shoes or boots thus prepared, ought not be worn until they are perfectly dry and elastic; as in the contrary case, the leather will become too soft, and wear out much sooner than it otherwise would.

MANURE.

The month of March is a very important one to farmers who wish to keep their farms in order, by saving and applying manure. As a great proportion of the manure from the farm yard is made from straw and refuse fodder, it is important that this should be turned to the greatest profit. It is more easily collected into heaps at this season before the frost is out of the ground than afterwards; besides, when the ground becomes soft, much of it is trodden into the ground, where it often remains after the ground becomes dry and hard. As removing all the soil from the yard, as deep as had been penetrated by the feet of cattle, would require too much labor, therefore it is better to scrape the manure into heaps as soon as the frost is out of it in the spring, and apply it to the fields as soon as is convenient, remembering that manure left to ferment in heaps until it becomes rotten, looses half of its valuable properties. We know that unrotted straw applied to some crops, would be unpleasant to work among, but yet, from the diversity of cropping on a farm, it can always be applied somewhere to advantage.

There needs no stronger proof of a slovenly farmer, than to see the manure lying round his barn year after year, piled up against the lower timbers, in many instances, rotting them away, not to mention the effect upon the atmosphere, which is unhealthy as well as unpleasant

Wheat.

Last spring we published some suggestions on the late sowing of spring wheat, as a means of saving it from the ravages of a yellow worm which some incorrectly call *weevil*. A number of our subscribers tried the experiment, and so far as we have heard, with entire success. A farmer in Grange county told us that he sowed one acre of spring wheat ten days later than the rest in the same field. The first sowed was seriously injured, the last not at all. Several, in other towns, made similar statements.

It has been observed, from the first appearance of this insect, that the earliest winter wheat was less injured by its attacks than any other. It is evident therefore, that the time of laying eggs is short. It is probably, soon after the heads make their appearance. Before they are defended by the leaf which encloses them; and when they appear, most probably the husk soon becomes so hard that the insect cannot pierce it to deposit her eggs upon the kernel. We have, then, only to ascertain the time as exactly as we can, in which the injury is done, and have our winter wheat too forward, and spring wheat not forward enough, for the operations of the insect, and the damage is avoided. At present sow your winter wheat as early as you can, and sow your spring wheat as late as you can, and give it time to ripen.

Farmers, and all who find either pleasure or profit in any thing made from wheat would be greatly indebted to any etymologist who should make us better acquainted with the character and habits of this destructive insect.

Grapes.

Much trouble has been taken to introduce foreign grapes and to render them familiar to our climate, whilst the native plant, of which our forests present a vast variety is comparatively overlooked and neglected. Inasmuch as the circumstances of their growing wild shows clearly their fitness for our country, would it not be well to pay particular attention to their transplantation and cultivation! How much fruits are improved by proper culture is shown by every day's experience, and there can be no doubt that some of our native vines, if properly tended, would furnish fruit infinitely surpassing the product of other soils, which only dwindle when transferred to climes for which their peculiar organization unfits them. To show the effects of culture in enlarging vegetable growth and improving their flavor and delicacy, we need only refer to the cases of many of the vegetables, now in daily use and highly esteemed, which in their unimproved condition were scarcely fit to be eaten.—*Baltimore American.*

Care needed for sheep.

Farmers who wish to carry their sheep safely and in good condition through winter, must recollect that the great secret is, to keep them constantly comfortable—in every sense of the word. To attain this, they must be properly sheltered from the wind and snow, they must have access to water, the strong and the weak must be separated into different flocks, and above all, they must have a regular supply of mangle wurtzel or ruta baga. It is indispensible too that constant regularity both in the quantity and nature of their food be strictly observed.—*Gen. Farmer.*

Sheep.

It is a well established fact that sheep as well as cattle, thrive better and are not so much inclined to sickness during the summer, if they are sheltered from the storms, and cold of winter. They should at least have a hovel to protect them from the north and easterly winds, and open towards the south whither they can retreat on the approaching of a storm. They should be fed there at sunset and sunrise, which will induce them always to return thither at night and remain till morning.

These hovels can easily be constructed of rails and dry seed weed or the branches of the red cedar and stubble. On the approach of a storm a farmer should always see them safely folded.

Strawberries.

As soon as your beds are bare in the spring spread over them a slight covering of straw, and set fire to it. This will consume all the decayed leaves, etc. left last season, and leave the whole neat and clean. Then spread on a little fine manure from the yard, or ashes [which answers quite as well,] and then a covering of chaff, say two inches thick. This method is said to bring the plants and fruit forward earlier; and to make the latter large, and of better quality. It keeps the fruit clean and ripens it finely. The burning over is recommended by Dr. Miller of Princeton, and other experienced cultivators. The use of the chaff is practised by the editor of the Southern Agriculturist, [he uses rice chaff,] who last year gathered from half an acre of plants, 48 bushels of the finest fruit. It was sold for 25 cts. a quart; and yielded therefore the aggregate sum of $360.—*Vermont Farmer.*

A Good Hint.

An esteemed correspondent of the Farmers' Cabinet, writing from the West, says:—"If the oak juggles, or large chips, cut out by the wood-choppers, when making rails, be laid on the shoulder of the covered drain, described at page 71, vol. 2, of the Cabinet, they will answer much better than the surface sod, and be more tasty. On the Prairies, in Illinois, where the drains are dug in precisely the same manner and form as those referred to above, and where the surface sod is not firm enough to form a sufficient roof, juggles are used."

From the Maine Farmer.

"Thinks I to Myself."

We are indebted to a worthy and observing friend for many of the following hints.

When I see a mass of chips accumulated in a farmer's back yard, remaining year after year, "thinks I to myself," if the coarser ones were raked out, they would serve for fuel, while the finer parts with the addition of soap-suds, &c., from the house would afford a valuable source of manure.

When I see a convex barn-yard, "thinks I to myself," there is comparatively but little manure made there.

When I see banks of manure resting against a barn during the summer season serving only to rot the building—"thinks I to myself," that manure might be employed.

When I see the drainings of a barn-yard finding their way into gullies and rivulets, while with small expense they might be thrown on to a valuable swell or declivity, "thinks I to myself," that farmer is blind to his own interest.

When I see a hog-yard not well supplied with materials for making manure, "thinks I to myself," that man suffers loss for the want of care.

When I see a piece of hoed ground in a mowing field, and the turf, stalks, and stones that were carried out by the plough or harrow not collected together, "thinks I to myself," there is something slovenish in the case.

When I see ploughing done, year after year, in the same track by the side of a fence or a gully, till a dyke of considerable height is thrown up, and of course a corresponding leanness in the interior, "thinks I to myself," there is a want of good husbandry.

When I see a stone wall topped out with a single tier of round stone, "thinks I to myself," the upper foot in the height of such walls ought never to have been put on, and look out for dull scythes and loss of hay.

When I see fruit trees loaded with twice the top necessary for bearing well, and this perhaps partly dead, thereby keeping the needed rays of the sun from the under crop, "thinks I to myself," here is an indication of bad husbandry.

When I see stones piled around the trunk of a fruit tree, "thinks I to myself," here is an invitation to suckers and to mice, and if dull scythes should follow, it would not be strange.

When I see a total failure of a crop of Indian corn, "thinks I to myself," if that man had bestowed all the manure and perhaps two-thirds the labor on half the ground, he would have had a fair crop and a fine piece of ground for a crop of Ruta Baga the following year.

When I see a farmer selling his ashes for ten cents per bushel, "thinks I to myself," he had better have given the purchaser fifty cents to leave it for his corn and grain.

CUT STRAW FOR HORSES.

At this season of the year, horses that are used much, or that perspire freely, are apt to take cold, and become hide-bound. They require, once or twice, a couple of table spoonfuls of sulphur mixed with their food, which should be of cut straw, and corn and cob, and oats, ground together. If well curried, their skin will soon be loose, and they will begin to thrive immediately.

A NEW AND CHEAP PAINT,

More impervious to the Weather than Common Paint.

Take of unslacked lime a quantity sufficient to make two gallons of white wash when slacked—mix it with a due quantity of water—add to it two and a half pounds of brown sugar, and about three ounces of salt. The exact proportion of each will be best ascertained by experiment. This, when applied as a paint, becomes perfectly hard and glossy. By mixing either ivory black, or lamp-black, with the ingredients, a beautiful lead color may he had, or a yellow, by mixing suitable ingredients. This paint is now almost altogether used at the south for houses, fences, &c.

The quantity of rain which fell in Philadelphia, during the last month (January, 1838) was two inches and twenty hundredths. (2:20.)

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 a demand for grain of an inferior quality.

For the Farmers' Cabinet.

When is the best time to plough sod for Corn.

A diversity of opinion exists among practical farmers, as to the best time to plough sod for corn. Some are in favor of ploughing it in autumn, some in the winter—some as soon as possible in the spring, after the frosts of winter have subsided, while others prefer leaving it as late as possible, that they may have it accomplished by the time they wish to plant their corn. Ploughing at each of these seasons has its advocates, from certain peculiar advantages supposed to be derived therefrom. Amongst these may be enumerated, certainty for a medium crop, destruction of depredators, and exemption from labor. To answer the above question, to be of practical utility to the farmer, essential regard must be had to economy, the philosopher's stone in the science of agriculture. That in which the greatest certainty of a crop, with the least amount of labor is connected, is certainly the preferable; and, however plausible theory may be, the only data sufficient to furnish the solution is, experience.

The principal argument offered in favor of autumn ploughing, is the destruction of the cut-worm, which, in some seasons, commits such destructive ravages in the corn crops. Sufficient of this was to be observed in the season of 1836. No person who has the least experience in the matter, I presume, will doubt, but that autumn, or winter ploughing, will obviate the loss to be apprehended from this source.

The best scientific description of the cut-worm, which has yet come under my notice, is by "Observer," in Vol. 2, No. 2, of the Cabinet. His ideas on the subject and mine coinciding, I give them verbatim:

"Habits.—I am not aware that the manner in which the cut-worm, phalæna, deposits its eggs, has ever been observed. I can, therefore, only arrive at probable conclusions. As very few phalæna survive the winter season, it is probable that the eggs are deposited in autumn, among the grass, at or near to the surface of the ground. The eggs appear not to hatch until spring."

The correctness of this view is inferred from the success of fall, or very early spring ploughing, in preventing the ravages of the cut-worm. It may be proper to inquire a little, how winter ploughing produces this result. I apprehend that the eggs become buried so deep in the earth, that the vivifing influence of the sun and air, does not reach them, or if they do hatch at such a depth, they must perish before reaching the surface, where, alone, food is to be found to nourish them. In late spring ploughing, the same thing would not so certainly happen; vegetation having started, the proper food for the worms would be buried along with them, and the loose state of the fresh ploughed land not only admits the passage of warmth and air, but would greatly facilitate the egress of the worm to the surface. Even should the moth survive the winter, and not deposit its eggs till spring, the foregoing explanation will apply equally well; or if the moths should find the ground already ploughed, they would probably seek some other field in which to deposit their eggs. It is generally admitted, that *fall, or very early spring ploughing* does, in some way, prevent the cut-worm from injuring our corn crops."

Now, to obtain a correct solution of the question under consideration, after having weighed all the advantages arising from fall ploughing, it will be equally necessary to take into consideration, also, all the disadvantages it presents. The great disadvantage attending fall ploughing, for corn, particularly if the winter and spring be open and mild, is this—the sod, instead of undergoing decomposition, by having the roots of the grass killed, with the timely use of the harrow, will carry on such a process of vegetation as to increase the labor of cultivating it at least two-fold. I remember to have seen this particularly illustrated in the year 1828. The winter and spring having been remarkably mild, in a field that was ploughed the fall previous, the grass had become so strong, that I feel myself safe in saying, that it required three times as much labor as ordinary to conquer the grass, not to be an injury to the crop of corn.

To the correctness of the foregoing statement by "Observer," of the efficacy of early spring ploughing, in preventing the ravages of the cut-worm, I need but add, that so far as my experience is concerned, it is equally as efficacious as fall ploughing: and ground ploughed in the spring, will scarcely need half the tillage to destroy the grass, as that ploughed in the fall.

The chances of winter ploughing being, at best, but precarious, and the object to be obtained being similar to that of fall ploughing, it deserves no particular notice in these remarks.

Farmers sometimes think it an object of some importance, to leave their ploughing as late as possible in the spring, that their stock may derive some benefit, from the pasture afforded by the sod. This may answer extremely well, in those seasons affording a paucity of worms, particularly if the sod be not too tough. The ground, in this case, will be in finer tilth, than in either of the preceding. Some intelligent farmers are of opinion, that crops of corn, planted on a late

ploughed stiff sod, have been injured by the whole furrow being moved with the cultivator, in the dressing of the corn. This reasoning appears sufficiently plausible, especially if the ploughing is not of sufficient depth—and argues also in favor of deep ploughing. But the danger incurred, of having the crop injured by the cut-worm, by leaving the ploughing till so late a period, overbalances all the advantages it presents.

A writer in the last number of the Cabinet says, "We also have a variety of means to destroy depredators and convert them into food for vegetables, such as the frost of winter on the embryo of the cut worm, as exemplified by the benefit arising from autumn and winter ploughing." In view of the above, and other reasons, he draws the following conclusion.

"Land for Indian corn should be ploughed in the autumn or winter preceding the planting."

If he has actually discovered, that the frost of winter destroys the embryo of the cut worm, he has added one link to the great chain of scientific facts, which has hitherto evaded the research of some of the most profound inquirers. My knowledge upon the subject being entirely analagous, I shall advance my objections, by proposing a few inquiries. But in the first place let me observe, that in the abstract, the eggs producing the cut worm, must consequently be deposited in or before autumn. 1. If the frosts of winter destroy the embryo of the cut-worm, why has not the insect long since become extinct? 2. Where does the phalæna deposit its eggs, at the surface of the ground, or about furrow depth below? If the phalæna deposits its eggs at the surface of the ground, and the embryo is destroyed by the frosts, then I should conclude, that the best method to get them destroyed, is to leave the ground unploughed during the winter, that their situation may be the more exposed; as ploughing them down would have but a tendency to preserve them from the rigors of winter. But if the eggs are deposited about furrow depth below the surface, then early spring ploughing, I presume, instead of destroying them as proved by experiment, would have a tendency to promote their advancement, by exposing them to the genial influence of the sun.

Now the idea of the cut-worm being destroyed by the frost of winter, appears to me, to hold good, neither in theory nor in practice. I presume, that in autumn, winter, or spring ploughing, we must look for its destruction, to some other source than the frost. As I am not writing a philosophical dissertation on the habits of the cut-worm; but inquiring, when is the most advantageous time to plough sod for corn; for, what appears to me, to be the most probable cause of its destruction, I must refer to the quotation from "Observer." If nothing else was to be taken into consideration but the destruction of the cut worm, I should agree that autumn ploughing, was perhaps as advantageous as early spring ploughing. But with regard to economy, and exemption from labor, with the equal certainty for a full crop, experience and argument, in my opinion, fully prove, that as *early as possible in the spring, is the best time to plough sod for corn.*

A.

Chester County, Feb. 3, 1833.

BROCOLI.

This plant belongs to the cabbage family but has not been cultivated in the U. States as much as the common cabbage. It appears to be a mixture between the cauliflower and common variety, and perfects itself with more certainty in this latitude than the cauliflower. Like the latter it is cultivated for the congregation of flower-buds, which is the part used; these appear in a conical shape, and are very tender. When used, they are boiled, and served up with drawn butter. The plants are to be sown and treated in the same manner as cabbage; and there is also early and late varieties, both of white and purple color. The purple cape brocoli, or fall brocoli, is one of the best varieties for our climate, as the head of the flower-buds is large and close, and although the color, when growing, is a pale purple, when boiled, it is of a beautiful green. In flavor, brocoli much resembles the cabbage, but the part used is extremely tender and delicate.

We would recommend to every farmer, to set out a few of the plants with his cabbage.

A RARE EXAMPLE OF HONESTY.—A circumstance recently occurred in our vicinity which we think deserving of notice. Mr. D. of the city, says the "Commercial Herald," wished to purchase a horse of Mr. B. of the county. One hundred and ten dollars were asked, and one hundred offered. Mr. B. agree to take one hundred dollars, provided he could have the use of the horse for one week. This was assented to, and the money paid. On the day that the horse was to be delivered, he died. Mr. B. promptly offered to refund the money. Mr. D. declined receiving it. Each insisted on being the loser. Mr. B. was finally prevailed on to retain $25, which was all he could be induced to keep. If we were all to act thus nobly, how rarely would the peace of society be disturbed by litigation.

"When SELF the wavering balance shakes
'Tis RARELY right adjusted."

ARTICLES.	Philadelphia Feb. 10.	Baltimore, Feb. 9.	New York, Feb. 10.	Boston, February 9.
Beans, white, per bush	$1 25—1 62½	1 25— 0 00	0 14—0 15	1 12— 1 25
Beef, mess, new, per bbl	14 00—15 00	11 00—13 00	14 00—15 00	14 50—15 00
Bacon, western, per lb	8— 10	9— 10	8— 10	.....
Butter, extra, per tub	12— 14	16— 20	21— 23	.....
Butter, fresh, per lb. [market.]	00— 00	20— 25	20— 25	20— 23
Hams, per lb	12— 14	13— 13½	10— 12	25— 28
Hog's Lard, per lb	9— 10	9— 10	10— 11	14— 15
Cheese, American, per lb	9 — 10½	9— 11	8— 9½	9— 10
Beeswax. yellow, per lb	25— 30	23— 25	26— 27	8— 9
Beeswax, white	.....	38— 40	38— 40	26— 31
Bristles, American		—	25— 65	38— 40
Flax, American	40— 50	9— 10	6— 7	.....
Flour, best, per bbl	7½— 8	8 — 0 00	8 00— 9 00	9— 12
GRAIN—Wheat, per bush, Penn'a	8 00— 8 75	0 00— 2 10	1 85— 2 00	9 50— 9 62
Do. Maryland	1 60— 1 75	1 80— 1 82	1 60— 1 75	
Rye, per bushel	1 60— 1 70	0 90— 0 95	—1 18	.....
Corn, do	0 98— 1 06	75— 76	1 10—1 12½	1 33— 1 37
Oats, do	70— 75	37— 00	40— 50	0 94— 0 98
Barley, do. Penn	40— 43		0 00—	52— 55
Peas, do	85— 90		— 8	0 00—0 00
HAY, Timothy, per 100 lbs	1 00— 1 25	75— 1 00		.....
Meadow Grass	0 80— 0 85	10 00 per ton.	.....	18 00 per ton.
Hemp, American dry rot, ton	70— 80	.....		
Hops, first sort, 1836, lb	1 50— 1 60	6— 7	1 30— 1 04	.....
Plaster Paris, per ton	9— 10	— 9	6— 6½	6— 7
SEEDS—Cloverseed, per bushel	3 35—3 37½	4 00— 000	2 50—	3 0—0 3 25
Flaxseed. rough, do	5 25— 5 50	5 50— 6 00	.....	14— 15
Timothy	1 40— 1 43	1 37— 1 50	8 59— 9 50	.....
Tallow, per lb	3 00— 3 50	3 25— 4 00	12 50—14 00	2 87— 3 00
WOOL—Saxony, fleece, per lb	11— 11¼	— 11	— 11	12— 13
Merino	00— 00	40— 50	50— 00	50— 55
1-4 and common	46— 48	35— 40	37— 00	45— 47
	33— 36	25— 30	40— 50	33— 83

Prices of Marketing, as near the average as can well be ascertained.

Beef, - -	7½ by the quarter.	Potatoes, -	40 a 50 per bushel.
Pork, country killed,	- - 6 a 8.	Sweet Potatoes,	75 a 1 00 do.
Veal, - -	6 a 8 cents per lb.	Apples, - -	- 75 do.
Mutton, - -	- - 6 a 8.	Dried Apples, -	1 50 a 1 75 do
Dried Beef, -	12½ a 15 per lb.	Dried Peaches -	- 4 00 do.
		Cider, - -	a 3 00 per barrel.
Chickens, -	75 a 1 50 per pair.	Lard, - -	- 14 a 16 per lb.
Geese, - -	1 00 a 1 25 a piece.	Hams, - -	- 16 do.
Ducks, - -	75 a 1 25 a pair.	Shoulders, -	- 12½ do.
Butter, - -	- 25 a 28 per lb.	Oak Wood, -	- 5 00 a 600.
Eggs, - -	18 a 20 per doz.	Hickory Wood, -	- 6 50 a 7 50.

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THE FARMERS' CABINET,

DEVOTED TO AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

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Indian Corn.

The following communication was read to the Philadelphia Agricultural Society, February 21, 1838, and directed to be published in the Farmers' Cabinet.

Of all the kinds of grain raised in the United States, Indian corn is the most valuable, taking into view the quantity and the price per bushel, and it has been a subject of much solicitude for some years past, that the early frosts have done such extensive injury to it; diminishing the crops and otherwise rendering it of much less value for feeding stock. In the South, the seasons are sufficiently long and warm to mature it, but in the middle and northern states this is not the case, and consequently, our farmers have been directing their attention to other varieties than those heretofore cultivated, that will ripen earlier and bear planting at a later period. Of the kinds experimented upon with this view none has succeeded so well as the variety called the "Dutton Corn." This answers the purpose completely, as it may be planted the latter part of May, and even as late as the first of June, and cut off the first week in September fully ripe. It is a hard corn, deeply yellow, grains set very close, generally twelve rows, sometimes more, and never eight. It is remarkably heavy and believed to be more sweet and nutritious than the ordinary kinds of corn usually raised in our country. The stalk is small and it shades the ground less than other kinds, and of course admits of being planted much nearer together. A specimen of the ears has been deposited at the office of the Farmers' Cabinet, so that those who desire to see it may have an opportunity of inspecting it, and thereby prevent their being deceived; as much of the small eight rowed yellow northern corn, which also ripens early but not so soon as the Dutton, has been sold some years past for the real invaluable "Dutton corn." This in some instances has produced much disappointment and loss, but perhaps the venders of it, have themselves been deceived and no fraud intended.

Isaac Roberts, near Springmill, in Montgomery county, raised an acre and a half of it last year, which produced about seventy-five bushels without a soft ear. It was cut off the first week in September, and the ground ploughed and sowed with winter grain.

The rats and mice which are admitted to be good judges of the qualities of grain, have displayed a very decided preference for the Dutton corn, where that and the common kind have been equally accessible to them.

A. B.

To the Editor of the Farmers' Cabinet.

Thatching.

I have received two interesting communications in answer to my inquiries—one of them is so emphatically addressed to me for my private information, that it is not proper to give the *name* of the writer—which if not objected to, it is always better to give for obvious reasons. Mr. Gardner comes at once to the point on the score of *expense*, and proves that a thatched roof is cheaper by the cost of the shingles, where a grass, such as that mentioned as growing on Doctor Tongue's marshes, which nature seems to have made for the purpose, may be had for nothing; and is burned off in the spring, "any-how."

York, Penn., Feb, 5, 1838.

J. S. Skinner, Esq.

Sir:—In the Farmers' Cabinet of the 15th January, 1838, I saw your communica-

tion on the subject of "Thatching." If it be at all acceptable, I can only give you some practical information, on the subject of your enquiry. A thousand bundles of rye straw is worth sixty dollars; supposing the straw to be of a good quality, it would produce six thousand thatches, which would make as much roof as an equal number of shingles, that would cost nine dollars a thousand. The straw would cost - - - - - $60.00.

The Shingles, (Pine.) - 54.00.

$ 6.00

There would be a balance of six dollars in favor of the shingles. A well made thatched roof will last from twenty to twenty-five years. I have known thatched roofs to last thirty years and turn the rain.

A farmer, or tobacco planter, who has the straw and need not purchase it, would probably have nearly as good and certainly a cheaper roof than by purchasing pine shingles, rails, &c.

Respectfully yours,

John Gardner.

Centre Square, Pa., 1st mo. 30th, 1838.

To J. S. Skinner:

I observe in the last "Cabinet," over the above signature, an article on the subject of "Thatching," with a number of queries which I feel a willingness to endeavor to answer in a private way according to the best of my knowledge on that subject, having been acquainted with it from my youth up to this time, say fifty years. "In what part of Pennsylvania is it most used or best understood?" I am unable to say; but in the neighborhood, or part of the country I have lived, it is more or less practised by most farmers, generally for the covering of barracks, hog-pens and hen-roosts. Rye straw is the article altogether used for that purpose, and the best of any thing we have. If the straw is good, bright and well put on, it will cast rain fifteen years, and with a little repairing will often last several years longer. With regard to a comparison between that and other kinds of roofing as to cost, it would be difficult to decide with any degree of accuracy, as the different articles mentioned in the communication, vary so much in price in different parts of the country; but I think I can put the thing in a way so that thee can calculate it near enough for the neighborhood of Baltimore. For instance, fifty good bundles of straw, say two bundles to twelve sheaves of rye, will cover from sixteen to twenty square yards according to the thickness it is put on. I do not think it the better for being too thick. With regard to thatching houses with straw, wherein there is stove wood fires used, I have no faith in that practice, though I never have seen it tried, but we may easily form an idea what would become of it, if the chimney should happen to get on fire and burn out. I am not aware that I can describe the process so as to be understood either by "a printed description or a diagram," although the process is so very simple, that I think I could teach any man of common understanding the whole mystery in less than ten minutes, if I had him here, though it is like many other things "*practice makes perfect.*" But I have no doubt that any handy man after a few days practice, would be able to put on from 30 to 40 square yards of straw roof in a day, on being well attended with the material in good order. The wages much the same as for other common work. "Could a man be had in Pennsylvania, to come into Maryland to thatch Tobacco houses!" I think such a man could be had, but would suggest that it would be more profitable to the proprietor to send a man here, and we would soon teach him the whole art for nothing, and then he might go back and set up for himself. The frame work is much the same as for shingling.—Rafters may be about 3½ feet distant. Lath further apart, say 15 to 18 inches, according to length of straw or other material used, and two inches wide by one in thickness, and if there was a false lath tacked half way between the better, to keep up the butts of the straw, as when one course is put on the butts will hardly reach to the next lath above; something like a split hoop-pole would answer very well, but secure all the straw to the first mentioned lath. I will however proceed and try to describe the process of *thatching*. In the first place when the frame work is prepared, the operator may set himself on the lower lath at the eaves, having the straw well shook so as to dispense with all the shorter particles, and tied up in small bunches of about the size both hands will enclose, secured with about half a dozen straws round the middle and then handed to the operator, who will place it on the lath so as to tie about twelve inches from the butt tucked with a small band, say ¾ of an inch diameter after being twisted, but not under as in binding a sheaf, still drawing a small parcel out of the above hand-full or last hand-full put on, either up or down; but not drawing it entirely from under the few straws or band that secures it to the lath, and then twist that last drawn so as to fasten in with the ends of the first band, and when well twisted together, bring it over the second hand-full and under the lath, giving the hand-full a pound with the other fist while drawing in order to settle and flatten it, and so on till the first course is done, which will be all

fastened on with one continued band, by splicing it at every hand-full as mentioned; the operator still moving backward all the time. He must proceed with the second course, going back to the same end of the building where he first began; he there begins in the same manner, only turning the straw the other end up, which will cover the first course entirely down to the eaves, and so continue with butts up in every course after the first to the top of the building. When both sides are done in this manner, secure the comb by laying a course of straw along and a light pole on each side to keep it there, or any other mode that may suggest.

The straw should be all dampened unless the weather is damp and cloudy. I see no reason why the grass mentioned in thy communication should not answer as well as rye straw after being thoroughly cured. Ice houses are almost entirely covered with straw in our country, on account of the rays of the sun not heating straw as much as a wooden roof. Having thrown these hints together in haste for thy own private use, I conclude with respect.

To the Editor of the Farmers' Cabinet.

Mr. Editor.—Whilst I appreciate your Cabinet as the vehicle of valuable information for farmers, I cannot but fear it has a tendency to mislead some in their estimates of the profits of agriculture generally. There are, undoubtedly, some choice spots of ground, very productive, and profitable to their owners; of which, we do not fail being told, through the medium of agricultural publications, and, in some instances, the accounts are greatly exaggerated. There are very many farmers in Chester county, which, by the by, is one of the most fertile in our state, who barely receive reasonable remuneration for their labor,—who, if they would give us a correct detail of their farming operations, would present quite a different picture when contrasted with those before mentioned.

The profits of agriculture will be found to be very moderate, if the estimate be made for five or ten years together.

STALL FEEDING CATTLE.

In a former number of the Cabinet I gave a hint that I might give some account of stall-feeding cattle; I shall only make a statement of facts, as they occurred with me, and shall be obliged to any more experienced feeder, if he will show me, wherein I could have done better (with the single exception of having sold my cattle off the grass, which in that instance, I think, would have been the more profitable.)

I ascertained that two yokes of oxen would sell for two hundred dollars, if sold off the grass; this I considered a fair price, but, being disposed to stall-feed for more profit, I had them put in the stalls about the first of November, 1836, and sold them about the middle of February, following, when beef was selling "high" in market. I sold them at 9 cents per lb. with the allowance of 60 lbs. to the 100, for beef—which is about the same as 5 1-3 cts., on the live weight—my account is as follows:

Dr.

4 Cattle worth - -	$200 00
5 1-2 Tons of hay at 12 00 -	66 00
102 Bus. of corn at 90 -	91 80
28 " of oats at 45 -	12 60
	370 40
Interest on the above, for 3 1-2 mos.	6 24
	$376 64

Cr.

4 Cattle sold for - - -	$300 00
Manure, exclusive of the littering	15 00
	315 00
Loss - - - - - -	61 64
	$376 64

The grain was measured carefully—the hay was estimated by taking portions out of the racks, at different times, and weighing them. Upon an average, they had, each 28 lbs. per day. I have no doubt of its being pretty nearly correct; therefore, it appears that I have lost nearly the amount of the hay by stall-feeding the cattle; which verified the truth of the saying, "you need not expect to get any thing for your hay."

Beef is now lower in price than it was this time last year, and grain could have been sold since harvest at the high prices—What will the profits be this winter! Farmers, keep good accounts, and let us hear through the medium of the Cabinet.

I should be very happy in communicating any knowledge that I possess, relative to farming or stock, were I persuaded, that in so doing, I would confer any thing useful on the farming community—but, unfortunately, many of us are quite deficient in that kind of knowledge which would tend to profit, did we but possess it. In this as in other things, let us "go ahead." Intelligence is as useful, and, very probably, as powerful as money.

Patent scales are being erected in different parts of our country; these will afford to farmers, the means of ascertaining the weight of their cattle when fatted—much is lost to the unskilful farmer by the erroneous estimate of the weight of his cattle, sometimes

owing to the bad judgment, but more generally, the duplicity, of the broker with whom he deals. Very superior cattle, weighing alive over 2000lbs. may probably, neat 70lbs. to the 100; but such cattle as are more commonly sold, of which many are oxen, weighing from 1200 to 2000lbs. alive, from the best information I have, I would say, 60 lbs. to the 100 is a pretty fair allowance; if not altogether as fat as they should be, perhaps, they would lose nearly one-half. I have not tried hogs very extensively, but found six shotes, eight months old, to weigh, alive 1285lbs. with ordinary treatment; when killed and dressed, they weighed about 1000 lbs. losing rather more than one-fifth—one weighing alive 165lbs.—weighed 130lbs. when dressed. There may be some profit with hogs, provided you can have the pigs early in the spring, and market them early in the ensuing fall, but, I have doubts of their being profitable when kept over winter, excepting for breeders. Hogs of 18 months, rarely weigh over 350lbs., with the ordinary treatment—and I cannot persuade myself to believe that "3 1-2 lbs. of corn meal, made into mush, will make a pound of pork."

I have found it better to sell pork at the usual killing time, than to salt it, and sell it in bacon—it loses considerably in the drying.

I had two hogs set apart and weighed, after they were killed and dressed—they weighed jointly 659lbs.—After salting and drying in the usual manner, they made as follows:

Hams - - -	127 lbs.
Shoulder - -	116
Flitch - - -	95
Chines - -	45
Jowl - - -	28
Total	411

2 Shoulders before salting 64lbs., when dried 57lbs.; 1 ham, 35lbs. when dried 31½lbs.

In the valuable table, published in No. 20 of the Cabinet, I have discovered some typographical errors, in the most interesting part—those who have it can correct them with their pencil as follows:

Erase the number 3872 opposite, 4 ft. 6 in. by 2ft., draw a line connecting the aforesaid 2ft., with the next number to that erased, which is 4340—and so continue downwards, until you shall have drawn ten lines, connecting, lastly, 2ft. 6in., with the number 4356; then erase the 2ft. 3in. opposite to it, and the correction will then be completed.

Respectfully yours,

J. J. M.

Chester county, Feb. 11, 1838.

For the Farmers' Cabinet.

Farmers often state that the grain fed to cattle or hogs would have sold for more than the animals have brought after they were fattened: when this happens after a fair estimate, taking all the proper elements into calculation it is bad economy; but it is apprehended that, on a fair experiment, it seldom occurs unless it be occasioned by his own fault in buying too dear, selling too cheap, or mismanagement in feeding at too great an expense.

As regards the rate of purchase or sale under ordinary circumstances, where proper knowledge of the subject is possessed, it is presumed, that in the course of a series of years the supply and demand regulates it, as it regulates all other matters of trade, so as to bring the price to a fair medium, giving to each party engaged in the business of buying or selling a fair remuneration for his outlay of capital, risk, expense and labor. If this was not the case, the particular branch of business on which a loss always took place would be abandoned by every body, and would cease to be carried on till it would produce a fair return of profit. But it is apprehended, that the complaint, if it be a just one, has its origin more in the extravagance, and waste arising out of the mode of feeding, than from any other cause. The general practice is, to feed with whole grain, in its raw state, notwithstanding numerous experiments have been made in most civilized countries clearly demonstrating, that by this course of proceeding, about one half of it is lost, and the animal is not kept in as thriving a condition as he would have been, if it were steamed or boiled. Two years ago a very accurate experiment was made by a farmer in Maryland, in feeding a number of hogs of the same litter on whole shelled corn, and on mush made of corn meal. The hogs were carefully weighed at the commencement and termination of the experiment, and it was ascertained, that those fed on mush, gained more than those fed with the raw whole corn, although, the meal from which it was made, weighed only one half as much as the corn, on which the others were fed. This is an important affair truly—more meat made with half the grain. Now, if those who feed on whole grain could afford to sell their pork at seven cents a pound, that fed on cooked food could be sold at four cents or less, and nett the same profit. If the saving, by the general adoption of this well known and simple process in Pennsylvania, should be only one cent per pound, it would make an aggregate saving on the pork raised in the state of more than one million of dollars per annum. An annuity of a million of dollars a year for twenty five years, would amount to a sum

that would enable us to make a complete garden of our good Commonwealth, and intersect it in every direction with rail roads and canals, and build school houses within blowing distance of every farmer's mansion in the state. The experiment above referred to was published at the time in several agricultural journals so as to give it publicity, but farmers have generally gone on in the old way of feeding notwithstanding.* Another experiment was made and published in 1821, to show the economy of feeding a horse with ground oats, instead of giving the grain whole as is usual; it resulted in proving the fact that one half the quantity crushed kept a horse in better order, he undergoing the same labor during the trial.

No person brought up on a farm can have failed to have remarked that, when cattle were fed on whole grain, a considerable portion of it escaped being digested, and was ejected without having parted with any of its nutritious qualities, and this crude undigested matter passing the whole line of the alimentary canal, must certainly have been productive of discomfort to the animal, independent of doing no good during its long journey. The sugar beet which some of our most intelligent farmers are beginning to cultivate, and which produces from 1000 to 2000 bushels (each weighing 60lbs.) to the acre, has been found to be a very important and cheap auxiliary in feeding all descriptions of animals. A farmer in Delaware county raised 3000 bushels the past season, which he has been feeding to his stock this winter with great advantage; and it is to be hoped the coming season that many will avail themselves of this very nutricious and valuable vegetable for the use of their cattle next winter. The feeding with roots cannot be too highly prized. In England and Scotland, no farmer pretends to carry his stock through the winter without the extensive use of roots of some kind, and it is a very remarkable fact, that in Great Britain, no disease under the name of Hollow Horn is known, which some ascribe to the universal practice of feeding cattle with a portion of succulent food daily during the winter season.

AGRICOLA.

For the Farmers Cabinet.

Marl, &c.

It is said that in passing through Virginia, you can tell from the appearance of the farms, who takes the "Farmers' Register," such has been the effect of that valuable agricultural journal in that state. Now you must not consider me as using an empty compliment, if, I state that it is thought, it will not be long, before the same remark may justly be made in respect to your own journal, "the Farmers Cabinet," in Pennsylvania and New Jersey; for I find that the best and most intelligent farmers, in the parts of those two states, where I am pretty extensively acquainted, not only take your Cabinet, but esteem it a most valuable acquisition in their families. Some have stated that frequently a single number is worth more than a whole years subscription I therefore, hope you will persevere in your good work of sowing the seeds of agricultural knowledge broad-cast through the land, and I trust that both you and they will receive their reward in due season. Now I want some of your intelligent Jersey subscribers to furnish for the Cabinet an account of their marl; the quantity per acre, that is found the most useful, and its effects, on grass, corn, potatoes or grain; the cost of the article on tide water where vessels can take it in, and what places or creeks it can be delivered at cheapest; also how far it will bear hauling by land—also the best mode of applying it to the soil, and in fact all, and every information which may be useful to a person who may desire to apply it; and if practicable to furnish it, I should be pleased to learn the theory of its operations in promoting vegetation. The above information, if satisfactory, and it should suit the soil in Pennsylvania, may lead to a profitable and extensive traffic between the two states. Pennsylvania can furnish lime in exchange for marl, and, perhaps both states be benefitted.

We begin to think that the Jersey marl is pushing that state ahead of us, and we are desirous of not being left too far in the rear of our industrious neighbors, if we can help it by fair competition. It has long been remarked, that the Jersey farmers, who attend the market excel us on this side of the river, in the neatness and care with which their marketing is got up. Their dressing of veal, lamb, &c. excels that of our best professional butchers, and there is exhibited in all their articles offered for sale, a tact in the getting up, that is unrivalled in our market. But this is not all; they get from 10 to 25 per cent more, for the same description of articles, and of no superior original quality, than is generally got by our Pennsylvania farmers, a very few instances excepted, and the education or paternity of some of these excepted cases can readily be traced across the Delaware. Now, if these are facts, and I believe many witnesses could be brought to testify to them; it would be very desirable to be informed, why this disparity has been brought into existence, and also the best and most speedy remedy for bringing us up to an equality at least, with our very respectable and thrifty neighbors over the water. It is a

* See Farmers' Cabinet, vol. I. page 153.

a well known fact, that the citizens of Philadelphia are always willing to pay a higher price for articles, that are well and neatly got up, and exhibited in a clean and tidy manner, without the appearance of blood, dirt, or dirty cloths; and it is said that it helps the price, and procures a more ready sale, if the vendor is clean shaved, and has no segar in his mouth. It is even said, that some fastidious people have adopted it as a rule for themselves, not to purchase any article of a person who smokes in market; perhaps, this is carrying it too far, but every one must be indulged in his notions in these matters. Now, Mr. Editor, if you do not think the above worth printing, just put it in the fire, and say nothing about it; but if you will ask the foregoing questions, you will oblige an indifferent

FARMER.

Feb. 22, 1838.

From the Yankee Farmer.

Profits of Gardening.

Mr. COLE:—Last year, I purchased at your office the following seeds, one paper of each, at 6 1-4 cents per paper, amounting to 37 1-2 cents which yields as follows:

Ruta Baga,	30 bush., at 25 cts.		$7 50
T. R. Cabbage,	30 do.	31 1-4	9 37½
Sugar Beet,	8 do.	75	6 00
Onion,	5 do.	1 00	5 00
Carrot,	7 do.	33	2 31
Parsnep,	6 do.	50	3 00
			$33 18½
Cost of raising, and seed.			5 37½
Profit,			$27 81

Probably I should have had double the amount had I put the seed on more ground, as the vegetables grew very large, some of the ruta bagas weighed from 8 to 10 pounds apiece—the turnep rooted cabbages below ground 12lbs., and some of the sugar beets over 6lbs. I mention this small instance of the great profit of gardening to show what farmers and gardeners may do, and the importance of sowing and planting good seed.

A YOUNG FARMER.

ECONOMICAL FOOD FOR HORSES.

Nine pounds of bread, made of oatmeal and bean flour, will afford more nourishment to horses than a bushel of oats of good quality. A French farmer in Hainault feeds his horses during the winter with a mixture of boiled potatoes and chopped straw, giving each horse daily, at two feeds, about fourteen pounds of potatoes, which food agrees with the horses, and is much relished by them.

The Sugar Beet..

As many of our farmers are directing their attention to the cultivation of the beet root, principally for the use of stock, we have thought that a few remarks on its cultivation, gleaned from sources entitled to confidence, would be acceptable to the readers of the Cabinet. CHAPTAL, authorized by 10 or 12 successive years of experiments and observations upon the culture of the beet-root, advises the "sowing of the seed in the latter part of April or the beginning of May, when there is no longer any danger of the return of frost, I have sown it with good success about the middle of the month of June." In this latitude the middle of April would probably answer very well, allowance, however, should be made for the state of the weather. It does not answer well to sow "immediately after the cessation of frosts as the ground being cold and wet the seed does not germinate immediately, and the soil becoming hardened by the violence of the rains, does not admit the air to penetrate, so that if the seed do not decay, the beets come up badly." The most favorable period for sowing is that when the earth, although heated by the rays of the sun, still contains sufficient moisture to produce germination and to facilitate the growth of the young plant; the month of April and the early part of May generally unite these advantages.

CHOICE OF SEED.

"A good agriculturist should always raise his own seeds; for this purpose he will plant his beet-roots in the spring, in a good soil, and gather the seed in September, as fast as it ripens, selecting only the best, and leaving upon the stalks such as are not thoroughly ripe; each beet-root will furnish from five to ten ounces of seeds. When no care is taken in selecting the seeds, and they are sown indiscriminately, not only are many of the beets small, and ill-grown, but half of the seeds sown do not yield any thing." The seeds should be fresh, not exceeding two years old, and the utmost care should be taken that they are of the true kind.

CHOICE OF SOILS.

Distinction in the choice of soils for the culture of this root is exceedingly important. Its nature is to penetrate low into the ground, and, therefore, prefers a deep loose mould in which it can vegetate without obstacle. Its radicles easily collect the nourishment necessary for its support, and it thrives luxuriantly.* All grain lands are more or less

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*Notice of the Sugar Beet, page 20.

adapted to the cultivation of beets, but the best soils for the purpose are those that have the greatest depth of vegetable mould. They may be cultivated with good success upon natural or artificial grass lands, but they come up badly when sown in the spring upon such lands as are are broken up in the preceding autumn, the turf and roots do not in so short a time become sufficiently decomposed, and in order to have good beet-roots it is necessary to raise a crop of oats between the time of breaking up a meadow and sowing it with beet-seed, after this two successive crops of the finest beets may be grown. Dry, calcareous and light soils are but little suited to the culture of this root, nor will it flourish well in strong clayey soils.*

SITUATION OF THE GROUND.

The position of the ground employed for this culture is not a matter of indifference. In highland the beet succeeds but imperfectly in dry seasons, but it is then easily worked; the crops on these high grounds are abundant in wet seasons. In low marsh grounds the case is reversed, the crop is drowned, and the beet generally saturated with water, whilst in warm dry years the crops are excellent, because the heat and drought are counteracted by the fresh and moist sub-soil. To obtain average crops it is, therefore, prudent when it can be done, to choose a situation exposed to neither of these extremes.

PREPARATION OF THE SOIL.

Generally speaking I cultivate beets upon all such lands as are appropriated for sowing grain upon in the fall. The lands I prepare for receiving the seed by three good tillings, two of which are performed in the winter, and one in the spring, by this last ploughing the dung which is thrown upon the ground after the second is mixed with it, the quantity of manure employed is the same as if the ground was to be immediately sown with wheat.† The importance of thorough ploughing, harrowing, rolling, and all other means of improving soils is now pretty well understood. All plants do not require in the same degree these precautions, and those which require them *least* generally rank among *exhausting* plants, while those that can least dispense with them are considered *fertilizing*. The beet is of this latter description, and one of the leading advantages which it offers to agriculture is the necessity it creates not only for deep and thorough ploughings, but moreover the careful culture it requires, and the means necessary to gether it, must in the aggregate necessarily leave the soil in a highly improved state, and the benefits therefore to rural economy which an extensive culture of this plant must produce are incalculable.

SOWING BEET SEED.

CHAPTAL, always good authority, says that beet-seed may be sown in either of the three following methods. 1. In a seed-plot. 2, in drills. 3. broad-cast. The first of these, ways offers to the agriculturist the advantage of requiring much the least time at a season of the year when every moment is precious—the young plants may be transplanted the latter part of May or in the month of June before hay-harvest. The first and third method of sowing are objectionable. Chaptal employed the process of sowing broad-cast for several years, but abandoned it for sowing in drills, as being more sure and more economical. For this purpose, as soon as the ground is prepared I trace upon the surface, by means of a harrow armed with four teeth, distant about eighteen inches from each other, furrows of an inch in depth; the seed is dropped in these furrows at intervals of sixteen inches, by women or children who follow the harrow, and who cover the earth over the seeds with their hands. Each woman can plant in this manner, six or eight thousand seeds in a day,—page 319. Four pounds of seeds will be sufficient to plant an acre. But whatever mode may be followed it is necessary to observe the three following rules. 1. To sow only new and naturally fertile soils. 2. Not to place the seed at the depth of more than an inch. 3. Not to sow the seed too thick.

WEEDING AND OTHER LABOR NECESSARY TO THE CULTURE OF THE BEET.

Few plants require more care than beets, their development being greatly impeded by the neighborhood of other plants, and if the soil be not light and loose around them, they languish, turn yellow and cease to grow.—If the plants are sown in furrows, the plough or cultivator may be passed between the rows, and the roots of the plants be cleared with the weeding fork. The same operation must be repeated at least twice in a season. As weeding opens the earth to the free entrance of air and water, the plants may be seen to be benefitted by it; the green of their leaves deepens, their roots increase in size, and their foliage expands.—*Chaptal.*

It is well suited for feeding milch cows, being exceedingly nutritious, and causing them to give abundant milk, while it does not taint it with the bad flavor which turnips give.—*Low.*

Remarks on the gathering and preservation of the beet-root will be given hereafter.

* Chaptals Agricultural Chemistry, page 317.

† Ib. 318.

Cultivation of the Sugar Beet.

Mm. Kitchen, near New Hope, Pennsylvania, raised ruta baga and sugar-beet. He fed the former to his cows, but soon found a bitter taste was imparted to the milk and butter; he then commenced feeding on the sugar beet, and obtained not only an increased quantity of milk of superior richness, and consequently of butter, but the latter was considered equal to that made in summer. He has already secured seed for the next season, being convinced of the superiority of sugar-beet for the feeding of stock.

J. L., near Jenkentown, had three cows, two of which he fed on ship-stuff, the other he fed on the sugar-beet. The latter gave an increased quantity of milk of a rich cream color, and the butter was fully equal to that made in the summer season. J. L. has cultivated the sugar-beet two seasons, and has a high opinion of its nutritious qualities.

A gentleman, near Haddonfield, N. J. gave ruta baga and corn at the same time to his hogs; the corn was eaten in preference to the turnep; he then gave corn and sugar-beet, the latter was devoured with avidity, and the corn left untouched.

———, of Bucks county, while fattening a cow gave her the sugar-beet which she eat with greediness, and refused pumkins, until the stock of beets was exhausted.

Ezekiel Rhoades, near Norristown, has fed his cows on sugar-beet during the present winter, and he says the result was an increased proportion of milk and butter of very superior quality.

The above are a *few* facts of many in our possession, all tending to show that the sugar beet is worthy the attention of farmers. as an article of winter food for their stock.

For the Farmers' Cabinet.

Ross' Patent Threshing Machine.

This machine is constructed, so that the part usually denominated the *cylinder* in Threshing Machines, is made smaller in the middle than at the two ends, and instead of being a cylinder, it is in fact, formed by the unison of two truncated cones at their smaller ends. The difference of diameter between the middle and ends, may be about one inch; or instead of two truncated cones, this part may be made concave in a regular curve, reducing its diameter in the middle, so that it shall be three-fourths of an inch, or upwards, less there than at the two ends.

The effect of this arrangement, it has been experimentally proved, is to prevent that annoyance from the current of wind and dust, produced in other machines for threshing grain.

The power of one horse to drive the machine, will thresh in a day, from fifty to one hundred bushels of wheat or other grain.—Two horses will thresh from seventy-five to one hundred and fifty bushels in a day.—Three horses, from one to two hundred bushels in a day, and four horses from two to four hundred bushels in a day. This machine can be built for forty dollars.

My machine for *threshing clover*, can be built for forty dollars, and it will, with the power of one horse, thresh from one to two bushels per hour. Two horses from one to three bushels per hour. Three horses from one to four bushels per hour. Four horses from one to five bushels per hour.

My machine *for shelling corn*, will shell from one to three bushels per minute, price thirty-five dollars.

The corn sheller was patented in April, 1833, and the other two, in February, 1835.

Joseph Ross.
February 9th, 1838.

We are requested to state that Mr. Ross will dispose of single rights for the above named machines, township, county or state, on the most reasonable terms. Application may be made to him at Boundbrook, Somerset county, N. J. In the list of premiums awarded by the managers of the late fair of the American Institute, held in New York, we find the following:—To Joseph Ross, Boundbrook N. J., for the best Clover Threshing Machine and Corn Sheller, "a silver medal."

RAISING POTATOES.

A correspondent says:—I will barely state a fact, or rather an experiment in the agricultural line. I planted in my garden in 1836, one potatoe, from which I raised ninety-six potatoes. In 1837, I planted the ninety-six, and raised from them eighteen and a half bushels of as large and handsome potatoes as I ever saw. Thus in two years I raised from one potatoe eighteen and a half bushels. The only secret is, I cut out the eyes, and put one eye in the hill. I deem it important for farmers to know this, as there is a great saving in seed.—*Conn. Observer.*

Worth trying.—An experienced writer says that one bushel of flaxseed ground with eight bushels of oats, is better for horses than sixteen bushels of oats alone, and will effectually cure the bots. If this really be the case, the mixture would be much cheaper food for horses than oats by themselves, for one bushel of flax-seed, would not generally cost more than four bushels of oats, leaving a saving of 4 bushels in every 16. It is worth a trial.

Raising Poultry—Domestic Fowls.

The varieties of the common fowl are very numerous, and distinguished from one another by their size, color, and fecundity.

1. The game-fowl is a very singular creature on account of its habits. Size less than that of the common fowl, symmetry of its limbs greater, and the beauty of its plumage remarkable, when not mutilated for the barbarous sport for which it is destined. Its flesh is white, and esteemed beyond that of all the common kinds for its delicacy and flavor; but the singular pugnacity of disposition, which shows itself at the earliest period of life, deters all breeders rearing it except for the purpose of gaming. Whole broods, scarce feathered, become blind from continued fighting. They cannot be employed for crossing the common fowl.

2. The Dorking-fowls, so named from a town in Surrey, are the largest and finest of our domestic breed. Their color is wholly white, their body is capacious, and they are prolific layers of eggs. They are distinguished by having five claws on each foot.

3. Equal to the Dorking in estimation, are the Poland fowls. Their color is black, heads flat, and surmounted with a crown of feathers. They are a very useful variety, prolific of eggs, but less inclined to set, than those of any other breed.

4. The Bantum is a little Indian breed, very delicate to eat, but, from the smallness of its size, not of any economical importance.

5. The Chitogong or Malay fowl, is the largest variety of the species, but the flesh is regarded as inferior to those described.—When it is wished to form a breed of fowls, the breeding should be from a young stock. Hens are at their prime at three years old, and decline after the age of five. *The best period to commence breeding is in the spring*—Low. The number of hens to one male should be from four to six, the latter being the extreme number, with a view of making the utmost advantage, although ten and even twelve have been formerly allowed.

POULTRY HOUSES, YARD, &c.

The situation of the poultry house should be dry, and exposed either to the east or south-east, so as to enjoy the sun's ray's in winter as soon he rises above the horizon—Loudon. Where a *set* of houses are intended then, a situation should be fixed on, near or close to the farm yard, and with ample space around for the fowls to disperse over in the day time, and one or more ponds for the aquatic sorts. All must have access too gravelled yard and to grass for range, and have clear water near. Great attention should be paid to cleanliness and whitewashing, not for appearance but to destroy vermin—Arthur Young.

The following remarks are from Maubray's work on Poultry:—"A space thirty by fifty feet may be made choice of for the buildings and yards; the building may be ranged along the north side, and the three other sides enclosed with a trellis or slatted, or wire fence, from six to eight feet in height, and subdivided with similar fences, according to the number of apartments. The hen house (*a* fig. 37) and turkey house (*b*) may have the

Fig 37.

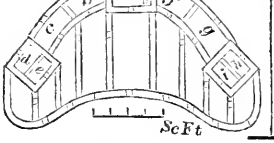
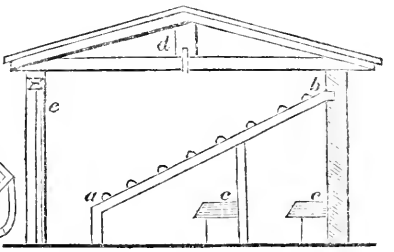


Fig. 38.



roosts (*c*, *c*) in part over the low houses for ducks (*d*) and geese, (*f*, *g*, *h*) and besides these there may be other apartments for hatching, or for newly hatched broods, for fattening, to serve as an hospital, or for retaining, boiling, and otherwise preparing food, killing poultry and other purposes. A flue may pass through the whole for moist or very severe weather; and the windows ought to have outward shutters, both for excluding excessive heat and excessive cold. In every apartment there ought to be a window opposite to the door, in order to create a thorough draft, when both are opened, and also a valve in the roof, to admit the escape of the hottest and lightest air. Every door ought to have a small opening at the bottom, for the admission of the fowls when the door is shut.—The elevation should be a simple style, and there may be a pigeonry over the centre building. The roost is sometimes a mere floor or loft, to which the birds fly up or ascend by a ladder; at other times it is nothing more than the coupling timbers of the roof,

or a series of cross battens or rods, rising in gradation from the floor to the roof. The battens should be placed at such a distance horizontally as that the birds, when roosting, may not incommodate each other by their droppings. For this purpose they should be a foot apart for hens, and eighteen inches apart for turkies. The slope of the roost may be about 45°, and the lower part should lift up by hinges in order to permit a person to remove the dung. No flying is requisite in case of such a roost, as the birds ascend and descend by steps, see figure 39, in which (*a*, *b*) are spars for the poultry to sit on (*c*, *c*) ranges of boxes for nests, (*d*) the roof, (*e*) the door which should be nearly as high as the ceiling, for ventilation, and should have a small opening with a shutter at bottom, to permit the poultry to go in and out at pleasure. The spars on which the clawed birds are to roost, should not be round and smooth but roundish and roughish like the branch of the tree."—Maubray.

To the Editor of the Farmers' Cabinet.

Soiling of Cattle.

The following is taken from "the Diary of an Invalid," a late traveler in Switzerland and may serve to show something of the manner of managing cattle in that country, where industry and thrift are the order of the day. If you think it worth publishing it is at your service. X.

"In the neighborhood of Lausanne, there is a large grazing farm, where no less than a hundred cows are kept in the confinement of the stall during the whole year. The advantage of this mode, in a farming point of view, seem to be considerable. The grass which supplies them with food during the summer, instead of being wastefully trodden under foot, and daintly picked, is regularly and fairly cut—fat and lean together—and is thus made to go much farther; while the vast quantity of *manure* which is accumulated from so large a stock, is sufficient to support the pastures, under the constant exhaustion of the scythe.

The Swiss are very attentive to the dressing of their pastures, and to the preservation of the means of doing so; particularly to the *urinary* part of the manure, by far the richest and most valuable, of which they collect and treasure up every drop with scrupulous care.

The animals on the other hand give more milk than if they were at liberty, and are in much better condition, in the grazier's sense of the word; that is, they are always ready for the butcher. The only objections to this mode, arise out of considerations for the happiness of the animals themselves, to whom we are disposed to attribute human feelings and sentiments, and to imagine that they derive the same pleasure from browsing freely in the sunshine of the meadow, or reposing in the protecting shade of the woodland, surrounded by the beauties of nature, which we should ourselves feel, if similarly situated.

But it may, I think, be fairly concluded that animals, though they may seem to participate with man, to a certain extent in the faculty of reason, are utterly insensible to all the pleasures of taste and imagination. The beautiful has no charms for the brute creation; and even in the passion of sexual desire, where, if any where, it might be supposed to have some influence; we do not perceive that youth, beauty, and cleanliness, make a more forcible appeal to their feelings, than age, dirt, and deformity. And it may be doubted, whether, the tranquility and protection from flies during summer, afforded by the stall, be not sources of greater gratification to these animals, with whom—

"To live well, means nothing but to eat."

than any which they could find in the enjoyment of liberty, or the contemplation of the landscape."

On Deep and Frequent Ploughing.

The late Mr. Pickering, in an address before the Essex County Agricultural Society, says—"I entertain no doubt of the utility of deep ploughing; not at once, in our lands in general, but by an increase of 2 or 3 inches every annual ploughing, until the earth be stirred and pulverized to the depth of ten or twelve inches. Indian corn planted in such a mass of loosened earth, would not, I am persuaded, ever suffer by ordinary droughts. Like a sponge it would absorb a vast quantity of rain water, and become a reservoir to supply the want of that and of all other plants. Nothing is more common in a dry summer, than the rolling of the leaves of corn; and that circumstance is often mentioned as an evidence of the severity of the drought. This rolling of the leaves of Indian corn, is the consequence, in part, of scant manuring, but still more of shallow ploughing. Few, perhaps, are aware of the depth to which the roots of plants will penetrate in a deeply loosened earth. A gentleman much inclined to agricultural inquiries and observations, informed me nearly fifty years ago, that seeing some men digging a well in a hollow place, planted in Indian corn then at full growth, he stopped to examine how far its roots had descended, and he traced them to the depth of nine feet. The soil was an accumulation

of earth, which had run or been thrown down into the hollow.

The seeds of a common turnep sown in warm weather; and on a soil sufficiently moist, I have known to vegetate in about 48 hours; and in only four or five days afterwards, I found the plants had sent roots to the depth of four or five inches.

For the Farmers' Cabinet.

Ashes.

Of all things to make grass grow ashes beats; this you may depend upon, for I have tried it often, and it has never failed yet; just collect as much of it together as you can, the more the better, and spread it over your grass grounds, and see if I am not correct in my assertion. It is said by some people that it is the potash which is in it, that produces the effect and I strongly suspect they are right in this matter; for two years ago suspecting that to be the case, I procured some potash from an apothecary, which cost about five cents a pound, and dissolved it in water, and put it over the grass ground with a watering-pot, just for an experiment, and you would have been surprised to see how luxuriantly the grass grew where it was put. Now, I should like some of the intelligent farmers who take your paper to try an experiment with potash this spring, and inform your readers of the result through the Cabinet. Some say it is excellent for Indian corn; this might also be tried. My object is to make plenty of grass grow, for I find if we can do that, we then can accomplish every thing we can desire in agriculture, because with that, we can feed stock, and by that means make manure, and with plenty of manure, what cannot be done by industrious and intelligent farmers: I say industrious and intelligent, because without these two qualities, a man had better quit farming at once, and try to find out some business soon, that can be carried on to profit without those indispensable qualifications to a farmer; and when the discovery is made I hope it will be communicated through your paper, for I should like to embark in such a business as I am well adapted to it by nature.

MONTGOMERY.

N. B. A person has just informed me, that a plan of farming without industry has been on trial for many years in some part of North Carolina, but notwithstanding, they have exerted all their ingenuity on it they have not yet succeeded in their attempt. He says that when he returns there, if there should be any thing encouraging in the prospect, he will forward you a letter on the subject, as it is a matter of much interest to many farmers.

Leached or Slacked Ashes for as a Manure

Whilst nearly all who have tried ashes as a manure, bear testimony, in the strongest terms, to their superior efficiency as an improver of the soil; still we occasionally hear the question mooted, whether they possess any virtue as a manure! This is the more to be regretted, as even experience, itself, would seem to have but little, if any influence in settling a question of the deepest importance to every agriculturist living near any of our large cities, or on navigable water leading to them. To our mind, leached ashes will bear hauling by land several miles, and that, even when the first cost is added to that of transportation, they will be found to be a cheap manure. When they can be transported by water communication, in quantities, and at less cost, they are the more valuable; and, therefore, those who may reside on navigable rivers, convenient for their procurement and delivery, should make it a point of duty to themselves, and their country, to obtain them, as there can be no doubt that in addition to their efficacy in promptly restoring exhausted soils to a state of desirable fertility, they are, next to lime, among the most lasting manures ever applied to the earth. Among their other good qualities, they are equally beneficial when applied to *clays*, as to *sands*, and *sandy loams*—disintegrating the tenacious particles of the first, thus rendering them friable and easy of being worked; and imparting body and consistency to the two latter, so as to give to them a greatly increased capacity for retaining manures. To cold clays, they are particularly adapted by their warming qualities, infusing, as they do, an active and highly beneficial principle into bodies, which, otherwise, might have remained inert, if not noxious to healthful vegetation.

As a top dressing to meadows, when applied at proper seasons, and in proper quantities, they are found productive of the happiest effects.

Applied to *corn*, *wheat*, *rye*, *oats*, *buckwheat*, *turneps*, *potatoes*; indeed, to almost the entire vegetable family, they are eminently useful. For *turneps* and *corn*, we know of no manure that can compare with them in the degree of benefits resulting. On *corn* they have been known, even when applied in minute quantities to the hills say, a gill to each, to produce the most wonderful effects.

Having spoken of the proper seasons of application, and *proper quantities*, it may not be inopportune to remark, that on meadows they should be spread in early fall, winter or spring, when the ground is dry and firm, and when there be no danger of poaching—to all grain crops they should be applied to the sur-

face and harrowed in at the time of seeding: the *proper quantity*, we conceive to be, on *clays*, 200 bushels: on *sands* and *loams*, from 100 to 150 bushels to the acre.

Wood Ashes, we have seen it stated consists principally of potash or vegetable alkali, united with carbonic acid,* and that these substances have been proved by analysis, to exist in most plants. Now, if these be the principal ingredients in the composition of ashes, as they are known to be promotive of the vigorous growth of plants, may not ashes, besides possessing the mechanical qualities we have before ascribed to them—of decreasing the tenacity and warming clays—and of giving tenacity to sands and loams—We say, may they not, also, contain, to a considerable extent, the principle of nutrition! We incline to this belief; and we think we are borne out in our opinion by the fact, of the astonishing difference in *product* they are known to effect, even when used in small quantities. The mere disintegration, or the division of the particles in the one soil, or the conferring *substance* upon the other, could not, if they possessed no other than stimulative powers, impart such lasting vigor, and give such productive capacity to plants, as are invariably witnessed. For *stimulation* without *nourishment*, good and wholesome nourishment, would, by mere force of its own action, bring about repletion, and consequently, premature decay and dissolution. Is vegetable *alkali*, combined with carbonic acid and potash, essential to the growth of plants? Certainly, or we would not, by analysis, be able to find them forming the component parts of *healthy* plants. We admit, that the lacteals of the roots even of *healthy* plants, might take up these substances in their liquid or gaseous forms; but then, if they did not contain congenial *food*, but were merely *stimulative*, the very *excess* of the latter, would produce death in plants, as do alcoholic stimulants in the human subject.—*Farmer and Gardener.*

* Gypsum has also been detected in ashes.

MANGE IN HOGS.

A correspondent of the Southern Planter says:—"During my travels through the State, especially towns and villages, I see a vast number of swine dying with what is called the *mange*, while many others are on the eve of expiring. This disease is very easily cured, if persons would only take the trouble of pulverizing sulphur, and giving each hog affected, one table spoonful in a little corn meal dough, twice a week for two weeks, they will shed the scurf and become perfectly clean. The sulphur at the same time destroys lice and fleas on the swine."

Indian Wheat.

This is the name applied to a grain, which recently has been brought into notice by its extraordinary productiveness, and of which as inquiries are constantly made of us, we propose to give what information we possess.

The plant refered to is, without question, the Tartarian Buck-wheat; or as it is called by others, the Siberian Buck-wheat. It belongs to the tribe of the *Polygonum* from its many sides; and its name Buck-wheat is supposed to be a corruption of Beech-wheat from the resemblance of its seeds to the Beech Mast. The cultivation of this particular kind of Buck-wheat is not new in this country nor in this state. The recent excitement in regard to it seems to have been accidental; its value perhaps being more particularly brought into view by the failure of common Wheat through the grain worm and by rust; and the loss of the Indian Corn by the inclemency of the seasons. This particular kind has been several years cultivated in Pennsylvania; and a beautiful sample of it was brought to us from the northwestern parts of that state three years since; but without any name by which to designate it, or any account of its cultivation or its yield. It has been likewise for several years cultivated successfully in Hampshire County in this State. It was said to have been introduced into Germany a century ago; and within a few years has been cultivated in Great Britain. It is supposed to possess considerable advantages over the kind that has been usually cultivated, not only because it is considerably heavier in the grain, but is generally considered more palatable. It is said to do well even in the poorest soils; is not affected by cold; and being more disposed to branch out and spread its stalks, requires not so much seed for its cultivation as the common kind of buck-wheat. Some persons, who have cultivated it demur to the fact of its being more productive; and complain of its flour as being blackish and rather bitter. These differences can only be reconciled by supposing differences in the modes of cultivation; in the nature of the soils, upon which it grows; in the kind of manure employed; in the manner of its being cured; and in the manufacture of the bread itself.

With a view to give the best information we have been able to obtain of its cultivation and history here, we subjoin some extracts from letters received in answer to our inquiries.

"Of its origin, says one of our correspondents, I know nothing; but report says some years since a traveller fed his horse at a public house, in a town a few miles north of us

(Hartland, Vt.,) and that after he left, a few grains were found in the trough in some respects resembling buck-wheat; and that these being sown, produced the grain now known by the name of Indian Wheat. It produced 30 or 40 bushels to the acre on ordinary land, such as will not bear a good crop of any other grain; and sometimes yields 75 to 100 bushels to the acre."

"Our farmers differ much as to the quantity of seed that should be sown. Some put on a bushel, some not more than eight quarts. I should say from 16 to 25 quarts. It may be sown any time till July. It requires from two to three months to come to maturity; if sown too early it will be in danger from late frosts. About the middle of June is the usual time of sowing here."

"The land should not be too rich. On common land without manure it succeeds well. Poor sandy land that is not worth cultivating in any other grain produces a fair crop. The ground should be prepared as for rye or oats. If the land be poor, it should be left as smooth as possible that the grain may be cradled low; as it generally branches out near the ground, especially when sowed thinly or on poor land. The average weight is 48 to 50lbs. per bushel. It is used for various kinds of bread stuff; also for feeding hogs, horses, cows, &c. When floured as it should be, it makes good bread if eaten when new, whether warm or cold. It will mix well with rye and Indian meal for coarse bread.—It is thought by some to be equal to corn for fattening hogs, bushel for bushel; but I think this is a mistake. I have known no experiments to test its value. It is fed to horses by some persons, but probably oats by weight are preferable. On the whole I think it a very valuable kind of grain, especially in places where the land is naturally poor or has become exhausted by long continued cultivation."

We have another letter before us, which states; "I suppose the right name of this grain to be Indian-wheat. It has been cultivated a number of years in Vermont, and in some parts of New York; but where it originally came from, I cannot tell. I broke up last year about 2 1-8 acres of a piece of pasture land; sowed one bushel and two quarts, and obtained one hundred bushels, which was the greatest yield I have heard of. It has been raised on almost all kinds of land. I sowed it last year on the 10th of June. I think it should be gathered when three fourths of the grain are ripe. It will produce from twenty to twenty-five pounds of flour per bushel. It is used as an article of food considerably in these times of scarcity, and is much used for fattening swine."

Such are the accounts we have received of the cultivation of this article of produce, which is comparatively new among us. We have been informed on authority on which we rely that it has this year yielded seventy-five bushels to the acre; but the circumstances under which this product has been obtained, have not come to our knowledge. It would be wrong to calculate upon any such amount as usual or probable. That which we have tested weighed 49lbs. to the bushel. A farmer with whom we are acquainted, who has used it in his family, has obtained 35lbs. of flour to a bushel of grain. A grain weighing this much, and yielding in a poor soil, without manure, even 25 or 30 bushels to the acre, must be pronounced a valuable acquisition. It is advised by some farmers to use it for horses; but one writer says, he has known it to produce a stupefying effect.—Young says, a bushel goes farther than two bushels of oats. In fattening swine it is said that eight bushels of buck-wheat will go as far as twelve bushels of barley-meal. We give these statements entirely upon the authority of others, having had very partial experience in the use of it for feeding. Buck-wheat cakes, which are almost a standing dish in Pennsylvania and Maryland, when well made, and eaten warm, are much esteemed by most people; are deemed nutritious; and have the advantage of not turning acid upon the stomach.

The plant is cultivated in many places extensively for its advantages in feeding Bees; its blossoms containing a large quantity of honey and remaining a long time open, different plants in the same field, and different parts of the same plant opening in flower at different times. One writer says "the *haulm* of buck-wheat is more valuable than clover if cut while in flower." It is of little value as food for animals after the seed has ripened.

One person says he has seen hogs after having eaten heartily of it become so inebriated as to be unable to walk without reeling. How far the use of it for swine would under such circumstances compromit those good men, who have signed the temperance pledge, is a nice question in casuistry, which we shall leave to them to decide. Perhaps they will construe their obligations in this matter as applying to the furnishing the means of intoxication only to human swine.

On its value as a green dressing and for the purpose of ploughing under, and as a protection of the young wheat, we shall have something to add a future and more convenient season.—*N. E. Farmer.*

Try to spend your time usefully both to yourself and others.

From the Baltimore Patriot.

Wine Making in the United States.

The following, extracted from the Southern Agriculturist for October, ought to be generally disseminated. It shows what can be done, and may induce others to try to do likewise. Mr. Herbemont has been making wine for many years—15 or 20 probably; and the writer of this has frequently had the pleasure of tasting its good qualities. I will not say it is equal to the best Medeira, but I do say I like it much better, as it is not *brandied*. The kind of grape he principally cultivates for his best wine is called the "Herbemont Madeira."

Yours, &c.,

G. B. S.

Extracted from an article in the October number of the Southern Agriculturist.

Columbia, S. C., Sept. 9, 1837.

By way of encouragement, I must tell you that I have this very day terminated my vintage, except a few odd grapes, which I shall gather next week, which will add 50 or 60 gallons of wine to that already made. I made at my farm 750 gallons, and in my garden 528 gallons. This last is a most enormous crop; for the vines that produced that quantity are on *one sixth part of an acre*. This is, therefore, at the rate of 3168 gallons to the acre, which is perhaps a greater crop than ever was made any where else; at least I never have seen any account of any more than 2000 gallons, and that is exceedingly rare. I have, moreover, reasons to believe that the wine will be of a very good quality. The produce of two of the vines in my garden is so great, that if I had not the most respectable witnesses of the fact, I should hesitate to name it. They produced *one hundred and thirty gallons of wine*, and even more.

Very respectfully,

N. Herbemont.

SHEEP.

It is computed in a book recently published at Cambridge, that the number of sheep in certain of the States, is as follows:

In Maine 622.619, New-Hampshire 465.-179, Vermont 1.099.011, Massachusetts 373.-322, Rhode Island 81.619, Connecticut 255.-169, New-York 4.299.879, New Jersey 250.-000, Pennsylvania 1.714.640, Delaware 150.-000, Maryland 270.000, Ohio 1.711.200, Kentucky 600.000, Virginia 1.000.000. The whole amount being 12.897.638. The whole quantity of wool produced is estimated at 41.-917.324lbs. Valued at $21.168.246.

Sumac.

There are great numbers of articles that grow spontaneously in our fields and woods, that we neglect to gather, but fit our ships to go to Europe, Africa, and Asia, to obtain them, because they sell them cheap; and to pay for them, draw off the life blood of our circulation. Our correspondent below, has pointed us to one article on which we may commence; there are thousands of others.—We hope he will continue his observations, and point them out.

TO AGRICULTURISTS.

That it is a lamentable fact—blessed as the people of these United States *are*, with an almost boundless extent of territory, comprehending, within its already populated limits, nearly every variety of soil as well as of climate; abounding with the mightiest rivers; intersected (as many parts of it now are, and doubtless all soon will be) with canals and rail-roads; and bountifully supplied with vast natural resources, to encourage and reward the toils of the laborer—that *necessity should have compelled* us, *to import from Europe and other foreign countries*, a very large proportion of the bread stuffs required to support us during the past and present year—surely no friend to his country can for a moment dispute. And the natural effect of the extraordinary state of things, ought to be, to teach us to examine minutely into our condition, and, *if it be possible*, strive, by increasing attentions to agriculture, to do away such a prolific source of national shame.

Within a short time past, I have seen with pleasure, in our own and several sister states, instances of watchfulness and care on the part of the legislatures, in providing suitable and duly qualified scientific gentlemen as geologists, to survey and report upon the various buried sources of mineral wealth, within their respective jurisdictions. Such profitable legislation cannot be too highly praised, as it is calculated to bring forward into places of usefulness, many of the scientific men with which our country is now so well supplied—men who have genius, cultivation, and talent, and are competent to develop her natural treasures in the soil, and to point out the best plans for making such riches available. But why should we neglect the vegetable kingdom!

In the indigenous vegetables of which America is so prolific, we have before us an immense field of action; and, one would think, such a research for the botanist might go hand in hand with that of the geologist; the latter would inform us as to the soils, and the former indicate those native productions which would flourish best, if planted there.

I am fully convinced in my own mind, that our country *does* produce many spontaneous vegetable products, capable, with but a moderate share of toil, of amply rewarding the capitalist, or the farmer, who shall undertake their cultivation, for commercial or manufacturing purposes; and I farther believe, that a careful study into the natures, properties, habits, and usefulness, of such plants as are indigenous to, or capable of being introduced into this country, could not be otherwise than entertaining and instructive to every citizen.

Is it not a matter of astonishment, that at the present period, when our manufacturers have already arrived at such a high state of perfection, as in most branches to stand forth successful rivals to, and in others to challenge competition with, the older and longer practised artisans of Europe, we are found importing from thence, or elsewhere—instead of furnishing ourselves, from our own soil—nearly all the important adjuncts to successful competition? Suppose, for a moment, we look into the statistics of other countries, for some information regarding an article largely used in this country, but mostly imported from Europe, when if WE *would but realize it*, we should discover, that we can hardly travel twenty miles hereabouts without seeing it growing wild in abundance—it is nothing more nor less than that poisonous shrub, or weed, called SHUMAC, or SUMAC, which grows frequently *where nothing else will grow*, and is generally looked upon by the farmer as *good for nothing*—while, if he would but bestow upon it some attention, he would find much benefit accruing therefrom, which now gets into the pockets of foreigners.

At the first glance, it will, no doubt, be a matter of surprise to many, and difficult to realize, the vast quantity of the sumac used in Great Britain, for the purposes of dyeing and tanning. In the years 1832 and 1833, according to M'Culloch, the quantity *entered for home consumption only*, amounted to no less than *thirteen thousand eight hundred and twenty-four tons and two hundred weight!!!*

The following tabular view of the number of bags imported into Liverpool, during a period of five years, is taken from a circular issued by Messrs. Jee, Brothers & Co., 31st December, 1832.

1828.	1829.	1830.	1831.	1832.
Bags, 23,000	26,000	35,000	41,200	44,000

which shows a progressive increase.

I am yours, &c.,

A FRIEND TO NATIVE INDUSTRY.

The external misfortunes of life, disappointments, poverty and sickness, are light in comparison of those inward distresses of mind, occasioned by folly, by passion, and by guilt.

For the Farmers' Cabinet.

Quince Trees.

The time for planting trees being now near, I take the liberty of recommending to farmers, to cultivate the quince tree more extensively than they have heretofore done, both for pleasure and profit. Quinces in the Philadelphia market sell for, from two to six dollars per pushel, according to the quality. I have never known them to sell for less than twenty-five cents the half peck, and fine one's have often sold for three times that price. The great demand for them is for preserving, for which purpose every house-keeper knows their value. But for *drying*; to *mix* with *dried apples* or *peaches*, they possess a value, unrivalled by any other fruit; the superior flavor communicated by them to pies can only be appreciated by those who have tasted of their excellence when used in that way. The tree is more easily cultivated than most other kinds of fruit trees; they grow from the slip, if the soil is moist; may be propagated from suckers, or by grafting, or any of the usual methods of propagating fruit trees. They are hardy, do not shade the ground much, and are not as liable to injury from cattle as many other trees; and to crown all, the fruit, either green or dried, always sells readily for a high price. Now, what should prevent a farmer from having twenty, fifty or a hundred of these valuable trees set out along his fences, where they would not lessen his other crops, and would bring in a handsome annual revenue, to increase his library, or help to procure an out-fit for a son or daughter, when they are about to quit the paternal mansion, for a settlement in life on their own account.

I would particularly recommend the extensive cultivation of the quince to our Ohio, and Western Pennsylvania farmers. If they are brought to the Philadelphia market in a dried state they will bring five times as much as dried apples, and the carriage would be the same; they would sell at once, and not lay on hand for a long time as the western dried apples often have done, and then been sold for a trifle, hardly sufficient to pay transportation, storage and commissions. Think of it, and act promptly; there is no mistake about it.

MARIA.

Feb. 27, 1838.

For the Farmers' Cabinet.

"Gather up the fragments, that nothing be lost,"

The Poor Widow and her Cow.

On the approach of the winter 1836, '37, a poor widow, who resided on a small lot in the lower part of Bucks county and kept one cow, that was a principal support for her

family, and having but a scanty supply of hay and corn fodder, regretted much on a morning when visiting her charge to see the corn-stalks stripped smooth of their leaves, and so large a bulk of the stalks remain useless in the rack. Her good sense at once suggested a plan of rendering this refuse available. She cut the hard stalks with an axe into pieces two or three inches long, and boiled a portion of them daily in her wash-kettle, and then fed them to her cow, and to her great surprise, she found them eaten with a high relish. The quantity of milk was more than double during the winter, and in the spring, she had the satisfaction to find, she had so largely contributed to the comfort of her family at so cheap a rate, and that not even a dry corn-stalk had been suffered to go to waste.

X.

Important to Farmers.

A few weeks since we published a communication from a correspondent, giving the results of an experiment in plant ng corn, by Hart Massey, Esq. of this village. Mr. Massey called upon us on Saturday last to correct an important error in said communication, and invited us personally to examine the said field, which we accordingly did, and now give the results of our observation.

Mr. Massey took of the seed corn with which he planted the field, a small quantity, and soaked it in a solution of sal nitre, commonly called salt petre, and planted five rows with the seeds thus prepared. The remainder of the field, we believe, was planted by the same individual. Now for the result. The five rows planted with corn prepared with salt petre, will yield more than twenty-five rows planted without any preparation. The five rows were untouched by the worms, while the remainder of the field suffered severely by their depredations. We should judge that not one kernel, saturated with salt petre was touched, while almost every hill in the adjoining row suffered severely. No one who will examine the field can doubt the efficacy of the preparation. He will be astonished at the striking difference between the five rows and the remainder of the field.

Here is a simple fact, which if seasonably and generally known, would have saved many thousands of dollars to the farmers of this county alone, in the article of corn. It is a fact, which should be universally known, and is, in all probability, one of the greatest discoveries of modern times in the much neglected science of agriculture. At all events, the experiment should be extensively tested, as the results are deemed certain, while the expense is comparatively nothing.

Mr. M. also stated as to the result of another experiment tried upon one of his apple trees last spring. It is a fine thrifty healthy tree, about twenty-five or thirty years old, but has never in any one year, produced over about two bushels of apples. While in blossom last spring, he ascended the tree and sprinkled plaster freely on the blossoms, and the result is, that it will this season yield twenty bushels of apples. Now if the plaster will prevent the blast, it is a discovery of great importance. Mr. M. was led to make the experiment by reading an account of the production of trees adjoining a meadow where plaster had been sown at a time when there was a light breeze in the direction of the orchard, the trees contiguous to the meadow bearing well, while the others produce no fruit.—Watertown (N. Y.) Standard.

For the Farmers' Cabinet.

Canada Thistle.

A number of years since large quantities of Timothy seed were introduced from the northern part of the State of New York, into the counties in the neighborhood of Philadelphia, and sold among our farmers; with it was introduced that most *pernicious pest*, the Canada Thistle, which has taken root among us, and is extending itself in the counties of Delaware, Chester, Bucks and Montgomery, and perhaps in other places not at present known to the writer. Several who have it on their farms, have but recently become apprised of the name and character of this unwelcome stranger, who has become seated among them. Many no doubt do not yet know this enemy to their peace and prosperity. It behoves all to be up and doing to extirpate this worst of all enemies to agriculture, before it takes entire possession, and drives us from our farms. It is the opinion of those best acquainted with this weed, that the best farm in the State, if well set with it, would not be worth ten dollars per acre. The roots of the other species of thistle are biennial, and of course by preventing them from seeding, they are easily got rid of. But the root of the Canada Thistle is perennial, creeping, and very tenacious of life. It penetrates the earth to a great depth, and each fibre of the root will produce a new plant. Dr. W. Darlington of West Chester, says:—"This foreigner is the vilest pest that ever invaded the farms of our country, in the form of a weed." Should any of your readers possess a knowledge of the best method of ejecting this unwelcome squatter, he would much oblige by communicating it through the Farmers' Cabinet.

O.

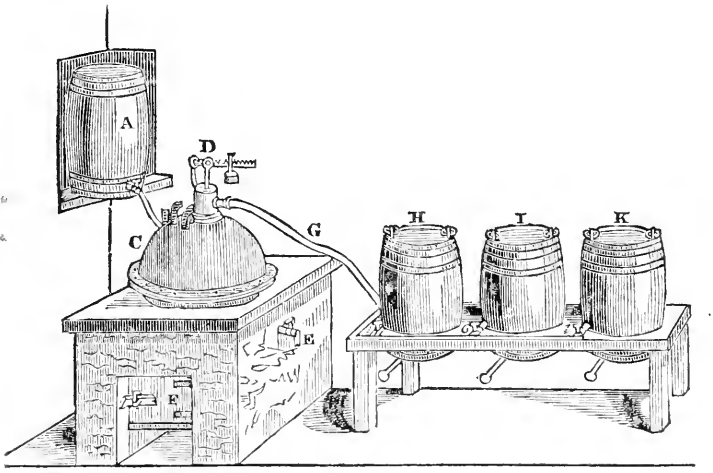


Fig. 39.

Apparatus for Boiling and Steaming Food.

In numerous cases it is found to add to the nutritive properties of roots and grain, to boil them before they are given to animals. The most economical method of preperation, is by heating the water by means of steam, conveyed from the boiler to the vessel containing the roots or grain.

Any kind of wooden box or barrel will answer for the purposes formed, as to admit of being readily filled and emptied. The steam is to be conveyed in a pipe to the lower part of the vessel, which ought to have a sliding board at the bottom to allow the contents to be discharged when ready. The vessel may be filled with water, though this is not necessary in the case of succulent roots as the potatoe, because the steam is quickly condensed. But when corn is to be boiled, it should be covered with water, that the steam may be condensed.

The above figure represents a *steaming apparatus* of a sufficiently good construction. A, is a barrel or other vessel for containing water and supplying it to the boiler C. D, is a safety-valve. At the upper part of the boiler at C, are placed two tubes, with stop cocks. One of these tubes terminates near the bottom of the boiler. Upon the stop-cock being turned, water should always issue from this tube. When, therefore, steam issues from it, and not water, this indicates that the water is so much boiled away, and consequently that there is a deficiency of water in the boiler. The other tube terminates within the boiler near the top. Upon the stop-cock being turned, therefore steam ought always to issue forth. But should water in place of steam come out, then it will appear that the boiler is too full of water. In this manner, the attendant by turning either stop-cock, ascertains whether there is a deficiency or excess of water in the boiler.

The quantity of water could indeed be regulated by nicer means; but that described will be found sufficient in practice. F, is the furnace, and E, is a pipe with stop-cock, communicating with the boiler. When it is wished to obtain hot water, it is obtained by this pipe. A pipe G, communicates with the barrels H, I, K, and conveys the steam to them; and in these is placed the food to be steamed. By means of the stop-cocks, T, T, T, the communication can be cut off with any of the barrels, so that the steam may be admitted to one barrel or two barrels, or three as may be attended. Each barrel has a moveable lid, which is kept down by screws, and a sliding board below, by which the food, when ready, is withdrawn, so that a wheelbarrow or vat may be placed below, and the food at once emptied into it. By means of an apparatus of this kind, roots and other parts of plants may be steamed in a convenient and economical manner.

Important to Farmers.

We are well assured that the genuine Italian Spring Wheat, sent to this market by the gentleman in Oneida Co. N. Y., who procured it, can be obtained in this city of Mr. I. L. Pierce, Bull's Head, North Third St.,

Artificial Divisions of a Farm.—No. 1.

Where a country is entirely in tillage, it is of less importance that farms be divided by artificial barriers; but wherever live stock is kept, this is essential to the proper keeping of the animals, and to the profitable occupation of the grounds; and besides the purpose of retaining and separating animals of different kinds from one another, and of defending the cultivated crops from injury, fences serve the purpose of sheltering the fields, and, when accompanied by ditches of draining the ground. The fences of the farm may consist either of stone-wall, or of live fence, or of a combination of the live fence and stone-wall, and sometimes even of an open ditch, a mound, or a rail.

STONE FENCES.

The stone-wall may either be formed of stones built without cement, or it may be built with mortar like common masonry.—But the last of these methods is rarely practised with the common fences of a farm.—The cementing of the stones with mortar, adds, indeed, to the durability of the wall, but then the expense is too great in common cases.

The wall, therefore, for the ordinary purposes of the farm, may generally be built of stones alone, though sometimes with a little mortar merely for cementing the coping, and occasionally for pinning or closing the interstices of the outside. When stones cannot be obtained, brick may be substituted.

The materials for building the dry-stone wall, as this kind of wall is termed may be sand-stone, whin-stone, or any other stones of sufficient durability. Loose stones taken from the surface, termed land-stones answer sufficiently well, if they be of proper size, and not too much rounded; but in the latter case, they present too smooth a surface, and cannot be kept in their places without mortar.

The implements to be used in building the dry-stone wall are, a mason's hammer, a spade or shovel for clearing the ground for a foundation, a pick or mattock, and a frame of two upright posts fixed together, so as to correspond with a verticle section of a portion of the wall, (Fig. 40.)

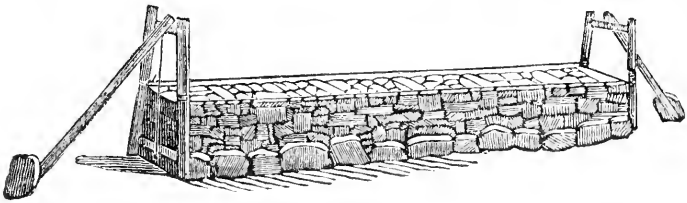


Fig. 40.

The line of the intended fence being fixed upon and marked on the ground, the stones for building should be brought forward, and laid down on both sides, if possible, of the line of fence, but, if not, on one side. Pins being fixed in the centre of the space to be occupied by the wall, the workman proceeds thus:—He carries his wooden frame to some distance along the line to be built upon; he sets it perpendicular, which he is enabled to do by means of a plumb-line attached to it, and he fixes it in this position in a simple manner as shown in the figure. He then fixes another similar frame at the place where the wall is to commence; he stretches two cords between these two frames on the outside, and as these cords correspond with the outside of the wall at a given height; he has a guide for building it of the required dimensions. After having built one portion, he uses only one frame, the wall itself serving afterwards the part of a frame: for the cords being fixed to both sides of the wall, and then attached to the frame which is placed in advance, the workman has, as before, a guide by which he proceeds in building.

The foundation of the wall should be laid on firm ground, and when there is not green sward to build upon, the loose earth should be taken out by the spade, until a solid foundation is arrived at. In building, the largest and flattest stones should be used for the foundation; and it is very desirable, if the materials used will allow, to place stones at intervals, of sufficient size to lie across the breadth of the wall, so as to bind the wall together and render it more secure. (Fig. 41.) different kinds of coping may be placed

Fig. 41.

upon the wall, to defend it, one of these consists merely of turf, two sods being laid upon the wall, with the earthy sides placed to-

wards each other. Another species of coping consists of large stones, which being closely built and wedged together, are cemented by mortar. This is a complete and durable species of coping, but when it is used, a row of flat stones should be laid on the top of the wall immediately beneath the coping and made to project a little on each side of it. (Fig. 42.)

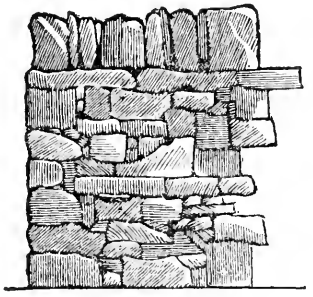


Fig. 42.

A wall sufficient for the purpose of the farm may be 32 inches wide at bottom and including the coping 4 1-2 feet high, and two good cart loads of stones will suffice for building a yard.

Society for Promoting Agriculture.

At a meeting of the Philadelphia Society for Promoting Agriculture, held at their Hall on Wednesday, the 21st, Feb. the following resolutions having been passed, were ordered to be published.

On motion, it was

Resolved, That Messrs. Joseph Cloud, David Comfort, and James Thornton, be a committee to inquire and make report on the best method of destroying the Canada Thistle.

On motion, a committee was appointed, consisting of Jos. Cloud, Kenderton Smith, and Algernon S. Robers, to digest a plan for the distribution of premiums for the advancement of agricultural objects.

On motion, it was

Resolved, That the secretary be authorized to publish an invitation in the various papers of the city and county, for communications upon rural economy and agricultural subjects generally, to be submitted to the Society.

On motion

Resolved, That the President, Treasurer and Secretary be a committee to apply to the legislature for a renewal of the charter of the society, which is about to expire.

KENDERTON SMITH, Secretary.

At the previous meeting it was on motion

Resolved, That all communications on agricultural subjects, approved by the society, be published in the Farmers' Cabinet.

For the Farmers' Cabinet.

How to Improve Poor and Barren Lands.

MR. EDITOR:—I read an account, I think in the "Norwich Courier, Conn." about the year 1821 of an experiment, which so much impressed my mind, that I reviewed it a number of times, and distinctly recollect the principal facts, though the name of the gentleman who related them has escaped my memory. His statements and calculations were made with such perspicuity and accuracy, that convinced that he was a person of intelligence and close observation, and left no doubt on my mind of the correctness of his statement.

He purchased for 500 dollars by way of experiment, one hundred acres of light pitch pine land, which was considered of little value, except for the wood that was on a part of it, little more than sufficient to build a strong log fence round the whole lot. As he resided at a distance, he hired all the work done upon it by the job, which enabled him to make a more accurate estimation of the various expenses. He fenced, cleared, and burnt over such parts as were combustible. If I recollect right, he ploughed the whole in the spring, and harrowed in oats and clover-seed, but let the scanty crop of oats decay on the ground. The next summer when the clover was in blossom, he turned it under with a deep furrow of the plough, and harrowed in clover-seed again. The summer following he again ploughed in the clover, in the fall cross ploughed it, and sowed wheat, clover and timothy, and harrowed in the seeds. The ensuing summer he had a crop of wheat of excellent quality, of between thirty and forty bushels to the acre. He hired it harvested, threshed and carried to market, making no estimation of the straw. The following spring he had the prospect of a good crop of grass, of which he made no account. He carefully stated the various amounts expended in the purchase and cultivation, calculating accurately the interest upon the whole of his advances for purchase, labor, seeds, transportation, &c. Then he credited the amount received for his wheat, which after deducting the whole amount of expense, including interest, he had quite a balance in his favor, the exact amount I do not recollect, and had remaining 100 acres of land fenced, in a good state for the production of crops under proper management.

I exceedingly regret that I have not the paper at hand, to give a more accurate ac-

count in the gentleman's own words. As there is in our country a great quantity of similar land, I thought perhaps, some one might be benefited by noticing my broken recollection of the statement. Indeed, I have ever considered it as one of the most interesting agricultural experiments I have ever met with.

At the time it came under my notice, I had in the country a farm connected with a manufactory, and observing on it, a steep gravelly side hill that had become barren by washing, after repeated ploughings; I was induced, from the hints of the above statement, to order early in the spring a top dressing of compost, containing leached ashes, and to be sowed plentifully with grass seeds, white and red clover and spear grass (Poa prateusis) which germinated freely. The next year the land was nearly swarded, and a tolerable crop of grass, which I suffered to decay on the ground undisturbed. The following year the ground was well covered with a firm sward, and yielded a fair crop of excellent hay, and the land appeared in good heart. The following winter the property was sold, and subsequently, I have had no opportunity to judge of it.

I am yours respectfully

DAVID L. DODGE.

Cedar Brook, Plainfield, N. J.
Feb. 24, 1838.

RELATIVE VALUE OF PLASTER AND ASHES FOR CORN.

I took three rows in a small piece of corn beside my garden, and put a handful of ashes on each hill of one, a teaspoonful of plaster on each hill of another, and the third left without putting on any of either. I cultivated them all a like, hoeing them twice. During the season some pigs got in and rooted up one end of the rows, leaving but about five rods of each that came to maturity. In the fall I husked the rows as far as they had not been injured, and weighed the ears of each:—Weight of the ashed row, 49 3-4

" plastered row, 48 1-2

Weight of the row which was neither plastered nor ashed, 41 1-4

The ground was green-sward turned over in the spring; the soil clay, inclined to a loam,

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For the Farmers' Cabinet.

Flax Seed.

Would it not be well for each of our good farmers to cultivate a small strip of flax, for the seed only; to be used boiled and mixed with cut straw, hay or other food for animals. One bushel of boiled flax-seed, mixed in small portions with other food, is worth more for feeding, than four bushels of any other grain not excepting even wheat. I should like some of your intelligent correspondents to furnish their views on this subject, in a subsequent number of the Cabinet.

H.

THE ROHAN POTATOE.

Several statements relative to the great productiveness of the Rohan Potatoe, a variety cultivated in France, were published in the papers some years ago. In 1835, John A. Thompson, Esq. of Catskill, N. York, who has a quantity of them for sale, procured some of the seed from France; and from his experience in cultivating them the two past seasons, he says he is perfectly satisfied of their great superiority for the table and their extraordinary productiveness. It is said that in France they have weighed as high as 14lbs. Judge Buel says he planted 12 lbs. of these potatoes last spring. He divided the tubers into sets of two eyes, and planted one set in a hill four feet apart, in a piece of ground much shaded, and in rather low condition. On the 28th of September they were dug, and found to weigh 525 lbs. and measured nine bushels. "We have hardly been able yet to decide upon the quality of this potatoe, having barely tasted of one; yet we deem it equal to the English white, orange or the common peach blossom variety, which are kinds commonly cultivated. Others, however, in whose opinion we place great confidence, do not hesitate to pronounce them superior for the table. They are undoubtedly the most productive variety of the potatoe we have ever met with."—*Genesee Farmer.*

GOOD BUTTER.

We copy the following from the Delaware County Republican.

The county in which your useful paper is published, and where it so widely circulates, is deservedly celebrated for making good Butter, consequently the process must necessarily be well understood. The knowledge, however, required for the proper management of a Dairy appears to be very limited. The object of this communication is to call the attention of those who possess experience on that important subject, and endeavor to elicit from them such information on the art of butter making, as may be useful to the community. There is perhaps no branch of agriculture, particularly in the neighborhood of large cities, that is so profitable and that requires so much attention, as the butter dairy.—Much information is wanted especting various objects connected with it.

First, The pasture, fodder, and other food of cows, best calculated to produce the most milk, yielding the greatest quantity of cream.

Secondly. The best situation for keeping milk the proper temperature, and the form of vessels required to obtain the most cream.

Thirdly. The state of the milk when it is necessary that it should be skimmed off, or the cream removed from its surface.

Fourthly. The form of the vessel for keeping cream, and the temperature at which it should be kept until it is in a state to yield the greatest quantity and the best butter.

Fifthly. The state of acidity and temperature of the cream to obtain butter in the shortest time by churning.

Sixthly. The reasons why so, if it is more difficult to obtain butter from cream by churning in the winter than there is in the summer, and how the difficulty of churning is to be overcome.

Seventhly. The best mode of working or purifying and freeing it from the butter-milk, so as to obtain the best flavor, and to prevent its rancidity.

Practical answers to these queries would be of vast importance to the agriculturist, and to the community. J. C.

To the Editor of the Farmers' Cabinet.

Planting Trees.

John Libby.—Sir, the following is from an article accredited to the Silk Culturist. "Though the rapid growth of this tree (the Locust,) and its great value renders it a prime object of cultivation, yet the Mulberry will be found to be altogether more profitable. Its growth is as rapid, its timber as valuable, and in addition to both, its foliage will yield a large annual profit in rearing silk worms. We are credibly informed that Mulberry posts of the ordinary length and size for fences have been sold in New Haven for three dollars a piece. Every farmer may double the value of his farm in ten years, by cultivating the White Mulberry for the sole purpose of timber and fuel."

My object in calling your attention to this statement, which, whether from inattention or want of opportunity, I have never seen made before is to ascertain the measure of truth, experimental truth, contained therein. I confess ignorance of the subject, but exageration in the matter of the silk-worm appears to me to be the order of the day. Your sober farmer is after all a little tinged with the speculative fever, whenever exotic plants or animals are brought forward as worthy of introduction; and it is not improbable that like the merino sheep of former years, the introduction of the mulberry and the worm may prove ruinous to individuals though eventually a benefit to the country. It is evident, however, that a tree of rapid growth and durable substance is a great desideratum at the present time. Our forrests are becoming scattered and thinly set, and as a consequence the timber which is still growing is wind-shaken and subject to a rapidity of decay unknown to the earliest inhabitants. Our first attempts at planting will of course be directed to those trees which afford a speedy return for the labor and land bestowed, and which will supply the farmer with the most durable material for fences. The Locust has to this end attracted general attention; if an additional end can be attained at the same time without diminishing the prospect of a rapid supply of durable timber, it should be known and acted upon forthwith. While writing I am reminded that the Locust is said to be the least injurious to vegetation beneath, as shade trees and in fences, and rather to benefit poor soils. Will some one acquainted with the subject drop a few hints by way of information.

Chester County, Feb. 24, 1833.

Culture of Potatoes.

Having had numerous applications for single Nos. of the Farmer from new subscribers, containing Gen. Barnum's account of the manner in which he has raised at the rate of 1000 bushels of potatoes per acre, we have concluded to republish it. We give in this number his directions for the preparation of the ground, planting, &c., and shall hereafter publish the directions for hoeing, harvesting, &c.

PREPARATION FOR PLANTING.

Whatever soil may be selected for this purpose, to ensure a large crop it should be highly manured with compost decomposed vegetables, or barn-yard manure. The latter I consider preferable when it can be obtained with convenience; if raw or coarse be made use of, it should be spread immediately before the first ploughing, on the same day, to prevent the evaporation of its best qualities, which will rapidly depart if left exposed to the sun and atmosphere.

The first should be deep ploughing, and may be done as early as suits the convenience of the cultivator. If a stiff marl or clay soil, it would be well to have it ploughed late in the fall previous to planting. Where compost or other substances not liable to fermentation, are intended as a manure, it is better the spreading should be omitted until just before the last ploughing, after which it

should be thoroughly harrowed fine and smooth as possible; then take a narrow light cultivator, or small plough, calculated for turning a deep narrow furrow. With this instrument lay your land in drills twenty inches asunder and four inches in depth, running north and south if practicable, to admit the rays of the sun to strike the plant equally on both sides; put into the bottom of the furrows or drills about two inches of well rotten barn-yard manure, or its equivalent—then drop your potatoes. If of the common size, or what is more important, that they contain about the usual quantity of eyes, (if more, they should be cut, to prevent too many stalks shooting up together,) put a single potatoe in the drills or trenches ten inches apart; the first should remain uncovered until the second one is deposited, to place them diagonally in the drills, which will afford more space between the potatoes one way, than if laid at right angles in the rows. The covering may be performed with a hoe, first hauling in the furrow raised on each side of the drill; then carefully take from the centre of the space, the soil to finish the covering to the depth of 3½ or 4 inches. By taking the earth from the centre of the space on either side to the width of 3 inches, it will leave a drain of 6 inches in the centre of the space, and a hill of 14 inches in width, gently descending from the drill to the drain; the width and depth of the drill will be sufficient to protect the plant against any injurious effects of a scorching sun, or drenching rain. The drains in the centre will at all times be found sufficient to admit the surplus water to pass off. I am not at all tenacious about the instrument to be made use of for opening the trenches to receive the manure and potatoes; this work should be well done, and may be performed with a common hoe with much uniformity and accuracy, by stretching a line to direct the operation. It is true that the labor cannot be performed with the same facility as with a horse, but it can be better done, and I think at less expense, taking into consideration the labor of the man to hold, the boy to ride, and the horse to draw the machine.

SEASON FOR PLANTING.

In this respect they are a most accommodating crop, allowing the farmer in the southern and central part of the designated district 20 or 30 days to perform the operation. The particular time depends in a very considerable degree upon the climate. In the region of my residence, (the 44th degree of North Latitude,) they may be planted from the 10th of May, to the 15th of June. At the extreme north of the described limits less latitude is afforded for seed time and harvest. The good husbandman in that climate should make all practicable preparations for his crop in the fall, and plant as early in the spring as the ground is sufficiently dry and warm.—Here the growth is extremely rapid, not requiring more than from 90 to 110 days to pertect it. The quantity will not be quite so great as with us, but superior in quality.

Bones---Manure.

It is well known that bones converted to dust constitute the most efficient and valuable manure that has yet been discovered; and that to this substance much of the improved state of European agriculture may fairly be attributed. It has occurred to us as somewhat surprising that in the present advanced state of chemical science, and when the constituent parts of bones are so well known, that no attempts to produce a compound embracing the same substances and capable of producing the same results, have yet been made. Bones are composed of gelatine, fat, cartilage, and earthy salt. Chemistry has determined the nature of each of these substances, and the proportions in which they generally exist in bones is also known. The earthy salts are lime and phosphorus, or the solid part of the bone is phosphate of lime; a substance of great value to plants, and which is found in many of them. We therefore can see no insuperable obstacle in the production of an article, which, if it could be afforded at a reasonable cost, would, from its active nature, and the ease with which it can be applied, supersede all others in those places and for those purposes in which ordinary manure is inefficient or disgusting. We regret that the profound genius of the philosophic Davy had not been directed to this point; as such a discovery would be one of the greatest gifts science has yet made to agriculture. Perhaps, however, the discovery has been reserved for Hare or Silliman, as the application of electro-magnetism to mechanical purposes was for Davenport. We shall see.—*Ib.*

CELLARS.

It is a practice in Germany, worthy of our imitation, to keep open a communication between the cellars and the principal chimney of the house, to enable the noxious air, more or less generated there, to escape. It also promotes the draft of the chimney. The air in cellars often becomes highly deleterious to health, and the sickness of families may frequently be traced to the stagnant and noisome air in these under ground apartments. Where there are different apartments in a cellar, ventilation should be provided for by leaving a passage open over the doors of communication.

Silk Worm & Sugar Beet.

The following letter contains the reply of Mr. Stone, to certain queries addressed to him by Mr. Randolph, Chairman of the Committe on Agriculture. We publish it, with the view of disseminating information on the important subject to which it refers.

To the Honorable, the Committee on Agriculture in the House of Representatives of the United States.

I had the honor of receiving, through the medium of your chairman, a number of interrogatories, and soliciting my speedy answer to the same; to which I remit you the following, as being my deliberate views and best understanding on the subject.

1st. Interrogatory. "Are you acquainted with the culture of the Mulberry and Sugar beet, or either of them?"

I am practically acquainted with the culture of several species of Mulberries and the French Sugar beet.

2nd. Interrogatory. "What kind of soil, and what situation and exposure are the best for the production?" A mellow, sandy loam is decidedly preferable for the Mulberry. As for situation, undulating and high grounds are decidedly best. Much might be said respecting soils, but I will mention some known facts on the subject,

Mulberries will flourish very well on low, damp, rich soils, for one year and after that grow less thrifty, be less hardy to endure the winter, as the root will not mature as well; the foliage will be of a watery, crude, and coarse texture; will not be eaten by the worms as readily, nor is it so well adapted to ther health; and the silk will be of a harsh quality.

But Mulberries propogated on undulating grounds, having a soil of a sandy loam, will flourish about the same the first year, as those on low rich grounds, and much better for succeeding years—will be more hardy to endure the winters—the foliage in every respect far superior. Experienced persons will be sure to select the like locations and soils, to plant Mulberries, from which to produce silk. Our most sandy soils, by being a little nourished, will do for the business very well. A sunny situation as a matter of course is required.

A mellow, sandy sub-soil, is most congenial to the quantity and quality of the sugar beet

3d. Interrogatory. "What species of Mulberry is the most valuable, taking into consideration the capability of enduring cold and frost; the quantity and quality of the foliage, and the labor of culture and stripping?"

There are many species of Mulberries, all of which the silk worms will eat, and produce silk; but it is natural to suppose some to be better than others. Some few are found indigeneous in the United States. It is well known that in Europe, in the silk growing districts, the White Mulberry, (Morus Alba) is very universally used in the business. They are planted in hedge rows or orchards, &c.

There is a new kind of Mulberry introduced within a few years into Europe, and from thence into the United States, which will in time supercede all others, without any doubt, for the purpose of raising foliage for silk worms.

This new species of Mulberry is called the Mulberry of many stems or stalks, (Morus Multicaulis) from the fact of its roots being capable to send up many stems or stalks. The leaves of the Multicaulis tree are at least five times the size of those of the White Mulberry, which proves one very important item of its superiority —the saving of labor required to gather the foliage. It is further proved not only in this country, but also in France and Italy, that a given weight of foliage of the Multicaulis will produce more silk, and of a better quality than the same weight of any other species of the Mulberry known; it having more nutriment and being of a finer texture.

It is also a known fact that the silk worms will eat the foliage from this tree, more readily than from any other, which is a very correct criterion to test the superiority of its foliage; for if worms are fed on Mulberry leaves they dislike, and which they eat with reluctance, they are sure to make but little silk, and of a very poor quality. In the silk growing districts of Europe, most of those who propagate the Mulberry (White Mulberry) do not feed the worms themselves, but sell the foliage by weight to the peasantry, who feed the worms and reel the silk. Though in many instances, the reeling is done in large filatures by water or steam power.

In this case you will perceive that the buyer will have to pay as much for the Multicaulis foliage as for the White, and the seller will get as much pay for his White, as for the Multicaulis; so in this case a change will be slowly effected from their old system. And as they have a more dense population than we have, and all must have some employ, and system or scheme to save labor is met with opposition, and not encouraged. But in the United States we have different views, we are ever ready to adopt a system or a machinery intended to expedite business and save labor. So with us in the United States, who are just beginning in the business, we are sure to satisfy ourselves which is the best species of Mulberry known, and obtain it at first. Respecting the hardihood of the Multicaulis tree, to endure the winter, it has to my knowledge, been successfully propogated, as far north as 42°, and I see no reason why it may not be acclimated, and become as hardy as the White Mulberry.

Respecting the quantity of foliage to the acre, I will give it as my estimate that 5000 lbs., can be produced from the first years growth of trees, and the labor for culture and stripping $75, and by calculating 100 lbs. foliage to the pound of silk, the 5000 lbs. foliage will produce 50 lbs. of silk, and for a few succeeding years will somewhat increase.

By the best accounts, we have in the United States, a far greater amount of Multicaulis trees, that can be found in all Europe. They are there scarcely known among the silk growers, but principally confined to the nursery men, who raise them to sell. But no information of any trees to be imported into the United States the coming spring.

4th. Interrogatory. "What is the best mode of cultivating the Mulberry; at what age may it be stripped; and what is its value, expense, and profit per acre?"

All species of Mulberries used in the silk business, save the Morus Multicaulis, are grown from the seed, and first sown in nurseries, and afterwards transplanted.

The Multicaulis tree is propogated from the bud by cuttings, having one or more bud, or by layers, and no other way in its purity. As it is abundantly given to foliage, it does not produce much fruit, and the seed is not sure to produce its kind if planted. As I consider the Multicaulis tree the only species worthy the attention of the American silk grower, I shall mention more particularly its propagation. My views for planting out a Mulberry field, from which to produce silk are, first—after selecting high grounds with a soil of sandy loam, lay out the field in rows, about eight feet asunder, and plant the trees about four feet apart in the rows; the manure for the business should be a compost of many different kinds. The ground should be cultivated to prevent the weeds and grass from growing. But to propagate the Multicaulis tree for sale, only with the intent to take them up in the autumn, they may be planted in rows three or four feet apart and in the rows, one foot.

But when planted out with the intention to remain in the field, in rows of eight feet as above described, I would cut them down near the ground every autumn, when cold weather will be setting in. The roots in the following spring will send up several stalks where but one grew the prior year.

The White Mulberry may be transplanted from the nursery at the age of one or two years into orchards or hedge rows, and at the age of about four years, it may be robbed of a portion of its foliage, and after a few years growth ladders will be wanted to get up to the foliage.

But quite different with the Multicaulis. This tree will grow to the heighth, in many instances the first year, of six feet or more, and weigh down its branches with foliage the same as a fruit tree when heavily laden with fruit; and is capable of imparting at least two thirds of its burthen without injury to the tree; and no ladders are required in any wise. I will here mention that in my estimate in answer to interrogatory third—that 5000 lbs. foliage can be produced on one acre, it will not do to rob the trees of all their foliage, for fear of doing an injury to them, but two thirds may be taken without injury. The value from the Multicaulis tree at present is from 25 dollars to 50 dollars per centum, one years growth, and is allowed to multiply about tenfold every year with good attention.

As to the profits to the acre in producing silk, I feel convinced that after proper fixtures, cocooneries, &c. are prepared, and stock for trees on hand, 50 dollars per

acre profit may be obtained without difficulty. I estimate 25 lbs. raw silk to the acre.....$125.
$3 a pound rearing and reeling.....75.

Leaving a clear profit of.....$50.

By making this estimate to you, I feel myself on the safe side, and think it may be much augmented by proper exertions. But if I live another year I intend to satisfy myself by my own experiment as to its correctness.

7th. Interrogatory. "Which is the most valuable species of the silk worms, what the best mode and time for their propagation, the quantity and quality, value of, and market for the cocoons?"

We have several species of silk worms, and spin several colors of silk, some are near white, some between the white and yellow, some a bright yellow &c., all of which will become one color, after being cleansed of the gluten by boiling in soap and water, which is white.—The history of the silk worm is traced back to ancient date. We trace its history to China, and the Chinese pretend by their history they had a knowledge of it about 5000 years ago, and it is well known by other histories that the Greeks and Romans had no knowledge of what silk goods were made of, but knew they were fetched by caravans across the deserts from the east, and cost an enormous price, even their weight in gold. But in the sixth century two Persian Monks secretly got a few silk worm eggs in the hollow of a cane, and fetched them to Constantinople to the Emperor Justinian, and they gradually spread over the south part of Europe.

We wish to find the species of worm that will spin the largest cocoons, and equally as good quality as any other. I have a preference for the kind called the White Mammoth worm, which spins a large white ball, and of good quality. We have a kind that winds a yellow ball of good size, and is a very good kind, but the one that spins the large white ball I prefer.

The mode and time for their propagation in some respects varies; but the mode of hatching is nothing more than exposing the eggs in a warm room of some 70 or 85 degrees heat, and in a few days they germinate into life, and the worms appear, and though quite small at first, if pieces of Mulberry leaves are laid by or over them they soon commence eating. They may be placed on papers or cloths, and laid on tables whilst hatching, and fed there a few days, when they are removed on a net work frame, and there to be fed until the time of spining their balls. But in no wise must they be exposed to the rays of the sun either the eggs or worms

The time for propagation is when the foliage becomes sufficient for stripping to feed the worms. We learn that in Europe they have but one hatching season, which is about the middle of May, and the last of June their feeding season is over; but a mode has been discovered among us of late by some of our experimenting fellow countrymen to procrastinate the eggs from hatching to our convenience. This mode is to place the eggs in an ice house in dry vessels, and when prepared for the worms, bring the eggs into a warm atmosphere, and they hatch perfectly well any time during the summer. But care must be taken to deposit the eggs in the ice house in the winter time before warm weather. This is nothing more than prolonging their winter. As to the quality of American cocoons or silk, I will refer you to the authority of Italian and French silk growers and English manufacturers, who report to us that no silk in the world will excel the American as to the quality of silk on a given amount of cocoons, or the superiority of the silk in its texture.

Ten lbs. cocoons are allowed to make one bushel with the floss on, and one bushel is allowed to make one pound of raw silk, reeled ready for market or manufacturing.

When raw silk is worth $5 a lb. a bushel of cocoons is well worth $1,25. "Twenty-five hundred cocoons will make one pound reeled silk. There is a ready market for raw silk or cocoons, at the eastward, where manufacturing has begun.

When filatures (reeling houses) shall be established, they will cause ready markets for small or large parcels of cocoons in their vicinities. Their transportation to a distance is not practicable,

We have already facilitated the reeling, and brought it into so simple a form, that young girls at the age of eight or ten years can work at it admirably well. The French and Italian writers on the subject have represented it as a very great obstacle to surmount in the silk business. But I think those who may visit us in Burlington the coming summer and autumn will have ocular demonstrations that the difficulty can be easily overcome.

8th. Interrogatory. "Has your State Legislation proposed any, and if any, what encouragement to promote the culture of the Mulberry and sugar beet?"

The New Jersey State Legislature, the present session have made an able report in favor of the culture of silk, accompanied with a bill granting a premium of fifteen cents a pound on all cocoons raised in this state for the next five years,

7th, Interrogatory, "What is the best variety and the best mode of cultivating the sugar beet, and what its value, cost, and profit per acre?"

I cannot answer you from experience which is the best variety of beet, but no doubt the White Silician beet is most productive of saccharine matter.

After the ground is made mellow the beet seed may be planted in rows by drills eight or ten inches apart. Their value and profit per acre, I feel fully assured is equal to the potatoe crop, for the farmer to raise for feeding stock. The cost of raising will be greater, but the crop will be much more abundant than the potatoe crop.

8th and 9th, Interrogatories. "What would be the necessary expense of erecting suitable works for the manufacturing of sugar from the beet?"

"Would the manufacture of sugar from the beet be more or less expensive than from the cane: could it be profitably conducted at present prices, or at what price could it be furnished?"

To these two last interrogatories I can furnish no satisfactory answer. I have seen some specimens of sugar made from the beet that was very good.

Many of our countrymen entertain the belief the beet sugar business will be brought into a system which will pay a good profit.

It might be said a community or a nation of people can comfortably live without the articles of silk or wine. But their use has become so interwoven with the habits and customs of civilized nations, they are made indispensable articles. At present we are paying an enormous tribute to foreign nations for these articles. And as we have such a variety of soil and climate, I feel assured both may be produced in our country with a profit to the producer. Besides some attention is beginning to be paid to the culture of silk, attention is being paid to the culture of the vine in some sections of our union, and the juice is expressed from the grape with good success. Our native grape is found to be profitable for our use.

Respectfully yours, &c.
CHAUNCEY STONE.

Hon. Jas. T. Randolph, Chairman of the Committee on Agriculture.

Burlington, N. J. Feb. 1838.

From the Genesee Farmer.

Mixed Husbandry.

Mr. Editor.—The question is often asked "what branch of agriculture is most profitable—grain raising—lairying—wool-growing—the rearing of stock—graining, or any other of the various pursuits of the agriculturist!" This question, though well enough for the purpose of eliciting discussion, is nevertheless, I conceive, a most *idle* one, if put with any view of learning the truth from a *direct* answer. There are those however who are ready to give that answer, and to decide in favor of *one single* department of agriculture, to the exclusion of *any* other, or *all* others. This is not perhaps surprising. The man who has followed one particular path and been successful in it, is apt to imagine that his own is the only road to wealth.

I have been often struck with this fact in looking over our agricultural publications. *A.* writes to prove that dairying yields the best profits, and that it is subject to fewer contingencies than any other branch of husbandry. *B.* is equally sanguine for grain raising,—and *C.* for sheep. Each not only at-

tempts to prove that his own *is* the best business, but he contends that it *always must remain so !*—Yet how many have lived to see their confident predictions entirely falsified by the event—their favorite pursuit placed for a considerable period at least, entirely at the bottom of the list.

The truth is when we mount our hobbies, (especially on paper) we are liable to take a little too much for granted. "Paper calculations" has passed into a bye-word. Fortune always smiles on paper! Our grain never rusts—or is winter killed—or destroyed by insects, in a paper calculation! Our sheep always shear just so much wool—raise just so many lambs to the hundred, and the wool always commands just such a price! Our cows "cannot fall short" of so many pounds of butter and cheese to the head, each week —and these commodities "cannot fall short" of so many cents to the pound! So on, through the chapter of hobbies. In this way we *figure* ourselves into a fortune. But who does not know that the "tide in our affairs" does not always carry us on smoothly! Who does not know that prices are always fluctuating; that accident is ever at work; that misfortune will assail us; that

"A' *our* views may come to nought
Where every nerve is strained!"

It may be laid down as an axiom in agriculture, that no one branch can be permanently more profitable than all others. The principles of political economy forbid this. Demand and supply must regulate each other. If transient causes—particular circumstances —render the producing of ony one commodity the most profitable, the *rush* attending the discovery soon restores the equilibrium—nay, sinks the favored article, for a period, below the common level.

I do not doubt that any department of agriculture entered into with a discreet appreciation of circumstances, and followed skilfully and perseveringly, will, with the ordinary blessings of Providence, lead the man who has some capital to the acquisition of more. But the danger of farming with exclusive reference to a single object, lies in the fact, that in so doing, we commit all to a single risk—in nautical phrase, embark all in one bottom.—This may do well enough with the capitalist, but it is far otherwise with the mass of farmers. They are not able to lose, or lie out of the produce of a season. And they are always liable to be placed under the necessity, where they commit all to one venture. If that venture be in sheep, a revolution in the pecuniary world may (as at present) destroy the market for wool; if it be in the cultivation of wheat, the rust, or the worm, may doom the granary to emptiness. It is true that the labor of a whole season may also be lost, where a course of mixed husbandry has been pursued, but the risk is less. When one cable has parted, another may hold the vessel. Each adds to our chances of safety.

Mixed husbandry as a system is objected to because it militates against the theory of a "division of labor." Let every one, says the advocate of this theory, bend his energies towards a single point—cultivate that which he can cultivate best, and exchange his surplus for such other commodities as he may want. This is good doctrine in the mechanic's shop, or the manufactory. The blacksmith had better stick to his trade, and if he wants a wagon, buy it of the wagon maker; but no such degrees of skill are requisite in each of the simple avocations of the husbandman. Good common sense, aided by the experience which he rapidly acquires, fits him for the whole round of his duties. But it is said that much time is frittered away in the constant change from one description of labor to another. There is perhaps some force in the objection, but this *change*, according to my taste, adds to our enjoyments, by introducing a pleasing variety into our routine of labors. This, and the pleasure of being surrounded by so many agreeable objects, constitutes, to my mind, one decided argument in favor of mixed husbandry. We farm it not only to make money, but to make ourselves happy. A variety of pursuits, no one followed until it becomes a drudgery, are enjoyed as pastimes. We go forth and we are gladdened with a scene, not abounding in the stern sublimities of nature, but glowing in the beauty of *utility* —the meadow stretching away in the vale— the wood fringed uplands—the intervals tesselated with fields of various colored crops, in every stage of vegetation—yonder hill-side dotted with sheep—and the pastures devoted to horses and kine. Neither do we pass contemptuously over yonder field of clover filled with luxuriating swine, and even the gay colored poultry, the cock with his noisy harem, add to the general animation of the picture. A well regulated farm, where the mixed system is adopted is a little independent nation (a government strictly patriarchal) of itself. With the exception of some few 'importations' from the shelves of the merchant, and the calling in of the mechanic's skill to manufacture its *raw material*, it contains within itself the element of self support, the true luxuries and substantial necessaries of life. I speak of course of lands which will admit of the introduction of such a system. Some I admit will not. There are those for instance, well adapted to dairying, which would not yield wheat enough to pay for the tilling. But if good for dairying, they would in all probability, be also good for wool growing,

grazing, &c. Now I would not recommend the man who farms such land to attempt the cultivation of wheat, but I would say to him "follow those branches which your lands are best adapted to; but go as far as possible towards rendering yourself independent of the world, and placing yourself above the reach of those contingencies which any *one* branch is always subject to." This I conceive to be the proper distinction—the true rule of agricultural action for those whose means require them to go on the safe side.

SOUTH HILL.

Cortlandville, Dec. 16.

For the Farmers' Cabinet.

Poetry for Farmers.

To put off till to-morrow what ought to be done to day, is not good economy.

To consider any thing "done well enough," that can be better done, is bad economy.

To plough four inches deep instead of eight, is not good economy.

To feed grain whole, without grinding, boiling or steaming it, is bad economy.

To feed hay or corn-fodder, without cutting it short, is not good economy.

To keep more horses than cows, is bad economy.

To keep more stock than you can keep well, is not good economy.

To suffer the essence of your dung-hill to be washed away by rain, is bad economy.

To omit to mix good earth and sods with your manure heap, is not good economy

To neglect to haul good soil into your hog-pen is bad economy.

To permit docks, mullens and thistles to grow in your grounds, is not good economy.

To neglect to raise beets, ruta baga, and potatoes for winter food for your stock, is bad economy

To omit to boil or steam them before they are fed, is not good economy.

To have less provision for your stock than will supply them six months, is bad economy.

To give your stock less than will keep them in a thriving condition; is not good economy.

To turn out your stock to pasture when the grass is very young; is bad economy.

To pasture your grounds too close in the autumn; is not good economy.

To put in a crop without having the ground in good order; is bad economy.

To neglect to dress a crop in the very best manner; is not good economy.

To be in the rear of the season with your work; is bad economy.

To sow your grass seed too thin; is not good economy.

To neglect your kitchen garden; is bad economy.

To permit trees, shrubs or weeds to grow in it; is not good economy.

To omit to plant out good fruit trees and vines; is bad economy.

To neglect to take good care of them when planted; is not good economy.

To suffer stones to interfere with the cultivation of your fields; is bad economy.

To remove them to a place where they must be moved again; is bad economy.

To permit elders, bushes and briars to take possession of your best land; is bad economy.

To suffer them to hold adverse possession after fair warning, is not good economy.

To permit your buildings and fences to go to decay; is bad economy.

To half repair them, and say "it will do well enough;" is not good economy,

To drink whiskey yourself and give it to your workmen; is bad economy,

To permit it to be brought on to your farm; is not good economy.

To suffer idle fellows to lounge about your place, is bad economy.

To be influenced by their bad example, is not good economy.

To have too many hands for your work; is bad economy.

To have too much work for your hands; is not good economy.

To sow or plant inferior, or dirty seed; is bad economy.

To do it on the "well enough" system; is not good economy.

To omit to lime, marl, or manure your land, is bad economy.

To try if it will do "well enough," without manure; is not good economy.

To suffer your gears, agricultural implements and tools to be out of order; is bad economy.

To permit them to be out of place; is not good economy.

To permit your small dues to remain unpaid; is bad economy.

To neglect to pay them cheerfully when called for; is not good economy.

To undertake to farm without an industrious, frugal wife; is very bad economy.

To marry a proud, indolent and shiftless girl; is not good economy.

To omit to give your children a good solid education; is bad economy

To neglect to train them to habits of industry and sobriety; is very bad economy

To neglect to attend a place of worship on the sabbath; is very bad economy.

To conduct irreverently when there; is not good economy.

To omit to read the Bible and good books on farming; is bad economy.

To neglect to subscribe for "The Farmers' Cabinet," and to pay for it in advance, is the very worst sort of ECONOMY.

For the Farmers' Cabinet.

William West of Springfield township, Delaware County, was the father of agriculture in Pennsylvania; he used often to say that "*he loved to see farmers kind to the soil.*" When he was about eighty years of age he was on a visit to this city and met in the street the late B. Johnson, who had a short time before purchased a farm near the city. He in a friendly way, invited William to come and pay him a visit; and give him a lesson on farming; William told him he had now grown old and he did not go much from home and therefore declined, but informed him he would give him a lesson then, which was to make five acres of his farm as rich as he would wish to have it; Benjamin said that would cost too much, he could not afford it. He then told him to make three acres, two,

or one acre, as good as he would like to have it, and then call on him and he would inform what to do next.

By this simple process he communicated the theory of improving a worn out farm; it being the plan he had himself adopted many years before, for bringing a poor neglected farm into the highest state of cultivation of any at that time in the State of Pennsylvania.

R.

It adds much to the *comfort* and *reputation* of a farmer and his family, to have a neat and good garden well stored with useful vegetables; therefore let every farmer be ready as soon as the ground is in a proper state this spring, to dig his garden and manure it, and have it in complete order for planting and sowing all the various seeds necessary for a complete kitchen garden; let the seeds be all of the best kind, and plant out a few ornamental trees and shrubs near the mansion, *but not in the garden, for trees do much injury to a garden.*

From the Farmer and Gardner.

Great Crop of Corn.

The following letter from Mr. Wm. Miller, of Kent county, Md. proves conclusively, that much less ground than is usually devoted to the cultivation of corn, can by heavy manuring be made to yield the desired quantity. Here is an instance of 53 double horse-loads of green barn-yard manure being put upon an acre, not only with decided benefit, but producing a result as astonishing as lucrative, considering that the corn was only once harrowed and twice worked with the cultivator. The distance too, at which this corn was planted is worthy of notice, as it shows that close planting is not the scare-crow many imagine.

Kent Co., Md., Nov. 4, 1837.

MR. EDITOR:—

Dear Sir:—I have just finished measuring the corn that grew this year on a lot of nine of 5 acres, and have measured a hundred and five barrels and a half and one bushel of ears, making one hundred and three bushels of corn per acre. The corn is called Semmon's corn; it is a deep yellow, and not a gourd seed, but a very deep grain, and small red cob, has from eighteen to twenty-four rows on the cob. I have taken great pains in selecting my seed for the last three years. I threshed off three hundred and twenty bushels last May, and found from the measurement, it measured from the barrel five bushels and seven eighths of shell'd corn. The following is the manner in which I prepared the ground, &c. The soil is a stiff clay, one acre and a half of said lot was in clover last year, the bblance in grass.

I put 265 two-horse cart loads of barn yard manure on it, the manure was coarse made out of straw, corn tops and husks, hauled in the yard in January and February, and hauled out in March and April, and consequently was very little rotted. I spread it regularly and ploughed it down with a large concave plough, made by G. Cox of Middletown, Delaware, 7 inches deep. I then harrowed it twice the same way it was ploughed. I then had the rows marked out with a small plough, 3 feet ten inches wide, and an inch and a half deep. I planted my corn from 18 to 20 inches apart, and covered it with hoes: just drawing the furrows over the corn, which covered it an inch and half below the surface. When the corn was 4 inches high I harrowed it, and thinned it two stalks in the hill, in about two weeks after harrowing it, I cultivated it again, which was all the tillage I gave it. We farmers of the eastern shore count our corn by the thousand; I had 38,640 hills on my lot, and I think my corn would have been better had I planted earlier. I think the planting of corn shallow, and working it with the cultivator is much the best way, especially on clover lay. If you think the above worthy of notice, you will please give it a place in your valuable paper.

WILLIAM MILLER.

The monthly meeting of the Pennsylvania Horticultural Society was held on Tuesday, the 20th of February, in the room under the Atheneum.

The committee on Plants and Flowers awarded the premium for the best display of Plants in Pots to Robert Buist, and the best Bouquet to Ritchie and Dick, Kensington.

Mr. Buist exhibited Amaryllis Johnsonii, Conanthera Campanulata, kennedia florabunda, Verbena, Tweediana, Cammellia Colvillii and C. Dackelaari; the Camellias are entirely new, especially the last, never having flowered in the country before, besides it is an original one from China, although not very double it will be a favorite from its well formed petals and showy flower.

G. WATSON, Record. Sec'y.

From the Farmer and News-Letter.

Ruta Baga for Horses.

MR. COLE:—Noticing in one of your papers a recommendation of Ruta Baga, in small quantities, as good food for horses, I have this winter tried the experiment much to my satisfaction. I have two working horses which I have fed on coarse fodder together with a peck of ruta baga each per day. My horses were never in better health and flesh since I have kept horses, which has been for about thirty years. My neighbors frequently ask how much grain I give them, and they appear much surprised when I tell them—not a kernel. W.

Westbrook, Me. Jan 23, 1838.

Remarks by the Editor:—We have just noticed one of the above horses, and as he is in so fine order, it is no wonder that W's neighbors are surprised when they find that he is kept so well without grain; and we were surprised to learn that the coarse fodder on which these horses are kept is nothing but the rye stubble and weeds, mowed after the crop of grain was harvested.

Here, brother farmers, is an important lesson for you—a very cheap method of keeping horses in fine order so that they will skim you over the ground with the velocity

of old Scrapewell's mare. This fact, together with that of the abundant yield and cheap method of raising ruta baga, is worth thousands to the community. We have before recommended to farmers to raise roots for their stock instead of grain; they are usually worth as much as the grain that can be raised on six or ten times the quantity of ground, and they will keep stock in a better condition than grain. In this way the same amount of food, and better food, can be obtained, and yet the most of the land usually devoted to raising grain for stock can be put to other useful purposes.

Citron Pumpkin.

This most excellent and delicious article, known in this region as the *Valparaiso Squash*, was introduced into this country by Commodore PORTER, on his return from the Pacific ocean after the late war. The Commodore gave a few of the seed to the late Lieutenant GAMBLE, then at the navy-yard in this city, who cultivated them successfully; but owing to some cause, perhaps, a prejudice existing against the squash, the name by which this article was introduced, or a combination of causes, it was not duly appreciated, and consequently not extensively cultivated. Some years since Lieutenant GAMBLE, was transferred to the navy yard New York, at which place he continued the cultivation, and it gradually spread over Long Island and along the banks of the Hudson. A gentleman of this city, Mr. THOMAS L. PLOWMAN, being on a visit two or three winters since at the city of Albany, had his attention arrested by one of the pumpkins being exposed at the bar of the hotel at which he put up. On enquiry, he learned that it was the article that had been served up at the dinner table for several previous days, and which was highly esteemed by all who had partaken of it. He procured one of the innkeeper, brought it to this city, and the following spring, distributed the seed among his friends. All who paid attention to the cultivation of this most delicious vegetable production have been abundantly remunerated. We have conversed with several persons who were acquainted with it in South America, who bear testimony to its very superior qualities. From all that we can learn it is known in different sections under different names. That, at the head of this article, is, we presume, the most appropriate. It most probably obtained the name of Valparaiso in consequence of being brought in the first place by Commodore PORTER, from the city of that name.

We are informed that in some parts of Massachusetts, and in the wheat growing districts of New York, it has almost entirely superseded the common pumpkin. It possesses all the good qualities of the pumpkin and squash, is neither watery or stringy, makes a most delicious pie, far superior to that made of the former, and goes much farther. It is also served up at table with meat, in the same manner as the squash, and if not superior, it is certainly equal to the best of the species. For all culinary purposes it is a most superior article, and as it contains a vast proportion of saccharine matter, we are persuaded that it would be highly beneficial to cattle, especially milch cows. Another great and very decided advantage is that the Citron pumpkin, sometimes erroneously called the Valparaiso squash, may be readily preserved throughout the whole winter, provided they are kept free from the influence of frost.

The seed may be planted at the usual time of planting the pumpkin in the spring. Mr. WM. P. JENNY, of New Bedford, in a letter to a gentleman in this city on the subject, says, "They require a rich moist soil; I planted in beds six feet a cross; they require considerable room, as they are great runners as well as great bearers. I have seen the ground literally covered with them. With us they frequently grow to the weight of 30 to 40 pounds, and I have no doubt that in the neighborhood of Philadelphia, being farther south, they would with proper attention in the culture reach the weight of 70 to 80 lbs. They are in deservedly high repute with us. They ought not to be planted near any other vegetable of the same tribe." They resemble in shape, a mellon, have no neck, are easily cultivated and in great demand, all brought to this market during the last fall being immediately bought up. We hope, inasmuch as many of the seeds have been distributed among our farmers during the last fall, that our market will through the coming season be abundantly supplied. Some in this vicinity the last year weighed over 40 lbs.

From the Wilmington Journal.

Agriculture.

Delaware and New Jersey.—We mentioned in our paper of last week that the agricultural society of this country had, through its president, Philip Reybold, Esq. received an invitation from several prominent and enterprising gentlemen of Salem county, New Jersey, to pay an agricultural visit to the marl pits and lime stone quarries of that region, and also to see in the adjoining county of Gloucester, the celebrated Durham stock of Mr. Edward Tonkins. The compliment was properly appreciated by the society and

a committee was appointed to represent it, and although the weather unfortunately most unfavorable for the excursion, we learn that a respectable number of the committee were in attendance, among whom were Edward Tatnall, Dr. Thomson, and Joseph, Tatnall of this city—Maj. Stockton of New Castle—Philip Reybold, Anthony Higgins, and Philip Reybold jr., of Red Lion Hundred. The committee was met on its arrival at Salem by Josiah Reeves Esq., of Alloways town, Mr. Caseby of Salem, and other gentlemen, and after spending a short time there—were by common consent handed over to the particular care and kindness of Mr. Reeves, who took them all to his house and to whose kind attentions and elegant hospitality, we have heard but one expression of opinion by the gentlemen who were the recipients of it. The whole of Friday was consumed in examining the marl pits about Woodstown, Mannington and Sweedsborough and paying a visit to Mr. Tonkins and his famous stock.

The rich specimens exhibited to us of the shell and green sand marl brought over by one of the committee, as also the lime stone of Mannington quarries, which are in the immediate vicinity of the finest beds of marl —must make Salem one of the richest counties of the state and the clay soil, which abounds there, a fine wheat country;—no better evidence was exhibited to the committee in this improving county, (to which nature has been so bountiful in natural manures) than was shown on the farms of the Messrs. Reeve's,—lands which cost them but four dollars per acre (and unimproved, were dear at that,) covered with cedar bushes and crab grass, and producing nothing like good grass or grain—with the aid of *lime* and *marl*, are now yielding three tons of clover and timothy to the acre, with twenty five bushels of wheat the past year—and corn, rye and other products in the same proportions. The same may be said of all the other lands there, improved in this way—No one without seeing, can imagine the contrast now made between the old sedge commons and the cultivated fields reclaimed from them—the increased value thus given to individual and national wealth, is most obvious and interesting. Specimens of Delaware marl such as were analized by Mr. Booth. State Geologist, (from St. George's hundred,) were taken over by the committee and compared with the best qualities of Jersey marl —they appear very similar, and are no doubt equally enriching if judiciously applied, being of the same great veins which cross each of those states and penetrate largely into Maryland—and containing by examination about the same fertilizing matter. We augur the best results to our agricultural interests of both states from this visit of practical and improving farmers to each other, and the good example set by New Jersey, will not be lost on those of Delaware, who are now boaring and finding marl daily, in most of the lower parts of this country.

Of the cattle of Mr. Edward Tonkins of Gloucesster, the committee speak in the highest terms of admiration and praise. His stock consists of pure Durhams—and of cattle 3-4 and 7-8th in this blood; they say, his cows and 3 and 5 year old steers of this description are models of the kind—and that the two enormous oxen now feeding by him and nearly 8 years old exceed any thing of the kind they ever witnessed. The average number of persons who visit them is supposed to be one hundred daily, from all parts of the country—and there is little doubt that they will each weigh from 2000 to 2500lbs. nett—which will make them the finest pair of cattle ever fed in the United States. A report of this visit will be read at the next quarterly meeting of the Society, The committee returned home safely on Saturday—highly gratified with their excursion and expressing their warmest thanks and obligations to all those who tendered to make their visit instructive and agreeable. Among those we heard particularly alluded to were Mr. Josiah Reeve and brother of Allowaystown, Mr. Caseby of Salem. Messrs. Smith, Riley and Squire Read of Woodstown and Mr. Tonkins of Gloucesster county, and Messrs. Ridgeway and Inskip of the Mannington lime quarries. The farmers of Newcastle county will be ever ready to reciprocate the attentions and hospitalities which have been paid them on their late visit, and we venture to predict to our Jersey neighbors, that although they concede the palm for the present to Gloucester county cattle, they will emulate the spirit which has actuated Mr. Tonkins and make the *Newcastle ox* out weigh them *all*.

P.

Russian Clover.

A variety of clover seed bearing this name was brought into our market, last year. by Mr. A. F. Palmer, and a few pounds were sold and sown. It grew up rapidly, and blossomed, with a somewhat long and conical head. Some sown by friend Paine Wingate, went to seed. It appears to be a thrifty variety, and will undoubtedly yield a good burden per acre. How it will stand the winter, is a question which we cannot now answer. We hope it will receive a more extensive trial another year. It will undoubtedly prove a fine crop for many purposes besides for hay, such as an excellent pasturage for bees, as well as neat cattle, &c.—*Maine Farmer.*

To measure Hay in the Stack.

Where hay is sold by the stack, or where farmers wish to know the quantity they may have on hand, measurement, instead of the tedious process of weighing, may be conveniently practised. The first object, is to ascertain the number of cubic yards contained in the stack. As the practice of building them round or circular, is by far the most common, it is necessary in ascertaining the contents of such, to measure round them at different heights but at *regular* distances, (omitting the part above the eaves, if it is a regular cone, as is usual,) and these measurements added together and divided by their joint number will give the mean circumference. The square of this is then to be multiplied by the decimal .0796; the product thus obtained is again to be multiplied by the height up to the eaves with one-third of the rise from the eaves to the peak, and this last product will be the number of cubic feet in the stack. Divide this by 27 and it will give the cubic yards. The measurement round, may be performed by a cord, drawing it close to the stack, and allowing about six inches in depth for loose hay. The height may be known with sufficient accuracy by placing a pole perpendicularly beside the stack, standing off a few rods, and observing with the eye.

If the stack is square or oblong, multiply the medium length by the medium breadth, and that product by the medium height, (which is the height to the eaves and one-third of the rise of the roof taken together,) and the last product will be the solid contents.

If the hay has been put up in as moist a condition as admits of safety, and has stood six months in the stack, ten cubic yards will make a ton. If it has been put up very dry twelve will be required; if chiefly clover, even as many as thirteen. If the stack is very large, and has been put up quite moist so as to need copious salting, eight or nine cubic yards will make a ton. According to the experience of the writer, the difference between the most moist and the most dry, at the time of stacking, is, after settling, about as eight to twelve. These circumstances are then all to be taken into consideration. But notwithstanding this variation, the method of measuring is far more accurate than that of *guessing* the quantity.

Genesee Farmer.

The quantity of rain which fell during the last month, was 2 inches and 19 hundredths. 2, 19

Pennsylvania Hospital, 3 mo. 1st. 1838.

For the Farmer's Cabinet.

Italian and Siberian Spring Wheat.

The following statement is made by Mr. Ammi B. Clark of New Hartford, Oneida County, N. York, a practical farmer of the first respectability.

He has raised the Italian for three years; in 1836 his crop was 25 bushels per acre;—in 1837 he ploughed in the stubble of 1836,—4 acres in two days with one span of horses, and he sowed and draged it in, in one day;—three days work, to 4 acres,—gravelly loam; no more work on it till harvest. It yielded 30 bushels to the acre, (no smut or rust) and weighs full 63 lbs. per bushel, the grain is beautiful, plump and bright: so much for the Italian.

He sowed also three acres of Siberian, soil the same as above, but not after a previous wheat crop, as in the other case,—got it in as well or better than the Italian—his yield of Siberian was 20 bushels per acre, 62 lbs. per bushel. He sells the Siberian for $2 00, and the Italian for $2 50 per bushel: and says he shall sow 15 acres to Italian in the spring, but none to Siberian.

J. Hathway.

Rome, N. York, Feb. 28, 1838.

PEAS.

Peas should be sown as early as may be; harrow them in, but they may be ploughed in, if thought best. Be cautious and see that they are not covered too deep. Oats, or some other plants, should be sown with them, in order to support them; as their stems will be too feeble to support them alone. The crop should be cut before the peas become too dry. Lay them in small heaps, and thrash them in the common manner when they are dry enough. The straw is good for fodder. Peas are good for fatting swine or cattle, and, mixed with oats, make excellent provender for a horse. Some people sow them on purpose for fodder, which is proved to be a most nutritious and heavy crop. They leave the ground mellow, and in a good state for a crop of grain. As to bugs, let the peas be soaked in some rich and suitable liquor, made hot, before sown. For the garden, peas should be sown about once a fortnight. Thus you may have green peas through the season. Sow them in double rows, and stick them between, having the brush, or sticks, placed firm in the ground.

There is an early sort, called the Washington peas, which are very excellent. For later peas, the marrowfats are generally preferred, and are very productive. Keep your peas clear of weeds, if you mean to have them do well.

Sweet Mutton.

Isaac Newton, of Delaware county, has brought to market during the past winter about two hundred sheep which he fattened upon sugar-beet, with some portion of corn. This mutton has been pronounced by all our friends, who have tasted it as fully equal to any which they have ever obtained in our market, being remarkably sweet and tender. It has acquired so high a reputation, that Mr. Newton has been unable to supply the demand. It deservedly obtained an extra price; and when our market can be supplied with mutton of this quality it will become an article of general consumption, and be esteemed, as in Europe, one of the most luxurious viands. It is proper to add, that Mr. Newton's sheep referred to above, were in part of the South Down breed, so highly prized in England.

DEAD ANIMALS.

All animals which die on a farm should be covered with mould or earth of any kind. Each dead horse or any animal thus treated, would throw out gass enough to impregnate five loads of earth with its fertalizing properties. To promote the speedy decomposition of animal bodies, a few bushels of lime should be thrown on them previously to being covered with earth or mould. After the decomposition of the flesh, the bones should be broken up and placed in the soil, where they prove both an efficient and lasting manure

Cutting and Securing of Grafts.

Now is the proper time for cutting scions for grafting. The growth of the past season should be taken, of wood plump and well ripened; and it is better, it is said, to take them from the extremities of the limbs, rather than the sprouts which are pushed from the trunk and from the large branches. Some prefer cutting grafts in the spring immediately before setting. This will answer for some kinds, as the apple, if the buds are not too forward; but for others, as the plum and cherry, it will not answer as well; the cherry in particular, as I have found by experience. Grafts cut in the spring, after the sap has begun to flow freely, the vessels become expanded and the buds much swollen, are liable to shrink and perish. It is a common saying with nurserymen, that "the graft should be a little hungry when set," to insure its taking well; that is, not too full of sap; neither should it be too much dried and shriveled. After grafts are cut, they should be labelled by tying with fine wire a bit of pine stick with the name written on it with a lead pencil, and buried in moist earth in the cellar. Other materials than wire, such as twine, bass-mat, &c. are liable to rot, and the labels thus to become displaced when the scions are taken up. W. W. B.

FURNISH YOUR BOYS WITH PAPERS.

A subscriber observed the other day, that his boys had rather disliked the business of farming, and when he took a number of the Yankee Farmer home to examine, the boys read it very attentively, and observed that they would do better if he would subscribe for it. He subscribed for the paper, *paid in advance*, and he says that his boys take more interest in farming, do better and are highly delighted in reading the Farmer. Many other farmers may do likewise with the same advantage.

SADDLE GALLS.

Saddle Galls are generally occasioned by an unequal pressure of the saddle, or by a saddle being badly fitted to a horse's back, and if neglected they grow into very ugly and troublesome sores. When these inflamed tumors are first discovered, cold water alone is frequently sufficient to disperse and drive them away, if applied as soon as the saddle is pulled off; but when that will not have the desired effect, by washing them twice a day in the mixture I shall here recommend, the cure will be readily performed.—Take of sharp vinegar, one gill; spirits of any kind, one gill; sweet oil or fresh butter, one table spoonful; to be well mixed before used.

Scalds and Burns.

The following composition is said by a Cincinnatti paper, to be an excellent remedy for *scalds and burns*. Mix lime-water and sweet oil together intimately; the relative proportions should be such as to produce a compound about as near a perfect liquid as cream. This substance is then to be applied to the scald or burn, with a feather or soft rag. Under the application, the pain of the severest burn *instantly subsides, and if only renewed is an effectual cure.* This application is not generally known, and as we have seen its efficacy frequently tested, can recommend it as the speediest and safest that can be used.

☞The regular monthly meeting of the Philadelphia Agricultural Society, will be held at their room in the Philosophical Hall, on the second floor, in Fifth below Chesnut street, on the third Wednesday, the 21st of March, at 11 o'clock, A. M. A punctual attendance of the members is requested. Nomination of new members will be received.

☞The regular monthly meeting of the Pennsylvania Horticultural Society, will be held in the basement story of the Philosophical Hall, at 7 o'clock, the preceding evening, the 20th of March inst.

ARTICLES.	Philadelphia, March 8.	Baltimore, March 7.	New York, March 7.	Boston, March 7.
Beans, white, per bush	$1 38—1 62½	1 25— 0 00	0 14—0 15	1 12— 1 30
Beef, mess, new, per bbl	14 00—15 00	11 00—13 00	14 00—14 50	14 50—14 75
Bacon, western, per lb	8— 10	9— 10	8— 10	.....
Butter, extra, per tub	12— 14	16— 20	20— 25	22— 25
Butter, fresh, per lb. [market,]	00— 00	20— 25	.....	25— 28
Hams, per lb	10— 11	13— 13½	10— 12	14— 15
Hog's Lard, per lb	9— 10	9— 10	7½— 9½	9— 10
Cheese, American, per lb	9— 10½	9— 11	7½— 8½	8— 9
Beeswax, yellow, per lb	25— 30	23— 25	26— 27	26— 31
Beeswax, white,	.....	38— 40	— 40	38— 40
Bristles, American,	42— 65	25— 65	15— 50	.....
Flax, American	7½— 8	9— 10	6— 7	9— 12
Flour, best, per bbl	8 00— 8 50	7 75— 8 75	7 00 7 75	9 50— 9 62
GRAIN—Wheat, per bush, Penn'a	1 55— 1 65	1 70— 1 80	.. ..	.....
Do. Maryland,	1 50— 1 60	1 45— 1 55	....	.....
Rye, per bushel,	0 90— 1 00	0 90— 0 95	1 00— 1 06	1 33— 1 37
Corn, do	70— 77	0 70— 72	75— 80	0 94— 0 98
Oats, do	36— 37	37— 38	40— 50	52— 55
Barley, do. Penn	85— 90	.....	95— 1 00	0 00—0 00
Peas, do	1 00— 1 25	75— 1 00	—	.....
HAY, Timothy, per 100 lbs	0 80— 0 85	12 00 per ton.	.....	18 00 per ton.
Meadow Grass,	70— 80	.....	.....	.....
Hemp, American dry rot, ton,	150 0—160 0	—	130 00 140 0	.....
Hops, first sort, 1837, lb	9— 10	— 9	5½— 6	6— 7
Plaster Paris, per ton,	3 25—3 37½	0 00— 3 50	3 52— 3 50	3 00— 3 25
SEEDS—Cloverseed, per bushel,	5 25— 5 50	5 00— 6 00	11½c. per lb	14— 15
Flaxseed, rough, do	1 40— 1 46	1 25— 1 50	1 25	.....
Timothy,	2 00— 2 50	3 25— 4 00	$16 pr. tierce	2 87— 3 00
Tallow, per lb	11— 11½	— 11	— 11	12— 13
WOOL—Saxony, fleece, per lb	00— 00	40— 50	40— 45	50— 55
Merino	46— 48	35— 40	35— 37	45— 47
1-4 and common	33— 36	25— 30	20— 25	33— 38

Fruit Trees.

We have received a "*Catalogue of Fruit and Ornamental Trees, Shrubbery, &c.*" cultivated and for sale by SAMUEL RHOADS, at Haddington, four miles west of Philadelphia. The catalogue is extensive, and embraces almost every choice variety. We are assured that orders may be sent with confidence to Mr. Rhoads. Orders are received at No. 258 Market street, where catalogues, with the prices, may be obtained.

☞ Correspondents are respectfully requested to forward their communications, as early in the month as may be convenient.

Chester and Delaware Counties.

A GOOD SIGN.—At a recent meeting of some of the farmers of Chester and Delaware counties, it was resolved to form an Agricultural Society. A committee of twenty from each county was reported to frame a constitution and by-laws for the Society. The committee, we understand will report at West Chester on the 17th of March. Farmers attend!

☞ Since the present number was prepared for the press, several valuable communications have been received. They will appear in our next.

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A MONTHLY NEWSPAPER,

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THE FARMERS' CABINET,

DEVOTED TO AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

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AT ONE DOLLAR PER YEAR.

For the Farmers' Cabinet.

Transmutation of Plants.

Mr. Editor:—It appears by a couple of communications in the 13th number of the second volume of the Farmers' Cabinet, that the obsolete doctrine of the *transmutation of plants* still finds believers, and advocates, among a portion of our respectable agriculturists. This antiquated notion was formerly very prevalent; nor is it surprising that it should have been so, when intelligent men were content to receive *specious appearances* for *unquestionable facts*, and had a ready faith for all the pretended wonders of Astrology and Alchymy. The present state of science, however, requires that all theories and seeming facts, which are inconsistent with the known laws and operations of nature, should be rigorously investigated before they are admitted; and hence we find that naturalists have been compelled to discard, as untenable, all such doctrines as *equivocal generation*, or *spontaneous production*, and the *transmutation of plants and metals*. Many errors of opinion have originated, no doubt, from our proneness to consider *successive phenomena* as connected with each other by the relations of cause and effect—when they have been entirely distinct—and their association altogether incidental. This I take to be the fact, in the supposed case of the transmutation of plants. When we see *one kind* of plant growing up, in places where we had every reason to expect *another kind*, it is perhaps natural enough—but certainly not very philosophical—to imagine that the *expected plant* has been *transmuted*, or changed, into the one which we find *actually growing*. The manner in which crops of different plants succeed each other, is very remarkable,—nor do we yet thoroughly comprehend the economy of Nature, in the distribution of seeds, and the wonderful preservation of their vitality; but it is unquestionably more consistent with all that we *do* know of the vegetable creation, to suppose that every plant, wherever found growing, has sprung from seeds of its *own kind*—than that its botanical characters have been utterly changed by the influence of external causes. We all know that seeds are extensively disseminated in the soil; and that the vitality of many kinds will remain dormant for long periods, under certain circumstances; but I have never met with any satisfactory evidence of the conversion of *one species* of plant into *another*—much less of the transmutation of *distinct genera*.* That different tribes of vegetables do *succeed* and *supersede* each other, in our fields and meadows, we every year see to be a fact. Our *wheat crops*, in this vicinity, are generally succeeded by a copious growth of *Bitterweed*, and *Foxtail grass*,—which spring up after harvest, and are then in turn superseded by the cultivated and natural grasses, until the soil is again disturbed by the customary rotation of crops. *Pine forests*, when cut off, are apt to be succeeded by a growth of *oak*; and so of many other plants. I have often sown *Timothy and Orchard grass*, plentifully, in low grounds; and have had, instead of those plants, an abundant growth of *Rushes*, and *Cyperaceæ*: but I never for a moment suspected that my favorite grasses had been *transmuted* into those vile weeds. I have also had *Bromus*, or *cheat*, to grow up where I had sown *wheat*; and I have often seen *cheat*, and *other species* of the *same*

* The beautiful theory of the *metamorphosis of organs* (such as that of leaves into *Bracts*, *Sepals*, *Petals*, *Stamens*, and *Carpels*) is a very different doctrine from that of the *transmutation of species*, and is in no wise available in sustaining the latter notion.

genus, growing where no *wheat*, nor other cultivated grain, had been sown; but, upon the closest investigation, I have never been able to find the slightest evidence of any plant being *changed* into a different one. It seems that Mr. Featherstonehaugh is of opinion plants *can* be so changed. Whenever Mr. F. shall have demonstrated the correctness of the old contemporary doctrine, of the *transmutation of metals*, I shall be prepared to receive the doctrine of the *transmutation of plants:* but probably not till then. I aver that all *ascertained facts*, and all *analogy*, sustain the opinion that *species* are invariably continued, and preserved, by means of *seeds;* whilst the same facts, and analogy, repudiate the doctrine both of *transmutation* and *spontaneous production*. The vegetation of seeds is nothing more than a developement of the embryo, or miniature plant, which already existed in a quiescent state—but with a perfectly definite form and character—in those seeds. The operation of *external causes* (such as soil and climate—light, heat, moisture, nourishment, &c. either deficient or in excess) may, indeed, effect a modification in the *appearance* of a plant—in the size, aspect, texture, &c. of its various organs—so as to produce *varieties*, or *monstrosities;* but they can never change the *specific character*—nor *convert one species into another*—much less can they transmute *distinct genera* into each other; such as *Wheat* into *Bromus* or *Timothy* into *Orchard grass*. The idea is repugnant to all the known laws and operations of nature; and can no more be tolerated, by a philosophic mind, than the doctrines of Alchymy and perpetual motion.

It is a curious circumstance, in the history of this popular error, that one unlucky grass—one particular species of the numerous family of *Bromus*, (*namely*, *B. secalinus*, or *cheat*)—should be selected, as presenting that peculiar form of vegetation, into which all the cultivated small grains are liable to be *transmuted*, whenever they lose their *own original character!* Let their pristine structure be what it may, they are all supposed to be converted into this identical *Bromus*, or *cheat*. Thus, we have gentlemen assuring us, that such dissimilar plants as *wheat* and *oats*, can both be so totally changed as to take on the precise form and character of that same curious *Bromus!* Nay, we even hear that *flax-seed*, being sown in a burnt soil, will often be converted into "*yellow seed*" (probably the *Camelina sativa*, of the Botanists)—a plant to which *Flax* has no more affinity, in its botanical characters, than it has to the *Horse-radish*, or the *Shepherd's purse!* It is, moreover, gravely inquired *how*, or *why*, this strange event happens? To which I reply by another question—which ought to be the first determined—*Does it happen?* It is always best, I think, to *ascertain* extraordinary facts, before we spend our time in trying to *explain* them. I consider it vastly more probable, that every plant springs up from its *own peculiar seed*, than that it should be the *transmuted product* of any other *distinct species*. I have not the presumption to imagine, that I can succeed in eradicating a notion, which has resisted the learned efforts of the celebrated *Linnæus*, for the greater portion of a century. All I aim at, is to submit a few hasty remarks, in the hope that they may induce some of your readers to scrutinize the subject a little more closely—and to examine the doctrine in a spirit of philosophic caution, instead of taking it for granted. W. D.

West Chester, Pa. March 3, 1838.

For the Farmers Cabinet.

Veterinarian.—No. 3.

In my last number I treated of urinary calculi generally, and of those in the kidney in particular.—I shall now speak of

2. Calculus or stone in the ureter.

It has been intimated, that the ureters are two narrow, fleshy tubes, commencing with wide funnel-shaped mouths at the kidneys, and opening on the inner coat of the bladder.—Their office is to convey the urine to the latter organ.—When a stone forms in the kidney, it readily passes into the expanded mouth of the ureter, before it has acquired much size, and may reach its destination in the bladder, without causing any great inconvenience. Owing to this circumstance, stone is but rarely found in the kidneys.—Sometimes, however, the calculus is arrested in its passage through the ureter—inflammation and tumefaction is produced, and the urine

accumulates above the obstruction. This condition of things is productive of severe pain, and great febrile excitement. As the ureter becomes distended with the urine, the stone is often liberated, and gradually sinks lower till it reaches the bladder, when the symptoms rapidly subside. But, the stone may become so impacted that it cannot move—in which event, one of two things, equally fatal must happen.—Either, ulceration will take place at the point of obstruction, and allow the urine to escape into the cavity of the belly—or, the ureter will burst from over distension. The violent symptoms may subside for a short time, but the respite is delusive.—The presence of the urine, in the cavity of the abdomen, will speedily produce peritoneal inflammation and destroy the animal.

There are no signs whereby the presence of a stone in the ureter can be positively determined, during the life of the animal—nor any *special treatment* which the case admits of. The pain and fever may be accompanied with demonstrations of disease in the urinary organs, and should be combatted, on *general principles*, by the use of depletory and relaxant remedies.

There are, however, some French veterinarians, who recommend in cases where the stone in the ureter is suspected, to pass the hand into the rectum,—feel for the obstructing body, and endeavor to press it forward to the bladder.—If the effort should prove unsuccessful, they again propose, to cut through the bowel and ureter, and extract the stone through the anus.—Both propositions would be found extremely difficult of execution, if not altogether impracticable, and the latter operation, would, probably, hasten the final catastrophe, by opening a direct passage for the urine into the cavity of the abdomen.

3. Calculus or stone in the bladder.

A stone may either originate in the bladder, or be derived from the kidney, in the manner described.—No doubt many stones do pass off through the urethra, and are happily disposed of while small.—But owing probably, to a part of the bladder depending, horizontally, below the neck of the organ, they are sometimes retained until they acquire a size which will no longer permit them to escape.—The animal may then be said to have stone in the bladder.

Unfortunately *such patients* cannot render their sufferings sufficiently intelligible to enable us to form certain conclusions respecting their diseases.

The signs of stone in the bladder are such as strongly indicate an affection of the urinary apparatus—especially, during what is called *a fit of the stone*—for the symptoms vary greatly in intensity. There is a frequent, or almost incessant, straining to make water, without obtaining any, or only very partial relief.—the little which passes being often tinged with blood;—A shivering of the posterior extremities; frequent change of position, looking mournfully towards the flank; fever comes on, the appetite fails, rumination ceases, and the muzzle and mouth becomes dry and hot.—These are the *presumptive signs* of stone in some part of the urinary organs, but they are not *conclusive*. The hand must now be introduced into the rectum. The bladder will be easily felt, forming a round, elastic tumor within the pelvis.—By gentle pressure, the contents of the bladder will, generally, be discharged, and if a stone exists therein, it can be felt, and its size determined.

If the animal is not in beefing order, or, is too much diseased to be used in that way, the operation for removing the stone should be performed.

Having thrown and properly secured the animal, the operator will cut down upon the urethra, where it passes round the bone of the pelvis, below the anus.—By cautiously using the knife, he will easily enter the urethra.—A straight grooved directory, is then to be carried into the bladder, and the point of a probe-pointed bistoury, or other convenient instrument, carried along the groove—cutting upwards and outwards, to one side of the anus, until the neck of the bladder is sufficiently divided to permit the extraction of the stone, which should be done with forceps constructed for the purpose.—Or, the right hand may be carried within the anus, while two fingers of the other hand are placed in the bladder.—Thus situated, the right hand will direct the stone between the two fingers in the bladder, which serve to guide it through the wound. If an artery of much size should bleed, a ligature must be applied, by means of the tenaculum or needle. Where the external wound is large, one or two stitches may be used, but in such way as to allow the urine to escape freely through the lower part of the opening.

It has been recommended to facilitate the first stage of the operation by a previous one. To cut down upon the penis, before the scrotum,—draw it forward, so as to obliterate its curvature, and to pass a directory, within the urethra, as a guide for the knife, in cutting into that canal. It appears to me that such a course would be attended with more trouble and difficulty to the operator, and more suffering to the animal, than to proceed, directly to final operation, as I have recommended.

After a few days, the urine will resume its natural channel, and the wound heal.

New Garden, 2nd Mo. 25th, 1838.

For the Farmers' Cabinet.

Cultivation of Corn.

The best method to ensure a full crop of corn, according to the quality of the land, in my opinion, is simply this; plough your ground well, completely turned six or eight inches deep, early in the spring, and about the twentieth of the fourth month harrow twice lengthwise; great care should be taken not to displace the sods or the furrows. Then, if the ground be dry, as it frequently is about this time, pass the roller over the field; then harrow once or twice more according to the tilth of the land; mark the field three feet apart as near east and west as possible, and cross it five feet apart as near north and south as convenient, but do not mark with the plough as that will turn up more or less of the sod, or leave openings, but do it with a log with handles like those of the plough; this makes a neat mark, and the earth so moved is finely pulverized, and no sods will appear on the field. This should be done by the twenty-fifth of the fourth month, for this reason, the ground is in better order for planting about this time, eight times out of ten, than immediately before or after, and for the farmers of the middle states, it is decidedly the best time to plant. Sufficient care is but seldom observed in planting. What I call having it well done is, to drop in each hill four good grains, and cover them over with mould one and a half inches deep; care should be taken that the hoe is not drawn under the grains, as that often raises them too near the surface, where there is not sufficient moisture for them to vegetate. The hills should be broad, so that all the grains may have an equal chance to vegetate and come up straight, not springing from the side of the hill in a horizontal direction. Towards evening of each day you plant, let the part planted be rolled, or, if several hands are planting, the roller may follow, and if the ground should become wet, wait till it is dry; you had better be idle than to plant when the ground is too wet. The first rolling may frequently be omitted, but sometimes, and on some land, it is highly necessary. Harrow your ground with the furrows and quartering, but never at right angles, as this would turn up sods; my reason for being thus nice about displacing the sod is this; the egg, from which the cut worm proceeds, being deposited in the grass the fall previous (I say in the grass, for this reason, they are not found upon lands that have been tilled two years in succession) and being well turned six or eight inches deep, places the egg so deep and cold as to greatly retard the worm from coming forth, and by harrowing well, but not deep, fills up the openings, and rolling after planting, presses and pulverizes the ground, prevents washings, causes the ground to become warmer at the surface, the grain to vegetate quicker, and all at the same time, and the worm, when it does come forth is very feeble, and being buried at the depth of eight inches and the openings all closed and rolled, they cannot get at the corn in time to injure it, if planted when and as already mentioned. The worms are about half the length of a common pin, and about the same in thickness as a pin when they are first discovered at the corn; attached to them is a small web resembling that of the spider, with which they immediately cover themselves when disturbed. When land is ploughed deep in autumn or early spring, the openings closed and rolled and the corn tilled with the cultivator, or sod not broken, I have some doubts about the eggs hatching till they are brought nearer the surface. I ploughed a field between six and eight inches deep for corn early in the spring, treated as above described, farmed with the cultivator, the corn was not injured by the worm and made sixty bushels per acre. The spring following the field was ploughed and sown with oats, when they were about half grown or more they were blown and beaten down; a second crop sprung up immediately, and I scarcely knew whether to cut the first crop or wait for the second, however I cut the first and owing to the vast quantity of green oats, the crop was compelled to remain in the swarth four days, by this time all the cut worms of that field and of some others, for what I know, had collected under the swarth to feed on the green oats; in every horse track or small hollow that was under the swarth there were dozens; I counted fifty-three on four inches square; they had cut the green oats so as to cover themselves with the chaff, and they were generally found under each swarth, and I think would make about one bushel per acre—they were full grown. Now the eggs from which this army proceeded must either have lain in the earth at the depth the plough placed them or they were deposited in the ground while, in with corn, or on the field after the oats were sown, or perhaps several years ago. I presume they are no great travelers, or I should have supposed some of them were from a distance.

I have done looking after the worms. The corn once up, attention must be paid to it. I go over and replant all that have not two good stalks to the hill. Corn planted in this way, the furrow being shallow and the surface smooth by rolling, will not admit of the fallow harrow; therefore I use the cultivator, and prefer one that is much worn while the corn is small, as it does not cover the corn or disturb the sods; when the corn is out of the power of the worms, if there be any, thin to

two stalks to the hill. My corn is the Virginia gourd-seed; some kinds, perhaps, would do thicker. I run a two horse cultivator between the five feet rows which disturbs the ground and grass as they should be, and one horse the other way; the two should be used frequently, so as to keep the ground clean and mellow. When the corn is fit to plough put one light furrow to the side of each row; this should be done while the corn is small, to cover the little weeds that may have started in the hills; in a short time put one heavy furrow to the other side of each row, which must be followed by the hoe to cut out the weeds, &c. If the sod is tough, plough the middle shallow, but if there is little or no sod, thin with two horses and plough, stir them deep. After harvest, if the grass begins to grow or the season be dry, pass the two horse cultivator, but with shorter teeth than before harvest, over it again; if this does not make a crop put on lime till it will. Ploughing just before planting, turning the eggs and grass down, and harrowing and rolling as already described, is sure to produce a good crop; when it can be performed well the ears will be larger than if ploughed at any other time, but will not ripen so early —but to this mode there are objections, the grass roots get strong, the ground settled, and sometimes or often dry and baked, the weather warm, very hard for the horses, and cannot be pulverized well without tearing up the seeds and worms, and the eggs which have been on or near the surface exposed to the sun till so late a period, soon become active depredators, and the open cloddy state of the ground afford them all chances of getting to the surface. Light land, ploughed in autumn, produces corn of good quality, it grows off well in spring, ripens early, but the ears are small in comparison with those from spring ploughed land; and much more tillage required, and rather heavy land ploughed in autumn becomes so compact by planting time as to render reploughing or double furrowing necessary, and even then produces small ears, whereas if ploughed early in spring, before night freezing is over, produces good corn both in quality and quantity—some land is too heavy and tenacious for corn, plough it when you will, but such should be top dressed and kept for pasture.

EPICURUS.

Mill Creek Hundred, New Castle Co. Del.
2d Mo. 24th, 1838.

N. B. I have frequently known fall ploughing to be reploughed or double furrowed before planting, and I have almost as frequently known the worms to be very bad, often destroying the crop. This is produced, I presume, by turning the eggs up for the sun to animate them, whereas they would not be ready for the corn till out of their way, if the reploughing had been omitted. I have frequently heard farmers complain that after ploughing in autumn, and reploughing in spring, and putting the land in fine tilth, the cut worm entirely destroyed the crop. Turn the eggs down in autumn, out of the way of frost, and to the surface and sun in the spring, and if the corn is not injured it is because there are no eggs there. E.

To the Editor of the Farmers' Cabinet.

On Sheep.

The sheep fed in this section, are mostly brought from the west,—are of a small size, their weight, from twelve to eighteen pounds, per quarter,—but few are bred here, and the farms being divided into small enclosures, large flocks cannot be kept advantageously. The full blooded merino, is a valuable breed, a few of them, should be kept by every farmer, for his own family use. They will shear, on an average, about seven pounds of wool in the dirt, and will, when fat, weigh fifteen, and sixteen pounds per quarter. By the industry of the family, and a small assistance from the manufacturer, the house can be supplied with fine cloth, flannel, &c. The cost of manufacture would not exceed five cents per yard, more than coarse, or common cloth, and it would sell for about double the price.

A friend of mine living in Chester county, within a few miles of this, has a buck, which he imported from Devonshire, England; his live weight is three hundred pounds; short legged, heavy bodied, and well quartered, and is considered a good feeder by the best judges,—his wool is long and coarse. This stock crossed with the merino would be valuable on account of the wool; being more suitable for stockings, blankets, and cloth for working men, and would make good feeders. The ewes, when fat, will weigh twenty, to twenty-five pounds per quarter.

When few sheep are kept together, they will thrive better, and produce more wool. When they are found amiss, open the hole between their hoofs, where they join the foot on the upper side, and attend to it a few days, until the discharge is regular from it; keep their locks clean; salt them frequently, and with such treatment, a flock may be kept nearly free from all diseases.

A BRANDYWINE FARMER.

Wilmington, March 3, 1838.

A good farmer is generally a true friend, an affectionate husband, an excellent parent, and an honest man; and it is an established axiom that a *well tilled field*, denotes the supervision of an enlightened mind.

To the Editor of the Farmers' Cabinet.

Preparing Corn Stubble for the Plough.

As the season is approaching, in which farmers prepare their corn stubble for the succeeding crop, I propose throwing out a few hints on the subject of preparing it for ploughing—to be left in the best condition for receiving the seed of, and taking off, the following crop. Since experience has confirmed that cutting off corn at the ground, is preferable, in an economical point of view, to topping it above the ear—that method has generally been adopted by those farmers, who make economy a prominent article in their agricultural creed. It might be asked, what can be done to make it in a better condition for ploughing, than by cutting the corn off at the ground! Farmers, try it for yourselves.

The object to be attained, is to prepare the stubble to be in such a condition, that most of it may be ploughed down; and being ploughed down, not to be drawn up again with the harrow, in putting in the following crop:—In the practice of cutting off corn at the ground, unless more especial pains be taken, than is usually bestowed, a stubble of some six, eight, or ten inches will be left. In this case farmers sometimes scalp them off even with the ground with a hoe, to make it in a condition more suitable for ploughing.

Another method has been adopted by many farmers, which has been found to answer the purpose better than scalping. It consists in passing the harrow twice over a row, or in other words, *going a round to a row.* This should be done early in the spring before the ground becomes completely settled. Where both plans have been tried in the same, or adjoining fields, it has been found that that which was harrowed, the corn stubble ploughed down better—and those that were ploughed down, were less drawn up than where they were scalped. Hence, they would obstruct less in applying the seed, and taking off the crop. Again I would say, *farmers try it for yourselves!*

A.

Chester County, Feb. 24, 1838.

For the Farmers' Cabinet.

Remarks on the Treatment of Animals.

I have frequently observed in the daily papers and other prints introduced for popular view, *receipts* for the cure of wounds, sores, and other complaints in horses; some of them inert, and others excellent, if judiciously used; but most of them—given, as they usually are, without special directions for the discriminate use of them—positively injurious. There is the same necessity for the exercise of judgment, and for the observance of care in the employment of curative means in practising successfully upon the inferior animals, that there is in the treatment of the diseases of the human family. A man can no more be a good horse doctor without applying the energies of his mind specially to the subject, than he can become eminent in any other pursuit in life without toiling to make himself so. Quackery therefore, even upon the brute creation, should be discountenanced, and in the graver diseases of our domestic animals, advice should be sought in an intelligent quarter. But as there are frequently occurring complaints and casualties of an ordinary and simple character, we may trust in such cases to our own faculties, provided, we make a proper use of them. A little observation, a just appreciation of the recuperative powers of nature, with which all animals are endowed; and the exercise of common sense, and humane feelings, may be said to embrace all that will be found necessary in such cases. It is pity enough that the horse should have so many ills incident to his domestic life, and to our abuse of him. We ought not, therefore, by our ignorance and officiousness to add to his suffering by resisting, as we often do, the kind and persevering efforts which nature makes to restore him to health. We first chafe a poor beast by mal-adjusted and unsuitable trappings; next fret and jade him by the repeated use of them, until the galled part generates into a sore; and then seek a remedy in painful and injurious nostrums; whereas, by simply keeping the part clean, covering it with some unirritating and balmy application, and defending it against further mechanical injury, *nature* will speedily effect the cure. We take a young horse from the habitual use of pasture or soft food; put him into a stable and feed him upon grains, hay and other harsh food, and thus cause the tender roof of his mouth to become so swollen and inflamed that he cannot eat. He consequently pines for want of sufficient nourishment. The farrier tells us that he has the *lampas*, and immediately with the *twitch* screws up his upper lip to agony, in order to render him incapable of resistance; and then sears the whole roof of the mouth with a red hot bar of iron.—Whereas by restoring the poor animal to his wonted soft food for a week or two he would be effectually cured; and by the gradual introduction of the harsher foods into his messes, a return of the complaint would be entirely obviated. Thus it is also with a variety of the complaints of the kind, causing lameness, swellings, &c.

A horse is transferred from the country, where he has been accustomed to soft and

natural roads and clay floors, to towns and cities, where he is driven over turnpikes and stone pavements and lodged on plank or perhaps stone floors. The consequence of such a transition, is that he becomes lame from swelled limbs, splints, windgalls, quittor, &c., &c. Forthwith the poor beast is subjected to rowelling, firing, blistering, caustics, aqua-fortis &c., for the purpose of curing which, in most cases, a removal of the causes alone is necessary—as nature will do the rest. These are but examples of the tissue of errors extended throughout the whole treatment of unsound horses. The whole system is a bad one.—It is cruel and unprofitable quackery. I would therefore advise those who keep horses to seek the advice of an intelligent and skillful veterinary physician, when such a one can be found, in all obscure and complicated diseases; and in the ordinary complaints and casualties, to beware of resorting to harsh and tormenting, as well as disfiguring remedies; to learn how adequate nature is to remove diseases, and to repair injuries, provided she is not in her operations impeded, resisted, baffled, nay! as she often is, really subdued by meddlesome man. There is that certain, though inexplicable power, in the animal economy by which diseases may be cast off, and injuries repaired—a principle inherent in and inseperable from life, and on this we should mainly rely. We may render ourselves auxiliary to the cure, but cannot force it contrary to nature's design.

MEDICUS.

For the Farmers Cabinet.

Borrowing.

The lender is servant to the borrower.

Will you permit an old fellow who has seen some service in farming, and who has been a subscriber to your very useful paper since its first publication, to occupy a few lines in the Cabinet, for a purpose that perhaps some may consider of little importance.

The purpose indicated by the heading, to wit:—Borrowing, in many neighborhoods, and amongst considerate thoughtful farmers is not much practised; yet there are individuals who through downright carelessness and neglect of duty to themselves and their more provident neighbors, are much given to this species of imposition. A proper spirit of accommodation, and a disposition to oblige and reasonably to promote the interests of neighbors, should always be encouraged and promoted, but it should never be carried to the point where it would assume the character of a regular systematic plan of operations.—*Those who borrow, should resort to it as seldom as possible, and always return the article borrowed as early as practicable, and be sure that it is returned to its owner in good order.* This is but a very plain principle of common sense and justice, and yet there are very frequent instances of its infringement, and that among well meaning, yet inconsiderate people. On the farm that I was reared, care was taken to keep the implements of agriculture in good order, and to have a proper supply of them, but we had neighbors in good circumstances who instead of depending on their own resources, were constantly borrowing, first one article and then another, the year round, and it was somewhat of a rarity for them to send any thing home again; for they seemed to think it trouble enough to come for it in the first instance.—During my boy-hood, it fell to my lot when a loaned article was wanted to trudge off to the neighbor who had borrowed it and bring it home, and it was not unfrequent that it was unfit for use when brought home, and sometimes there was demur at the surrender of a borrowed article. Now I hope there has been improvement in these matters since I was errand-boy, yet I fear there is still room for admonition on the subject of borrowing, and I concluded to drop you these few lines, that the boys of the present day, may know what has been the experience of those who were boys fifty years ago but are now

OLD MEN.

For the Farmers' Cabinet.

Bees.

I have had some experience in the management of Bees for upwards of thirty years. The first knowledge I had of the *miller worm* was about seventeen years ago, since which period they have been very destructive to my bees, particularly in wet seasons. I have read with attention several treatises on the history and management of bees, the proper construction of hives, &c., in order to prevent the ravages of the worm; but my success has not been equal to that of the authors. I therefore adopted a plan of my own—simple it is true—but it has so far proved successful. It is as follows:—I have several hives ready made, of sizes suitable for the swarms; I then nail two uprights to the hive; through these uprights I bore with 1 1-4 inch augur a hole; through these holes a strong wooden pin is inserted, by which the hives are hung upon a pole, made flat on the top to prevent them from swinging. I have the bottom of the hive elevated four feet from the ground. By this means, the worms, when they begin to crawl, usually fall to the earth, and not being able to re-ascend, perish—whereas, when the hives are placed on a bench, as is usually the case, the worms, losing their foothold, fall, but are en-

abled to make their way back again, and most generally, in process of time, destroy the bees. Again, bees, suspended from a pole, as above described, are less likely to fight and rob each other, than when placed on a bench. Care should be taken to place a few boards in such a position as to prevent the sun from heating the hives. In the fall of the year the hives should be taken off and placed in some suitable situation to remain during the winter. In my judgment there is no need of a bee house, as it is only a harbor for insects, particularly ants and miller worms.

If you design to put on cap hives, make the braces of a sufficient length to admit the hive. In regard to cap-hives I have had but little success—sometimes the bees would work in them, at other times they would not. I have generally succeeded much better by *splicing* the hive. When I see the comb coming down, and the hive getting full, I lengthen the hive six or eight inches by screwing on the splice. This is easily done. Make the splice so as exactly to fit the hive, set it on a bench, then take off the hive and place it on the splice, and with two small strips of thin boards screwed to each, fasten them well together, and the bees will continue on their labors as usual. I have sometimes neglected splicing and the bees have extended the comb six inches below the hive, and at the same time there was a cap hive on. Bees will fill the hive with comb, and make a certain quantity of honey and no more, although it may be in the honey-making season, for this reason, that they will always leave open cells sufficient in the comb for their accomodation through the winter. Bees placed on a bench will, in the latter part of the season, "hang out," those in this situation will cease their labors unless the hive be spliced. I weigh my hives every ten days, and mark them, so I know exactly how the bees are getting on. I make the hives out of white oak boards; yellow pine will do, but white oak is the best, as this wood, when well seasoned, tries the teeth of the worms so that they cannot bore, whereas white pine or cedar is not proof against them. The worms generally commence boring the hives the latter part of the season. They penetrate the wood, in which they pass the winter in a torpid state; in the spring they make their appearance, and frequently destroy a hive in a few days. I screw my hives together so that they may be readily taken apart without injury. I have in the winter season unscrewed a hive and taken out two or three reefs of comb and honey; but this plan will not answer. In preserving bees through the winter, be careful to select those hives that contain the largest number of bees and comb. Fifteen pounds of clear honey will be sufficient for a large hive. I have kept fine hives over; in the spring they would weigh from forty-five to seventy pounds clear of the hive, and these hives were just as likely as not to be the last in swarming. Bees that have consumed their winter stock, will commence their labor much earlier than those that have a supply remaining. As I weigh the bees I know something about it. I can weigh a hive in a minute. My plan is to hook under the pin of the hive, and take a hog gambrel and hook over it; then raise it up clear of the pole and you have the weight without disturbing the bees.

I find, from experience, that narrow long hives, say ten inches square and two feet long, are much better than those made wide and large. When I first commenced keeping bees I made the hives wide, from fifteen to seventeen inches square. The bees would remain only a few days, make a little comb in one corner of the hive, and then swarm again, and either go off entirely, or return whence they came. In the narrow hives they generally appear contented and do well. Sometimes, however, they appear unmanageable—in this case I do not meddle with them, and in the course of a few days they become quiet. M. B.

West Jersey, March 5, 1838.

For the Farmers' Cabinet.

The Roller.

This implement which has come into general use, only within the last few years, is of so deservedly an useful character, that it now ranks in importance with the plough and harrow—and no farmer can consider his stock of agricultural implements complete, without the possession of one of these. They are principally constructed on two plans, the one consists of a single cylindrical piece of timber set in a frame, in which it revolves, by gudgeons, the other, of two such timbers, each of which is half the length of the single one. The latter is preferable in the turning of the angles of fields and lands. The objects to which it can be advantageously applied are various:—Grounds, which remain cloddy after being ploughed and harrowed, can be reduced by the roller to a state of pulverization, which with the harrow only, could scarcely be accomplished. Crops, succeeding Indian corn, may be taken off with much more facility, particularly if they be heavy and lodged, by having the corn stubble and other protuberances levelled down with the roller.

It is of considerable utility in mowing grounds, by pressing small stones in the ground, which would otherwise impede the scythe in the mowing, and by levelling weeds to the ground, which greatly facilitates

their decomposition. Grain, which has been frozen out during the winter, may be considerably benefitted by passing the roller over it and bringing the fibres of the roots in contact with the earth again. There is another object to which I would invite the attention of farmers—in the use of the roller—that is, in the preparing of their ground for corn.

The roller may be used to great advantage on any sod after being ploughed, by making the ground more compact, which will facilitate the decomposition of the sod and render it more impervious to drought. In corn ground in addition to the above, it prevents the furrows from being moved by the cultivator in the dressing of the corn and renders the ground in much finer tilth than it would otherwise be with the same labor, without the roller.

A

Chester County, March 16th, 1838.

To the Editor of the Farmers' Cabinet.

Canada Thistle.

Dear Sir,—Having seen an article in this month's number of the Famers' Cabinet, requesting information as to the best means of destroying the Canada thistle, I send you the following:—In all grass lands the only thing necessary to be done is to seed it down with timothy and clover, taking care first to prepare it well by ploughing, &c. My father-in-law, one of the best farmers in Washington county, N. Y. had a piece of grass land completly overrun with them. Three years ago he ploughed them under and seeded the land with timothy and clover, mixed with oats. The first year the thistle was nearly all destroyed—the second year he had a fine yield of grass, as also this last year, no thistle appearing among it—but on stony lands it is impossible to get rid of them at all, at least by any means as yet known.

E.

New York, March 20, 1838.

To the Editor of the Farmers' Cabinet,

Farming in Kent County, Md.

I have read in your valuable paper, reports of what farmers are doing in many parts, and have thought it fair that they should know something in return about us, in Kent county, Maryland, and, if it be of no edification, it may, nevertheless, afford some amusement to your numerous readers.

Our farms are large; three hundred acres is rather a small farm. We plant large crops of corn, say eighty to a hundred acres. The cultivation of this crop requires a number of working beasts and hands; to feed those hands we must raise a good number of hogs; the hogs eat up the corn, and we eat up the hogs, so that at the end of the year we have but little surplus for market. If a farmer raises two thousand bushels of corn and sells six hundred, he is doing well; beside all this, the farmer keeps a saddle or harness horse, and sometimes both. It is very common to say "the land is too poor—I cannot live on it." However we are going to do better, since our honorable geologist has paid us a visit and innoculated us with the marl fever. I think we shall now "go ahead." I should be very much pleased if some of your readers would give us the result of their experiments with green sand, its component parts, and the quantity to put on an acre. We have large quantities of it, but have little practical experience in regard to its application. Your friend, Kent.

For the Farmers' Cabinet.

Apple Orchards.

I have observed that the generality of orchards decline in about twenty-five or thirty years. This is owing to many causes. First, the sowing of oats, which seldom fails to kill the trees; it ought never to be done; again, in about the time specified, the tree has exhausted the land, which is too poor to support it. I would recommend the following plan—the benefit I have proved. Grub round the trees and take the mould and grass away; then manure them; take off the old scruffy bark—a spade is a good implement for this. Then let your hands take a stick about two feet long (the end in each hand) and rub briskly up and down; this will, in a small degree, loosen the bark, and give room for the sap to flow freely. After this you may put round the trees, say the second year, corn cobs; those from your hog pen are best. Cut off the sprouts but no large limbs.

A Subscriber.

To the Editor of the Farmers' Cabinet.

Culture of Hemp and Flax.

We frequently see the culture of silk recommended in the Cabinet. It would, in my judgment be of greater interest to the farming community in general to pay more attention to the culture of *wool*, and also to that of *hemp* and *flax*, as the wearing apparel made from these articles is far more serviceable, than that of silk. Let the farmer give his sons and daughters a good education; then let them labor with their own hands, and thereby become familiar with that industry and economy that is essential to the successful and thrifty farmer. First, let the son take hold of the plough; learn the management of a farm; acquaint himself with the different kinds of stock—in a word, let him be instructed in all that is essential to constitute him a

good *practical agriculturist*; then when he sets up for himself, he will labor under no embarrassments arising from a lack of knowledge in his calling. Every one ought to be deeply and thoroughly impressed with the vast importance of understanding fully his duties, and discharging his obligations with fidelity and punctuality.

The wearing apparel of a farmer should not only be prepared by his industrious wife and daughters (and every farmer should be so blest) but it ought to be the production of his own farm, instead of going to cities and towns to purchase imported broad cloths on credit, by which, at the end of the year, his store bill will balance that of his farm. Too many farmers and mechanics, deeming the employment in which they themselves have prospered, too humble for their sons, have directed them to the fancied dignity of the learned or mercantile professions. Extravagance, of course, kept pace with this erroneous principle—agriculture, the main business of our country and the source of its wealth, was neglected—to this was added, the successive failure of crops—provisions doubled in price—*the importation of foreign grain commenced;* and when pay day came, as it always assuredly does, thousands, who thought they stood firm were reduced to bankruptcy, either by their own indiscretion, or the failure of those for whom they had vouched.

Our forefathers with industry and economy succeeded in obtaining a decent and comfortable living for themselves and families; but our expenses, have on an average, within the last thirty years been quadrupled. No necessity existed for this—nothing can justify it. To correct the evil we must wed the hands to labor,—the head to knowledge—we must practice economy and industry. Those who have forsaken rural labors, and been disappointed in their Utopian dreams of riches and happiness, should return to their legitimate calling—they will be kindly received, and amply remunerated for all the labor they may bestow upon the soil, which never refuses to yield a rich return to the fostering hand of industry. We live too high—we dress too fine, and we have the fashion of cooking, eating, and dressing from at least four different European nations to follow.—Let every farmer's daughter then, be fully instructed in all that pertains to intelligence, industry, domestic economy, in all things necessary to render her a frugal *industrious house-wife*—a comfort to her husband and an ornament to society. Our nation is as one family,—whatever benefits one class or one district, indirectly benefits the whole; so that what injures one class of people, or one region of our country, indirectly inflicts an injury upon all. A reformation in the habits of the people is necessary to a system of industry frugality, and prosperity.

N. P.

Lancaster Co., 3d Mo., 1833.

For the Farmers' Cabinet.

Fruit Propagation Farms.

I would suggest for the consideration of farmers and others, whether the subject stated below is not of sufficient importance to lay before the State Legislature for their action, that if approved, it might receive the fostering care of the government—and as the subject is one in which party can scarcely find a place, both bank and no bank men might unite—nor do I see that the warmest friend to the cause of temperance need be alarmed thereat, as there would be no necessity for making more cider, wine and whiskey, because we had good apples, pears, peaches, plums, cherries, &c. than whilst we have those of an inferior quality; nor do I suppose that there would be as much, for our interest tells us that we can get a better market for our fruits of an extra quality, in their natural state, than in any other way.

The plan I would suggest would be for the State to procure a tract of land on each side of the mountains, or in other words, one in the eastern, the other in the western section of the State, of two hundred acres each, and appoint, in such way as the Legislature may judge best, suitable persons to have charge thereof, and be called Fruit Propagation Farms, the expense to be borne by the State; as it would be several years before there could be much benefit derived from the fruit. The land not planted might defray a part of the expense—but my views do not extend to a present money making concern, or else I would by all means recommend a private company. In the purchase, care should be taken both as to soil and situation. It should be properly prepared previous to planting—I would neither lime nor manure much, as I am of the opinion that either of them has an injurious tendency on fruit trees, the ground being of a good quality and not reduced by cropping, is the best, I apprehend, for the health of our fruit trees, which, like the human family, enjoy the best health when living in a state of natural simplicity. A portion of the ground being properly prepared should be planted with the seeds of apples, peaches, plums, pears, cherries, &c. Every year, and at early periods, set out the plants in situations where they might remain, if found worthy—but inasmuch as there would not be found one perhaps in fifty that would be worth preserving, their distance apart need not be great—in this way I would propose proceeding to plant out several hundreds

every year, and have them well cultivated to hasten their maturity, and when arrived to a bearing state, (which for some kinds would require several years,) all such as were not of a superior quality should be removed to make way for others; but such as were found on a full trial of superior quality, should remain to propagate from, and grafts or buds freely given to such as applied for them. Thus, in time, the whole country would receive an extensive benefit in the increased value of its fruits—if it should be thought advisable, a portion of the ground might be appropriated to the culture of such of the present varieties as are well known to possess superior qualities, thereby increasing the facility of acquiring the desirable kinds, by nursery men and farmers, in setting out orchards. The primary object, however, should never be lost sight of, to wit, the propagating of *new varieties*, as common experience has taught us that nearly if not quite all kinds of fruit degenerate, some sooner, some later; the trees becoming sickly, and fruit decaying much sooner than it did originally —every person who has given attention to the subject for 50 or 60 years, must have observed that many varieties, in the course of that period, have so far run out as not to be worth planting, and that a few new kinds have come on the stage which have been of great public and private benefit. If the foregoing plan, or something like it, should be adopted, I trust that succeeding generations would have a greatly increased variety of the different kinds of fruit, and some of them probably far surpassing any which we at present have; whereby they would be enabled to plant with a good degree of certainty of reaping to advantage, instead of, as at the present time, taking much care to grow trees that, after all their care, soon decay without by any means recompensing for the trouble. Under these views and considering that the seeds of most kinds of fruit do not produce the same as the parent tree, I think our being supplied with good fruits has been too long left to chance, such as seeds dropped by the sides of fences, or ditch banks, &c. and one occasionally chancing to be of some new and excellent variety from which we propagate; such I believe to be the history of the Seckel pear, and most others of our favorite fruits. When individuals plant they wish as speedy an increase as possible, therefore will not plant from seed, and wait several years, and then very likely have to remove all of them. The foregoing hints are thrown out for consideration by a

MONTGOMERY COUNTY FARMER.

2d mo. 24th, 1838.

For the Farmers' Cabinet.

Advice of a Farmer to his Boys.

Come boys, let us see if we can't farm a little better this season than we did last. I think we can if we make an effort; and if every succeeding year we outstrip the preceeding one, I think in a few years you will be able to set up for yourselves. We have already sown our grass seed this spring, thicker than heretofore, which there is reason to believe will amply repay us for the additional seed, as we have heretofore always had more or less bald places in our grass fields, or had them filled up with weeds. We have some seed oats which weigh ten or twelve pounds a bushel more than the common kind we have usually sown; this cannot fail to be an advantage of at least 25 per cent over the light stuff we have had in former years, and if it is found to become lighter by being re-sowed; we must change our seed again at a future time. As for Indian corn, the "Dutton," of which we have plenty for seed, I think will answer our purpose the best of any kind I have seen, if we put it in handsomely and give the strictest attention to the dressing of it with the cultivator; let us give it a couple of extra dressings during the summer, and keep the ground as mellow as an ash-heap; this is the only way I know of to make a good crop of Indian corn. It suffers more from neglect than any other crop we cultivate; but stop—let us collect our ashes together and put a handful of it, with as much Plaster of Paris, on each hill as soon as the corn is fully up; this pays well for expense and trouble.—But I am getting wrong end foremost with my plan; be sure when you go to the city next week, to buy a pound of salt-petre to make a steep for the corn before it is planted; this is said to be an excellent plan, as the corn comes up much more vigorously after being soaked in saltpetre, and is sooner out of the way of the birds and grubs, which is a matter of great importance. Well, we had forty bushels to the acre last year; now can we go fifty or sixty this, if the season is favorable, and we pay strict attention to it; let us try for it any how; and one thing I am certain of, that our success will be in proportion to our exertions, other things being equal. We must increase our potatoe crop, and raise an acre of sugar beet, and the same quantity of ruta-baga for winter food for our cattle and sheep; the attention to these root crops is light work, and I think need not interfere with our other business; besides, I intend to buy neighbor Jones' old still, as he has quit making whiskey with it, since his two fine promising boys have gone to destruction by the use of that vile article. I think he will sell it cheap, as it sickens his heart to think

of a still, since the prostration of all his prospects for the advancement of his once fine boys. We can fix this up so as to steam our roots and grain for the hogs and cattle, and I have a great notion to try it on cut corn stalks and hay, for it is said they go much further, and feed better by being cut and steamed.—The millers' toll may also be saved by steaming the grain we feed, instead of having it ground. If all the stills in the country were used for preparing food for animals, instead of making poison for men, it would save at least ten millions of dollars annually, and clear out most of our poor-houses and jails, and prevent many a parent from going to the grave with a broken heart. Let us turn to to-morrow morning right early, and drive on our work vigorously during the season, and with the blessing of Providence on our united exertions we shall find ourselves blessed in basket and in store, even beyond our deserts.

Abram.

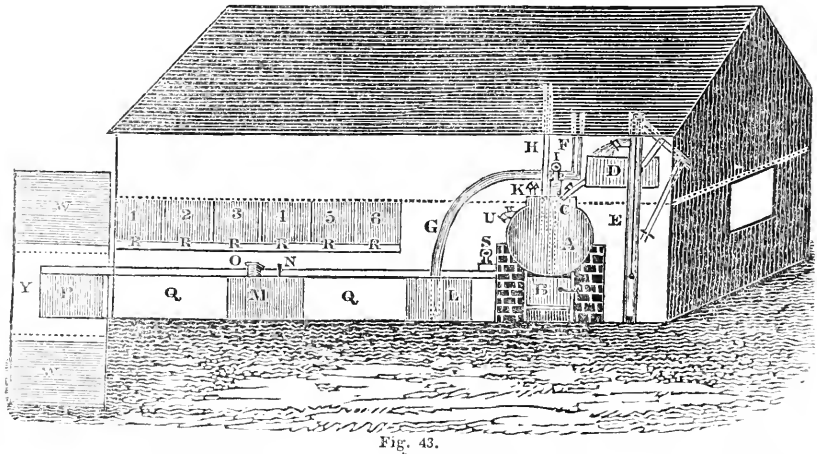

Fig. 43.

For the Farmers' Cabinet.

Steaming Apparatus.

Mr. Editor,—I herewith send you a model of my steaming apparatus, calculated to answer for a common farmer to feed from 30 to 40 head of hogs, and steam and scald feed for 10 or 15 head of cattle. My boiler is nothing more nor less than an old still kettle, and contains about 60 gallons. I can steam about 15 bushels of potatoes or any other kind of roots at once, and make boiling water enough to scald meal for 40 head of hogs at one time, enough for one day. I have a lid fastened down on the boiler head, air tight, with small screw bolts. A represents the boiler. B furnace. C. a tube to supply the boiler with water from D. (and runs to the bottom of the boiler, as you cannot fill your boiler when the steam is up otherwise,) with a stop cock; whenever you are filling the boiler with water, if the steam is up, you have to open the cock K, and gage your boiler by stop cock U; never fill your boiler higher than stop cock U, for steaming or other purposes. D is a trough to contain water to charge the boiler. E. pump. F. escaping tube. When you are done steaming you reverse the steam from G. by stop cock I. and let it escape through the other end at F; that tube is 1 3-4 inches in diameter. G. conveys the steam to L. where you steam your roots, or whatever you wish to steam. L. is a box with a lid, large enough to contain 15 or 20 bushels, just as you wish; tube G. passes into the back part of box L. and runs to the bottom as is represented. Several holes are bored in the bottom to pass off the water that collects in the box while steaming, and there should be two half inch holes bored near the top of the box, for the steam to escape. H. is a safety valve, or answers that purpose; it is 3-4 inches in diameter, it runs within ten inches of the bottom of the boiler, and 8 or 10 feet above the boiler; the upper part is tin, the part in the boiler is copper; whenever the water is boiled down below the bottom of the valve the steam will escape up through the valve, and then it is high time the boiler is supplied with water; when the water is above the bottom of the valve the steam will not pass up through the valve. M. is a box to scald meal of any kind for slop for cattle. Immediately over the box M. is a small trough T. which conveys the hot water to M. or to P. so that you can scald for cattle in M. or let it pass to P. and scald for the hogs, as you will see a pin N.; you can draw the pin and bring the water from the boiler, shut down the gate O. and it will pass into M. or put in pin N. and draw gate O. it will pass to P. QQ is the entry or

passage through the steam house to the hog pen; W W are the two hog pens. Y. is the feeding place. The dotted lines represent the troughs, each pen 10 feet, to be extended as deep as you wish them; the entry 8 feet in width, the door should go out of the entry QQ into the pen at P. The dotted line in steam house represents the back part of the steam house. 1 2 3 4 5 6 represent stalls for feeding cattle. R R R R R R is a trough where cattle are fed from entry QQ. My whole building, with machinery, is put up very economical. I sunk a range of posts in the ground, 9 feet high in front, 32 feet long, 6 feet in the back, and 18 feet in width. The back side I took the common 5 hole fence posts, put them in 3 feet six inches apart, which form my stalls, 11 feet long, 3 rails in each pannel, the trough rests on the lower rail and is fastened to the second range of posts that you see in entry QQ; all the cost of my building does not amount to more than fifty dollars. I bought an old still kettle for ten dollars, the tubes cost about twenty-five dollars, the brick I used for the furnace and chimney I do not count any thing, as they can be applied to other uses at any time, if I abandon the steaming. I covered my steam house with boards, and weather boarded the house with rough boards which I consider convertible into other purposes; so that I consider all the outlayings of my whole building, and to pay mechanics, would not exceed fifty dollars. Some prefer boiling the food for stock, but what little experiment I had of it, I would prefer steaming.

REFERENCE TO THE ENGRAVING.

A. Boiler. B. Furnace.
C. Feeding Tube. E. Pump.
F. Escaping Tube. G. Steaming Tube.
H. Safety Valve. I. Reversing Cock.
K. Stop Cock to open when filling boiler.
L. Steaming Box to steam roots, &c.
M. Scalding box to scald meal for cattle.
N. A pin to let hot water down from T.
O. A small gate to stop the water at M. or let it pass to P.
P. A box to scald meal for hogs.
Q Q. The Entry in steam house.
R R R R R R. A trough to feed stock in steam house.
S. Stop cock to draw water out of the boiler.
T. A Small trough to convey hot water to M. or P.
U. A Stop cock to gage the water in the boiler, to know when the boiler is full enough.
1 2 3 4 5 6. Stalls for Cattle.
W. W. Two hog pens.
Y. Entry or Feeding place.

J. FRANTZ, Jr.

Lancaster County March, 1838.

For the Farmers' Cabinet.

Guessing.

The area of every enclosure on a farm ought to be ascertained, in order to determine with some degree of precision the quantity it produces per acre, as well as the quantity of seed or plaster sown per acre and to regulate the manuring and the labor with some degree of accuracy. Fields being generally rectangular, very little difficulty would arise in determining the number of acres in each, and when once ascertained a record could be kept, that would render further trouble unnecessary. Many farmers depend too much on *guessing*, as to the quantity of land and the produce per acre, and those who are not pretty knowing in such matters are supposed by some, occasionally to make great mistakes, that sometimes involve a suspicion of their veracity. If the size of fields and the amount of their produce were accurately registered in a book kept for that purpose, it would be but little trouble, and it would furnish an agreeable amusement for a rainy day, to compare the products of different years from the same ground; by this means a farmer would always be able to determine the improvement and increased fertility of his farm, and if at any time he should incline to furnish an agricultural journal, with the results of any of his operations, it could be done with confidence as to its accuracy, which would be satisfactory and instructive to the public.

A farmer should never *guess* at results when he has the means in his power of arriving at truth so easily. Keep a regular account of all articles sold and purchased, and at the year's end balance your book, so that you may know your latitude and longitude, and not be in danger of receiving a visit from the

SHERIFF.

For the Farmers' Cabinet.

Rewards of Industry and Economy.

As it is a rational desire for farmers, in common with their fellow citizens following other pursuits, to make a comfortable living for themselves and their families, and to accumulate a reasonable fund for contingencies, and for giving their children, or others dependant upon them a start on the journey of life; I design to furnish some of the results of my own experience and observation on the means most likely to accomplish those desirable and meritorious objects. I started out in life a poor boy, destitute of property, being thrown on my own resources, as tens of thousands annually are in our country, and by *industry and economy*, with the *blessing of Providence* on my exertions, I have now advanced pretty well on towards the natural period of the termination of my earthly ca-

reer; having always lived in comfort, and it looks likely that I shall be able to leave quite enough to those who may come after me, to promote their best interests.

Let young men set out in life with a firm reliance on the superintending providence of God in all the things of this world, and resolve to ply the hand of *industry* in whatever calling they may be engaged. Be *prudent;* pursue *a rational economy;* despise not SMALL GAINS; and under the ordinary circumstances of life you will be prosperous, perhaps rich.

The prospects in life of more industrious young men are frustrated by the effort to get great gain quickly, than by any other cause whatever. Small accumulations, well husbanded, are the most certain and effectual in promoting comfort and wealth; the truth of this remark you cannot fail to see verified in every district of our country; but "those who seek after sudden riches fall into temptation and a snare."

I have often heard young men despise the idea of making but 100, 200 or 300 dollars a year, thinking it beneath their notice; and I have lived to see some such persons receive charity from the hands of the servants of their fathers. It is by no means an unusual circumstance in our country to see those who were "bound boys" to farmers, by industry and good conduct rise to opulence; at the same time that their master's sons who were thought to be born to wealth, for want of those qualities, have ended their days in penury.

An experienced old gentleman, many years ago, when I was young, gave me some very judicious hints on the subject of "small gains," and explained to me the manner in which they accumulated, and what the end would be, if followed up carefully; and if you have no objection, Mr. Farmer's Cabinet, I will give you a table that is true to a figure, and which will show the wonder workings of money if it be let *alone* to accumulate; and I would have you observe that the same result will be produced, only in a much more *extraordinary degree*, by adding each year, *not money*, but ADDITIONAL FERTILITY to the same amount to a farm.

One hundred dollars put to interest at 6 per cent, and an additional $100 added to it each year successively, together with the interest accumulated for 10 years will amount to $1318 07

An annuity of $100 in	20 yrs.	ams. to	3678 55
do	30	do	7905 81
do	40	do	15476 19
do	50	do	29033 59
do	60	do	53312 81
do	70	do	96793 21
Annuity of $100 in	80 yrs.	am't to	174659 98
do	90	do	314107 51
do	100	do	563836 80

Only think of it! the poor despised 100 dollars a year! see the wonderful workings of it! it is almost incredible! I could scarcely believe it myself, if I was not positively certain the calculation was correct to a figure. Now is there a farm of 100 acres within 30 miles of Philadelphia, that by ordinary management would not produce 100 dollars per annum, clear; or that would not enable its owner to add 100 dollars worth of fertility to it annually? if there is not, then the above miracle almost, may be wrought out. Take courage young men, try it! do not desert your honorable calling for wild, uncertain speculation; try it! stick to your calling, I say, and you will not repent of it.

BUCKS COUNTY.

Elements of Practical Agriculture.

DRAINING.

Principles to be ever kept in mind by the tillage farmer are to keep his land dry, rich and clean.—The first in the order of these principles, and an essential one to be regarded in cold and humid countries, is to keep the land dry.

While a certain portion of water is essential to vegetation, an excess of it may prove greatly injurious. In the colder countries an excess of water is one of the main causes of infertility, and a primary purpose of the husbandman there is to carry it away from the ground.

The water which falls from the atmosphere does not sink to an indefinite depth, nor generally to a great depth, in the earth. It is either retained at or near the surface where it falls, and whence it is evaporated, or it finds its way to a lower level, by channels upon the surface, or in chinks of rocks, or beds of gravel, sand, and other permeable substances beneath the surface.

When water stagnates at or near the surface, or when, having penetrated to pervious substances below the surface, it is finding its way to a lower level, the purpose of the drainer is to confine it to a determinate channel, and carry it away by some convenient outlet, in order that it may not overflow or saturate the soil.

The drains for conveying away water from the surface are:—The ditches of fields, which ought to be so laid out as to favor the descent of water, the open furrows which are formed by the ridges, and trenches dug in the places necessary for allowing a passage to the water.

The trenches for carrying away surface water, are usually left uncovered, and they are termed open drains. But sometimes they are partly filled with stones or other substances, and then covered with earth, so that while the surface water may sink down and be carried away, the tilling instruments may not be interrupted.

In the forming of open drains, the dimensions must be fixed with relation to the quantity of water to be carried away, and the direction determined by the natural flow of the water, or by the particular course by which it is expedient to conduct it from the ground. In general, open drains are formed in the hollows or lower parts of the land to be drained, so that the water may find access to

them from the higher grounds, or sometimes they are formed across the line of descent, in order to intercept the water which runs from the higher grounds to the lower.

In open drains, of whatever depth, the sides should possess a declivity from the top to the bottom, to prevent them from crumbling down and being underminded by the current. Except in the case of rock, this inclination should not be less than 45 degrees; and, when the earth is soft, and the flow of water considerable, it should exceed 45 degrees. In all cases, the earth should be spread from the edge of the trench backwards, so that the water from the land on each side may have access to it.

When drains of this class are covered, they are generally made from 2½ to 3 feet deep, and filled with stones or other loose materials to within a foot of the surface. They are usually in this case carried through hollow places, where the water of the land stagnates, or tends to flow.

The further end to be effected by draining is to form channels for water which has already sunk into the ground, and is either retained by it, or is finding its way beneath the surface from a higher to a lower level. It is the intercepting of water below the surface that constitutes the most difficult part of draining, and which requires the application of principles which it is not necessary to apply in the case of surface draining.

When the soil rests upon a retentive subsoil, the latter may present a surface of resistance to the water; or the water may have sunk down into the subsoil, and be finding its way through the channels beneath.

The substances through which water finds its way with facility are the looser earths, sands, and gravels, the crevices of rocks, and beds of loose or decomposing stones; the substances which resist its progress are clays and the harder rocks.

If we shall penetrate a little way into the looser portion of the earth, we shall generally find a series of strata, consisting of gravel, sand, or clay, of different degrees of density. These strata are frequently horizontal, frequently they follow nearly the inclination of the surface, and frequently they are broken and irregular. Sometimes the stratum is very thin, as a few inches in thickness, and sometimes it is several feet thick; and sometimes the traces of stratification disappear, and we find only, to a great depth, a large mass of clay or other homegeneous substances.

When these substances are of a clayey nature, water finds its way through them with diffieulty; when they are of a looser texture, water percolates through them freely. These last, accordingly, form natural conduits or channels for the water which is below the surface, when finding its way from a higher to a lower level.

When any bed or stratum of this kind, in which water is percolating, crops out to the surface, the water which it contains will flow out and form a burst or spring, oozing over and saturating the ground, as in the following figure, whice represents a section of the ground, from C to D.

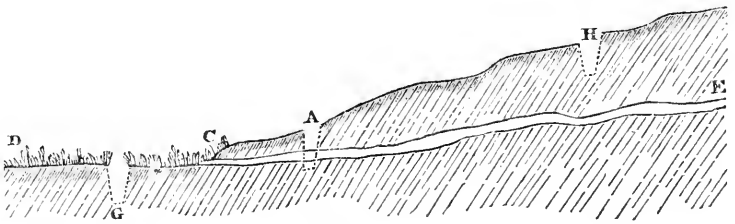

Fig. 44.

When water is, in like manner, percolating through one of these pervious strata, and meets any obstruction, as a rock or bed of clay at A, Fig. 44, it is stopped in its progress, and, by the pressure of the water from a higher source, it is forced upwards, and thus saturates the superjacent soil, as from D to E, forming springs, or a general oozing.

In either of these cases, and they are the most frequent that occur in practice, the object of the drainer is to reach the water in its subterraneous channel before it shall arrive at the surface, and to carry it away in a drain.

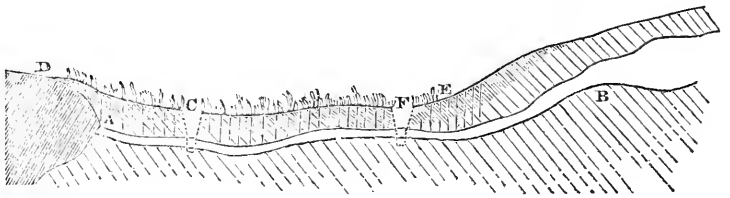

Fig. 45.

By cutting a drain at A, Fig. 44, the water of the stratum of sand CE, is cut off before it reaches the surface at C, where it forms the swamp CD.

In like manner, in Fig. 45, by forming a drain at C or F, the water is cut off in its channel AB, and thus, in relieving the pressure from the higher source, by giving egress to the water through the drain, the cause of the wetness from E to D is removed.

In looking at the sloping surface of any tract of ground, as a field, in which there is an oozing or bursting out of water, we shall generally distinguish the line where the wetness begins to appear on

the surface, extending over a considerable space, *xxxxx*, Fig. 46, the effects appearing in the wetness of the ground farther down the slope, as *yyy*. The line where the wetness begins, and which is generally rendered perceptible by the change of color of the soil, the tendency to produce subaquatic plants, and other indications of wetness, marks for the most part nearly the course which the line of the drain should follow. By cutting a drain nearly in this line as from G to A, and from L to A, sufficiently deep to reach the porous stratum in which the water percolates, we shall intercept it before it reaches the surface, and by carrying it away in some convenient outlet, AB, remove the cause of wetness.

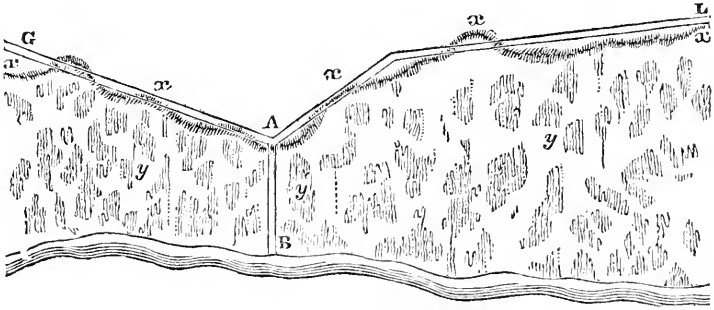

Fig. 46.

This, accordingly forms, in the greater number of cases, the rule adopted in practice for the laying out of drains upon the surface. The line is drawn nearly at, or a little above, the line of wetness, or, to use the common expression, between the wet and the dry.

Should the line of drain be drawn too much below the line of wetness, as at G, Fig. 44, then the trench would fail to intercept the water; and further, if it were filled with earth, stones, and other substances, in the way to be afterwards described, the whole, or a part, of the water would pass over it, and the injury be unremoved.

Again, should the line be too much above the line of wetness, as at H, the drain would fail to reach the channel of the water, and so would be useless.

It is for this reason that, in common practice, the rule is, to draw the line of the drain nearly between the wet and the dry, or a little above it, taking care to give it the necessary descent, and to form it of sufficient depth to reach the pervious bed or stratum in which the water is contained.

But as water may arrive at the surface in different ways, and the wetness be produced by different causes, so variations from this rule of lining out the drain may be required, and the judgment of the drainer is to be shown in adapting the course of his drain to the change of circumstances.

Sometimes in a hollow piece of ground, feeders may reach the descent, as in Fig. 47; and the water may be forced upwards by the pressure from each side of the hollow, and thus form the swamp from A to B. It may not be necessary here to cut a trench on each side along the line of wetness at A and B; a single trench C, cut in the hollow, and giving egress to the water, may relieve the pressure and remove the swamp.

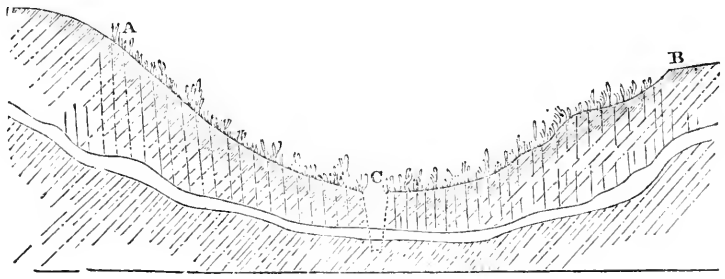

Fig. 47.

Sometimes upon a sloping surface, one pervious stratum, in which water percolates, may produce more than one line of springs, as at B and A, in the following figure. Here a single drain cut at B will remove the cause of wetness at both swamps, without the necessity of the drain at A.

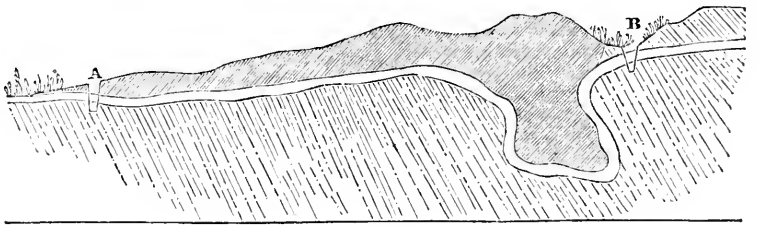

Fig. 48.

And, in practice, it is well to wait to mark the effects of a drain cut in the higher part of the slope to be drained, for these effects often extend further than might be anticipated, removing springs, bursts, or oozings, at a great distance.

On the other hand, a single swamp, as from B to A, in the following figure, may be produced, and yet one drain at B may be insufficient to remove it. In this case, the water being brought to the surface by more than one channel, it is necessary to form several drains to reach the several beds in which the water is contained, as at B, C, and D.

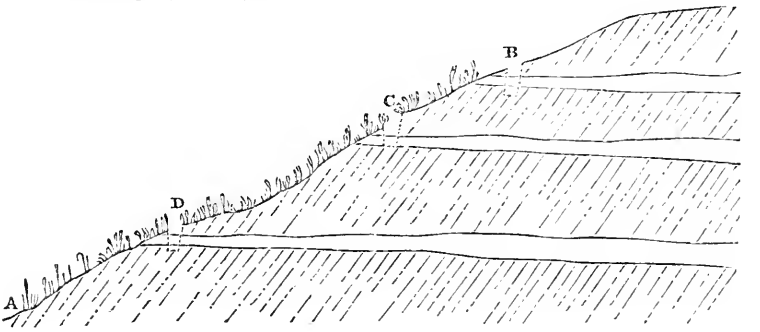

Fig. 49.

These examples will show, that one rule, with respect to the laying out of drains, is not applicable to all cases, but that the drainer should adapt his remedy as much as possible to the cause of injury. One end, however, to be aimed at in all cases, as to reach the bed, channel, or reservoir, in which the water is contained.

(To be continued.)

Rutabaga.

The following is an account of the method of cultivating rutabaga, adopted by the Rev. Henry Coleman, in obtaining a crop for which he received a premium of twenty dollars from the Massachusetts Agricultural Society, in the year 1830.

"Gentlemen—Accompanying this you have the certificates of a crop of rutabaga raised this year on my farm in Lynn. From these it will appear that on an acre, measured by a sworn surveyor, on one side of the field, were gathered seven hundred and forty-one basket-fulls; and that forty baskets of the above named weighed at the town scales, two thousand seven hundred and fifty pounds net weight.

"This, allowing fifty-six pounds to a bushel, the standard weight assumed by the society, would give a crop of nine hundred and three bushels to the acre. The turneps were planted on the 29th of June and second of July; about one pound and a half of seed was used for the acre; and they were gathered and stored in cellars and in the barn, in the last part of November.

"The ground on which they grew is a good soil, neither wet nor dry, and bore the last year an abundant crop of onions, and corn the year prececding the last. It was well manured at both times, and in fine tilth. It was manured with at least six cords to the acre of barn manure the last spring, and sowed again to onions; but the seed entirely failing, it was ploughed, harrowed, furrows struck out, and about eight cords of barn manure spread in the furrows; ploughed again so as by a back furrow to form a ridge over the manure, and the seed sown with a small drill harrow on the ridges, making the rows about twenty inches asunder.

"As soon as the plants were of sufficient

size, a drill harrow, with small shares fixed to it, to cut off all the weeds, was passed through the rows; and the plants were thinned with a small weeding hoe, to the distance of about eight inches apart, and the vacant places filled up by transplanting from the supernumerary plants. They were once more harrowed and cleaned, which was a very small labor; and owing to the very unpropitious weather, were not harvested until very late.

"Some of them were very large; one weighed fifteen pounds, and many were nearly as large. The exact expense of cultivating the acre cannot be estimated, as it was intermixed with other farm work; but the whole, from the sowing to the gathering, was not two thirds of the labor usually bestowed on planting, cultivating, and gathering an acre of potatoes.

"My Sweedish turneps the last year, of which I raised considerable quantities, were fed off to my oxen, dry cows, young stock, and fatting sheep. To the cattle they were of very great advantage; and for feeding sheep, they proved the last year by an accurate account, worth from ten to twelve and a half cents per bushel. The man who has the care of my stock considers them as among the most profitable feed which can be given either to fatting or to store cattle. Three years experiment has increased their value very much for these purposes in my own estimation.

A correspondent in the New England Farmer, Vol. xi., page 277, writes thus:—"A wish to have others profit by my experience has induced me to send you, Mr. Editor, half a sheet of remarks on the culture of the rutabaga as a food for domestic animals. I have cultivated from half an acre to three acres of this root every year for thirteen years in succession, and feel competent to give rules for its culture, and confidence in recommending it as a valuable and profitable crop.

"The soil must be rich and dry; and the more it inclines to a sand loam the better.—Clay is the worst, and wet soils will not answer at all.

PREPARATION.

My general practice has been, to manure well a piece of pasture, or clover ley, from which the hay has first been cut, plough it handsomely over, and harrow it well.

SOWING.

I sow in rows at two and a half or three feet, with a drill harrow. The sooner the preceding operations succeed each other the better. I have sown broadcast, but the expense of thinning and culture is increased. A man will drill in, three or four acres a day. We allow a pound of seed to the acre, though half this, properly distributed is enough.—Sow from the 26th of June, to the 10th of July.

CULTURE.

I use a cultivator, that may be graduated to the space between the rows, drawn by a horse, as soon as the plants can be well distinguished. This is repeated in a few days, back and forward, and the implement carried so close to the drills, as to leave only strips of from four to ten inches, which are then thoroughly cleaned with a skim hoe, and the plants thinned to eight and ten inches' distance. The cultivator soon follows for a third time, and if necessary, the skim hoe, when the crop is generally left till harvest. The great aim is to extirpate the weeds, and to do this while they are small.

HARVESTING

Is postponed as long as the season will permit. The roots are then pulled up and laid on the ground, the tops of the two rows towards each other. The pullers are followed by a man or boy with a bill hook, who with a light blow cuts the tops as fast as three or four can pull. Three men will in this way harvest, of a good crop, three hundred bushels in a day.

"The tops are gathered into heaps and taken to the yard in carts daily, or the stock, until they are consumed. An acre will give from five to ten cart loads of tops. The roots are piled in the field if dry; the pits, two or two and a half feet broad, covered with straw and earth, and as cold weather approaches, with manure, to prevent frost. N. B.—With a crowbar make one or more holes on the crown of the pit, which must be left open, to let off the rarified air, and prevent the roots from heating.

USE.

The tops serve for autumn. As soon as the mild weather of spring will justify, I break through the frost, and take the contents of a pit to my barn, and cover the roots with straw or hay. From thence they are fed to my stock, being first chopped up with a *snik*, (Dutch meat-chopper,) or spade. They are excellent for sheep, especially for ewes that have young; and hogs and horses eat them freely. Steamed, they are used in the north of England for horses as a substitute for grain.

"I have fattened sheep and bullocks upon them with profit. They constitute, particularly from February to June, an excellent culinary vegetable for the table. A bullock will thrive fast upon two bushels a day, and will consume hardly any hay, and requires no drink.

PRODUCT AND COST.

My average crop has been six hundred bushels per acre, though others have raised much heavier products. The cost in manure and labor, when they are secured for winter, has been from two to three cents per bushel."

For the Farmers' Cabinet.

Mischief and injury from the wanton destruction of birds.

The season having now arrived, that the little songsters make their appearance amongst us, to build their nests and rear their young, I appeal to every man, woman and child in the nation, to afford protection and security to them, in return for their most valuable services to us in the destruction of the myriads of insects and worms, that annually devastate our fields and gardens. It cannot but have been noticed by the most ignorant, that the various tribes of insects have increased in a geometrical proportion to the decrease of birds, who are their natural enemies; the equilibrium of nature has been destroyed by our cruelty and ignorance in refusing protection and succour to our best friends; and the annual loss sustained by it to the country, it would not be possible to estimate. During the past forty years the various tribes of small birds have been diminishing with a frightful rapidity, and if it should progress in the same proportion for forty years to come, it will be a serious question whether the produce of the country can be kept up, so as to supply the wants of the inhabitants. Where is the farmer that followed the plough fifty years ago, that does not remember the flocks of birds that crowded the furrows of the newly turned up earth, devouring every grub or worm that was exposed to the surface! They seemed fearless of man, each one appearing anxious to be nearest to the foot of the ploughman to destroy his inveterate and insidious enemies. Now what has become of those faithful guardians of our property? The answer to this question can be given by every farmer in the country without danger of mistake. As soon as they appear amongst us in the spring, and begin to build their nests, a set of idle, miscreant boys commence annoying them; take their eggs and often destroy their nests, and offer every kind of persecution to them which is in their power; and at all seasons of the year a set of ruthless vagabonds prowl through every neighbourhood with their guns, ever ready to shoot down a robin, sparrow, tomtit, or wren, either of which are rendering more service to the community in proportion to their ability, than their murderous persecutors. The damage sustained to grass and grain, the injury to fruit trees and destruction of fences by this worthless part of our population, is a matter of serious magnitude, but it sinks into comparative insignificance when contrasted with the increasing devastation by insects, mainly produced by the persecution and wanton destruction of the class of birds which were doubtless intended to keep their multiplication within harmless limits. The wheat, Indian corn, fruit trees, garden vegetables, and even the grass and the trees of our forests annually furnish the most conclusive testimony of the great disturbance in the equilibrium of nature, produced by these ignorant savages who can load and shoot a gun.—Public opinion, the influence of which is so potent in many other matters, ought speedily to be brought to bear on this very momentous subject. Where would exist the difficulty in calling public meetings in townships or neighborhoods to concentrate, and express public opinion on a subject in which every member of the community has so deep an interest! Let this speedily be done, and try its effect; if it should fail, other means must be resorted to, for the grievance is of too alarming a character to be tolerated longer in civilized society. Teachers of religion and school teachers ought to consider, whether they might not render some service to their fellow citizens by occasional instruction and admonition, that would illuminate the ignorant and alarm the vicious, in a matter that so deeply concerns the public welfare.

A premium of ten dollars, or a medal of equal value, at the option of the writer, will be paid to the person who will furnish the best essay on the foregoing subject, adapted for publication in the Farmer's Cabinet and the newspapers generally. The editor of the Cabinet who will pay the premium, to be the judge. The essay to be produced in time for the June number, and not to exceed four pages.

AGRICOLA.

Important to Farmers.

SPRING WHEAT—NEW CERTIFICATES.

Extracts of a letter from the Hon. Wm. H. Tilghman, dated Talbot county, Maryland, 11th Nov., 1837. "Coming near home, I saw Mr. Reybold, or rather the result of a committee of the Kent county Delaware, Agricultural Society, who have had the flour made of some of his Spring Wheat, and bread of the flower, which gave universal satisfaction, to a large and intelligent company present at a meeting (among whom were several celebrated millers.")

Mr. Reybold (President of the Delaware Agricultural Society,) has lately written to "Judge Buel," (conductor of the "Cultivator," printed at Albany, N. Y.,) saying that he got last winter of Mr. Hathaway, and sowed six bushels of the *Italian Spring Wheat*, that he merely ploughed up his stock field, as he does for oats and sowed it;—that he raised about thirty bushels to the acre, and it was his in-

tentions to sow all he had raised (120 bush.,) this spring.

Extract of a letter from Jay Hathaway, Esq. dated Rome, N. Y., February 19, 1838. "I have lately received a sample of *Italian Spring Wheat*, from the celebrated wheat growing county, of Cayuga,—it is very fine, and the grain is increased in size at least 1-4 —it was raised by Levi Hopkins of Sennet. He bought six bushels last spring in Rome, sowed it on eight acres of rich sandy land, and had a splendid crop;—has threshed, measured and sold it,—he had 202 bushels from the five acres, and it *netted* him $65 to the acre, this is 40½ bushels per acre! Mr. H.—had 16 acres of winter wheat adjoining the Italian, and had less from it than 200 bushels. It was proven here, in Rome, the year past, that wheat sown *as late as 1st of June*, yielded 25 bushels to the acre!

The genuine Italian Spring Wheat, may be known, being *generally* of a reddish yellow.

The above wheat may be had (direct from Jay Hathaway, Rome, Oneida county N. Y.) by applying to John L. Peirce, Bull's Head, North Third street, Philada.

Philadelphia, March 13, 1838.

For the Farmers' Cabinet.

Be Kind to the Soil.

I was gratified with the publication of the remark made by Wm. West, the good old farmer of Delaware county, at page 250 of your last No., that

"HE LOVED TO SEE FARMERS KIND TO THE SOIL."

He did not die indebted to it, though he borrowed much from it, during the course of a long, well-spent life; but he annually returned as much or more than he borrowed, with interest; and in this way the benefits were reciprocal and always on the increase. Since his death, which took place in 1808, when he was in the 84 year of his age, the farm, which was a scource of so much pleasure and profit to him, and which was left in a high state of fertility, passed into the hands of those who appear to have been moved by a very different set of principles than those were which actuated the good, the kind, the intelligent, the industrious, the pious William West,* the great Pennsylvania farmer. For in common with numerous other farms in our country, it now appears, I am informed, as if it had been in charge of those, who are not only not kind to the soil as was Mr. West, but who attempt to get *something*, for *little* or *nothing*; those who are borrowing from it, without paying much either of principal or interest. This was not the plan of the patriarchal farmer of Delaware county, for he held it as a point of duty, "in every man who occupies land to endeavor as far as he is capable, to keep it in improving state, for the benefit of his connections, the public, and posterity; he who can make an addition or improvem though small, to what is already known, wo be doing more good than giving alms all th days of his life."

His biographer says, "a visit to his farm was well repaid. The inquirer found always a hospitable reception, a pleasant companion; and saw every thing about the land bearing the strongest marks of industry, care and skill. The most luxuriant grass, the native production of the soil, every where met his eye; not a weed to be seen; the fences in the most perfect order, a compost bed ready prepared or in preparation in the field next to be dressed, and every improvement effected in the most substantial manner, as if he had been just entering the farm early in life." "He made ample pecuniary loans, without the smallest compensation. Against this he was principled. He had known the advantage himself of some capital in the commencement of his agricultural operations, and therefore, freely advanced it, when convenient, to those proper objects whose necessities induced an application to him." It was his firm settled conviction that a farmer could not make a more secure and profitable investment of capital than by the most liberal expenditure of it, in increasing the fertility of his farm, so as to cause it to produce the greatest quantity of grass; and, this accomplished, all the rest was easy, pleasant and profitable.

This has now become the settled conviction of the most intelligent and successful farmers in our country, and any attempt to controvert it is considered little short of heresy in agriculture.

Now let us all resolve hereafter to amend our ways, and make reparation for our long continued disobedience to the sound advice of the wise and good, and in time to come, remember to

"Be kind to the soil."

Springfield.

March 26th, 1838.

* Eldest brother of Benjamin West the celebrated painter.

For the Farmers' Cabinet.

Rats.

Mr. Cabinet:—I suppose I need not tell you that *rats are an abominable nuisance*, that they do a vast deal of mischief, and that they exist in vast numbers about many of our barns, corn-cribs, and granaries. I have no doubt that many farmers lose as much by them in a year, as would hire a good hand during the whole summer. Now what I want is that some of your ingenious correspondents would inform us through your paper, how to get rid of them.

Chester County, March 21, 1838.

The following communication from Col. KENDERTON SMITH, Secretary of the Agricultural Society, is worthy attentive consideration. The plan recommended is simple, and no doubt efficacious; and if generally adopted, in sections where coal ashes may be easily obtained, the best results may be anticipated. The great value of coal ashes has been almost entirely overlooked.—We are promised an article on this subject by a gentleman who is acquainted with the value of it, and who has applied it to his land with the best effect.

To the Editor of the Farmers' Cabinet.

Peach Trees.

About this time last year, I sent to the editor of the Germantown Telegraph, a communication, which was published over the signature of PENN, recommending the use of COAL ASHES AS A MANURE FOR PEACH TREES. Another year has rolled around, and I still have no reason to doubt their efficacy. The result of my observation has confirmed the opinions I advanced in my communication of last year. I have found very few worms, although many of my trees are in a garden, and the earth round about them, is more or less mixed with the ashes in its cultivation. Most of those I found were above the ground, and their presence was indicated by an oozing of gum, accompanied with the woody-borings thrown out by the worm. By looking for these their presence is easily indicated. My trees during the last year have made a great quantity of wood, and have been remarkably healthy. They have this spring an appearance of vigor, that seems to justify me in expecting a large crop. My confidence in the advantage of the use of coal ashes is now fully established, both for peach, apple, plum, and apricot trees. I open a hole around the root extending to about the distance of a foot from the stem, then after having carefully examined to ascertain that there are no worms, I fill up the hole with ashes, and raise it about four or six inches above the level of the adjacent earth. I find the ashes after being wet adheres very closely to the stem, and holds the tree firmly in its position. The ley therefrom, whether it proceeds from the lignious or mineral ashes, (for there are usually both in the coal-ashes, to say nothing of the theory that mineral coal is a vegetable deposite) certainly acts as a powerful promoter of the rapid growth and vigorous and healthful appearance of the tree, and in bearing seasons insures an abundant crop of fruit, and that too upon a soil in which the cultivation of the peach tree has been almost abandoned for thirty years past. This delicious fruit, can now I think be cultivated in the county of Philadelphia, with complete success, if care is taken to have the trees examined twice in the fall, between the 1st of September and December, and once in the spring, a labor which is soon performed, as the presence of a worm is so easily detected when ashes are used, and the worms are seldom found below the surface of the ashes.

SUGAR BEET WITH CORN.

A friend has mentioned a plan of growing beet roots that has been adopted by a distinguished farmer in Chester Co. Pa., which is said to have been very successful.—They are grown in alternate rows with corn; the corn being planted in rows six feet apart, a row of beets intervenes—the corn crop is very little if it all diminished—the labor is not much increased, and a very good crop of beets is obtained; the shade of the corn is supposed to be favorable to the beet. This plan may be worthy of a trial by those who have not prepared a piece of ground for roots, and who are anxious to have good winter food for their cattle.—*Baltimore Farmer.*

EZEKIEL RHOADS, states—That within one week after his sugar beets were exhausted, the butter from three cows was reduced from twenty to fourteen lbs. per week. His butter was in much higher repute while feeding on the sugar beet, than it had ever before been during winter.

To the Editor of the Farmers' Cabinet.

Canada Thistle.

DEAR SIR,—In looking over the March number of the Farmers' Cabinet, I took notice of an article headed, "Canada Thistle," setting forth the nature, the pernicious effects and unfortunate introduction of that most pernicious weed into the state of Pennsylvania. Unfortunately, some years back, I sowed one of my fields with timothy seed, said to have been brought from the state of New-York. About three years after, I observed one large parent stock, with several of a smaller growth, of the Canada Thistle, the first I ever saw of that species. My mind immediately recurred to a conversation I had with a neighbor some months previous to this period of time, relative to this kind of thistle, introduced in a similar way upon his farm. I immediately took one of my men with a spade and bucket, and had the whole of the ground occupied by the thistle spaded from one foot to eighteen inches deep, and a diligent search made for every root and fibre thereof, being determined to eradicate it at once. About two years after this (which was last season) on examining the spot where the thistle was first found, I think there was double the former number of them spread and growing on more than double the space of land, so amazingly had they multiplied,

notwithstanding my former care. This second crop was mostly young, and might be owing partly to the seed from the parent stock, for it was a seed stock when nrst taken notice of, as well as from some of the remaining roots and fibres of roots, though there were none left in the ground to my knowledge. I now directed a similar operation for the second removal of them, and if not successful, I intend to adopt the method recommended in the enclosed slip from a Bucks County paper, the republication of which, in the Farmers' Cabinet, may be a good answer to an inquirer for information upon this subject, and an advantage to the farmer who is troubled with this thistle. The writer's description of the plant is certainly a good one. Yours, &c.

JAMES ANDERSON.

Lower Merion, Montgomery Co.
March 19th, 1838.

From the Bucks County Intelligencer.

Canada Thistle.

There are a great variety of Thistles, some are annual—some biennial and some perennial. The two first kinds may be easily destroyed by cutting them down with hoes or mowing before the seed ripens, they are but very little in the way of the farmer, do but little injury to the land and generally looked upon as an evidence of the goodness of the soil.—But those that are perennial are very difficult to extirpate and cannot be destroyed but by a total eradication of the root with all its fibres or by destroying them in the ground. The Canada Thistle is a perennial plant, strikes its root deep into the ground from one to two feet in one single stem with joints one or two inches apart from which small fibres shoot out —from three joints there will spring up new tops if the upper part is cut off or the root broken and any of the joints left in the ground—when it grows with grain or tall grass such as Timothy, in a good soil, it throws up generally one stalk from 18 to 20 inches high on the top of which it has a head like the common thistle but smaller and with smaller seeds of the same shape and color, with a down attached to the end of which the wind carries the seed and spreads it abroad—where it grows by the road side or in pasture fields it branches and spreads out a bushy top, the leaves smaller and more numerous than the common Thistle and every leaf is covered with small and very sharp spikes, like needles.

Some years ago I discovered the Canada Thistle on my farm among the Oats; when cutting it the seed was ripe and most of it blown away from the head, the next year the field was laid down in grass, the Thistle came up very thick, I concluded to destroy it if possible. I had the gronnd dug up 12 inches deep about a rod square where it grew the thickest: all the roots gathered out that could be found and burned. After lying a few weeks, the Thsitles came up very thick from the joints of the broken roots that were left in the ground—I then had about two barrels of fish pickle and three bushels of salt put on well mixed with the ground, all this did not destroy the Thistle it came up from the broken roots that were still left in the ground and grew, but appeared weak and unthrifty —as we did not dig up the whole ground containing Thistle I adopted another experiment to destroy it. My farmer took a grubbing hoe and stuck it into the ground about three inches from the plant so as to bring up the plant and part of the root with the sod, then put a handfull of coarse salt into the hole, took the root out of the sod and returned the sod to its place,—in no instance did the root shoot up again, but perished where it was cut off at or near the centre of the hole, the salt gradually dissolving for months, completely destroyed it.—The seed being spread by the wind over a considerable space of ground, the Thistle continued coming up every summer for three years, and as often as new plants came up they were dug up and salted, by which means the Thistle was totally eradicated. This appears to be a tedious and and protractive mode of destroying it, but it is effectual, and one man can destroy a great many plants in a day. The Thistle has been brought from the State of New York into this country by sheep the seed getting mixed in the wool is carried by them and scattered over the country, it is also brought in Timothy seed.

BUCKS COUNTY.

For the Farmers' Cabinet,

Manures.

Manures are of three kinds, *vegetable*, *animal*, and *mineral*, and a *compost* made of either or all of these intimately combined, by *industry* and *intelligence* will make grass grow most luxuriantly; and when that is accomplished no farmer need apply to the doctor to know what to do next. His collapsed purse will soon begin to distend itself and to stand up stiffly. But I was going to state that a considerable diversity of principle and practice prevails in regard to the best mode of applying manures of different kinds, and that difference is most considerable in regard to the application of the mineral manures; particularly lime and marl, or more appropriately the green sand of New Jersey, Delaware and Maryland. As respects plaster of Paris, it is universally admitted that it ought to be applied as a top-dressing to grass or clover; when the rains dissolve portions of it and carry the solution down to the absorbing

fibres of the roots, whence it enters into the composition of the plant, for which it furnishes a wholesome invigorating nutriment. There scarcely remains a doubt, but that the same mode of application by top-dressing is also the best mode of applying the green sand, or marl, as it is sometimes called; but of this it would be well for observing farmers, who have used it extensively to furnish the results of their observations and experiments, for the benefit of the craft generally. Chemists say that good green sand or marl, on analysis furnishes from 7 to 14 per cent. of pot-ash,and it is now generally believed that this is the ingredient on which its fertilizing property exclusively depends; for it is found to be more or less useful in promoting vegetation in proportion as the pot-ash predominates in its composition. I am informed that in the process of analysis, by which the quantity of potash is determined, they first separate by mechanical means, the silicious matter or common sand from the particles of the green sand or marl, and then subject the latter *only* to the process of chemical analysis, and it is by this means that the percentage above stated has been obtained. Of course that which has the least common sand mixed with it, is to be preferred, although it might indicate only the same percentage of pot-ash with that containing more silicious matter. The farmers on the peninsula between the Delaware and Chesapeake bays, where this most valuable article has recently been found to exist in great abundance, are very desirous of being informed through the Cabinet from some of our experienced Jersey agriculturalists, the proper mode of using this newly discovered scource of wealth, to the greatest advantage, and it is to be desired that your next number will oblige them in this respect.

As regards the application of lime, various modes have been resorted to. Some spread it on their Indian corn ground in the spring, and work it in by dressing the corn, from a supposition that ploughing it in, and mixing it well with the soil is an advantage. Others apply it on an open fallow in the summer or fall, preparatory to sowing their winter grain; of course it is by this process well ploughed in and for the same reason, as is adduced for dressing the Indian corn ground with it. Others again spread it on the grass or sward, either in the fall or spring, and this plan of operation is now believed by many to be preferable to either of the other modes of application. Because it is found in regard to all the mineral manures, that their specific gravity being great, they sink into the earth quite as soon as is desirable: lime spread on the sod, in the course of a year will generally be found to have sunk several inches in depth, and then the plough will bring it near the surface again, where its action is most beneficial in decomposing the vegetable fibre, and by this means furnishing a soluble material for plants to feed upon; and at the same time it loosens the soil, by releasing the clods of earth which are often held together by the fine fibres of the roots of the grasses, particularly timothy, the roots of which are very strong and rigid. There is no danger to be apprehended from evaporation in the case of any mineral manure, and some entertain the same opinion in regard to vegetable; but this is a mooted point, and will require further observation before it can be pronounced upon with safety; for if manure of any kind be placed in a vessel over a moderate fire, the only thing that will be found to arise from it will be pure or distilled water, entirely free from any contamination. So that there does not appear to be any danger from manure rising out of the earth, but there may be danger of its sinking too deep for the roots of plants to follow it. Hence I conclude it ought to be our effort to keep it as near the surface as possible, and depend upon the rain to disolve it, and carry it to the absorbing fibres of the roots of plants. These remarks are made to elicit the views of the experienced in these matters that we may arrive at the true theory of the application of manures.

AGRICOLA.

March 28th, 1838.

For the Farmers' Cabinet.

Receipt for making Boys industrious and useful.

He who is not fond of his calling seldom succeeds.

It cannot but have been remarked that the natural disposition of children when in health is that of great bodily activity, and the predominant efforts of those, to whose care they are intrusted, is often to diminish this disposition, so as to be productive of the least possible inconvenience to themselves. This I take to be a great error in education, and one of the principal causes which gives rise to indolence of character, at a more advanced period of life; when we are desirous of deriving the most advantage from their labor. The muscular powers become strengthened exactly in proportion as they are brought into use; and if we want strength, we must use it, not abuse it. Let children be permitted to exert themselves, and be as useful as their circumstances admit of, and furnish them with implements or tools adapted to their age, strength and capacity, from time to time, and give them the soothing language of encouragement to use them, and they will grow up from childhood to man's estate without being chargeable with the crime of being lazy; and it will be found that a vast amount of useful labor may be extracted from them without

murmuring or repining; their bodily powers will be improved and invigorated, and they will display more mental developement than those with whom a contrary plan has been pursued. Farmers should procure for their boys, small axes, shovels, forks, dung-forks, rakes, spades, wheelbarrows, scythes, sickles, and in fact every tool necessary for the performance of every agricultural or horticultural operation. These should all be graduated in weight and size to adapt them to the age and strength of their juvenile owner; for they should be possessed in fee-simple by the boy for whose use they are intended, and that would be a complete guarantee not only that they would be used with effect at the proper season of business, but that in the intermediate periods, when not wanted, they would be properly respected and cared for; and the approach of the time anticipated, with much pleasure, when they could be brought into profitable requisition. If those who make tools would prepare setts of the different kinds made for mens' use, graduated to the proper proportions for lads, and let them be of a good quality so as really to be useful, and not toys, they would meet with ready sale, and the expense to the purchaser would be small, compared with the benefits derived from them. When a boy grew out of them, although he would be the owner, he would readily convey his title to the next in succession, so that a single sett might serve several in turn, as a pair of pantaloons or a vest descends to the next expectant in a provident family. If this plan was carried out by an intelligent father, who would give himself the exquisite pleasure of conversing rationally with his young sons, about the reasons of the various plans and processes of agriculture, and take some pains to get them to understand the philosophy of his calling, he would rarely find them indolent or dissatisfied with their business, and less seldom would he discover a disposition to exchange so useful and honorable an occupation, for the more precarious and hazardous business of mercantile life.

W.

For the Farmers' Cabinet.

Blight in Pear Trees.

The cause of the blight in pear trees has frequently been a subject of inquiry. I believe it most commonly attacks trees standing in well cultivated and rich soils. In this I apprehend lies the first cause of the disease. I have found from the observations that I have made during the last four years, that every tree which bore large quantities of fruit was more or less blighted, while other trees of the same kind of fruit, of the same age, and standing in the same ground, but moderate bearers, were not affected by this disease. Last year I observed that a tree of the pound pear kind, had one of its largest branches so completely filled with fruit that three props were placed under it to prevent its breaking down; a few days afterwards I examined this tree and found that identical branch blighted. The leaves appeared to have been burnt, and the bark was decayed and dried up. I examined another tree in the same orchard having a single branch blighted, which last year was overloaded with fruit. The other branches were in a vigorous state. The reason I conceive why pear trees are more subject to blight in a well cultivated and rich soil is, that they are forced to a higher state of vigor than trees standing on a poor soil or grass land. After a year or two of rich culture they become exceedingly vigorous, make a great proportion of wood, and form numerous fruit spurs; and then a favorable year occuring, they are overloaded with fruit. The maturity of this great quantity of fruit checks the growth of the tree, exhausts it, and destroys the vegetative principles. If overbearing be the cause of the fire blight, the obvious preventive is to thin off the fruit, wherever it shall appear to be too much for the tree to bear.

A. B.

Lampiter Square, Lancaster County.

For the Farmers' Cabinet.

Fencing and Whitewashing.

Spring having now arrived, it is time for the whole brotherhood of farmers to be up and doing. One of the first things to engage attention is our fences; let us have them all well mended; and if necessary reset, and if there are any new ones to be made, now is the time to have it done, before other indispensable farm operations engage our care and attention. In renewing fences, a removal of them, so as to bring the soil under cultivation where a fence has long stood is a great advantage, as it enables you to clean the ground of weeds, briers and sprouts of various kinds, and it oftentimes furnishes a fine spot for a compost heap, handy to where it is wanted. In many parts of our country, where stone is abundant and easily and cheaply procured, I am satisfied we ought to turn our attention more to making *stone fences;* timber having become so scarce and expensive in many places that keeping up our fences, to adapt the enclosures to our our present mode of farming, is a very serious affair. Some persons who have tried stone fence have not been very successful with it, in consequence of not having it well put up. In order to secure it from falling down, more attention should be given to im-

part strength to it, than to improve its beauty at the expense of its stability: and in order to accomplish this, at least one-third of the stone should be laid across the wall to bind it together properly; whereas the more common plan is to lay them, generally, lengthwise, to make a handsome facing on each side. This is the most material and principal matter to be attended to in building a stone fence. Some are of the opinion that it is better to build upon the surface of a sod, than to dig a foundation, unless you extend it entirely beneath the reach of frost. Those that extend north and south stand better than those which run east and west, because the frost thaws out of the ground on both sides about the same time and it settles equally; but in the other direction the frost on the south side is gone long before that on the north is operated upon by the sun, consequently it settles unequally and is liable to be leaned over and injured, unless it is well bound together by cross-ties. Those who wish to try this mode of fencing might begin by making those north and south; as with them they would be likely to be most successful; and by the time they have finished all in that direction they will have acquired experience, which will enable them to go east and west with safety. The indefatigable Samuel Mason, of Roxborough, on the township line road, about seven miles north of the city of Philadelphia, has made a considerable extent of stone fence within the last ten years on his place, with the aid of his common hired help only, and it is done in a handsome, workmanlike manner, and looks as if it might stand for generations to come with very little care. Let this important subject engage the attention of those who have the material handy, perhaps in their fields, where it interferes with the plough.

Whitewash all the fences about your house, barn and garden, and your out-houses, that are wood and are not painted; it preserves the timber to a much greater amount of value, than the labor and expense of doing it; and then you have all the advantage from the neatness and improved appearance of your premises gratis, and that I think no person will doubt is worth having for nothing, for that is certainly the absolute cost of it. I am fully aware that some people, whose moral standing is not very elevated, seldom attend to those little matters of neatness, as they often call them, but those of a different cast consider them as involving a principle of some importance; for I once heard a celebrated preacher of acknowledged piety and great experience say, that "Cleanliness was near a kin to Godliness."

After the feeding season is over, clean out your barn, stables and cellars thoroughly, and give them all a complete white washing, it will much improve their appearance and destroy the insects which harbor and propagate their species in places that the whitewasher don't intrude upon with his brushes and lime; some think whitewashing an excellent way of getting the weevil, which is so destructive to wheat, dislodged from a barn—it is certainly worth a trial. WISSAHICON.

March 28, 1838.

For the Farmers' Cabinet.

Birds, Moles and Toads.

The evil tongue of slander is ever busy in finding fault and deprecating the character and standing for usefulness, of those, of whom they know but little, perhaps nothing. So it is with the public generally, and with many farmers in particular, in respect to the character, habit and instinct for usefulness of many birds, reptiles, insects and some animals, the true character of which has not been carefully investigated, except by naturalists who have devoted much time and laborious research to the more obscure and difficult branches of natural history.

Many kinds of birds have been supposed by the great mass of the people, to be useless or mischievous, or at best to be only valuable for the purpose of instructing young urchins or older dunces how to shoot with precision and effect. But this, in regard to many kinds of birds, it is believed, is now on the way of being settled, for those who refused to be operated upon by argument or remonstrance, have been, and are likely still further to be influenced, not by the voice of humanity or benevolence, but by the more powerful influence of interest or the love of gain. The prodigious multiplication of destructive insects, since the progressive and great diminution of birds in the more densely settled parts of our country, begins to call up reflection, and seriously to alarm the great mass of agriculturists throughout the Atlantic states, where the great evil of this destruction of the equilibrium of nature, and the palpable interference of man with its antagonist principles, are at present most seriously felt. But my object, in the present communication, is not to discuss particularly the uses of birds in the economy of nature, but to call attention to the character, habits and usefulness of the *mole* and the *toad;* two animals which have been assailed without much mercy or compassion for ages and generations; and in the almost total absence of defence, judgment has been rendered against them by default, and they considered by the multitude as mischievous depredators or offensive outcasts; and as a matter of course, every ignorant or prejudiced person in whose presence they make their appear-

ance deals out destruction and death to them without reflection or compunction of conscience.

The mole, as is well known burrows in the ground, and forms lanes in various directions in search of its favorite food; which is not, as has been generally supposed the roots of grass and vegetables; for the only food they can be subsisted on is animal. The late much lamented Dr. Godman in his most instructive and interesting work on natural history says (and this is confirmed by other naturalists) that "the favorite food of the mole is the earth worm; grubs and insects of various kinds he destroys in great quantities, and it may fairly be questioned whether the good done in this way does not more than overbalance any evil attendant on his presence. The presence of the mole in fields of Indian corn appears to be decidedly advantageous from the destruction of great numbers of slugs and worms; but in dry seasons these animals, if numerous, may injure small grain or grasses to a considerable extent, not only by the wounds they inflict on the roots with their sharp claws, but by raising the sod while forming their burrows, so as to withdraw the roots from the moist soil below."

It does not appear, after a very critical examination of the history of the toad; and after a particular inquiry into its domestic habits, that it has ever been charged with any particular crime against the lords of creation or any infringement on his rights or interest; but he is said to be ugly; this at best is a mere matter of opinion in which there may exist an honest difference of judgment or taste, but it ought not to excite prejudice to his injury. The slanderer has said he was poisonous; but this is clearly a mistake, for birds of prey and snakes swallow them with impunity, and some authors say that they are equally as delicious a morsel as the much esteemed bull-frog; how this may be I shall not determine; I merely contend that they are innocent and harmless, and are therefore entitled to our protection, and even to our regard if they are found to be concerned in the protection of our best interests, by destroying vast multitudes of voracious insects and worms on which they exclusively feed. The enlightened gardeners of Europe, accumulate large numbers of them in their gardens and green houses, to aid in protecting their precious plants from the depredations of insects, which they effect with great skill and dexterity. Why should not then our farmers and gardeners be equally solicitous to avail themselves of the valuable services of friends who require no further remuneration for the good they do us, than exemption from destruction and death.

It is stated in Pennant's Zoology "that a Mr. Arscott of Tehott in Devonshire, had a toad, which lived in a kind of domesticated state for more than forty years, and of having been in a great degree tamed, or reclaimed from its natural shyness or desire of concealment; since it would always regularly come out of its hole at the approach of its master in order to be fed. It grew to a very large size, and was considered as so singular a curiosity, that even ladies, laying aside their usual aversion and prejudices, requested to see the favourite toad. It was therefore often brought to table, and fed with various insects, which it seized with great celerity, without seeming to be embarrassed by the presence of company. This extraordinary animal generally resided beneath the steps of the house door, fronting the garden, and might probably have survived many years longer, had it not been severely wounded by a raven, which seized it before it could take refuge in its hole; and notwithstanding it was liberated from its captor, it never again enjoyed its usual health, though it continued to live above a year after the accident happened."

While writing the first part of this communication a distressed father called on me in great agitation, to procure aid and assistance for his son; a lad of 16 years of age, who had a few hours previous been so seriously injured in his elbow joint by the discharge of a gun, when he was out shooting birds, that the use of his arm was supposed to be permanently lost. I insert this incident as a commentary on the text, and bid you good speed in your valuable editorial labors of the Farmers' Cabinet.

Philadelphia County.

March 28th, 1838.

For the Farmers' Cabinet.

SONNET AND ACROSTIC.

"Speed the Plough."

Spring, balmy Spring! returns with smiling face,
Princess of seasons!—See, th' industrious plough
Emerges from its winter covering now,
Enters earth's yielding breast—leaves there its trace
Deep in the soil—and onward moves a pace!
There is the plough-boy! mark the ruddy glow
Hastes to his cheek, as with a joyous brow,
Eager once more, he takes his wonted place.—
Pastures again the lowing herds invite,
Luxuriant, in the green of Spring arrayed;
Orchards are blossoming, and landscapes bright
Unveil to view, thro' valley, hill and glade!
Gladsome is earth!—nor should aught else, be sad;
Haste then the plough!—and bid the heart be glad.

E. C. S.

Cedar Brook, Plainfield, N. J.

Products and profits of Land in Kent County, Del.

Having often heard from others, of the great profit made by our neighbor, Jonathan Jenkins of Camden, from the cultivation of a few acres of land, which a short time since was of inferior quality; I finally determined to ascertain from himself, the truth of the statements above alluded to. He informed me that he began to improve the soil of this small tract of land, containing only thirty-eight acres. It was very poor—more so than most of the lands in the neighborhood of Camden, and not better than much which is now suffered to lie waste in our country.—That from the very beginning it paid him a good profit, for the money expended in the purchase, and all the manure and labor bestowed upon it, although some of it, in consequence of its immediate vicinity to Camden, cost him sixty-five dollars per acre.—That his crops kept every year increasing in quantity, quality, and value, until he was induced to keep an account of them, and of the sums realized from the sales of his various crops, as well as the expense of culture. The following is a statement made in his own hand writing, and handed to me with the liberty of making it public, for the encouragement of others, who own light worn-out lands in our State.

Products of JONATHAN JENKINS' model farm contains thirty-eight acres, and divided into five fields, for the year 1837.

250 bushels oats, at 50 cents,	$125 00
150 bushels winter wheat red bearded at $2,	300 00
46 bushels spring wheat at $3,	138 00
325 bushels Pennsylvania yellow flint corn, at $1,	325 00
35 tons Clover Hay, at $12,	420 00
15 tons wheat and oat straw, got out with wheat threshing machine, worth per ton $8,	120 00
Corn stalks, top and blade fodder, all cut off by the ground and saved in good order, worth say	75 00
140 bushels Irish potatoes at 50 cts.	70 00
15 bushels sweet potatoes at 60 cts.	9 00
40 bushels turnips at 15 cts.	6 00
Pasturage for 4 cows, 8 months at $2 per month,	64 00
Profit or advantage from Pasture in fattening 1000 lbs of beef, over and above the pasturage of cows as stated,	40 00
	$1692 00
Deduct for expenses of cultivation and saving crops allowance, say	320 00
Nett profit,	$1372 00

He says that some persons may probably think his estimate of prices too high; but that he has always sold most of the produce for the sums there given, and expects to dispose of the remainder at the rates there set down; and at all events, making every allowance for excess in the estimate of the value of this little farm, these thirty-eight acres were worth to him the last year, a *sum equivalent to the interest on twenty thousand dollars.*—*Delaware Register.*

For the Farmers' Cabinet.

Blight of Pear Trees, and Decline of Old Varieties.

Various as are the opinions entertained respecting the cause of the blight in pear trees, it is well known that many old varieties are particularly obnoxious to the disease or injury. It is also generally known that many old varieties of pears and other kinds of fruit, have become greatly deteriorated—some so much so as to be worthless. These are facts, which, we presume, will not be called in question, however, widely horticulturalists may differ in regard to the cause and mode of the decay.

It becomes, then, an important object to obtain new varieties of the several kinds of fruit, and especially of pears. In Europe, several eminent amateurs in fruit have devoted much time and labor to the propagation of pears from seeds, and amongst the most successful may be mentioned Dr. Van Mons, of Louvain in Belgium. Many people are deterred from attempting to raise new varieties from seed by the long time that must elapse between the planting of the seed and the bearing of the trees, and the probability of having nothing but worthless fruit in the end. This difficulty is, in a great degree, obviated by the mode Dr. Van Mons has adopted, which is this;—selecting seedlings of a suitable size,—perhaps one or two years old—which are furnished with many buds or eyes placed near together, he grafts them, if apple, on paradise stocks, and if pear, on large pear or quince stocks, and thus in two or three years after grafting, fruit is produced. If the fruit is not good, he plants the seed of it and repeats the process until he obtains fruit of excellent qualities; and by this means he has greatly enriched our stock of pears, having propagated several hundred varities.

To these the attention of all who are fond of good pears, or who wish to raise them for the market should be directed, not only on account of the superiority of many of them in point of quality, but because there is a great probability that the *trees* will be less liable to *blight*, and that the *fruit* will retain its good qualities.

[Many of these kinds have been imported and proved in this country, and may be obtained at the nursery of Samuel Rhoads, Jr. in Haddington, 4 or 5 miles west of Phila-

delphia, (Office 258 Market street.) There is a large collection, and many of the trees are of large sizes and his prices moderate. We understand he has visited the principal nurseries in Great Britain, France, and Belgium, and personally selected the best kinds, where the greatest dependence could be placed on the nurserymen. Enterprise of this kind deserves and we hope will receive encouragement.]

For the Farmer's Cabinet.

Things that I have seen.

I have seen a farmer build a house so large and fine that the sheriff turned him out of doors.

I have seen a young man sell a good farm, turn merchant, break, and die in an insane hospital.

I have seen a farmer travel about so much, that there was nothing at home worth looking after.

I have seen a rich man's son begin where his father left off, and end where his father began—pennyless.

I have seen a worthy farmer's son, idle away years of the prime of life in dissipation, and end his career in a poor house.

I have seen the disobedience of a son, "bring down the gray hairs of his father with sorrow to the grave."

I have seen a fine girl marry a young man of dissolute habits, and repent of it as long as she lived.

I have seen the extravagance and folly of children, bring their parents to poverty and want, and themselves into disgrace.

I have seen a prudent, industrious wife, retrieve the fortunes of a family, when her husband pulled at the other end of the rope.

I have seen a young man who despised the counsel of the wise and the advice of the good, end his career in poverty and wretchedness.

I have seen a farmer too self conceited to amend his ways, and too proud to retrace his footsteps.

I have seen poor boys grow rich by industry and good management, and rich boys become poor by idleness and dissipation.

I have seen a man spend more in folly, than would support his family in comfort and independence.

I have seen a person depart from the truth, when candor and veracity would have served him a much better purpose.

I have seen a man deliver a fine political oration on a fourth of July, when his cattle were foraging in his grain field.

I have seen a young man soil his reputation by a departure from principle, when all the waters of the Delaware would'nt wash it out.

I have seen a man engage in a law suit about a trifling affair, that cost him more in the end, than would have roofed all the buildings on his farm.

I have seen money spent in litigation, that ought to have been applied to manuring a farm.

I have seen a man work by his wits instead of his hands, till his farm was grown up with bushes and briers.

I have seen a person neglect to repair or renew his fences, till he had lost enough to buy three cows, and had to do it at last.

'76.

For the Farmers' Cabinet.

Flax Seed.

Observing in the last Cabinet some statements respecting the advantages resulting from the feeding of flax-seed to stock, my attention was directed to an opinion entertained by many persons respecting it. It is supposed that when administered to animals under certain circumstances, whether in the form of whole seed or oil, to produce abortion. My own experience is very limited; but I have seen two instances which appeared to justify the opinion. If this be a fact, it is well worthy the serious investigation of farmers, before they commence the practice of feeding it extensively.

A YOUNG FARMER.

Breeding, Rearing and Fattening of Swine—No. 1.

COMPARATIVE VIEW OF DIFFERENT BREEDS.

Among the various articles of live stock, few are more profitable to the breeder than swine, while the number kept on a farm is proportioned to the quantity of offal on the premises; especially as the attendance they require is, when compared with that of others, very trifling, and the benefit arising from their dung more than counterbalances such attendance. The *characteristic marks* of a good hog are, a moderate length, as to the carcass in general; the head and cheeks being plump and full, and the neck thick and short; bone fine; quarters full; the carcass thick and full; his bristly hide fine and thin; the symmetry or proportion of the whole well adapted to the respective breeds or varieties; and above all, a kindly disposition to fatten early.

In consequence of the numerous sorts and varieties of these animals, found in almost every country, it is scarcely possible to ascertain which are the original breeds; under this head, therefore, but little more can be attempted than a brief notice of those most generally esteemed, and known under the following denominations:

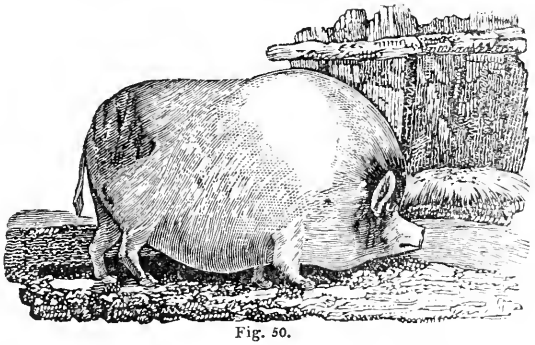

Fig. 50.

1. The Chinese Breed, of the general appearance of which, the above is a tolerably correct delineation, when fat, were originally obtained, as their name imports, from China. Of these there are two nearly distinct kinds: the *white* and the *black:* both are small; and although of an extraordinary disposition to fatten, will seldom arrive to a greater weight than sixteen or eighteen stone, of fourteen pounds, at two years of age. The former are better shaped than the latter; but they are less hardy, and less prolific. They are both very small limbed; round in the carcass; thin skinned and fine bristled, and have the head so bedded in the neck, that when quite fat, the end only of the snout is perceptible. They are tender and difficult to rear, and the sows are bad nurses; yet, from their early aptitude to fatten, they are in great esteem with those who only rear young porkers. The flesh is rather too delicate for bacon; it is also deficient in lean: and their hind quarters being small, in proportion to the body, they cut up to disadvantage when intended for ham; they, however, possess the valuable properties of being very thrifty, and of fattening on a comparatively small quantity of food. There is also a *mixed breed* of this kind, being white variously patched with black; some of which have prick ears, like the true breed, which they otherwise resemble in form, and others have the ears round at the ends, and hanging downwards. These last are in every respect coarser than the former; but they are remarkably prolific; are good nurses, and, with proper care, will bring up two litters within the year. They are, however, only valuable as breeding sows and roasters; for they are very indifferent store pigs, rarely attaining any great weight, and infinitely more difficult to fatten than the original stock.

Fig. 51.

II. The animals from which the above figures were drawn, were bred by the late Sir William Curtis, and were exhibited at Lord Somerville's cattle show, in 1807, where they attracted universal admiration. They were of the Berkshire Breed; the specific characters of which are a reddish color, with brown or black spots; sides very broad; body thick, close, and well formed; short legs; the head well placed, and the ears large, and generally standing forward; but sometimes pendant over the eyes. Another distinctive mark of this breed is, that the best are without bristles; their hair is long and curly, and from its rough appearance, seems to indicate coarse skin and flesh; but in fact, both are fine, and the bacon is of very superior quality. The hogs arrive at a very large size, and have been reared even to the weight of 113 stones of eight pounds.

Although generally termed the Berkshire breed, and having probably been originally

reared in that county, yet they are now dispersed over the whole kingdom; and some of the best are bred in the neighborhood of Tamworth, in Staffordshire, from the progeny of an animal well known to pig-breeders by the name of the *Tamworth Boar.*

The crosses from this breed are too numerous to be now distinguished, and my attempt to particularize them would be unavailing. Almost every county has its peculiar kind, the superiority of which is maintained in its own district, and disputed in every other. They have been repeatedly crossed with the Chinese; and a race has been obtained, which possesses some excellent properties, and is known in some districts as the *Tonkey breed.*

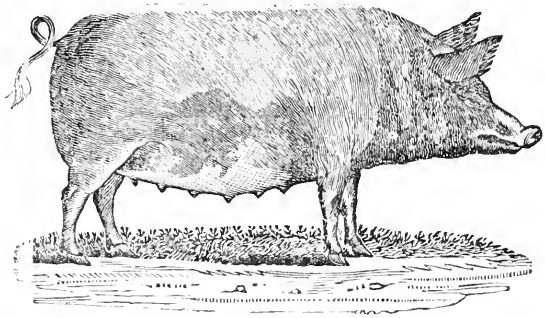

Fig. 52.

III. The Essex Half Black Pigs—of a sow of which kind, belonging to Mr. Western, of Felix Hall, the above is a portrait—are apparently descended from the Berkshire stock, and may be reckoned among the finest breeds in this country. They are black and white, short haired, fine skinned, smaller heads and ears than the Berkshire; but the latter are feathered with inside hair, which is a distinctive mark of both; short, snubby noses, very fine bone, broad and deep in the belly, full in the hind quarters, but light in the bone and offal; the sows are good breeders, and bring litters from eight to twelve; but they also have the characters of being bad nurses.

Mr. Western describes them, as feeding remarkably quick, growing fast, and being of an excellent quality of meat; and he considers them at least equal, upon a fair comparison of age, food and weight, to any sort whatever.

For the Farmers' Cabinet.

Pennsylvania Horticultural Society.

The monthly meeting of the "Pennsylvania Horticultural Society," was held on Tuesday, the 20th of March, in the Hall under the Athenæum. The President, Horace Binney, Esq., in the chair.

The Committee on Plants and Flowers awarded the premium for the best ten Camellias to Robert Buist, who exhibited Camellia Speciosa, C. eximea, C. Donkelaari, C. alba, C. florida, C. Landrethii, C. coronata, C. imbricata, C. concinea, C. Welbankia.

The premium for the best seedling Camellia, raised in Pennsylvania, was awarded to John Sherwood, Laurel Hill, who exhibited two very fine ones, especially one of them, the flower very compact and well formed, color dark red, a hybrid between the variegata and pompone, the flower has all the character of the imbricata, and opens in the same manner, remains a long time on the plant. Mr. S. may well be proud of it, being amongst the best hybrids that have been raised; the other is very dark red and has some of the character of the waratah.

The premium for the best display of plants in pots was awarded to Robert Buist, who exhibited Kennedya coccinea, K. florabunda, K. monophylla, Tropæolum tricolorum, T. brachyceras, Dillwynia cinerescens, Verbena Tweediana Euphorbia, Splendens, Ixora blanda, l coccinea, Erica tubiflora Polygala oppositifolia, Azalea coccinea, A. Gillinghamii, A. nova blanch, A. N. Phœncia, vari-Passiflora Loudonii Rosa fragrantissima, yellow noisette Rose, Pelargonium Hericartmum, E. Lord Denman, Epacris obtusifolia Burchellia speciosa, Mahernia odorata, Camellia conchiflora.

The premium for the best boquet was awarded to John Sherwood; William Chalmers, gardener to Mrs. Stolt, had a very fine one—came too late for competition.

McKenzie & Buchanan, Spruce and Schuylkill Fifth streets, exhibited some pots of Verbena Tweediana and Lantana Douglassii, raised from seed by Mr. Douglass, gardener, Washington city, a splendid new va-

riety with very large Lilac umbells, white in the centre of the corola, much larger than any other of the species known, and will soon be in the collection of every amateur.

John Sherwood, Laurel Hill, exhibited Erica imbricata, E. flora bunda, E. pubescens, and E. minor, Epacris pulchella, Hakea acicularis, Correa speciosa, Azalea Indica Alba, Arum crinitum, Ribus coccinea, Dilwynia cinerescens, Daphne, a new species, Lantana selowii, Kennedya rubicunda, Sprengelia incarnata, Erica margaratacea, Daphne Laureola, Cyclemen persicum, Camellia ileata, a new Helotrope, and the Double Crimson primrose.

Robert Kilvington exhibited Azalea Indica alba, Ixora coccinea Ornithogalum nivea, O. aureum, Pittasporum undulatum, Linaria cybelaria, Thunbergia alata, Rosa Smithii or yellow noisette, Cineraria cruenta, microstylis ophioglossoides, viola pecdata, Honstonea cœrula, Pelargoniums, stocks, cowslips, Auriculas metilla diphylla, Lind seuccio aurea.

The Committee on Vegetables awarded the premium to Daniel Reilly, gardener to Pierce Butler, Esq., for the best display of vegetables that evening. They likewise notice a basket of Snap Beans, exhibited by Robert Kilvington, as unusual for the season.

The exhibition of Tuesday evening reflects the highest credit on our practical gardeners and amateurs in and around the city. The fine healthy condition of the plants, as well as the interesting display of flowers, afforded a rich treat to the lovers of nature; and what, in our opinion, tended very materially to enhance the meeting, was the appearance of so many lovely smiling faces on the night in question. Philadelphia may now be said to vie, if not surpass any city in the Union, for taste in Horticulture. In support of this assertion, we may only remark that you cannot walk along any of our principal streets without seeing the windows filled with the choicest flowers tastefully arranged by the tiny hands of the fair occupants.

G. WATSON,
Recording Secretary.

Agricultural Society.

At a meeting of the Philadelphia Society for Promoting Agriculture, held at their Hall, on Wednesday, the 21st day of March, the following resolutions were unanimously adopted, and the same were ordered to be published.

Resolved, That a committe on premiums, shall be appointed each year, consisting of seven members, four of whom shall form a quorum.

Resolved, That the visits of the committee be confined to the state of Pennsylvania, and the distance twenty miles from the city of Philadelphia, except to competitors who are resident members of the society.

Resolved, That it shall be the duty of the committee, to meet on the 1st Wednesday of each month; articles offered in competition for premiums may be presented to the committee at such meetings as shall be designated. Such productions as cannot be presented at the committee room, will be visited by a sub or visiting committee; no member of a committee who may be a competitor shall be a judge or act on such articles as he competes for, but the committee may appoint a substitute in such cases.

PREMIUMS FOR 1838.

To the person raising the best crop of *Indian corn*, of not less than five acres, quality and quantity to be considered, competitors to notify the committee on or before the 1st Wednesday of September, a premium of $10

To the person raising the best crop of *Potatoes*, of not less than *one acre*, quality and quantity considered. - - $10

To the person raising the best crop of *Sugar Beets*, quality and quantity considered, not less than *half an acre*. - $10

For the best crop of *Mangle Wurtzel*, not less than *half an acre*. - - $10

For the best crop of *Ruta-baga*, not less than half an acre. - - - $10

For the *second best crop* of the foregoing, each a premium of - - - $5

Each successful competitor is expected to furnish the committee with a written account of the manner of cultivation, quantity and kind of manure, nature of soil, and as nearly as practicable, the amount of labor bestowed on his production.

To the person exhibiting the largest quantity of, and best *sugar beet seed*, of his own raising. - - - - $5

For the largest quantity of, and best *mangle wurtzle seed*, of his own raising. $5

For the best potatoes raised from seed, not less than one quarter of a peck. $5

For the best crop of *Spring Wheat*, not less than *one acre* quality and quantity per acre considered. - - - $10

For the *next best* crop of *Spring Wheat*, not less than one acre, quantity and quality per acre considered. - - - $5

Premiums may be withheld by the committee, when in their opinion the articles offered are not deserving of special notice.

Resolved, That the secretary be authorized to publish the above proceedings, and offers of premiums in the Farmers' Cabinet, and the other papers of the city and county.

Extracts from the minutes.

K. Smith, Secretary.

For the information of our patrons we give publicity, to the following notices.

EXTENSIVE SALE OF IMPORTED STOCK.

At the Old Norton Farm, East Bloomfield, five miles west of Canandaigua, Ontario Co., New York.

NUMEROUS applications having been made to purchase this stock, the proprietor has concluded, that in order to afford a fair opportunity to those who have already made enquiries, and others desirous of obtaining the breed to offer the same at **PUBLIC AUCTION,** *on Wednesday the 2d of May next*, on which day will be sold twenty *Improved Durham Short Horns*, Bulls, Cows and Heifers of various ages. Amongst the former is the famous Bull "ROVER," which was bred by the Earl of Carlisle, got by Rockingham, dam, (Cherry) by Wonderful, gr. dam by Alfred, &c. &c. Rockingham was by Fairfax, dam (Maria) by Young Albion; gr. dam (Lady Sarah) by Pilot; gr. gr. dam by Agamemnon.—Also, *Alexander*, *Orion*, *Splendor*, and others. And of the Cows and Heifers, *Beauty*, *Primrose* own, sister to Reformer, *Prize*, *Lady Bowen*, *Brilliant*, *&c. &c.*

Three full blooded Mares and one 3 year old Studd colt, of pure racing breed, viz:—Brown Mare *Falconet*, by Falcon, dam by Catton, (Hindeliff's dam) Hannah by Sorceror Amelia, &c.

Bay mare Miss *Andrews*, sister to Caroline, by Catton, dam by Dick Andrews; her dam by Sir Peter; Play or Pay's dam by Herod, etc.

Chesnut Mare Jessica, by Velocipede, dam by Sancho; gr. dam Blacklock, and Theodore's dam.

Bay Stud Colt, Humphrey Clinker, by Allen's Humphrey Clinker, dam Miss Andrews, etc.

The well known stud horses Tuik and Alfred, whose stock for the two seasons they have stood is unsurpassed.

Likewise about 20 Rams and a few ewes of the improved New Leicester breed of sheep. These are chiefly from a Ram belonging to the celebrated breeder Sir Tatton Sykes, for which he paid 300 guineas.

The whole of the above stock were selected from the highest order of blood in England by their present owner who imported it direct to this country, and can be recommended as worthy the notice and confidence of breeders.

Pedigrees may be had on, or previous to the day of sale, and further information obtained on application to THOMAS WEDDLE.

East Bloomfield, 1st Jan. 1838

N. B. The terms of payment will be liberal to those who wish.

The Imported Short Horn, DurhamBull, MAXWELL.

Purchased of Mr. Whittaker, and owned by the importing association of New Castle county, will stand the ensuing season, at Woodside, the residence of Samuel Canby, Esq., near Wilmington, Delaware, and will serve cows at the following rates, viz. common cows at 5 dollars, half blood's 7 dollars, and 10 dollars for full blooded animals,—in all cases the *cash* will be required at the time of service with the privilege of sending until in calf.

By order of the Association.

Good pasture furnished for cows if required.

To Correspondents.

Correspondents are most respectfully requested to forward their communications, so as to reach us, if possible, by the first of the month. The circulation of the Cabinet extends to all parts of the United States, and to some foreign countries; and as our list of patrons now amounts to nearly ten thousand, and is daily increasing, we are under the necessity of putting it to press early in the month. Our attentive friends, to whom we owe many thanks, will at once perceive the importance of an early transmission of their favors.

Seeds.

☞ Sugar Beet, Mangle Wurtzel, and Ruta Baga seed, of genuine quality, may be obtained at the Seed Store of GEO. M. COATES, No. 49 Market street, Philadelphia.

Quantity of Rain which has fallen in each month since January 1, 1838. inches.

1st month,	2,20
2d month,	2,19
3d month,	3,17

Philada. Hospital, April 2, 1838.

Value of Time.

Sir Walter Scott, says—"Our time is like our money; when we change a guinea the shillings escape as things of small account; when we break a day, by idleness in the morning, the rest of the hours lose their importance in our eye."

Baden Corn.

The following statement in regard to this corn has been politely handed to us by Peter A. Brown, Esq., of this city, to whom it was addressed.

Philadelphia Feb. 3. 1838.

Dear Sir,—The few grains of Baden Corn which you gave me last spring I had planted in the back part of my garden; the stalks averaged about fourteen feet in height One stalk had four large ears and one small one on it: a number of the other stalks had four ears on each, and the rest had some three and some two ears on each,

Respectfully, B. NEWCOMB.

The Baden Corn answers very well in the Southern States—it is very productive we understand, but requires a long season. It is understood not to be well adapted to our climate.

THE FARMERS' CABINET,

A MONTHLY NEWSPAPER,

IS PUBLISHED BY

JOHN LIBBY, NO. **45** NORTH SIXTH STREET, PHILADELPHIA.

ABOVE ARCH STREET.

To be had at Orrin Rogers' Book Store, No. 67 South Second Street, Philadelphia.

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The Cabinet is published on or about the fifteenth of every month. Each number will contain thirty two octavo pages on good paper and fair type. The subjects will be illustrated by engravings on wood whenever they can be appropriately introduced. TERMS.—*One dollar per year, payable in advance.* The Cabinet by the decision of the Post Master General, is subject only to *newspaperpostage*, that is one cent on each number within the state, and within one hundred miles of the place of publication, out of the state—one cent and a half on each number to any other part of the United States. ☞ Seven copies for five dollars. All subscribers must commence with the volume No. 1, or with the half volume, No. 7.

Neall & Shann, Printers, North East Corner of Eighth and Market Streets.

THE FARMERS' CABINET,

DEVOTED TO AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

Vol. II.—No. 16.] **Philadelphia, May 15, 1838.** **Whole No. 40**

PUBLISHED BY JOHN LIBBY,
No. 45 North Sixth Street, Philadelphia,
Above Arch Street,
AT ONE DOLLAR PER YEAR.

"Agriculture is the noblest of all employments, as well as the most favorable to morals. Let the soldier talk of *honor* and *glory*, I see more *honor* in covering the earth with grain and verdure than with dead and mangled bodies, and more *glory* in providing food for its inhabitants than in destroying them."

THE FARMERS' CABINET.

We take great pleasure in laying before our numerous readers the following interesting correspondence. Dr. THOMSON, the Corresponding Secretary of the New Castle County Agricultural Society, has set an example which we trust may have a tendency to draw out from other societies much valuable information on the various branches of agricultural industry. We hope that the plan of obtaining information on this most important subject, by propounding questions to intelligent, practical farmers, through the proper officers of Agricultural Societies may be extensively adopted. If so, and they are promptly answered, as in the present instance, and forthwith published, the happiest results may be anticipated. The great object in the formation of these societies is the improvement of their members in agricultural knowledge. By availing themselves of the opportunities afforded by the establishment of agricultural journals, this information, instead of being confined to a single neighborhood, and making slow advances into the surrounding country, may be immediately and widely diffused throughout all the land.

—

For the Farmers' Cabinet.

On Stall Feeding Sheep.

MR. EDITOR:—At a late quarterly meeting of the "Agricultural Society of New Castle county, Delaware," it was requested of the Corresponding Secretary to elicit from *practical farmers* throughout the state, such information and experience on matters connected with *agriculture*, as might benefit and advance the objects of the society, and when deemed of sufficient interest and importance, to publish the same for the use of its members. Many of them are subscribers to your valuable paper, and most of them interested more or less in sheep. The method Mr. Baynes adopts of making *fat mutton* will, no doubt, be interesting to some of them, and the information he imparts may be relied upon—founded as it is upon *experience*.

Yours, very respectfully,
JAMES W. THOMSON.

—

Wilmington, March, 1838.

CORRESPONDENCE, &c.

MR. THOMAS BAYNES—

Dear Sir:—I am induced from some practical remarks made by you in a late conversation on the subject of *sheep*, and particularly *sheep for stall-feeding*,—to solicit from you still further information on this important branch of grazing—not only for the benefit of our Delaware farmers (who in the prospect of a dog-law, for the protection of sheep, from the next legislature, will go much more largely into the business) but also for the sake of the agricultural interest of the country in general. In all our great markets, *fine mutton* is scarce, and consequently high—it is one of our most *wholesome* meats and if properly attended to, one of the most *profitable* the farmer can raise. But unfortunately for agriculture, the great and leading avocation of man,—too few of its practical votaries impart their wisdom and experience to others by essays and lectures, who so much need their direction and aid. The experience you acquired in England, and the years of observation you have had in this country as the shepherd of that celebrated feeder of fine mutton, SAMUEL WEST, of Delaware county, Pa., will give great interest to any communications from you on the subject—and as Mr. Barney has given a reputation to Delaware *sheep*, which they richly deserve as—among the finest in the country—practical directions

from you, for their treatment, and how they can be best improved and stallfed, will be thankfully received by those who wish to emulate his example—and profit by his valuable enterprise. Below, I have proposed some queries for you to answer at your leisure, on the interesting subject of *feeding sheep*,—without a wish however to confine you to them. Any other information than they ask for, and in your power, I feel assured you will impart and by so doing, much oblige yours, &c.

James W. Thomson,
Cor. Sec. Agricultural Society.

Wilmington, April 8, 1838.

—

To James W. Thomson, M. D.

Esteemed Friend:—Thy favor on the subject of sheep was duly received, and I will comply with thy request with pleasure as far as I am able. Samuel West, to whom thee has alluded, a practical farmer near Chester, Pa., feeds about 100 sheep per year—he purchases them in September, and, if possible, selects a mixed breed of Bakewell & Merino, or glade sheep. After getting them home, the first thing he does is to wash them in a clear stream of water to cleanse them from dust or mud which they may have collected in traveling. They are then turned into a pasture pretty well eaten down for a few days, when they are changed to a better one. It is best to change their pasture every week, particularly, if the fields are small. They will do pretty well on grass till December, when they should be housed (see directions in answer to thy 4th question.) The cost of sheep for feeding is generally from $3 to $5 per head, and will mostly sell for double the first cost when fat.

John B. Baynes, of Naaman's Creek, Delaware, keeps a *breeding stock*, the fine quality of which thee has some knowledge. He allows thirty ewes to one buck, which is considered about the right number on a farm of one hundred acres—these ewes on an average will have forty lambs, which at 4 months old are worth four dollars per head. But I should recommend the yearlings kept over which would shear seven pounds of wool on the 40 head—equal to 280 lbs. at 40 cents would be, $112,00

The 31 head of old sheep would shear 5 lbs. wool per head, 155 at 40 cents,	62,00
40 lambs, when fat, at 2 years old—$12 per head,	480,00
	$654,00
The food will cost $1 per head on the 40 yearlings,	40.00
Leaving,	614,00

The farmers' income from his *breeding flock*.

Ewes should be kept well through September and October, and the buck allowed to go with them on the first of October; after this time it is considered best not to keep them too high till towards March when they should be kept better. Potatoes or turneps should be given them till grass comes. Sheep should be washed about the middle of May, if the weather is clear, shear them ten days after. Some of our farmers may not be prepared to purchase a flock of Bakewell sheep. A profitable business can be done, and at the same time a good stock raised by purchasing a few good common ewes and a Bakewell buck—it will greatly improve the breed by changing the buck every year and selling off the old ewes. In three years the breed will be very nearly as good as full Bakewell. If two farmers in the same neighborhood could exchange bucks it would answer as well and be a saving to both parties. I have endeavored to give thee all the information in this and my answers to thy queries below I now think of, yet that I have omitted some things I have no doubt, but am willing at any future time to answer any questions and impart any knowledge in my power to aid thee and the valuable Agricultural Society of the county, whose advancement thee so ardently seeks to further. I remain thy friend,

Thomas Baynes.

—

Queries, by James W. Thomson, the Corresponding Secretary, of the Agricultural Society of New-Castle County, Delaware.—with Answers by Thomas Baynes of Wilmington, on the management and feeding of sheep.

Question 1.—What breed of sheep do you consider best, and most profitable for the feeding of mutton, in this and the adjoining States, to purchase, principally for the purpose of fattening?

Answer.—Half Bakewell and half Merino. A breed of sheep from the Glade country, State of New-York, answers very well.

Question 2.—What kind of sheep would best combine the fattening qualities, and yield to the farmer the most valuable fleece?

Answer.—*Bakewell*, viz:—Lambs at six months old, worth from four to six dollars, at 14 months, yield six to eight pounds of wool, worth 40 cts. per pound; at 24 months will sell for ten to thirteen dollars; if not sold, will produce from five to six pounds of wool, and have a lamb—continuing thus, till four years old, mostly decreasing in the weight of wool every year; at four, the fleece will not weigh more than four pounds, when they ought to be fed, and never kept older. It is a rule with good farmers, never to have their lambs before first week in March.

Question 3.—What should be the age of sheep to fatten best, and how is a farmer to know their age, and what length of time does it ordinarily take to make mutton sufficiently good for the shambles?

Ans.—From three to five years old. Their age is known by their teeth. At one year old they have two broad teeth in front; at two years old four, and at three years old six, or a full mouth; after this age their teeth begin to shorten.

They require three months to fatten, provided they are in fair order when purchased.—Six weeks on grass, and six weeks on grain and hay.

Question 4.—What do you consider the best food for stall feeding sheep, and how much food should be given to each sheep daily during the fattening process.

Answer.—Corn, oats and potatoes, with hay. It is necessary to be cautious at the commencement; the food should be three-fifths corn, to begin with half pint to each sheep, daily for five days, increasing gradually to one pint for five days more, and 1½ pints for five days after, when one quart can be given with safety. It is best to give a few potatoes daily, say two bushels to every hundred head.

Question 5.—Is salt essential to sheep at this time?

Answer.—They ought to have it to go to at pleasure.

Question 6.—How many sheep, with advantage to the farmer, and their health, can be fed on a farm of from 100 to 300 acres, and how many can one hand feed and fodder?

Answer.—One hundred is considered a sufficient number for a farm of 200 acres, to be fed in three separate flocks. In England one sheep to every head of cattle is the rule. The labor is very trifling, one hand can attend 100 in 1½ hours—½ hour morning, noon and night—Be *punctual to the time of feeding, it is of importance.*

Question 7.—Should fattening sheep be kept housed or suffered to run at large, and whether it is necessary to have any particular form for shelters, racks, or enclosures, for fattening sheep?

Answer.—Every farmer should have at least one sheep-house, to be two stories high; the upper story for hay in part, and to prepare their food in the lower story, open to the south, with a yard attached to it twice as large as the house, or to contain twice as much ground as the house stands on. The rack and trough to run around the inside on the lower floor, four feet from the outside wall, to allow a passage; a small trough to be placed at the bottom of the rack, six inches broad and four inches deep, two feet from the floor. The racks must be perpendicular, to prevent the hay seeds getting into the wool, and slope the back of the rack; two feet will be sufficient for the height of the rack from the trough. The hay is given them from the passage over the back of the rack, but the food must be taken inside and carefully placed in the trough, even all along to prevent any one from getting more than his share. It is necessary they have water twice every day. If they go out to water never allow them to be out more than two hours at a time. The pen should be kept well littered.

Question 8.—What are the diseases to which fattening sheep are most liable, and what are the proper remedies?

Answer.—The disease most common is rot or lax—the best remedy known for it is half pint of equal proportions of soot and salt. When sheep are feeding high they are subject to a disease supposed to be a species of cholic, the best remedy is to bleed at the eye vein, and give an injection composed of lard, molasses, and warm water; an injection is very good when they are too costive, but this never occurs when they have their proportion of potatoes, turneps or sugar beets.

When sheep get torn with dogs, or by any accident rend the skin, the wound should be well washed with warm milk and water.—Stitch up the place and bathe it with tincture of Cayenne pepper or spirits of turpentine.

Sheep are at times subject to foot rot or foul-claw; this can be mostly cured by placing in their path *quick lime* three inches deep, so that the lime will go well up between their hoofs. If this should fail, clean well their feet with a dry cloth, pare off the superfluous hoof, and apply butter of antimony; if it is still unmanageable they had best at once be sold, and then if care is not taken to clean well their pen, &c., the next flock will take it as it is a contagious disease. Scab is a disease more common in Scotland and north latitudes; it is scarcely known in this country. The best remedy for it, is the oil of tar, placed in the wool on the back; a small quantity is sufficient.

THOS. BAYNES.

For the Farmers' Cabinet.

Application of Marl.

On reading the last number of the Cabinet I perceive that your readers in the lower part of Delaware and the Eastern shore of Maryland, where the green sand or marl abounds, are desirous of being informed of the best mode of applying it as indicated by the experience of our New Jersey farmers. It may perhaps save those who are inclined to try it, some trouble and expense to be informed that every known method of applica-

tion seems to have been resorted to; and that which has been found to answer best, is to use it as a *top dressing* on sward or grass grounds; the effect is immediate and great, being scarcely to be believed excepting by those who have been spectators of its effects. The quantity applied to an acre of good marl is from six to twenty tons; a bushel weighs about a hundred weight, of course, a ton is about twenty bushels; more may be applied without any apprehension of injury, but from twelve to fifteen tons per acre is a good dressing, though some have applied twice that quantity. Spread it evenly over the surface of the grass ground in the fall, winter or spring, or whenever you have most leisure, and when done you need not give yourselves any further trouble about it; nature will do the rest, and your reward will be certain and great if your marl be good. Whenever you plough down your grass ground which has been thus marled for corn, or any other crop, you will see the effect of it strikingly exhibited in the subsequent crops. It has frequently increased the fertility of the soil more than ten fold, and some crops are believed to be much improved in *quality* as well as *quantity* by its application.

The great weight of the marl causes it to sink in the earth, and if it should be ploughed in on its first application, there is some danger of losing part of the good effects of it, by its being placed too remote from the roots of the plants intended to be nourished by it.

It is now agreed on by all, that the fertilizing ingredient of this valuable substance is potash, and the benefits derived from its use are directly proportional to the quantity of it contained in its composition.

Evesham.

April 20th, 1838.

For the Farmers' Cabinet.

Stall Feeding, &c.

Mr. J. Libby:—It is evident that the remarks of your correspondent "Agricola" in the last number of the Cabinet, [No. 38,] are intended to apply to my production, of the same number. Interspersed as they are, with "Beets" and "Hollow Horn," the device is shallow and insufficiently masked.

"Agricola" *may be* a "Farmer" and know how to estimate "Economy;" but he has risked assertions which I am fearful he will fail to prove. His first is "Farmers often state that the grain fed to cattle or hogs would have sold for more than the animals have brought after they were fattened."

"But," says he, "the complaint, if it be a just one, has its origin more in the extravaganee and waste arising out of the mode of feeding, than from any other cause. The general practice is to feed with whole grain in its raw state."

I have never read any such statement in any agricultural work that has yet fallen into my hands; yet it may have been stated —and if "farmers often" make such statements it would be well to inquire into the "facts" before we put forth the sweeping denunciation, that the "complaint has its origin more in the extravagance, and waste, &c. than from any other cause."

If "Agricola" will take the trouble to inform himself on the subject, he will find that many intelligent cattle feeders, in Chester county, have lost considerably on their cattle fed through the last winter; nor is it their "general practice" to feed with whole grain; it is generally ground. But in estimating the expense the toll actually taken out at the mill is also included.

Hogs are more frequently fed upon whole corn, and are found to be efficient masticators and digestors.

Steaming or boiling might render a less quantity sufficient, but I doubt its being economical where farmers feed only their usual number—a considerable addition of labor and some fuel would be had in requisition for either.

The "Maryland Farmer" who made his corn meal into mush and thereby saved one-half, has yet one other experiment to try, to be equal to the honest Hibernian with his two stoves, let him make it into something else, and he may, possibly, save it all. At any rate, it appears, that from stubborness or some other cause, Pennsylvania farmers will not adopt the plan, for "Agricola" says "the experiment above referred to was published at the same time in several agricultural journals, so as to give it publicity, but farmers generally have gone on in the old way of feeding, notwithstanding." Another experiment went to show that a horse was fed for a time on whole oats; the plan was changed, and "it resulted in proving the fact that one-half the quantity *crushed* kept the horse in better order." It might be so with an old horse that had no teeth, but in Pennsylvania we feed such on mush, &c.

I am very favorable to the sugar beet, so much so that I would recommend to every farmer the raising of a few bushels to give his cows through the winter and spring months. His reward will be in the quantity and quality of the milk and butter, and the improved condition of his stock.

"Agricola" says "it is a very remarkable fact, that in Great Britain no disease under the name of Hollow Horn is known, which

some ascribe to the universal practice of feeding cattle with a portion of succulent food daily, during the winter season."

"Agricola" may be correct in saying that "in Great Britain, no disease under the *name* of hollow horn is known;" but had he stated that no such disease as that called hollow horn in this country, is known in Great Britain, it would have meant something else. The same disease, under different names, exists in both countries.

After the able discussion between "Observer" and "Subscriber" of this very interesting subject, it might appear superfluous in me to attempt any thing further—but I feel persuaded that the length of their discussion will prevent many farmers from reading it, and am of the opinion that enough might be said in fewer words. I have had some experience with the disease commonly called hollow horn, and believe I have cured several animals that had it. I learned from an experienced farmer, who still pursues the plan successfully.

The early symptoms of the disease, as I have noticed them, generally are—dullness in the countenance—falling of the eye-lids—loss of appetite—slowness of motion—hanging of the head—sometimes coldness of the horns, at other times more than the natural heat—shaking of the head, &c.

If the disease has progressed a little farther, frequent discharges from the nostrils will take place—afterwards, it may be observed that these discharges have stopped, and though the animal has become more restless; no doubt, the matter has collected in the horns so as to prevent the natural circulation of the blood, as the horns at this stage of the disease will feel cold.

In any of these periods (though the earlier the better) I would proceed as follows:—Secure the animal firmly to a post, with a good strong rope, having furnished yourself with a gimblet of the size between a spike and a common nail gimblet, a vessel containing about a quart of milk warm water, and a handful of salt, and a syringe of metal or common elder, the former is preferable, proceed to bore the horns about three inches from the head and inject the solution, until the horns and nasal passages are completely cleansed—you may, perhaps, have to repeat the operation to effect a cure, unless you may have discovered the early stage of the disease.

If you have been so fortunate, and apply the above remedy, the probability is, the blood will resume its circulation in the interior of the horn and it will become healthy—the holes you have made will close up, and the animal may live a dozen years afterwards without again having the disease; but if the worst stages of the disease should precede your remedy the blood will not again circulate in the horn, and it will remain dry and empty, though the animal may live and in every other respect, do well. As we are subject to take "cold" from imprudent exposure, however well we may be fed, so I am of the opinion that cattle, however well they may be fed, when much exposed to cold and wet, are liable to take the disease called Hollow Horn. Very respectfully,

J. J. M.

Chester County, April 1, 1838.

The following communication was read before the Philadelphia Society for Promoting Agriculture, at its regular monthly meeting, April 18, and ordered to be published in the Farmers' Cabinet:

Stall Feeding Cattle.

To the Philadelphia Society for Promoting Agriculture.

Believing that the cause of agriculture may be promoted by practical observations and statistical facts, and that theories and principles should be based on these, I beg leave to communicate a statement regarding four bullocks which I have had the pleasure of bringing to a high degree of perfection. One of these steers was admitted to be one of the fattest ever exhibited in the Philadelphia market, and the others very little inferior to him. By the annexed statement it will be seen that the result, of between two and three years stall feeding, has been to pay me full prices for the grain, beets and hay consumed, and allow the manure for straw and labor, a result that I think would satisfy any reasonable farmer or grazier.

At the same time to succeed well with feeding large cattle, it is necessary, that they should be kind and good feeders. They should also be attended with especial care. Without these pre-requisites the farmer had better sell his grain than stall feed cattle.

ISAAC W. ROBERTS.

L. Merion township, Montg. Co., Pa., April 17, 1838.

Statement to 1st May 1836.

Nov. 15, 1835, bought two steers, estimated at 1750 lbs. dead weight—cost	$110 00
Commenced stall feeding them on the 1st Dec. and continued 150 days at 27 qts. per day or 126 bushels at 70 cents	88 20
They consumed two tons of hay at $16	32 00
The grain consisted of equal parts of corn and oats, ground; or corn and "mill stuff," or wheat bran. On the 1st May 1836, turned them on grass with a pair of oxen, estimated weight 1850 lbs. and valued at	230 20
	$150 00

Statement from 1st May 1836.

Cost as above of the four cattle	$380 20
Pasture during the season for the four	80 00
Commenced feeding grain on the first of October, twice a day, till 1st Dec., and then three times per day till 1st May,	

1837, equal to 190 days full feeding of 2 bush. per day or 380 bushels as above, at 70 cents,	$266 00
100 bushels Mangel Wurtzel Beets at 25	25 00
5 tons Hay at $16	80 00
	$831 00
Grass during the summer of 1837	80 00
Commenced feeding grain on 1st Sept., 1837, twice per day till 1st Dec., and then three times per day till 19th Feb., say 140 days full feeding or 280 bush. at 70 cents.	196 00
100 bush. Mangel Wurtzel, at 25 cts.	25 00
3½ tons Hay, at $12	42 00
	$1174 20

On the 19th Feb., 1838, sold them to Messrs. Drum, Wartman & Co., Victuallers, for $1200. In the spring of 1836 the two steers would have sold for $240, and in the spring of 1837 I estimated them at current market price as worth 750, and if then sold there would have been an apparent loss, but it should be remarked in explanation, that the stall feeding extends to the first of May, whereas the season for selling is the middle of Feb. to 1st March, when their cost was about what I estimated them as worth to the butcher.

RECAPITULATION.

First cost of the four cattle,	$260 00
Pasture during two seasons,	160 00
Grain fed to them 786 bush. at 70 cts.	550 20
Mangel Wurtzel 200 bush. at 25 cts.	50 00
7 tons of Hay, at $16,	112 00
3½ tons of Hay, at $12,	42 00
	$1174 20

And being sold for $1200 gives as before stated the manure for straw and labor, leaving a balance of $26 and paying me a liberal price for the produce of the farm: about two thirds of the grain consisted of equal measure of corn and oats, and one third was corn and mill feed.

By the foregoing statement it appears that the average increase in value of each animal was about $100 per annum.

STATEMENT OF WEIGHT AND GIRTH.

STEERS.

	Live weight—	*Dead weight*—	*Girth.*
No. 1.	2422 lbs.	1671 lbs.	9 ft. 1 in.
No. 2.	2321 "	1613½ "	8 " 9½ "

OXEN.

No. 3.	2555 "	1691 "	9 " 2½ "
No. 4.	2261 "	1533½ "	8 " 9 "

Cultivation of Sugar Beet.

The following letter, addressed to a gentleman of this city, has been politely handed us for publication:

Philadelphia, March, 1838.

Dear Sir:—Mr. Lovering's experiments are decisive of the fact, that beet sugar of superior quality to that imported from France, can be made from roots grown in this country, and that too under very unfavorable circumstances. It is satisfactory also, to find that his results, as to quantity of saccharine, &c., agree with the statements contained in your published report. There can be no doubt, therefore, that large quantities of this invaluable root will be grown this year, for the purpose of sugar making, as well as for the feeding of cattle, than which a more profitable crop cannot be raised: and as the time for sowing the seed is fast approaching, perhaps you will permit me to offer a few remarks on the best mode of conducting that process, upon which so much of the success of the result depends.

Chaptal, in his "Chemistry applied to Agriculture," recommends the English mode of culture, which consists of throwing the land into ridges, placing the manure in the trenches formed by the operation, and then splitting these ridges by a double plough, by which the dung is covered with a pulverized soil; and upon the ridges so formed, the seed is sown, either by hand or drill; so that the plants will stand immediately over the dung, which their roots will soon reach, and by which their growth will be astonishingly accelerated. This is, decidedly, the best mode of cultivation, and if the ridges are formed two feet apart, it will give sufficient space for the working of the plough or cultivator, in the after clearing of the crop. This method of sowing on the ridge is practised in the growing of turneps, by that best of Agriculturists, Mr. Walker of Holmesburg, with what effect, all who have the happiness of knowing him can testify; his mode too, of thinning the plants by hand, leaving only the strongest to form the crop, is admirable. Could you not induce him to give some details that others might "go and do likewise."

If therefore, let me repeat, the rows be two feet apart, the land might be kept clean by the plough, the operation of which will be found of immense advantage to the future well-being of the crop; the roots might stand 12 or 14 inches distant in the rows. Sow about eight pounds of seed per acre, this will give a sufficient number of plants from which to select the strongest for the crop; no practical man can endure to hear of *transplanting* and *watering* with the view of saving seed, &c.; it is better to sow largely, and thin the plants, selecting the strongest only.

It has been ascertained by experiment, by one whose judgment in this matter will be considered as decisive by all who know him, Dr. Gibbons, of Wilmington Del., that a crop of sugar beet can be raised with as little labor and expense as a crop of corn. Estimating then, the value of an acre of corn at $40, and the crop of sugar beet 40,000 lbs. p. acre at a fair price, (they sell readily in France for 20 cents per cwt.) the difference in the value of the two crops must satisfy any one; but when to this is added the advantage of the beet culture to the succeeding crops, and

the spirit of improvement which it engenders, the difference is incalculable. In France the beet is a fallow crop; it might be grown for many years in succession without impoverishing the soil, nay, it is found to be meliorating, especially in dry, burning soils, which are kept moist and cool by the shade of the large and spreading foliage.

With best wishes for the success of an undertaking which must have cost you much labor, time, and I fear I may add *money*, but which could never have been brought about by any other means, I trust the time is not distant when you "*shall look on the labor of your hands and be satisfied.*" I am, dear sir, most truly yours,

JAMES PEDDER.

For the Farmers' Cabinet.

Feeding Cattle, &c.

It is important to a farmer to know not only how to render the soil the most productive of grass or grain, but also to know how they can be fed to animals so as to keep them in good condition at the least possible expense, or how the greatest possible quantity of meat can be laid on them, in the shortest period of time, and most economically.

The process of nutrition is now so well understood that it is admitted by all, that in order to obtain the greatest advantage from food of any kind, it should be so prepared that the organs of digestion may obtain complete control over it, so that all the nutricious parts of it may be absorbed and carried into the circulating system and deposited in the form of flesh or fat. Besides having the food of a proper kind and duly prepared, and the animal in good health, it is essential to keep him quiet, both mentally and bodily, so as to be perfectly at ease, without any internal or external irritation that can possibly be avoided. Numerous cases might be produced which show conclusively the difficulty of fattening animals when under the influence of much excitement. The familiar one of sheep, which have been chased or worried by dogs, is well known to most farmers; as they never fatten kindly or do well afterwards; which is supposed to arise from continual apprehension of danger, so that they neither feed well or sleep soundly, and the latter is as necessary to the taking on fat kindly as the former. The same laws govern the human race, as the brute creation in taking on flesh, for we never see fat persons who are not good and sound sleepers. A good farmer and grazier, whose land is passed through by a rail-road, stated that his stock did not feed or fatten well when in the fields adjacent to it, in consequence of the excitement and alarm produced by the passage of the locomotives and the trains in their frequent transits over it.

This to some may appear ridiculous, but those who have carefully investigated the causes which retard the fattening process will be inclined to admit, that it may exercise a very important influence, particularly with very wild or very timid animals. A circumstance having a very important bearing on this subject, was related to me within a few days, by a worthy and excellent farmer of Montgomery county. He stated, that he had a shed in his barn-yard adjoining a public road, under which he had for two years past undertaken to stall feed some cattle, but without success, although the plan of feeding was according to the most approved rules.—It was finally supposed that something pernicious was given to them from malicious views which retarded their increase in flesh: in consequence of this, one of them was put into a stable and kept closely confined and fed as usual, when he did well and soon became excellent beef. On further examination and reflection respecting the cause of the failure under the shed, it was noticed that the poultry roosted there, and that the vermin from them had been communicated to the cattle, which kept them in a continual state of uneasiness and irritation, and this was no doubt the reason of the failure to fatten them in that location. An adjoining neighbor fed an ox nearly all the past winter, contiguous to the hen roost with the same result, having lost all the winters' feed before he discovered the cause of his want of success. The same person experienced a similar result in the case of a hog last autumn, and the cause was not discovered till he was killed, though he was very thin, when it was ascertained that he was lousy. In the case of lice, on domestic animals, tobacco juice it is believed would destroy them; but every precaution should be used to prevent animals from being brought into a situation where they would be likely to become infested with them. Keep all your animals clean, and they will thrive and do better. In a state of nature, all animals preserve themselves clean; it is only when brought under the dominion of man and their habits are changed, and it becomes impossible for them in compliance with their natural instincts to preserve themselves free from filth, that they suffer much by it. Don't permit poultry to frequent or roost in your stables, or near your *cattle* or *hogs*, or you will soon sustain a greater loss by it than they are all worth. A suitable hen-roost should be provided by every farmer, remote from other animals, and a proper place allotted for them to rub and dust themselves, to free them from vermin at all seasons of the year—of course it should be under cover.

A. B

For the Farmers' Cabinet.

Rotation of Crops.

System is as important in farming as any other business; without it, confusion, disorder and loss will be the inevitable result. Fifty years ago there was no regular, rational systematic rotation of farming pursued in what are now the best cultivated districts of Pen'a. The consequence was a regular and constant deterioration of the soil, producing less and less annually, till starvation and want seemed to be inevitable, in many sections of country, that are now in a very high state of cultivation. The introduction of red clover, and plaster of paris, with a judicious rotation of crops gave rise to the astonishing improvements which have taken place within forty or fifty years. The soil gradually became enriched and regenerated under the improved system, and its increased products enabled its owners still further to add to its fertility; and how far this plan of progressive improvement is capable of being carried, has never yet, that I have ascertained, been determined; but many of us have lived to see farms, that yielded but a very scanty support to a single family, under the old way of cultivation, now not only support in affluence, three, four, or five families, but furnish the means of enriching them all, by the adoption of the modern improvements in agriculture. Recently meeting with an intelligent farmer from the lower part of Delaware state, and falling into conversation with him on the subject of a proper rotation of crops, I was not a little surprised to find that the system which with us has enriched both the soil and its proprietor, should not have found its way into that part of our common country; but that the old plan of empoverishing the land and diminishing the resources of its owner should still at so short a distance from us be pursued to a very ruinous extent. At the particular request of my friend, who informed me that you had many subscribers in his vicinity, I consented to furnish for your Cabinet a statement of the rotation of crops which is generally adopted by the best and most successful farmers in the best cultivated parts of eastern Pennsylvania. After a grass or clover field has been mowed one year, and the next succeeding year been used for pasture, it is broken up or ploughed, either late in the autumn or early in the following spring and planted with Indian corn, which is cut off in the fall and the field ploughed as before either in the fall or following spring, and sowed with oats or barley; and immediately after the harvesting of the oats or barley, the ground is ploughed, manured and sown with wheat.

Grass seed should be sowed on the wheat early in the spring, and if timothy is intended to accompany the clover, it had better be sowed in the fall, and the clover, orchard grass or herd grass seed sowed early in the spring; and be sure not to be too sparing of the grass seed, for much loss is often sustained by not putting it on thick enough, particularly as the clover in some soils is often injured by the winter frosts, and then it is important to have plenty of timothy, orchard grass, or herd grass roots to supply its place.

The spring following the wheat crop, plaster of paris should be applied, say one bushel to the acre, most of our best farmers consider this to produce as great an effect as any larger quantity. This season cut the grass for hay, and the next succeeding season pasture the grass and in the autumn it may be again ploughed for corn the following season, and proceed with the same round of crops again in the same order; but if the farm should contain a sufficient number of fields, and the grass be well set, it may be pastured a second year before it is broken up for corn. The first is a five year rotation, the latter six.

The best time for applying lime or marl in this rotation of crops, is believed to be in the fall, after the wheat crop; applied as a top dressing on the young grass or clover. In this mode of application, its effects are very conspicuous in the increased quantity of grass the first season, and when the sward is broken up for corn the effect of the lime or marl, on that crop, will be much greater than if they were applied to it the same season.

AGRICOLA.

April 24th, 1838.

For the Farmers' Cabinet.

Peach Trees.

I am sorry to see it recommended in No. 39 of your CABINET, to put *coal ashes* round the roots of *peach trees*, to protect them from insects. Some years ago, when living in the country, I obtained peach and plum trees from Philadelphia, and having heard of the use of coal ashes, I applied them as directed by your correspondent. The trees all became sickly the first summer, and one died.

Suspecting that the ashes were the cause, I dug to the roots and found them all rotten as far as the ashes reached. Some of my neighbors told me that they never applied ashes, whether coal or wood, till they might be thoroughly leeched; that is, till all their causticity might be washed away.

The method which I subsequently adopted and found both safe and effectual, I learned from one of the first four volumes of the "Agricultural Society." Dig away the earth so as to lay bare the superficial roots, and then encircle the trunk of the tree with rye straw, the butt ends in the ground; tie this in several places firmly to the tree and cover up the butt ends with the removed earth. The straw need not be more than one foot long, nor need it be applied very thick.

When you plant a tree, look very carefully for worms, and then be sure to apply the straw before the first of June. But if the tree has been planted more than one or more summers, then dig away the earth down to the superficial roots and search for worms. If gum exudes from the bark, it is almost certain that the enemy is there, and he is to be sought out with a sharp pointed knife, even if it be found necessary to cut away a good deal of the bark; the wound must then be carefully crammed with well-wrought tough clay and the whole covered with the straw. These wounds will heal more quickly if made about the first of May, when the sap begins to flow freely and there is a long season of uninterrupted growth.

The worms are small and white, with a red head. They are the offspring of eggs deposited there by a fly the previous summer. They sometimes completely girdle the tree. that is, eat away the bark through the circumference. Nothing is more easy than to prevent all this evil, by the means above mentioned.

I have said above that about the first of May is the time to wound trees with the least injury. This is the fact, and hence I am sorry to see axes and saws and chisels employed in almost every street, square and garden in this city, during the winter. Wounds which would soon heal if made in May, will ever remain a rotten stump if made in the autumn or winter. Let the wound be made very smooth with a sharp instrument, then the sap flows freely, a glutinous and congenial covering is formed, the long growing season succeeds, and before winter the process of healing is far advanced, if not completed. S. J.

P. S. The trees of your correspondent may have been too large to be seriously injured by the ashes; mine were young trees, some just planted. But whatever is deadly to the young, cannot be wholesome to the old, though to these it may be less fatal than the worms.

Peach Prospects.

We are happy to learn from Delaware, now becoming celebrated for its *fine peaches*, that although the cold weather and frosts have been most trying on the young fruit, and much of it injured, that there is yet *enough spared* to promise a fine crop—if no future frosts should occur to nip the tender blossoms just bursting from the bud. The great success of Messrs. Ridgeway and Reeves, near Delaware City, (and who does not remember their fine and luscious peaches of last summer?) will soon be followed by other equally enterprising gentlemen of Delaware and this city who have gone largely into the business.

On the Union Farms, near Wilmington, owned, we understand, by Dr. Thomson of that place, and Mr. M. Eayre of this city, we learn that about 100 acres immediately on the river Delaware, are now flourishing in peach trees, and that about one half will bear this year, and that by a late arrangement our esteemed fellow-citizen, I. Reeves, for whom peaches *will always grow*, has become a partner with these gentlemen in their large concern. Philip Reybold, Esq., the efficient President of the Delaware Agricultural Society, has also, we understand, set out this spring a large orchard. We sincerely wish all these gentlemen the success they merit. Some of the fine peach districts of Jersey, seem of late years to have lost their power of producing, and continuing long lived, the tree that produces this best, in its season, of all fruits. We should like to hear from some of our Jersey subscribers if they can give us the reason, why it is so—and if any clue has yet been found into that most insidious and fatal disease to the peach tree, *the yellows!* We hope this hint will be kindly taken, and that all the information that can be imparted to us may be given for the benefit of the readers of the Cabinet, on the interesting subject of rearing and of prolonging the existence of the peach tree. A full and generous supply of this luscious and wholesome fruit, is a matter of great interest and luxury to every one, and our populous districts and cities should not hesitate to hold out the highest premiums and inducements to those who propagate fruit and supply our markets with the finest varieties.

For the Farmers' Cabinet.

Capons.

The propagation of poultry, is an item in the common concerns of husbandry, very much overlooked or neglected. Indeed, the greater part brought to our markets, may be justly placed to the account of accident, as the farming community give themselves very little trouble or thought on this subject, except it be in autumn, when they are about making up a load for market.

The high price and increasing consumption in our Atlantic cities, is certainly of sufficient importance, to induce a more pointed interest on the part of our farmers, as to the proper mode of rearing and increasing this truly valuable article, the dunghill fowl.

In taking the liberty of aiding my fellow citizens in this particular, I hope to be excused for suggesting a course of observation for their future benefit, under the confident impression, that they will be abundantly compensated both for the time and attention they may devote to this matter.

In the first place select a breed of large

fowls, give them comfortable accommodations, and at the setting season, select almost exclusively the *sharp pointed* eggs, as they invariably produce the male; these when at *puberty* should be *emasculated*, which will convert them at once into Capons.

This alteration will in about a twelvemonth nearly double the size of the bird, and proportionably increase its value as an article of sale.

This knowledge may be readily acquired, by performing a few experiments upon the dead subject. In France and Italy among the peasantry, this work is almost exclusively allotted to children, who manage it with dexterity.

In a general view of this subject, a great deal might be said; but the foregoing is quite sufficient, to such who are adepts in taking a hint, on matters at any rate relating to their own pockets. Civis.

4th Month, 1838.

For the Farmer's Cabinet.

Top-Dressing.

A communication in the Cabinet of last month on the subject of manures, particularly recommends the practice of top-dressing with all mineral substances used for the purpose of promoting the growth of plants; for instance, gypsum, lime, ashes and marl.—This, so far as my experience or observation extends, is undoubtedly correct, and several intelligent and successful farmers with whom I have conferred on the subject, concur in the soundness of the practice as justified by the results of their own experience. The most beneficial and permanent effect I have ever witnessed from the application of any substance to the soil, was that of *mortar* from an *old building* which was taken down about forty years ago; this was hauled out and spread over several acres of land, as I thought at the time to little purpose, but in this I was much mistaken, for its effects were truly astonishing, and the ground where it was placed can be discerned by its superior fertility at this remote time. It is much to be regretted that so much mortar from old buildings is lost to agriculture by culpable neglect or ignorance; for with a little attention and industry in the neighborhood of our large cities, where the spirit of *pulling down* prevails so extensively, enough of this valuable article might annually be obtained to fertilize some hundreds of acres, and more than double their products. As respects top-dressing with stable manure, there are some facts within my knowledge which seem to recommend it to the favorable regard of farmers. During the autumn of 1836 a friend of mine prepared his ground for wheat in the usual manner by hauling out his manure and ploughing it in, excepting a portion of the field where the manure was not applied till after it was sowed, when it was spread evenly over the surface as a top-dressing and left without further care. On the arrival of harvest the succeeding summer, when it will be recollected there was a general failure of the wheat crop, the part which was top-dressed furnished a full crop, and that portion of the field which was managed in the usual way by ploughing in the dung, partook of the general failure of the country. The land was of the same quality, being part of the same field and treated in every respect in the same way, excepting that the successful part was top-dressed, and the manure put on the other part was ploughed in as usual. The soil was that which is esteemed of the best quality for wheat, and the general treatment of the most perfect character. Facts are said to be stubborn things, and I throw these into the common fund that your numerous readers may test them by their own experience, and furnish the results so that we may obtain additional light on so important a subject as that of the best mode of applying manure to the soil, for there is always a reason why one way of doing a thing is preferable to another.

Montgomery.

For the Farmers' Cabinet,

On the deposite of Moisture on Plants.

Where plaster of paris, ashes, lime or marl has been applied on alternate ridges or lands of clover or other grass, the vegetation will be found in the early part of the day to be covered with moisture or dew, and it sometimes appears as though a smart shower of rain had fallen upon it, even in clear weather, when the parts of the field where its application was omitted are quite free from sensible moisture. Those farmers who have been in the practice of top-dressing, cannot have failed to have noticed this apparently extraordinary circumstance.

The usual method of accounting for this accumulation of moisture, where the dressing has been resorted to, is the attraction on the part of the substance applied for the humidity of the atmosphere, and that where its application has been omitted there is nothing to attract, and consequently the grass remains comparatively dry under the same state of the air.

This theory I take to be entirely erroneous, and calculated to lead us astray in regard to the mode of action of those substances, in promoting the growth of plants. I shall therefore state what I suppose to be the true cause of the accumulation of moisture under the circumstances alluded to, without resort to attraction, which, I apprehend, has nothing to do with the affair whatever.

The dressing applied is washed down and partially dissolved, and the solution carried to the absorbing roots of the plants, and furnishes them with a wholesome nutriment, which produces a healthy and vigorous growth; whilst those plants to which it is not applied remain puny and sickly for want of a full and generous diet. The vigorous plants transpire freely and throw off much moisture during the day, which has been absorbed from the earth with their food. This free transpiration carries off the excess of heat from the leaves, and materially reduces their temperature below that of the surrounding atmosphere, during very hot weather, when a condensation of moisture from the air takes place by robbing it of some of its heat, for the same reason that a glass or pitcher of water soon becomes coated with moisture on its outside under similar circumstances. The sickly or half starved plants which have not had a full meal, or generous diet bestowed upon them by a dressing, acquire a temperature nearly or quite equal to the surrounding atmosphere, and consequently the precipitation of moisture on them is so trifling as not to be much or at all observable. Dead animal, or vegetable matter acquires the same temperature as the adjacent air; but organized living matter, of either kind, during the very hot weather of our summers is generally below the range of temperature of inanimate matter exposed to the solar rays; provision having been wisely made by Divine Providence, for protecting animals and plants from the effect of too great a degree of heat, by the evaporation of moisture from their surfaces carrying off the excess.

The presence of an abundance of dew on plants, early in the morning, I presume, will always be found to exist in very warm weather, provided they have been furnished with a copious supply of suitable nutriment, *of what kind soever*, to preserve them in a state of perfect health and vigor, and *that* without reference being had to any supposed attraction in the manure which may have been applied to them. The quantity will be duly proportioned to the extent and expansion of the foliage—clover, when in health, having a larger surface of leaves than many other grasses, will, of course, display a greater amount of dew of a morning. Should the above theory not be satisfactory, the writer will feel obliged by any of your correspondents furnishing a better one for publication in your valuable Cabinet. X.

Splendid colored portraits of the large cattle, the Duke of Gloucester and the Earl of Jersey, raised and fattened by Mr. Edward Tonkin, of New Jersey, may be obtained at this office. Price, $1.

For the Farmers' Cabinet.

A Large Calf.

Mr. Libby—*Dear Sir:*—In the Baltimore Farmer and Gardener, I observe a statement of the weight of several fine animals, the stock of Mr. Beltzhoover, a farmer of skill and enterprise. Among them the most surprising appeared to me that of a Durham calf three months and seventeen days old, the weight of which was 450 lbs. It induced me to try the weight of a calf that I am raising, four months old this day, and the result is very little behind that of Mr. Beltzhoover. Mine weighed 432 lbs. being twelve pounds heavier, with thirteen days more age than his. It may be of some interest to your readers to know the stock and manner of treatment. It is a bull calf, 3-4 Durham; sire Col. Powell's full blooded bull Frolick; dam a 1-2 Durham of fine form and size, a remarkably good milcher, and like this celebrated stock, when well treated, always in good condition; gr. dam a full blood imported cow that I am assured yielded 10 lb. of butter per week. Until three months old the calf had nothing but its mother's milk, and a very little soft hay. During the last month it has had, in addition, Indian meal and wheat bran, but eats very sparingly of them. The rapid growth and great size have been produced almost entirely by the sustenance of his dam. It has been well housed, and frequently rubbed, and kept constantly in the stable. The weight was much greater than I anticipated, yet I am convinced it is no more than may often be obtained from the improved short horn stock. My neighbor, Dr. Geo. Uhler, has a full blooded calf, five months old, from his imported cow, and my brother, J. W. R. has a 3-4 Durham 4 1-2 months old, each of which are nearly if not quite as heavy as mine, and are both beautiful animals.

The readers of the Cabinet would doubtless be gratified by some information regarding Mr. Beltzhoover's mode of raising stock and hope he may be induced to favor the public with a statement, *pro bono publico*. I trust, sir, that in a few years this improved breed will be as common in the vicinity of Philadelphia, as it now is near London and Liverpool, where Durhams are preferred because they yield more profit as milchers and feeders than any other description of cattle.

Yours &c.

Algernon S. Roberts.

Phil. Co. April 5, 1838.

The regular monthly meeting of the Philadelphia Society for Promoting Agriculture, will be held at the Philosophical Hall, Fifth, near Chesnut street, on Wednesday, the 16th of May, at 11 o'clock, A. M.

For the Farmers' Cabinet.

Sugar Beet for Milch Cows.

In the last number of your Cabinet, there is a recommendation of the *sugar beet* as food for milch cows.

When living in a village in the forks of the Susquehanna, I cultivated the *yellow Siberian beet* in my garden. It produced at the rate of fifty tons to the acre. It was sowed the first week in May, in rows about 18 inches apart, and the seed dropped thick in the row. When the plants were grown so that the strong and the weak could be easily and certainly distinguished, they were thinned so as to stand about nine or ten inches apart in the row. I have forgotten what culture they required after this, but the farmer's good sense will teach him when he has the plants under his eyes.

They were dug up as soon as the lower leaves began to fall off, perhaps about the first week in October. It has been observed in France, that after this, they began to lose their saccharine matter. They were now piled up in conical heaps on the top of the ground, covered with rye straw, and then with a little earth. When hard frost came, more earth was thrown on and the whole was well covered with potatoe tops, straw, or something equivalent. They must not have much covering in October and November, lest they ferment or grow, for they may do either. As many as were wanted for winter use were carried to the cellars; those in the earth were kept for spring.

My servant washed them well; with a large sharp knife, he very quickly cut them horizontally in slices an inch thick; in this state he gave them to the cows, which eat them most greedily. They were not boiled or steamed. To do this is mere waste of time and fuel; you cannot render an easily digestible article more nourishing by any application of fire. It is possible they may be improved by salt and bran.

I do not know how much a cow ought to eat per day. Mine were fed three times every day, but the quantity was left to a faithful and intelligent servant; one thing, however, I do certainly know, that the cows always gave much more milk for being fed on sugar beets, and it was observed by all that the cream and butter were very rich, some persons thought them sweet.

I formerly had *carrots* cultivated for my cows, but my gardeners complained bitterly of the trouble of sowing them, and more bitterly still of the vexation they experienced in distinguishing them from weeds at their first appearance. They are long in vegetating and before they have time to peep out of the earth, the whole plat is covered thick with weeds. This great objection to the carrot does not pertain in any degree to the sugar beet.

I have recommended the *yellow Siberian* beet. I am not certain that it is to be preferred to the white sugar beet, but in my garden where both varieties were planted side by side, every advantage equal, the *yellow* grew the most vigorous, and owing to its very rich color, I could not but fancy that it would afford the most nourishment. I have tried too the *beta orltissima* or *mangel wertzal*, but it did not prove to be as productive as either the yellow or the white sugar. S. J.

Below we give the first annual report of the Directors of the New Castle County Silk Company, whose farm is located near the city of Wilmington, on the Concord turnpike. The active operations of this company, and the zeal and knowledge with which the directors have gone into preperations for the growth of the mulberry and the culture of silk, are all deserving of the highest praise.—Indeed the enterprise of this rich and productive county of Delaware—its fertile farms, its extensive meadows, and its great agricultural spirit of late, have all been exciting the admiration and emulation of the surrounding counties, and of sister states. This report of the Silk Company, adds another strong proof that our Delaware friends have gone to work in earnest, and understand well what they are about. We have been informed by an intelligent farmer, and a good judge, that this farm was bought by one of the directors a very *great bargain*—and was re-sold to the company at cost. He says of it that it is beautifully *located*, well hedged, and bears every indication of the best management.—Success attend their efforts.

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New Castle Co. Silk Company.

At a stated meeting of the Board of Directors of the New Castle County Silk Company, held on the 7th inst., a committee appointed for the purpose, produced the following report, which was read, approved, directed to be entered in the minutes, and published for the information of the stock holders.

Report of the proceedings of the Board of Directors of the New Castle County Silk Company to the present time.

Immediately on the election of the Board it took measures to promote the object of its

appointment. A farm, three miles from the city, containing about one hundred and fifty acres, was purchased at a low price, it was however, in a state of dilapidation and exhaustion. Committees from the Board visited it semi-weekly, in addition to the personal and regular direction of a competent special agent. A good farmer was obtained to occupy the house and work the land; six hundred pannels of new strong fence put up around it; cross lines of fences placed where necessary; and the plough put to work to prepare ground for the first planting of trees. This was done, and ten thousand plants set out, which grew well, and will afford food for from sixty thousand to one hundred thousand worms this season. The farm house has been repaired and made comfortable; a new roof and wing walls added to the barn, and other desirable alterations and improvements made within it. Thirteen hundred bushels of lime have been put on the ground, three hundred more contracted for, and a sufficient quantity of land ploughed and prepared to receive sixty-thousand plants the present season.

One thousand Morus Multicaulus, or Chinese mulberry trees, and twenty thousand cuttings, of two buds each, have been purchased, and are now at the farm ready to commit to the earth in the proper season, a few weeks hence. Besides the posts and rails for fencing, all of which were supplied from our own woods, the Board have had eight thousand posts and rails cut and rived out for sale, and about one hundred cords of wood cut and sold.

The Board hopes it will be apparent to its fellow stockholders, from the above brief statement of its operations, that it has not been unmindful of their interests. It trusts that another year will develope clearly, that its constituents may reasonably expect, not only a fair, but a large return for the funds they have placed in this concern. And while it regrets that so few have been found willing to subscribe for the promotion of this highly interesting branch of industry, it expresses its honest belief, that those who have adventured in it will be liberally compensated.

Signed by order of the Board,

MERRIT CANBY, Pres't.

SAMUEL WOLLASTON, Sec.

Wilmington, 4th Mo. 7th, 1833.

For the Farmers' Cabinet.

Rats.

Please inform your subscriber who is troubled with rats, to put some tar in and around the hole or entrance to his residence, so that he can't get in or out, without soiling his *best coat;* and my word for it, he will soon seek better quarters, for nothing is more dreaded by a *rat*, or any other *rogue* than a coat of tar. B.

For the Farmers' Cabinet.

What shall we drink this harvest?

As the season of crops is approaching it is probable the question at the head of this article will be in the mouths of not a few of our farmers—and I trust there are a large proportion of them who will be prepared to respond to it, "we will not have any intoxicating liquor in our harvest fields nor on our farms."

Since the attention of intelligent and respectable persons has been generally awakened to the subject, and their observation turned to the consequences arising from the use of such liquors, a change no less wonderful, than happy in its results, has been wrought in many neighborhoods. In places where it was thought a few years ago, that the harvest could not be gathered, nor indeed the ordinary labors of the farm performed, without the aid of ardent spirits, and where, as was to be expected from such a course, most of the promising young men fell victims to the bottle, experience has now convinced the farmers that so far from being an auxiliary to labor, it is a direct obstacle, and that aside entirely from the dreadful moral evils which are avoided by its disuse, they can perform more labor, and with less fatigue, when they totally abstain from it. The most experienced and judicious physicians who have closely studied the effects of ardent spirits on the human body, find that while it affords for a short period, an artificial and unnatural stimulus to the system, this state of excitement is quickly succeeded by a lassitude, exhaustion and thirst, which renders the drinker almost unfit to labor, and impels him soon to drink again. And although each repeated draught may excite him for a few minutes, and seem to allay his appetite for liquor, it is only to prostrate him still more and to torment him with a burning and almost insatiable thirst.

Ardent spirits always create a feverish action in the system, which is increased by the heat of the weather—they debilitate the stomach, impede the process of healthy digestion, create obstructions in the liver, and other viscera, and thus weaken and destroy the appetite and give rise to dyspepsia, head-ache, apoplexy, &c. Persons who are much exposed to the sun in summer should never drink ardent spirits, as the practice exposes them to imminent danger of sudden death from apoplexy or stroke of the sun.

Any one who has noticed a regular dram drinker, must have observed how little he eats when working hard, compared with a man who has never disordered his stomach with the poisonous article. I have often been struck with this, when those who drink drams and those who do not are sitting at the same table. Nothing is more certain that to enable

a man to perform his share of labor, he must eat an adequate portion of wholesome food and digest it well. The healthy performance of these functions is like the supply of water to a grist mill—take the water away from the wheel, and the mill must stop; or diminish the quantity materially; and the grinding will go on slowly. So if a man's strength is not constantly kept up by the invigorating effect of a proper quantity of wholesome, well digested food, he cannot labor efficiently—he will soon feel tired, languid, and exhausted; and either give over work entirely, or go on very slowly. But the stomach of a dram drinker cannot keep up this regular supply—its functions are deranged—it is either disinclined for food, and the man has no appetite; or if he eats, his digestive powers are so weakened, that the food is not properly dissolved in the stomach, and distributed throughout the system. Hence it is that such men, though they may exhibit great strength for a short time, while excited by the liquor, soon fail when long continued and steady labor is required; and are easily outdone by men whose natural muscular powers are far less.

It has been fully proved by actual experiment that men who never drink any intoxicating liquor, endure the extremes of heat and cold, much better than even those who use the article in what is usually called a moderate way. I well remember a circumstance which occurred some years ago, when an attempt was made in extremely cold weather to discharge the cargo of a vessel which had been wrecked. As the men were necessarily exposed to be wet, and the severity of the cold threatened to freeze their limbs, ardent spirits were deemed necessary and freely allowed. Not a gang could be got to endure the exposure and fatigue more than a few hours, when they abandoned the job. At length a very respectable man offered to contract for unlading the vessel in a short time, so short that the owners deemed it impracticable, considering the difficulties to be surmounted. He, however, persevered in his offer, and was accepted. When he put his gang of men on board, he provided at the same time for furnishing them at intervals of two or three hours with hot chocolate, and porriage alternately, with bread and butter, but strictly prohibited any intoxicating liquor, beer, cider, wine, &c. The dram drinking laborers laughed at his folly and sneered at his men, predicting that they would soon give out. But so far from this, they performed the work within the promised time, with comparatively little fatigue and no suffering—not a man gave out or was frost-bitten, though some of the dram drinkers were severely affected in this way.

This and other experiments fully prove that a sufficient supply of wholesome and nutritious food and drink furnish real support to the body to labor and that persons who use them only can endure much more than those who use intoxicating liquors. The same results, I am satisfied from my observation, will always be produced in the harvest field; and that true economy dictates the entire abandonment of those poisonous and destructive beverages.

But when we consider the moral evils flowing from the use of ardent spirits as a drink, the arguments against their practice are overwhelming, and indeed it is becoming quite disreputable to use or give them. From calculations which have been made it would seem that the number of persons who are slain by this mighty monster, greatly exceed the whole amount who perish by wars. If a pestilence sweeps over a country and consigns to the grave a multitude of our fellow beings, the mind is filled with awe and fear. But here is a dreadful moral pestilence stalking through our land and annually cutting down thousands of the once strong and promising members of society, yet so utterly insensible are many to the dangers which await them, that they even place themselves within reach of the infection, or tamper with the destroyer, as though they heeded not his pestiferious approach.

If we notice the wretched tenants of our prisons or our almshouses, we shall find scarcely one of the former whose course of degrading crime has not commenced in, or been nurtured by the habit of using strong drinks, while a large proportion of the latter will owe their wretchedness and poverty to the same demoralizing cause. How many blooming young men, once the pride and joy of their fond parents, and the light and hope of their declining years, have sunk, blighted and ruined, into an untimely grave under the fatal effects of dram drinking.

These all commenced their course in the *moderate* use of the article, and felt themselves secure from the danger of becoming drunkards, because they used it so sparingly. Perhaps some of them owed their introduction to the practice, to the example of those disconsolate parents who now weep in vain over their dishonored graves, and who commenced their course of ruin by carrying ardent spirits into the harvest field. No man suddenly becomes a drunkard—the morning dram—the occasional dose when wet and cold, or dry and hot, or when meeting a friend, or working at harvest, is the usual beginning. A friend of mine told me when far advanced in life, that in his early manhood he worked hard, and fell into the then popular error, that drams were necessary to sustain him. He soon found that the ordinary allowance did not afford him the

usual stimulus, and he increased the dose. A further increase became necessary, and again still further. He resolved to retrench, and had a cup made containing what he considered a small and safe measure. With this he began. The effort to reduce his allowance cost him a good deal of suffering, and in a few months he found his cup was made too small. The appetite for stimulus became so great, that one of two things was inevitable; he must either wholly give up dram drinking or become a drunkard. Shuddering at the dreadful alternity, he took his stand and after a hard struggle conquered the habit. But mark the consequences. His son, on whom he doated, following the example of his father in moderate drinking, had not the resolution to restrain his appetite or to abandon the practice, when he saw his danger, and sunk into all the degradation and vice of confirmed and irreclaimable drunkenness.

There is no nourishment whatever in ardent spirits—it is mere stimulus, the unvarying consequences of which, on a healthy subject, are deleterious, and sooner or later will produce disease.

But, say the consumers of the article, we cannot get through harvest without it—our hands will not work, and we should not be able to get in our crops. I will reply by giving you a statement of facts which came under my knowledge. A farmer settled many years ago, in a neighborhood where nearly every body used and handed out ardent spirits to their laborers. Conscious of the mischief attending the practice, he resolved not to do it, let the consequences be what they might. His neighbors all predicted that he could not get his work done, and that his harvests would rot in the fields. He had a man hired by the month, who worked well enough without liquor until harvest came on—then he demanded the usual allowance given by moderate drinkers, and on its being refused, stopped short in his mowing and hung up his scythe, declaring he would not mow another through, unless the required allowance of grog was given. The farmer quietly persued his work—mowed several throughs, and declared his determination not to give a drop of the article nor suffer it to come on his place, even if he lost his crops by it. When lunch time came, a bountiful supply of wholesome food and drink was carried into the field, and the dram drinker was invited to partake. He did so, and without saying a word more about the grog, took up his scythe, and worked through the whole season without a murmer. The summer was hot and the harvest large, but at the close of it the laborer voluntarily made the acknowledgement, that he had never seen a harvest got through so quietly and pleasantly—that he had thought it impossible to stand the labors of the season, without ardent spirits—but now he could say that he had never got through them with so little suffering and fatigue, nor felt himself so strong for work, and in such excellent health.

Now for the effect.—The force of long prevailing custom once broken through, the farmer found no difficulty in getting hands—the order, quiet and good feeling subsisting among his harvesters, while others were shouting, or in brawls and quarrels, arising from the excitement of liquor, induced his neighbors to try the experiment also, and all who did were so pleased with the improvement that there is now scarcely a farmer in the neighborhood who gives it. But the old practice had made many drunkards—the sons of many of the wealthy farmers, learning to love grog from the example of their parents, squandered their property and died off like rotten sheep; and the drunken laborers did not long survive them, while the happy change wrought by the steady example of this one man, has visibly improved the moral condition of the whole neighborhood, and a hardy, vigorous and intelligent race of young men and laborers have grown up, under the system of total abstinence, who are useful and valuable members of society, and promise to transmit to their posterity, a good name and estate. We would say therefore to every farmer "Go and do likewise."

OBSERVER, Jr.

For the Farmers' Cabinet.

Steaming.

Mr. EDITOR:—Any how, that is a formidable apparatus described at page 241 of the Cabinet, for steaming food for cattle. Few persons of our class would be either willing or able to incur the expense of such an erection, much as every one acquainted with the value of steamed food must approve the practice.

I showed the print and read the description of it to my wife, who is an excellent judge as well as councellor, and is right about nine times out of ten; she exclaimed, "My! how different is all this to your cheap and very simple contrivance, than which nothing can answer better for the purpose: do tell the people about it." This I promised, and the result is, the present communication.

You must know then, that my wife lends me the use of her large copper, when she does not want it herself; into this I have fitted a tub, merely one half a port-wine pipe, with holes bored all over the bottom, about the size of my finger, which is, I assure you, not one of the smallest, for I have always been a hard working man, what, I suppose, your learned people would call a *practical man*. This tub rests upon a stout wooden hoop on the edge of the copper into which it drops an

inch and a half. The copper is filled with water to within an inch of the bottom of the tub, and when all is fixed, the tub is filled with the food to be steamed. It will contain six bushels of potatoes. I have a stout wooden cover, which is kept down by means of an upright piece of timber placed under the beam which is above the copper, and in the centre of the cover is a hole with a round iron plug made tapering, which being hung, by a string, over a small pulley, with a somewhat lighter weight tied to the other end of it, forms an admirable safety-valve during the time of steaming. I have two iron handles placed near the top of the tub, by which it is easily lifted out of the copper by a pulley, when the contents are sufficiently steamed; and while the bottom of it rests upon the rim of the copper, it is lifted up by another small iron handle placed near the bottom, on the opposite side, so that in an instant the steamed food is turned into a wheelbarrow placed to receive it; and it is the work of about a minute only, to replenish the water that has been evaporated, to refill the tub with the article to be steamed, and to fix the cover; by the time this work is completed, the steam is up and the work "progressing" cheeringly.

I ought to say I place a strip of coarse linen cloth, 5 or 6 times doubled, between the wooden hoop and the rim of the copper, as also around the edge of the tub under the cover, by which these joints are made steam tight without trouble or cost. I am, Mr. Editor, a constant reader of the Cabinet, and

An Old Farmer.

April 24th, 1838.

Don't forget to Marl.

It is apparent, from the numerous recent inquiries from farmers residing on the Peninsula, between the Delaware and Chesapeake bays that they are becoming aroused from their lethargy, and are manifesting a disposition to improve the means which are within their reach, to advance the best interests of agriculture in that once fertile, and interesting district of country. The original constitution of much of the soil, the recent discovery of inexhaustible beds of green sand and marl; and the facilities afforded to the transportation of the products of agriculture to Baltimore, Philadelphia, and New-York, the three best markets in our country, should stimulate the farmers to increased exertion in availing themselves of this union of unparalleled opportunities of advancing their interests, and of redeeming their character from the imputation hitherto cast upon them, of being "unkind to the soil." The first effort should be to coat the fields with a luxuriant growth of grass, for without this there can be no permanent continuance of good crops of grain. The system by which the present depressed state of culture has been produced, has been that of constantly endeavoring to cheat the soil out of a grain crop, without making any remuneration to it in the form of manure. This nature winked at for a series of years, with an occasional display of repugnance to *give something for nothing*, till at last she shewed symptoms of coming to a dead halt, and returned to her unworthy task masters, who seemed inclined to try to overturn and violate her laws, scarcely enough to pay the labor and expense of cultivation. This course of proceeding has been persevered in too long, and has been the cause of poverty, distress and degradation to numerous families; and has induced many to emigrate to sections of the country, where the natural advantages, and real sources of wealth were much more sparingly developed, than in the land of their birth-right. The first step towards doing better, not only in farming, but in every other department of life, is to discover that we have been doing wrong; acting on false principles; for wrong principles followed out, will sooner or later display bad results. We can't change the laws of nature, and any attempt to violate them will be fruitless and vain. Having traveled on in the footsteps of our fathers till we are landed in poverty; let us now take the back track and adopt a more rational system, conforming in all our works to the known laws of nature, and let us aid her in her efforts for our good, and not attempt to coax and force her, to give us something for nothing as the manner of some has been; but deal fairly, honestly and uprightly with old mother earth, and she will in her benignant spirit of kindness, bless us in basket and in store.

The green sand marl should be evenly spread on upland fields, of artificial grass in the fall, winter or spring, at the rate of from one hundred and twenty, to four or five hundred bushels to the acre; when this has been done nature will do the rest; and you may

be assured that a most luxuriant crop will reward the labor. When it is deemed expedient to plough up the grass sod thus marled, the marl will be found to have penetrated the soil several inches, and will be again brought to the surface at the same time that the thickly set and entangled roots of the grass will be turned under, to undergo decomposition and furnish food for the succeeding crop, say of Indian corn, which will be astonishingly improved by the application of marl, lime or shells applied in the same way on the surface of the grass. The increased production of grass as above stated, will produce a correspondent increase of stable manure, which should be applied to the winter grain crop, and when the soil is not very rich, it is better not to sow more than can be manured well, for it has been found by sad experience to be bestowing labor without a rational hope of reward; and is besides, branding a farmer, and exhibiting him to a whole neighborhood, as one that is "unkind to the soil," for no one should expect,

"To reap where he has not *sowed*,
Or gather where he has not *strawed*."

R.

The following communication we recommend to the attention of our readers; it is from an intelligent and practical farmer.

For the Farmers' Cabinet.

What will an acre of land produce?

In 1822, I enclosed an acre of land in the vicinity of Wilmington for the purpose of trying this experiment. I erected upon the ground a small house, and leased it to a gardener to work for one half the produce. The ground was enclosed in such a manner, as to leave an exact acre under cultivation. It was at first ploughed deep, the stones all carefully pitched off, then highly manured, and afterwards worked the first five years with the spade. I furnished the gardener with about forty dollars worth of manure annually, and sent a man, horse and cart, twice a week to draw the produce to market. Every means was used to raise the amount of sales to the highest point; seeds of the choicest kinds of vegetables were procured, forcing beds erected, and the produce ripened early, and sold in the market at a high price.

The average produce of my share for the first five years, was $174 20 cts. per annum, consequently, the whole amount produced by this acre of land was not less than $348 40 cts. per annum, besides the vegetables used in the gardener's family.

The gardener and his little family, consisting of three persons, had other perquisites, by which they obtained about $100 annually, in addition to their share of the garden; by which they were enabled to live in comfort, and could have indulged occasionally in some of the luxuries of life if they had chosen so to do. But like most other workers of the soil in this country, they wanted more land, and till it with a plough and a horse.

In order to gratify this disposition, I enclosed them another acre, and lent them a horse, plough, and occasionally a man to work it, and continued the same outlayings for manure as in the former case.

The consequence of this change was, that I received less per annum for the second five years than the first.

The family now became dissatisfied with their situation, nothing would do but more land; they complained of their labor being increased, and their income diminished; they had sometimes to hire and they had no money to pay the laborer; they had many other difficulties to encounter, all of which were ascribed to the smallness of their farm. I was now as much dissatisfied as they were, for we could not agree about the cause of our unsuccessful efforts; but as no other way opened at the time, I enclosed about two acres more for a third five years experiment, which terminated in my receiving less income than in the second five years, and not much over one half the amount of the first five. So much for increasing the size of farms without being "kind to the soil."

The result of these experiments correspond with all the known facts that have come under my observation for the last thirty years upon the subject of the profits of capital expended in agricultural pursuits.

I at first adopted the opinion that the secret of gathering money out of the soil lay in small farms, but extended observation of facts and mature deliberation has changed this conclusion. I now believe the quantity of land has nothing to do with the profits of the capital expended; that it altogether depends upon a judicious selection of soil, the facilities of obtaining manure, and the proper application of it as food for plants, and most of all upon the quantity of the best and most nourishing kinds of manure; upon this mainly depends the profits of capital expended for agricultural purposes.

I found $5000 expended upon 100 acres of poor land in the neigborhood of Wilmington, would not produce after paying all expenses more than 5 per cent. upon the capital, but by doubling the amount in expenses for manure and making the sum laid out $10,000 it

would more easily nett $1,200 per annum; that is, the profits of the capital laid out in land produced an interest of 5 per cent. per annum, and the capital laid out in manure produced 20 per cent.

The simple fact of the vast difference between the profits of capital expended in land, and in the improvements explains the diversity of opinion that exists upon the profits of agriculture, and a knowledge of this fact is in my opinion of incalculable advantage to the community. If the above hasty sketch should elicit the spirit of inquiry, and put into operation some practical experiments among the readers of the Cabinet, it will amply satisfy a SUBSCRIBER.

Wilmington, 4mo. 23, 1833.

For the Farmers' Cabinet.

More fruits of Industry and Intelligence.

Verily, Industry hath its Reward.

The cultivation of the soil, in our country, is yet in its infancy, but it is growing into manhood with a rapidity that is truly surprising, and the publication and extensive circulation of well edited papers devoted to agriculture, horticulture, and rural economy, are producing an influence throughout the community which, tends greatly to promote the best and most durable interests of this republic. The effort to ascertain the greatest possible productive powers of the soil, can yet scarcely be said to have been made; still there have been some approximations to it in the neighborhoods of some of our large cities, where manure can easily be obtained and the productions of the soil are readily disposed of at fair prices. A very worthy and industrious individual, who resides within a few miles of Philadelphia, and who still carries on his business of horticulturist and farmer with much zeal and energy, married upwards of forty years ago, and took on a lease for seven years about thirty acres of heavy, flat, clayey land, with the necessary buildings. The soil was thin, and his capital consisted principally in the joint industry of himself and his companion; she was much discouraged at their prospects on settling on their new location, but they were both of the short-backed, industrious, economical stock, of German origin, and set to with cheerfulness and vigor; their neighbors were of the same class in life, and generally tenants of from 20 to 40 acres under city landlords. Their plan was to raise as many vegetables and as much fruit as they could dispose of advantageously in the market, and appropriate the remainder of the land to the cultivation of the various kinds of grain and grass to supply their domestic wants, and if there was any overplus, to dispose of it in the market to add to the general fund.

After proceeding on for some time in this way, he ascertained, that by great industry, economy, and close attention to business, he, in common with his thrifty neighbors, could, each, after paying the rent, save about two hundred dollars per annum. His neighbors, being of the penny-saving class of society, put their monies out at interest, at six per cent. per annum; but my friend George, who was a little more penetrating into what he thought would promote his best interests, informed the writer of this, that he *bought manure* with *his* money, and it produced him SIXTY per cent. In this way he proceeded till his lease terminated, when he purchased the place and became a landed proprietor. He still prosecuted his business with energy, annually improving the soil by the copious application of additional doses of manure, principally purchased and hauled from the city; and still his annual receipts continued to grow, as he encouraged the soil to grow more and more produce, by continually supplying it with plenty of nutriment of a suitable kind. As his means increased, his family increased, for his wife was a fruitful vine in every sense of the word. They had ten children, whom they brought up and educated well, and those of them with whom I am acquainted, do honor to their parents, being real chips of the old block, finely exhibiting the great advantages of a good rearing in habits of industry and economy, which might truly be envied by many of our respectable citizens, whose sons and daughters have been taught in a very different school. A number of the adjacent little farms were from time to time purchased by my friend, (a small portion of whose history I am writing out for you, without his knowledge or consent, though the materials I obtained from himself, at different times,) all of which were duly paid for, and he is now the owner of a large tract of land, though it is subdivided into small farms or vegetable lots. Several years ago, he removed to an adjacent farm, and put one of his sons on his first purchase of thirty acres, under a contract that he should first pay for all the hired labor, and manure bought for the farm, out of the gross receipts for the produce, and then divide the balance into two equal parts and pay over to his father one half, and keep the other moiety himself; and the amount thus paid over annually, has been, for many years past, thirteen hundred dollars; of course the nett proceeds of these thirty acres annually is twenty-six hundred dollars, after supporting the family of the son in eatables and paying for the hired help and the manure applied to the land. This statement may appear to some as too extraordinary to be true, but there is no fiction or exaggeration about the concern whatever, and in fact the half has

not yet been told, as the reader would at once perceive, if he should visit the spot, particularly in strawberry time, which will soon arrive after this communication emanates from the press. He will there see as many strawberries as will sell for $600; cabbages, lima-beans, early potatoes, asparagus and tomatoes growing close to, and resting on the fences, and in fact every other kind of fruit and vegetable that is sold in the market, of the earliest growth and in the highest state of perfection. It is not easy to get a dinner at one of our best hotels, or on board any ofour large steamboats, without paying tribute to my worthy friend, the gardener, who richly deserves all he gets, as a reward for his intelligence, his indefatigable industry, and his sound economy. But to conclude. he is now worth enough, after the toil of near fifty years, to purchase five of the best ships belonging to this port, all obtained without the taint of speculation of any kind, but by honest industry directed by sound intelligence; and all this has proceeded,primarily from he and his wife, both pulling at the same end of the rope, and by his being "kind to the soil." WEST.

Philada., April, 1838.

For the Farmers' Cabinet.

Ringbone.

Methinks it must excite involuntary feelings of pride, in the breast of every Chester countyan, to observe how many of the writers in the Cabinet, hail from this "home of agriculture." But those feelings may have been somewhat alloyed on finding that there is a little too much *lunacy* among us.

I did not remember that horses, were among the strange animals, which the celebrated John Herschell, recently discovered in the moon, by means of his newly invented oxy-hydrogen telescope. Nor did I know, till the reception of a late number of the Cabinet, that any intelligence of the veterinary art in that distant luminary, had yet arrived at our earth. Even yet I am left to conjecture how or by whom we have received the method of curing ring-bone in the moon. Has some *lunarian* just returned from planting cucumbers or potatoes—or gathering his crop—bringing the interesting intelligence with him? For you know that the moon is a sort of common *truck-patch* for every lunarian.

The remedy recommended by a German for the cure of ring-bone (Cabinet, vol. ii. p. 181) is rational enough when divested of its lunacy. It would be much better that remedies should be recommended on principle and according to their intrinsic value—and not by the imaginary influences of the moon or of aster-ology. The time has come when astrology should be discarded. Men and other animals are not now as formerly born under the benign or malign influence of a governing planet, nor are the less important events of their future lives under the relentless government of a ruling aster or star.

In this generation of anti's, I fear that many of our anti-lunarians would rather allow their poor horses to "limp on to the end of their journey" than undertake an equestrian journey to the moon for their recovery. It is for the especial accommodation of these anti's *at home* that the following remarks are penned.

Every one is familiar with the general appearance and seat of ringbone. Its more precise character may not be so well understood. The foot of the horse consists of three bones which lie below the great pastern or fetlock joint: The first or pastern bone lies between the great and little pastern joints—the second or coronet bone lies next and is articulated with the last or coffin bone just within the upper edge of the hoof. This last bone lies entirely within the hoof, and in shape resembles the foot externally. The middle of these three, the coronet bone, appears to be the primary seat of ringbone. In cases of long continuance it may extend to the pastern and coffin bones. It consists of a bony tumor growing from the surface of the bone and rendering the motions of the joints difficult and painful. It may probably be produced either by sprains and bruises, or by hereditary predisposition.

The remedies which have proved most successful in the cure of ringbone are such as produce severe irritation on and copious discharges from the surface of the tumor. Among these are all powerful stimulants as turpentine, oil of orgiganum, oil of spike, all the blistering and caustic applications—and even the red hot iron.

In the incipient stages of the disease the more mild remedies will often succeed; but when it has acquired inveteracy from duration it will sometimes resist the most powerful means, unless perseveringly employed for a length of time.

The *aqua fortis*, which a German recommends is of a caustic nature—and will act more or less severe according to the manner of its employment. Applied so liberally as he recommends and aided by the heat of the *rye cake* it would probably be unnecessarily severe for recent cases. When milder means have failed, and not till then, it should have a fair trial. But the owner may choose his own time and place to apply the remedy, for I will venture the assertion that aqua fortis will prove equally irritating, equally caustic, when applied to the skin of the horse at any other time as it would do "on the first day of last quarter of the moon." And moreover, it will prove quite as efficacious in curing

ringbone in Chester county as in the moon. I would also suggest that any other warm poultice may be substituted for "a cake of chapped rye" without detriment to the cure.

If these remarks shall enable any of my anti friends to cure their own horses at home and save them a journey to "the far-famed land of lunacy," I shall no doubt receive the reward due to an ANTI-LUNARIAN.

Chester County 4th mo. 20th, 1838.

For the Farmers' Cabinet.

Keep your domestic animals clean.

By cleanliness we carry out a law of nature, and thereby essentially promote our best interests.

In a state of nature, all animals keep themselves clean; instinct prompts them to do so, for the preservation of their health, and the promotion of comfortable feelings. In a domesticated state, it becomes the interest and duty of those who have charge of them, to keep them neat and clean by artificial means, or to furnish them with the liberty requisite to enable them to indulge their natural instincts so far as to carry out that great law of nature, which prompts them to resort to such simple means of promoting cleanliness and health, as are indispensible to their own well being, and the only certain means of rendering them objects of true interest and profit to their owners.

Poultry should always have a place of resort under a dry shed, well supplied with dry dirt, spent ashes or effete lime in which to rub and dust themselves. This is the process to which they resort to comb themselves, and to get rid of lice or vermin; and it at the same time opens the pores of the skin, and permits the confined, peccant fluids to make their escape from their bodies, which essentially promotes their thrift and causes them to lay many more eggs than they otherwise would. To keep poultry perfectly *clean*, *quiet*, and *retired*, increases their profit to the owner more than four fold. They should never on any occasion be suffered to feed, lay, roost, or even make occasional visits to the stalls or mangers of horses or cattle, hog pens, or sheep houses; the excrement and lice they leave where they visit or frequent are injurious and poisonous in a high degree to all other domestic animals, and do more towards preventing their owner from realizing his anticipated profits, from their generous keep, than any other cause whatever. R.

To the Editor of the Farmers' Cabinet.

DIRECTION FOR PLANTING PEACH TREES.

SIR,—If our Jersey friends, at the time of planting their peach trees, would excavate the earth to a good depth into the sub-soil, and cover the bottom with six or eight inches of brick and morter rubbish, and then mix marl with the surface mould into which to plant the tree, treading it firmly about the roots, there would be no further complaint of the worm, which is the consequence of the disease, not the cause. The sub-soil of ferruginous and acidulous or lime and calcareous earth act as corrector of these evils. AN OLD FARMER.

For the Farmers' Cabinet.

Procrastination.

"Procrastination is the thief of time."

It is an old and true saying that a thing begun, is half done—but to break the ice is the difficulty—when that is accomplished, most people can go a-head easily and pleasantly. I have a neighbor who is good at *planning*, none better; but it requires more energy of character, than he can command at pleasure, to enter promptly on the execution of his designs; he hesitates, he tries to invent some plausible excuse for "putting off till to-morrow what ought to be done to-day"; not being fully satisfied in his mind of the truth of the saying, that those who are good at making excuses are seldom good for much else. He has a good farm within a reasonable distance of market, but he is not yet out of debt, and I fear, that, unless he musters up a little more courage, and exhibits more promptitude of action, he never will be. He lacks energy, he puts off, he procrastinates, and of course he seldom has time to do many essential things, because he is always resolving to do a great many things, that never get done properly. For example, he determined, forty years ago, to plant an orchard, for he liked good fruit, and thought it might be profitable; this wise resolution has been fixed in his mind for execution about twice a year nearly ever since; but in the spring his other work presses upon him and he thinks the autumn the best time for planting trees, as they get fixed firmly in the ground before the sap begins to run, which he now conceives to be very important to their future growth and vigor: when autumn arrives, there is the potatoes to get in before frost, the corn to husk, and numerous other matters to be attended to before winter sets in; and then he conceives the spring would be the best time to plant, for neighbor B. has informed him that the hard frosts of winter might injure the roots of recently transplanted trees. Moreover, he hopes he will have more time for the operation before the ground is in order for spring ploughing; so he still resolves to have a fine orchard of fruit trees, and six months or a year won't make much difference in the time when it shall come to perfection. In this way, resolving, and re-resolving, he has moved along ever since I was a boy, and he has no orchard yet; in fact he is now worse off than he was formerly, for the

old trees that were planted by his industrious and thrifty predecessor, and which furnished a pretty good supply of fruit, for some years, by the ravages of insects, and the effects of old age, have ceased to exist, and left no representatives to supply their places. He now begins to think he is too far advanced in the vale of years to propagate trees, the fruit of which he shall not, in all human probability, live to partake of: so that, although I am many years the junior of my neighbor, there appears but a very dull prospect of my seeing an orchard on the adjoining farm during my life time. This, Mr. Cabinet, is only a sample of the effects of the operation of procrastination in my good neighbor's concerns—for he has a hedge occupying the best strip of land on his farm, that has been cut down, and the ground ploughed up and made into a compost-bed *in imagination* twenty times within that number of years, and yet it still stands, casting its shade further and further each succeeding year. He has also a goodly quantity of stones and rocks scattered through several of his inclosures, which he has often *dreamed* were hauled off, and deposited nicely in the bottom of a large gully, that intersects one of his fields, and which might be filled up in three years, so that it could be brought into fine grass, but there it still remains in all its original ugliness, gaping at every passer-by and seeming almost to articulate

Oh! the detestable vice of Procrastination.

O.

P. S. I was near forgetting to remind you of the saying, that, "as the old cock crows the young ones learn," for there are several young cocks on my neighbor's farm, who, I think, crow a little *louder* than the old procrastinating rooster.

For the Farmers' Cabinet.

Rats.

"A pennyworth of prevention is worth a pound of cure."

A writer in your last number is desirous of being informed of a remedy for getting rid of rats; and having some knowledge of those animals and of their depredating propensities, I will trouble you with a few lines on the subject.

In the first place when you find yourself annoyed with any malady or special inconvenience, inquire particularly into the various causes which have given rise to it; and when that discovery has been made, go at once to work on the *back track*, and remove the cause as quickly as possible, and in ninety-nine cases out of a hundred the complaint will vanish when the cause has been removed from which it originated.

In the second place, I take it for granted that every farmer who is considerably annoyed by rats, has provided for them some commodious and comfortable harbor, wherein they can breed and rear their young with perfect safety and comfort; for a rat is a very sensible and knowing animal, and never fixes his quarters intentionally and aforethought in a situation for a permanent residence where his peace, safety or repose, is likely to be invaded by his enemies. Of course, when he is in search of quarters, he always gives a preference to the barn, stables, barracks, stacks, or corn cribs of the most careless and dirty farmer he can find, because by such he is least likely to be disturbed.

A stack or barrack so fixed that a cat or dog can't get under it, furnishes especial good accommodations; and so does a hog pen with the floor fixed just so far from the ground as to make the ingress and egress convenient, and not to admit larger intruders which might endanger his safety. Various other suitable and convenient places for breeding and safely harboring rats might be pointed out, but I presume it will not be necessary, as every farmer of ordinary comprehension will be able to point out such conveniences as may be best adapted to the purpose.

It has been truly said that if you have a pigeon-house you will have pigeons, so if you have suitable conveniences and accommodations for rats, you will have rats without doubt, for they are always on the look out for undisturbed quarters, and the best plan that I know of to avoid troublesome tenants, is to remove and destroy all accommodation for them. Let them see that if they remain with you they must continue in a state of perpetual discomfort, and my word for it, they will soon begin to think seriously of emigrating to some place of repose. I know a farmer in Montgomery county, who has a large farm and three barns on it, and where it would be as strange a sight to see a rat, as it would be to see a snake or a toad in Ireland. The only remedy against their invasions is constant and unremitted care and cleanliness. Let no harbor for them remain about your premises in any shape whatever; keep your stacks and barracks so far from the ground that dogs and cats can pass under them; keep a terrier dog of high blood and good descent, and teach your cats to stay at the barn instead of living in the kitchen. If you should unfortunately have a stock of rats on hand at this present time, begin their persecution at once with ferrets and terriers, and don't give out while one remains to propagate from, and then resolve to keep your premises in such order that a rat would be afraid to show his face about them, for

What profiteth it the husbandman, to gather the grain into the garner, if it be eaten by rats.

WHITPAIN.

April 26, 1838.

To the Editor of the Farmers' Cabinet.

SUGAR BEET.

Sir—How is it that the successful manufacture of sugar from the beet still remains a problem? When Mr. Pedder was in France, two years ago, we were led to believe that on his return the experiment would be made on a scale which would put the question to rest; but, on the 3d of September, 1837, more than a year afterwards, we find Mons. Le Clerc, who had studied the beet sugar making *in France*, conducting "an experiment at Ludlow's station near Cincinnati, on a *small quantity of juice*, only a *glass full*," and expressing himself overjoyed with the result, for he had *discovered* that the manufacture of beet sugar on a large scale is every way possible!—and this *he discovered* from an experiment upon a glassful of juice!

In your number for September last, p. 46, I find an account from Mr. Child, who writes from France, what we would almost suppose must have been taken from the published report of the Beet Sugar Society of Philadelphia, had he not said, "I do not find the profit of raising the beet so high as Mr. Pedder did," but immediately adds, "can you wonder that land has risen from 50 to 150 per ct. in the districts of the sugar manufactories!" Since that time we have been inundated with accounts of partial success, and promises of great results from small experiments; but yet, so far as I can learn, the main question is still undecided, and I prophesy it will remain so until it is taken up by those who will enter upon it with the single aim of *preparing sugar from the beet*, and not with the view of making it subservient to some land speculation, or other consideration quite foreign to the purpose—then, with a capital sufficient to carry out the undertaking, success is certain. It has been supposed, that the difference between the cost of labor in this country and France, would operate as an interdiction to the manufacture of beet sugar, but I am of quite a contrary opinion. The growing of the crop is not more expensive than the raising of a crop of corn, this has been ascertained to a certainty; the difference in the amount of wages must, therefore, apply to the fabrication of the sugar only, and so far from this being in favor of France, I believe it is quite otherwise. In France, where the rate of wages is so low, few think of applying machinery to its full extent, in the various operations of the sugar house; almost every thing is done by hand, but the labor of a dozen men and women is, oftentimes, not equal to the single motion of a crank in a steam engine; and in the report above mentioned, I remember the observation, in proportion to the low rate of wages, so is the labor performed; and there too we are told, a woman with boards fixed to her feet was employed in treading the surface to save the expense of rolling! I believe it is Edgeworth who says it is customary in Ireland to make *gates* of *boys*, and when cattle break into the corn fields, the employer complains that the poor *gates* do not do their duty! If I am not mistaken, I have an establishment in my eye where six times the amount of labor is performed, at about a third of the expense incurred in countries where a man might be had for 15 cents a day's wages! and where the very circumstance of this low rate of wages, operates as the greatest injury to society; and who will erect expensive machinery, when the *human machine* can be purchased at so cheap a rate, ineffective as it will always be found.

It is an excellent observation, that the well-being of a country can always be estimated by the value of daily labor, and that this is by no means in favor of low wages. Although it has been proved, that no root crop can be raised for the use of cattle and sheep, that can at all be compared with the sugar beet, I am not willing that our efforts should stop here. All writers agree, that nearly as much stock can be kept on the refuse of the sugar-house and barn-yard, as upon the crop of beets uncrushed, and if I am not greatly mistaken, the fabrication of sugar might be conducted in this country, by the aid of improved machinery, at as cheap a rate as in France, by manual labor paid for at a rate, which scarcely affords the means of a bare subsistence. Thus far is certain, sugar from beets has long been made in France, equal, in all respects, to that from the cane, without difficulty and to great profit. It is admitted by all hands, that the beets can be grown in this country larger and more rich in saccharine than in France; the only question seems to be, on the power of crystalization in this country; now if those who have found a difficulty with their "glassful," "gill," or "half pint" of juice in this part of the process, would experiment upon the same quantity of cane juice, they would find the same cause of complaint; but if they will substitute for this "glassful" two or three thousand gallons, they would also find a very simple cure.

I have been re-perusing Mons. Le Clerc's letter of page 55 of the Cabinet, vol. II. It is a curious production—here is a man, who has studied beet sugar making in France, operating upon a glassful of juice, and expressing himself overjoyed with the discovery, *which he has made!* that the manufacture of beet sugar on a large scale is *every way possible*—with such very small means of judging, I should hardly have expected him to take upon himself to doubt whether this industry can be profitably conducted in this country by

others; and would hardly look for much information from the perusal of his manual of beet sugar making; and how he can have some "good additions to make to it," founded upon his experiments with a *glassful of juice*, I am curious to know—his means of information *in France* must have been slender indeed!

One thing is sure, whenever the business is taken up by competent persons in a proper manner, success is as certain as that the sun will rise to-morrow.

I am your subscriber and constant reader,

J. W. B.

Bucks Co. April 20, 1838.

Pruning Fruit Trees.

This operation is directed to be performed by a writer in the Horticultural Register, *in the winter*. The common practice is to prune *in the spring*. Both we conceive to be wrong. It is unnecessary again here to repeat our reasons, for pruning *at mid-summer*. We will only add, that our opinion in this matter is fortified by the philosophy and practice of the late Rev. Dr. Dwight, and by four year's observation and practice in our own grounds. We prune in the last of June and first part of July. We earnestly recommend a *trial* of the practice.—*Cultivator.*

The objects of pruning are at least three fold. We trim shade trees to produce symmetry of form. We trim forest trees to produce a handsome and valuable bole, or stem, for timber. And we prune fruit trees for the double purpose of giving them a good shape, and of inducing them to bear well. To the pomologist that shape is most handsome, in a fruit tree, which indicates the best bearing qualities. It is remarked, particularly of the apple, that upright shoots produce less abundantly than those which grow horizontal, or deviate materially from an upright form.—Hence, in forming the head of a young apple tree, it is customary to take out the upright shoot, when the tree has attained a proper height, say seven to nine feet, and to leave three or four laterals or limbs to form the head. And as pruning does not increase the quantity of wood, but has a different tendency and effect, by lessening the leaves, which are the organs of nutrition, the upright shoot should not be taken out until the laterals have acquired considerable wood and foliage. In pruning fruit trees, all limbs which are likely to interfere with each other, should be taken out while they are small. The head of the tree should be kept open, so as to admit light and air, essential to the maturity of the fruit. In pruning all trees in the nursery, the limbs should be left always upon one-third of the stem, that is, only two-thirds of the stem should be denuded of limbs.

For the Farmers' Cabinet.

STIR THE EARTH DEEP.

Deep ploughing has been much recommended and but little practised; the reasons for which I suppose are, that proper implements for that purpose are rarely possessed by our farmers, and few choose to incur much expense to supply themselves with suitable utensils when they are not fully convinced that a profit will arise from their use. Having met with the following simple and apparently efficient plough coulter, as it is called, in the Farmer's Register, with a recommendation subjoined, from one of the most intelligent farmers in Virginia, I beg of you to have a wood cut made of it, and publish the description and use of it in your very useful and interesting little work the Farmers' Cabinet. I have no doubt but many of our enterprising farmers, will at once see the importance of bringing it into use, on our stiff soils, to loosen up the earth for three or four inches deeper than our common ploughs go, without bringing the earth from below on to, or mixing it with the surface soil. One horse attached to it, and walking in the furrow after the common ploughman, will effect all that is required. This process of stirring the earth to a greater depth than is usual in common ploughing will, in time of much wet, suffer the superabundant moisture to sink away, and not injure the plants by diluting their food too much; and in time of drought the fibres of the roots will penetrate to a greater depth in search of their appropriate nutriment. This method of loosening the earth to a greater depth than is usual, is like all those good old rules that work equally well both ways; *wet* or *dry*.

"Plough deep while sluggards sleep,
And you shall have corn to sell and to keep." E.

Plan and description of an excellent Coulter.

A very brief description will suffice for the coulter, the original contriver of which I do not know; for I met with it about two years ago, on board the Rappahannock steam boat, in possession of a gentleman who could give me no other account of it, than that he procured it from the late Mr George Banks of Stafford county. I was so struck with its manifest superiority to any coulter I had seen before, that I immediately made a sketch of it; had one made as soonas I could; and have been using them ever since, with a decided preference to all others. None, of which I have any knowledge, are superior to it, in any one respect, while this is superior to them all in two important particulars; you may wear out both points, by reversing them before you

send it to the blacksmith; and the point which works behind, causes the coulter to run much more steadily. A single horse will draw it easily in most of our lands, after they have been well broken up with the plough; while four, even of our miserable half-starved Virginia oxen, will break or tear up roots by it, as thick as a man's wrist with no more "geeing" and "hawing" than they require to drag a load of wood to their master's door, or to any other coulter, that I have ever seen tried.

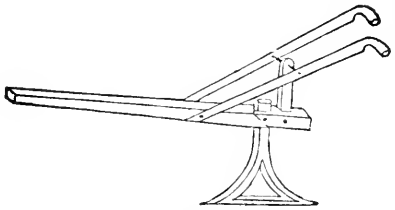

Fig. 53.

The lower part of the coulter is made out of inch-square iron, flattened and well steeled at the points, and is twenty-two inches long.

The upright part is of bar-iron two and a half or three inches wide, by a half inch or five-eighths thick, and should be seventeen or eighteen inches high from top to bottom, and left square both on the front and hinder edge.

A half inch bolt will suffice to fasten it in the mortice through the beam which should be at least four by three inches at that part. A band of round, half inch iron, should also be fixed on that part of the beam, so as to rest against the front edge of the coulter above and its back edge below, which will keep it firmly fixed in the mortice.

If this drawing, with my description of it should contribute only half as much as I hope it will, to the benefit of our agricultural brethren, it will be deemed an ample reward, to the end of life, by their friend and yours,

James M. Garnett.

Use of Lime.

Lockhart, in his life of Sir Walter Scott, relates the following anecdote.

'There see'—he continued, 'that farm there, at the foot of the hill, is occupied by a respectable enough tenant of mine; I told him I had a great desire for him to try the effects of lime on his land. He said he doubted its success, and could not venture to risk so much money as it would cost. Well, said I, fair enough; but as I wish to have the experiment tried, you shall have the lime for the mere carting; you may send to the place where it is to be bought, and at the term day you shall strike off the whole value of the lime from the rent due to me. When the day came, my friend the farmer came with his whole rent, which he laid down on the table before me, without deduction. "How's this, my man; you are to deduct for the lime, you know." "Why, Sir Walter," he replied, "my conscience will not let me impose upon you so far—the lime you recommended me to try, and which, but for your suggestion I never would have tried, has produced more than would have purchased the lime half a dozen times over, and I cannot think of making a deduction."

Elements of Practical Agriculture.

DRAINING.—Continued.

Before beginning to drain a field or tract of ground, it is frequently well to ascertain, by examination, the nature of the substances to be digged through.

At the upper part where the wet tract to be drained appears, or between the wet and the dry, let a few pits be digged. The place of each pit is to be marked out nearly in the direction of the proposed line of drain, six feet long by three in width, in which space one man, and if required, two, can work. Let the earth be thrown out to the lower side, and to such a distance from the edge of the pit as not to press upon and break down the sides. Let these pits be made to the depth of five or six feet, or more if necessary, so that we may reach, if possible, the porous bed in which the water is contained. Should we find no water, then let us apply a boring-rod, in order to ascertain at what depth the porous substance lies in which the water is contained.

Sometimes water will not be found until we come to a great depth. It may be so deep that we cannot reach it by any drain, or even by boring with the auger. In this case a previous examination saves us the labor of making the drain unnecessarily deep. Sometimes we shall proceed to a considerable depth without finding any appearance of water, when, all at once, by breaking through some thin stratum, we shall reach it. The water is frequently seen in this case, to boil up like a fountain, and this affords the assurance that we shall succeed in our object.

This species of preparatory examination by means of pits, is therefore, in many cases useful. It affords the means of judging of the proper depth and dimensions of which the drain shall be formed; it prevents the committing of errors in the laying out of the lines of drains; and it enables the drainer to enter into contracts with his workmen with precision.

When we have thus, by sinking pits in various parts of our intended lines, obtained an idea of the nature of the ground, of the substances to be digged through, and of the depth of the water, we mark our lines of drains upon the ground.

This may be done by pins, or by a plough drawing a furrow along the intended line.

It is at this time very convenient to make

a hand-sketch of the piece of ground to be drained, marking each line as it is laid off in the field, and noting the depth and direction in which the water is to run.

The lines being marked off in the manner described, these are to form the upper edges of the drains.

The width of the drain at the top depends upon its depth, it being usual, except in the case of very hard and tenacious substances, to make it slope from the top to the bottom.—Thus, if it be six feet deep, and from 18 in. to 2 feet wide at bottom, it may be 2½ feet wide at top.

The workman, in forming the trench, works up to the higher ground, and never from the higher ground to the lower. The instruments which he uses in the operation are—the common spade, a shovel for throwing out loose substances, a pick or mattock, for raising stones and breaking the earth when hard, and the foot-pick.

The materials to be used for filling the drain may be stones, tiles, or other hard and durable substances. When stones are to be employed, if they are inconveniently large, they may be broken to the weight of three or four pounds. They may be laid down for use, before the cutting of the drain is begun, along the upper line of the drain, the earth being thrown by the workmen to the lower side; or else they may be brought forward while the work is going on, and thrown from the cart into the drain.

In the larger class of drains it is regarded as beneficial, and even necessary, to form a conduit at the bottom. This is done by building a little wall roughly on each side at the bottom, about six inches in height, and so as to leave an aperture or conduit of about six inches in width. The workman then covers it with such flat stones as he can procure, filling up also the interstices of these covers with smaller stones, so as to defend the conduit from earth and other substances that might fall into it. When this is done, the remaining stones are thrown in promiscuously to the height of 18 inches or two feet above the cover. The stones are then to be made level at the top, and either covered with the sod which, on breaking the ground of the drain, had been laid aside for that purpose, or with a covering of straw, heath, or the like. This covering is to prevent the loose earth from falling amongst the stones.

When these operations are completed, the earth which had been thrown out of the trench is shovelled upon the stones until it be above the level of the surface. The purpose of raising it higher than the surface is to provide for the subsidence of the loose earth, which is generally found to be rendered more compact, and to occupy a smaller space than it did in its original state. When a portion of the earth is shovelled in, it is an economy of labor to employ a common plough for filling in the remainder.

A drain thus formed will appear on a transverse section, as in Fig. 54, and after the subsidence of the earth as in Fig. 55. Where the soil is very soft, it is of benefit to pave the lower part of the drain with stones or slates. In the whole operation of forming the trench and conduit, great care is necessary in seeing that all the parts of the work are executed well.

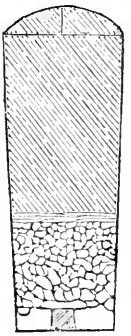

Fig. 54.

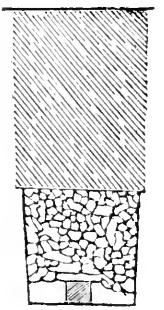

Fig. 55.

The stones used for this species of drain may be sandstone, or any of the harder stones that can be obtained. But, in many cases, stones are not to be obtained, in which case tiles may be substituted.

Fig. 56.

The tiles, which are made with an arch as in the annexed figure, 56 may be formed of separate pieces of about fourteen inches in length. Flat soles are made of the same material, on which the arched tiles are to rest.

The method of forming the drain when tiles are the material employed, may be somewhat different from that adopted when stones are used.

The drain is carried down as narrow as a man can work, and at the bottom an excavation is made by means of a narrow-mouthed spade, to fit the dimensions of the tile, which is then placed upon its stand or sole. Above this should be laid some loose materials, as clean gravel or sand, for allowing the filtration of the water. Even brushwood, and such materials, may

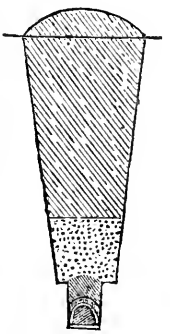

Fig. 57.

be used; for though they are not of great durability, they serve the purpose, even after they have decayed, of rendering the earth more open and pervious to water.

Drains formed in this manner, whether the material employed be stone or tile, will be found efficient when they are laid out in the proper direction, and when the pervious substances are reached in which the water is contained.

But it is often impracticable to reach these substances with a drain of common depth.—In this case, apertures may be formed at the bottom of the drain, by boring or sinking down at the proper distances, until the pervious beds in which the water is contained are reached. By this means the water will be allowed to flow up from below into the cavity of the drain, and so will be carried away.

The application of this principle had been familiar from the remotest times in the sinking of wells. But it was not till after the middle of the last century that the same principle was applied to the draining of land.—This was done by Mr. Elkington of Warwickshire, who employed the auger and the boring-rod for the purpose of reaching the channels and reservoirs below the surface, when an ordinary drain could not reach them.

The auger employed for this purpose is similar to a carpenter's wimble. It may be from four to five inches in diameter. Square iron rods are made to be screwed into one another, so that the length of the line of rods may be increased in proportion as the auger penetrates the ground. In the annexed fig., A is the auger, B one of the rods, C a key for turning it round and working it, D another key for holding the rods when they are to be unscrewed by means of the key C.

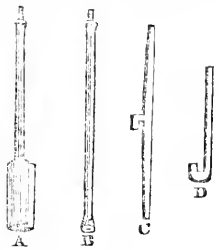

Fig. 58.

This instrument may be sometimes found useful when the channels and reservoirs of water can be reached in this manner. The apertures are formed by the auger in the bottom of the drain. When the water is reached, it will spring up into the drain, in the same manner as water in the bottom of a well. It is not necessary to employ any artificial means for keeping the apertures open, as the flow of the water will suffice to maintain for itself a passage.

For the Farmers' Cabinet.

Food for Chickens.

The thrifty housewife gotteth much gain by chickens.

As this is the season when our good housewives are rearing broods of chickens, and turkeys, to have them in readiness for market next autumn and winter, when they will, no doubt, sell for a good price, and enable them to purchase many articles of comfort, and perhaps some which would have been deemed luxuries by our primitive ancestors. I therefore embrace the opportunity of recommending to those who are engaged in this interesting branch of domestic economy, to have their hen-coops, in which the nurses are confined, while their young charge run at large in their vicinity, arranged *near to*, or *close by*, the paling of the garden; so that the younglings may wander through the beds of cabbages and among the cucumber vines and vegetables, and make an early breakfast of the insects, grubs and worms, which are so injurious to garden truck, without in the least degree trespassing on our superior rights.

This kind of food is eaten, by young poultry, with a high relish, and it saves the too frequent resort to the Indian-meal tub, and materially diminishes the number of those insidious invaders of our privileges, which have multiplied so alarmingly, since the *bad* boys and *idle* young men have killed off most of the birds, which were wont to keep them within harmless limits.

This judicious plan of feeding chickens and clearing a nicely cultivated garden of pernicious insects, was suggested by the wise practice of the worthy farmer who was mentioned in the last number of the Cabinet, as having a long range of stone fence, of his own making, that would repay a ride of seven miles to look at it. B.

Morello Cherry.

Mr. Editor:—Will you be good enough to ask of some of your intelligent and observant subscribers any information they might have on the subject of the disease and waste that is now affecting that valuable fruit tree, the *morello cherry*? It and the *pie cherry* will soon be extinct unless some bold efforts and thorough investigations are made to remedy the disease which now threatens their existence. Is not the black and warty excression which attacks almost every limb pervaded by an insect? and if so, cannot some means be devised to destroy it and correct its ravages. In *fine*, has there been any remedy for the evil complained of found, and by any of your readers; if so, will they not communicate it to the Cabinet for the good of the public? So hopes a subscriber.

Wilmington, Del.

For the Farmers' Cabinet.

Crows Outwitted.

A premium on crows' heads in Connecticut, as well as a desire on the part of a farmer of that state to save his corn, by diminishing their number, induced him to place a dead animal near a piece of wood-land, where he had erected a suitable brush-house, in which to ensconce himself, within proper shooting distance of the decoy. Flocks of crows visited and feasted upon the animal, when the farmer was absent from his retreat, but whenever he was lying in wait for them, with his gun, not one would venture to approach it, although with wistful eyes and watery mouths they beheld their favorite viands from the tops of the neighobring trees. He continued to visit the decoy house for many days, and, with anxious solicitude, awaited the approach of the wiley crows, but not one would venture to dine upon the delicious dead horse, whilst he was there secreted. Discouraged by his want of success, he stated the circumstance to a neighbor, who at once informed him, that he could succeed in shooting them, which his discomfitted friend had very strong doubtings about. However, they both immediately repaired, with their guns, to the brush-house, and, after a short time, the neighbor requested his unsuccessful friend to take his gun with him and go home, while he remained in the retreat. He set off across the field towards his house, and as soon as he was out of shooting distance from the animal, down came the crows to their repast, and the neighbor firing amongst them, killed a large number. The farmer, seeing his friend's success, returned to him and observed, "the crows are cunning critters, but they can't count." X.

For the Farmers' Cabinet.

Things that I like to see.

I like to see a farmer and his family neatly and substantially dressed; with an especial adaptation to their business; this indicates that they are respectable and prudent people, worthy of your confidence and regard.

I like to see neatness and soundness about a farm house, barn, outbuildings and fencing, with a small sprinkling of useful and ornamental trees and shrubs tastefully arranged about the domicil; it shows the proprietor to be a man of judgment and sound taste, and not easily jilted with humbugs.

I like to see a family of obedient, industrious children, ever willing to oblige one another; it indicates that their parents have been duly impressed with a proper regard for their present and future welfare.

I like to see boys helpful and attentive to their sisters, being ever ready to lessen their burdens and to promote their happiness; it shows good breeding, and augurs strongly their future success in life.

I like to see kindness gentleness and humanity extended to domestic animals; it furnishes a strong presumption that piety and benevolence have not gone from home.

I like to see a garden well filled with all the vegetables of the season, of the best kind, and cultivated in the best manner; it shows a proper regard to the interest and comfort of a family; and a pretty good judgment may be formed from it, of the moral character of its owner; for it is said a very good man seldom or never has a very bad garden. Rose.

THE HOME OF THE FARMER.

Still let me live among the hills,
The rocks, the trees, the flowers,
Where I have passed my earliest years,
My childhoods's happiest hours.

How oft beneath an aged oak,
Near by my father's dwelling,
Have I reposed with kindred youth,
Some playful story telling.

The birds above would plume their wings,
And raise their happy voices,
O sure 'tis a pleasant place,
Where every thing rejoices.

Surrounded by the friends I love,
And free from every fetter,
I am an independent man,
And wish for nothing better.

My little children round me sport,
So blooming, bright and healthy,
I often think that nature's gifts,
Hath made me very wealthy.

My wife is all which she should be,
Kind, gentle, prepossessing;
I'm sure if ever man was blest,
Mine is the greatest blessing.

Breeding, Rearing and Fattening of Swine—No. 2.

COMPARATIVE VIEW OF DIFFERENT BREEDS.

Mr. Western has the credit of having originally introduced this breed, which has now justly acquired great celebrity. It has, however, been claimed by Mr. Waltham, of Maldon, and Mr. Knight, of Ramsden's Crays, both eminent farmers. But the fact, as Mr. Young conjectures, appears to be "that since Mr. W.'s pigs have become so famous, those of whom he ever bought any are ready to claim their share."

The *Sussex Breed* is either a variety of the Essex, just described, or, as some assert, the original stock. It is smaller than the Berkshire, and of very handsome form, the

general size when full grown seldom exceeding eighteen or twenty stone, of fourteen pounds. The bone is not particularly small, but it is clean; the animal is of a kindly disposition to fatten, and arrives at maturity sooner than any other kind.

The *Dishley Breed*, which were at one time as celebrated as all the other kinds of Mr. Bakewell's stock, are remarkably fine boned and delicate, and are supposed to be partly descended from crosses of the Berkshire and Chinese. They were certainly carried to great perfection, and have reached to considerable weight in a very small compass, being, when fat, nearly equal in height, length, and thickness; their bellies nearly touching the ground, and their eyes scarcely to be seen for fat; the whole carcass appearing a solid mass of flesh. The form of these pigs possesses considerable beauty, and is well calculated to lay on a large quantity of meat, compared with their bone and offal. They also keep themselves in good condition on a moderate quantity of food, and are easily fattened.

Such are their general characteristics; but to these merits there are said to be opposed very considerable defects. They have been found slow of growth, tender constitutioned, and to require proportionably more food in fattening than the large breeds. It should, however, be remarked, that the experiment upon which the latter assertion is founded, was made by feeding *two* Dishley hogs against *one* from a cross between a Berkshire and a large white Shropshire hog; and that while the Dishleys consumed *jointly* the most food, the other weighed singly more than the two. This, however, is not alone decisive of their respective merits; which could only be accurately ascertained by a reference to the butcher; as a material difference would no doubt arise in favor of the sale of two small animals, when opposed to that of a single large one.

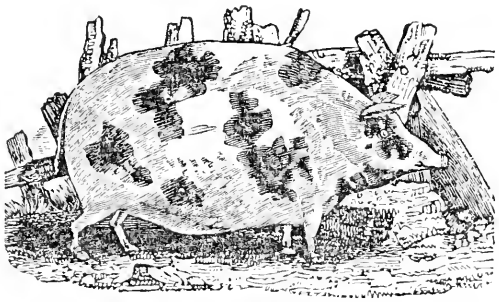

Fig. 59.

IV. The Woburn Breed—of which the animal portrayed above was exhibited at Lord Somerville's cattle show, in 1806—is a new variety, introduced by the Duke of Bedford. They are of various colors, well-formed, hardy, very prolific, kindly disposed to fatten, and have attained to nearly twice the weight of some other hogs within the same given period of time.

Besides these there are:—

The *Hampshire*, the specific characters of which are—color chiefly white; neck and carcass long, and the body not so well formed as the Berkshire pigs; but they fatten kindly to a very great size and weight, and make excellent bacon.

The *Northampton*, which are also white, with very short legs, ears enormously large, often sweeping the ground; size large, with coarse bone and hair, and many bristles. They fatten to a great size, but not very kindly, and are reared chiefly in the county of Northampton.

The *Shropshire*, which appear to be a variety of the Northampton race, to whose characteristics they bear a great resemblance; fattening to a large size, but not so kindly disposed as the Berkshire; yet they are both favorites with the distillers who seem to require a coarse heavy pig to consume their wash and grains with advantage.

The *Yorkshire*, which are similar in color to the Berkshire but with longer ears and coarser hair. They have long legs, flat sides, and are coarse in the bone; they are also slow feeders; but, for the reasons already assigned, they, as well as the Northampton and Shropshire, are in esteem with the distillers.

The *Lincolnshire*, with well-formed heads, and ears of a medium size pointing forwards, and curled at the lips; they are long and straight from the head to the tail, and of sufficient breadth; round in the carcass and deep in the sides; the skin and hair thin. The true bred pigs of this race are white, and rather tender; but they reach to thirty stone, of fourteen pounds, and in point of profit

may be ranked next to the Berkshire. This breed is also well known (with some occasional variation) as the *Norfolk* and *Suffolk*. The *Cheshire*, of various colors, but chiefly marked with broad patches of black, or blue, and white, have large heads, with long pendant ears; are of a great length, but proportionably narrow; curved in the back and flat-sided; large boned and long legged, with much loose skin, and altogether ill-formed; but they grow to an extraordinary weight, and are the largest kind of pigs in the kingdom except

The *Rudgwick breed*, which take their name from a village on the boarders of Surrey and Sussex, and are remarkable for the enormous size to which they reach, each of these; breeds has its several advocates; but as their respective value does not, as in other species of stock, depend on soil and situation, these differences of opinion can only be ascribed to the want of sufficient comparative experiments, or to prejudice. A very competent, and apparently a very candid judge of the merits of the principal kinds, gives it as his decided opinion that the Berkeshire rough-haired, feather-eared, curled pigs, are superior in form and flesh to all others; even to the best Chinese.

With regard to these two breeds, that opinion must have been formed on fair experiments and due consideration of their respective value, for he mentions having fatted a Chinese sow to the weight of forty stone, of fourteen pounds at three and a half years old,* and the quality of the bacon, of both kinds fatted and cured alike, was decided by a party of gentlemen at Lord Conynghams' table in favor of the Berkeshire. In this we so far, unhesitatingly coincide; but from all the other information we have collected on the subject, we are inclined to think that Mr. Westerns' Essex breed, may fairly compete with either; and the Woburn breed, has not yet been sufficiently tried to admit of a decisive comparison.

To these also, there must, in justice be added, a breed partaking of the Essex blood and generally known as the *Essex* and *Hartford breed*. It was introduced by Mr. Dodd, of Chenies, in Buckinghamshire, (a most successful breeder.)

True politeness.—To prefer other peoples' convenience to your own.

---

*The height of this pig was	2ft.	3in.
Length	4	11.
Breadth across the loins,	2	0.
Girth	9	10.

Horse Rake.

A subscriber inquires where the horse rake can be purchased. We cannot give the desired information. The accompanying descriptions and wood cuts, will, however, we hope, enable any common carpenter readily to construct one, either of the common or revolving rake.—*Genesee Farmer.*

THE COMMON HORSE RAKE.

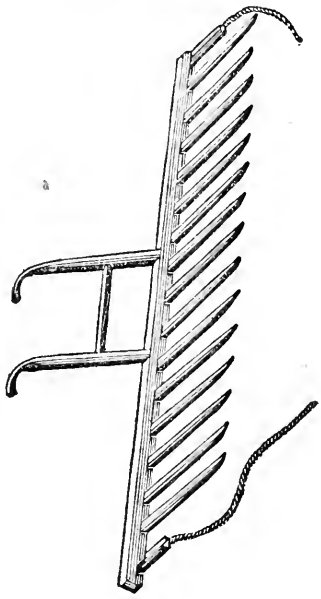

Fig. 60.

This is made of a piece of strong scantling, three inches square and ten feet long, into which about fifteen teeth are inserted horizontally, and made of strong white ash or other tough wood. The teeth should be about 22 inches long, and one inch by one and three quarters at the place of insertion, and tapering on the under side, so as to give them a slight turn upwards at the point, to prevent their running into the ground while using. The draught ropes are attached to the end of two projecting pieces of wood parallel to the teeth, at each end of the rake. These projecting pieces should be about one third of the length of the teeth. Those unskilled in the use of the rake, sometimes attach the ropes at once to the ends of the head; in this way it becomes almost entirely unmanageable. The forward ends of the draught ropes are to be fastened to the horse's collar, leaving space enough between the horse and rake for the collecting hay. Handles, like those represented in the figure, (fig. 60) are to be inserted in the head near

the middle, for guiding the teeth and lifting the rake from the ground when necessary.

In using this rake, instead of the teeth moving onward upon their points as in the common hand rake, they run along flat upon the ground, passing under and collecting the hay; when full, the handles are thrown forward, the rake emptied, and lifted over the winrow for another load. The rake thus passes backwards and forwards across the field, always emptying opposite the last heaps, and thus forming regular winrows at right angles with the path of the rake. A few hours practice will enable any one to use this rake without difficulty, the only skill required consisting in keeping the points of the teeth just so low as to pass under all the hay and yet not run into the ground. When small obstructions occur, the handles are depressed, thus causing the teeth to rise, and the rake passes freely over. Large obstructions, as stumps and stone heaps, require the rake to be lifted from the ground.

The chief recommendation of this kind, is its cheapness and simplicity. A good one need cost no more than two dollars. It may also be used on rougher ground than the revolving rake, as it is more easily lifted over obstructions. Where the ground is very uneven the teeth should be much shorter. When one becomes well accustomed to the use of it, work may be done nearly as fast with this, as with a revolving rake, though much more laborious. Twelve acres of hay, part of it yielding nearly three tons to the acre, on a meadow of the writer, were raked into winrows, by means of one of these rakes, in about *six hours*, working time. It possesses another advantage over the revolving rake—it may be used for scraping the winrows into heaps for drawing, and if the hay is stacked in the field, for drawing the hay to the stack. A man with a rake and horse, not only raked the hay, but drew it at the same time to the stack, a distance of from ten to twenty rods, as fast as an active man could pitch with a fork. A hand rake need scarcely ever be used on the meadow, as all the scattered hay may be raked up in a short time, after the rest of the hay has been drawn off.

The horse rake is very useful in raking stubble of wheat, and eminently so in pulling and gathering peas.

Shafts, instead of ropes have been attached to the head of the rake, and have been strongly recommended; but they diminish the simplicity of the rake, and appear to possess no advantage on the whole, and for gathering and drawing hay, are positively detrimental.

Fig. 61.

THE REVOLVING RAKE.

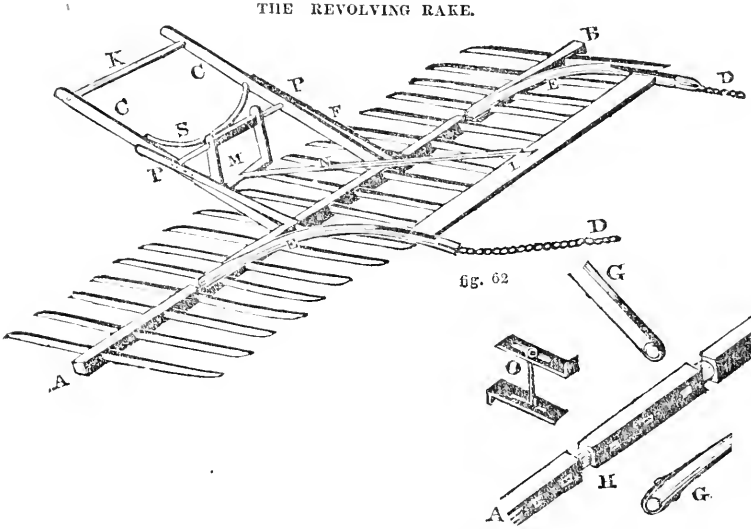

fig. 62

This is much more complex in its construction than the common horse rake, but possesses advantages over it in ease and expedition in raking. Its peculiar advantage is the facility with which it may be unloaded, requiring for this purpose but a slight elevation of the handles, and without stopping once in crossing the whole breadth of the meadow.

Its construction is as follows:—The head A B, fig. 61, is a piece of strong scantling, three inches square and ten feet long, through which eighteen holes, one inch square, are made to receive the teeth, which are pieces of the strongest white ash, one inch square and three feet long, projecting equally on both sides of the head when inserted, and forming

a double row of teeth, each about eighteen inches long. The draught chains or ropes D D, are attached to the forward ends of two curved arms E E, which are connected at their other ends to the head of the rake by iron straps passing round the head so as to allow it to revolve freely. G, fig. 62, represents a portion of one of the curved arms, showing the hole formed by the iron strap, and H represents a part of the head which turns in this hole. These arms are held firmly together by the cross piece I. An improvement in the curved arms is made by constructing them of two pieces at right angles, in a form similar to a carpenter's square, the first or shortest piece rising perpendicular from the head, and the other projecting forward, and to which the draught chains are attached. By this construction, more space is allowed beneath these arms for the collection of the hay.

The cross rod K, connecting the handles C C, serves for guiding and managing the rake. These handles are connected to the head by a contrivance precisely similar to that of the curved arms. At the middle of the handles is a cross rod P P, upon which turns the small frame M, which is connected (by turning joints,) by means of the rod N, to the cross piece I. This rod must be of just such length, as to cause the frame M, when pressed down upon the teeth by the handles, to touch them within about half an inch of their points; by this, the teeth are pressed flat upon the ground while raking. To empty the load this frame is raised by the handles beyond the reach of the teeth, and they pass it freely without touching. The rake is unloaded by means of the following contrivance. Outside of the handles C C, are two pieces of wood F F, turning freely upon the two projecting ends of the rod P P, as pivots, with their lower ends resting upon pieces of iron fastened crosswise on the head of the rake, just outside of the joints connecting the handles to it. The shape of these pieces of iron is shown in a detached view at O, fig. 62. When the handles are raised, the pieces F F, are thrown forward on these pieces of iron, until they strike the projecting part of them, when they immediately act as braces, and cause the rake to rise with the handles. The points of the teeth thus strike in the ground, and the horse continuing in motion, causes the rake to make a semi-revolution, emptying the load, and throwing the back row of teeth forward to be filled as before. The handles C C, should be perfectly parallel, that the pieces F F, may play freely. S, is a strong iron brace, fastened at each end to the handles, and at the middle to the cross rod P P. The cost of this rake is about six dollars. The revolving rake is better adapted for use on large farms and smooth meadows, and the common horse rake on small farms and rough meadows.—*Genesee Farmer.*

For the Farmers' Cabinet.

Horticultural Society.

The monthly meeting of the Pennsylvania Horicultural Society, was held on the evening of the 17th April, in the Hall, under the Atheneum—the President in the chair.

The Committee on Vegetables awarded the premium at the Society's intermediate meeting of the 31st of March, for the best six heads of forced Lettuce, to James Beadle, gardener, Turner's Lane, who exhibited fine plants of the Tiger Lettuce; they also noticed some fine heads from James McKee, Burlington, N. J., gardener to Horace Binney.

The committee on plants and flowers, awarded the premium for the best display of plants in pots to Robert Baist, who exhibited Amaryllis Johnsoni, Gesneria Spicata, Gloxinia, candida, G. caulescens, G. speciosa flora alba, Ixora coccinea, Epidendrum cochleatum Azalea Siucusis, a double purple Tropæolum tricolorum var, Euphorbia Splendeus, Burchellia capensis, verbena Tweediana, Brachysema latifolia, Diplacus punicus, a fine seedling Carnation, called Lord Byron, Rhododendrum pictum novum, yellow tea rose, Rosa Thea Lilacina, Hakea acicularis, Ixia Kermisina, Pelayonium Lord Denman, P. Etna, P. Dennis's perfection, P. ne plus ultra, P. Superbissima, P. Blue beard, P. pur purea cœrulea, P. Diversum, P. Lucifer, P. Adelina, P. Wheeleri, P. Queen of Scots, and three fine seedlings not named.

The premium for the best bouquet was awarded to John Sherwood, Laurel Hill, and recommended an honorary one to Robert Kilvington, gardner to Wm. Lloyd.

The Committee on Vegetables awarded the premium to J. Smith, gardener to N. Biddle, for the best display of vegetables, having exhibited a large quantity of very superior mushrooms.

Wm. Chalmers, Sr., gardener to Mr. Stot, exhibited some very superior Lettuce, some fine specimens of the oak leaved Lettuce.

The Society's premium for the four best forced Cucumbers, was awarded to Robert Kilvington, gardener to Wm. Lloyd.

Owing to the severity of the weather, the show of plants was limited from what is generally brought forward at this meeting; the tropical plants could not be brought in from the country: however those that were exhibited were of the best quality, and some of them new and very pretty. We allude to the Tropæolum trocolorum var. being a variety of the old one, only much superior in color, and a very free flowerer; the Rhododendrum pictum, is a beautiful plant, the flower a delicate white dotted over with small dark spots

on the back petals; the Geraniums were fine, and one of the seedlings, although not of a superior color, is one of the best formed flowers we have seen, the petals being so round and stand so well up. Both the vegetables and plants do great credit to the city and suburbs, and last, although not least, the meeting was graced with many a bonnie lassie.

G. Watson, Rec. Sec.

To Correspondents.

Several interesting articles for the present number, have been unavoidably deferred until our next—among them, Observer No. 14—the Veterinarian No. 4, and a communication from an "Old Farmer."

Quantity of Rain which has fallen in each month since January 1, 1838.

	inches.
1st month,	2,20
2d month,	2.19
3d month,	3.17
4th month,	3.58

Philada. Hospital, May 2, 1838.

For the Farmers' Cabinet.

DEPOSITORY OF AGRICULTURAL IMPLEMENTS.

Call and see.

Having just visited the interesting and extensive establishment of James Mitchell, importer and manufacturer, No. 12 Old York Road, opposite the old Indian weather-cock, where are kept wheat fans, straw-cutting boxes, corn shellers and grindstones, hung and unhung, in all their varieties, with numerous other articles peculiarly adapted to the use and convenience of farmers. I embrace the opportunity of referring them to this great Bazaar, where they will see some improvements in many of those useful implements that were at least entirely new to me, and I think will gratify agriculturists generally. It has long been deemed important that there should exist in Philadelphia a depository, where all new and useful implements for farming purposes should be exhibited and sold; and this situation seems as well adapted for the purpose as any other, particularly as Mr. Mitchell, is a man of high respectability, an old well known citizen, and very obliging and moderate in his charges for the articles manufactured under his own eye. This is written without his knowledge, as it was thought so useful and meritorious an establishment ought to be made known to the 10,000 patrons of the Farmers' Cabinet. R.

Philadelphia, May 4, 1838.

AN ACT

TO PROMOTE THE CULTURE OF SILK.

Section 1. Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania, in General Assembly met and it is hereby enacted by the authority of the same, That from and after the passage of this act, whenever any person or persons, either individually or collectively, shall raise any silk within this commonwealth, he, she or they, shall be entitled to draw from the State Treasury a premium of twenty cents, for each and every pound of cocoons raised by him, her or them, and fifty cents per pound on every pound of good silk by him, her or them reeled from cocoons so raised, and the person or persons so claiming the premium aforesaid, shall first exhibit the cocoons raised and the silk reeled as aforesaid, to one alderman or justice of the peace, within the proper city or county where they shall have been raised, and the said alderman or justice shall thereupon examine the person or persons claiming the premiums as aforesaid, upon his or their oath or affirmation, and shall require the party so claiming the premium, to swear or affirm that the cocoons were raised in the state of Pennsylvania, after the passing of this act, and that the premium has not before been claimed by or paid to any other person, and also, in relation to such other facts, matters and things as is, or may be in their opinion connected with the raising or reeling of the same, and upon the evidence being satisfactory to his mind, he shall thereupon make out a certificate under his hand and seal of the same, and the respective city and county treasurers upon the presentation of the said certificate or certificates, are hereby authorized and directed to pay the amount of the same of any moneys belonging to the commonwealth, which may then be in their hands, and the state treasurer in settling the respective accounts of the several city and county treasurers, shall, and he is hereby authorized and directed to receive the said certificate as equivalent to the amount of money paid out therein in conformity with the provisions of this act, and the same shall be audited and adjusted in like manner as other payments out of the treasury are now audited and adjusted by law.

Section 2. Any false swearing under this act shall be indictable and punishable as perjury in other cases is punished, and any fraudulent procuring of the premium on cocoons or reeled silk under the provisions of this act, shall be deemed a misdemeanor, and on conviction punishable as such, by fine and imprisonment, at the discretion of the court.

Section 3. The weighing the cocoons, administering the oath or affirmation required by this act, and making out the certificate, the justice shall be entitled to a fee of twenty-five cents, to be paid by the person applying for the same.

Section 4. The provision of this act shall not continue or remain in force for any greater length of time than until the first day of January, one thousand eight hundred and forty-three.

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THE FARMERS' CABINET,

DEVOTED TO AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

Vol. II.—No. 17.] June 15, 1838. [Whole No. 41

To the Patrons of the Farmers' Cabinet.

The next number of the Cabinet will complete the *second volume*, and according to a rule of this office, the work will be discontinued to all those whose subscription expires with that number, unless express directions to continue it be given. Several hundred of our patrons have already ordered the work to be continued,—some have paid several years in advance,—and many more, we are satisfied, need but a timely notice to communicate their wishes. That notice is now given. *Those of our friends who can make it convenient to call and renew their subscriptions at the office, are most respectfully requested to do so, and the earlier the better*, as we wish to ascertain, as soon as may be, the practicability of increasing our present large edition of the Cabinet. Those who do not visit the city, may remit by their neighbors, when convenient, or pay over the amount to our agents, or to any Post Master willing to receive it and receipt for the same, as all Post Masters are hereby authorized, and respectfully requested to act as agents for the Farmers' Cabinet.—And any friend of the enterprize, may constitute himself a *special agent*, by forwarding five dollars free of postage, for which seven copies will be sent to his order, for one year. We need the aid of every friend of agricultural improvement.

The Third Volume of the Cabinet will be commenced under favorable circumstances. It is true that we have encountered many difficulties—but they have been surmounted. The prejudice with which our enterprize was viewed in the outset, is, in some sections, at least, entirely overcome. The spirit of improvemen is abroad; agricultural societies are springing up in every direction, and from their judicious management the best results may be anticipated. Intelligent and enterprizing farmers are moving in this business, and experiments are being made in all the various departments of agriculture. In this great and important work, we do not aspire to lead—we offer our humble sheet as a co-worker in the great cause. Our desire is to present to our readers information on which they may rely; the proceedings of agricultural societies, and the results of experiments, as furnished to us by practical men, with such essays, and other matters, as may be deemed interesting to agriculturists, and worthy of preservation.

The increase of our correspondents keeps pace with that of our subscription list. Some of them would do honor to any work. We return them our thanks, and hope to receive many more favors from them, and also from other gentlemen who are interested in the subject, who can add to the stock of agricultural knowledge and who may feel disposed to write for the public good.

☞ For Notices see last page. ☜

To the Editor of the Farmers' Cabinet.

The following essay was read before the New Garden Lyceum, on the 24th of 2d mo. last, and immediately prepared for the Cabinet but was mislaid. If it is thought worth publishing, after so able a refutation from W. D., in the last Cabinet, [No. 3.] please to dispose of it accordingly.

Observer—No. 14.

"And God said, let the earth bring forth grass, and herb, yielding seed, and the fruit-tree, yielding fruit, after his kind, whose seed is in itself, and it was so!"

IS WHEAT CONVERTIBLE INTO CHEAT?

The affirmative of the question has long been maintained, with a zeal, and confidence, which could hardly proceed from any thing short of a belief in its correctness. It is on this account I have deemed it worthy of a dispassionate answer.

A belief in the convertability of a number of the grasses, is as old as it is prevalent. It was, long ago, a common opinion among the peasantry of Europe, and, is one of the many legacies, bequeathed to their descendants on this side of the Atlantic. The celebrated Linnæus deemed it not unworthy of his pen, to endeavor to *disabuse* the people, of his day, by a learned essay, on the subject, which was published in the *Amœnatites Acidemicæ*, vol. v. Formerly, many of the graminaceaus plants were thought to be convertible into each other, in a certain progressive order.—Thus the wheat was supposed to be converted into rye—rye into barley—barley into rye-grass—rye-grass into cheat—and cheat into oats. In these more enlightened times, and, especially, in this *free country*, where belief is too often untrammelled, even by reason, we have found a shorter road to folly, by allowing the wheat to pass directly to cheat.

The advocates of this doctrine unfortunately, stand directly opposed to the creative mandate, "let the earth bring forth grass, yielding seed after his kind, whose seed is in itself upon the earth." The man who reads his Bible, and believes what he reads, can hardly entertain such an opinion.—The Bible argument is against him. To believe that any plant can bring forth seed after *another kind* than its own, appears to be a palpable absurdity.

Such a doctrine is no less repugnant to the "laws of nature," as they are deduced from the most extensive observations in Botanical science. Every *species* of plant, is found, to "yield seed after his kind." A species might, indeed, be defined, "*a plant whose seed is in itself.*" Plants of some *species*, under the influence of local circumstances, such as, difference of soil, and of climate, present various appearances which are called *varieties*. Thus, we have many *varieties* of wheat—of corn—of potatoes—of apples &c., yet all those *varieties* belong to the same *species*, "whose seed is in itself"—*they mix with each other*. On the contrary, *no two species can be made to intermix, or propagate together*. This is a determinate "law of nature"—the best available distinction between *species* and *varieties*. Now wheat is only one of a number of species, which constitute a genus, (Triticum) each possessing determinate characters. The different species of this genus do never mix—the varieties of any one species do. The same remarks will apply to rye, barley, rye-grass, cheat, and oats; they all belong to seperate genera. If species, composing the same genus, and having a close family resemblance, do not mix, much less can we expect those of different genera to do so.

Our fields afford several species of cheat-grass, very near a kin to each other, yet only one of them is pernicious among grain.

The transformation, in question, is not so much a mixing of species, as an alleged alteration in the plant—a radical change, from the nature of wheat, to that of cheat. But as such change, has not been noticed to occur in plants generally, it is illogical to suppose that it can take place in any. If such vagaries *do* take place with some, they *may* with all. If *one* is thus permitted to contemn the creative mandate, with impunity, neither will *others* obey. The vegetable world would soon run into the wildest confusion.—Agriculture would become the most precarious of employments. Our crops might, at any time, be metamorphosed into a forest of oaks. The stately lord of the forest become a mushroom. Even,

> ——— "that tub'rous root,
> Which, in their clay-built cells, the hardy sons
> Of Erin bless"———

might spring up, the far-famed *upas*, and with one pestiferous breath, annihilate the vital existence of a world. Happily, the "laws of nature," which the Eternal Fiat has established, for the government of our world, will not permit any such disorders in the vegetable kingdom.

The disciples of this doctrine of *transubstantiation*, do not attempt to sustain it by reasoning—they do not venture an issue, by the "laws of nature"—but, they confidently appeal to stubborn facts, which defy all reason, and all law. It may be worth while to analyse some of those facts, and see whether they may not be in conformity, both with reason, and, with the "laws of nature," which govern them.

I will first examine a *fact*, stated by G. W. Featherstonhaugh, a gentleman of high sci-

entific attainments, and long accustomed to study the "laws of nature," and, to analyse its phenomena. And, what did he observe? *a plant of cheat, drawn from the earth, at harvest time, with the skin of a grain of wheat, (or cheat?) entangled among its fibrous roots.* This, I believe, is a fair and simple statement of his fact. He, indeed says, that the skin "was attached to the radicle, in a situation quite distinct from the lateral roots"—and, that on "applying the microscope, he found it had been a kernel of wheat, and *nothing else.*" The fact is, moreover, fortified by the concurrent opinion of the venerable Madison, and ushered forth to the world, under the auspices of "The Monthly American Journal of Geology, and the Natural Science."* All this is, by no means conclusive, to my mind. There is room to doubt, whether the skin of a grain of wheat, which had lain so many months in the ground could be positively identified, and distinguished from that of cheat,—even by means of the microscope,—especially, without a comparison of the two, which does not appear to have been made. Again, the connexion between the radicle and the seed, would probably cease, with the destruction of the kernel, and could not be depended on to draw the skin out of the ground. But, I can readily conceive, that a radicle, or little root, of the plant, may have so penetrated the skin of its own seed, *or some other one*, as to aid in removing it from the earth, and present all the appearances noted. An opinion, if well founded, relating to an occurrence so common as the conversion of wheat is said to be, ought to find more conclusive evidence for its support. Moreover, the writer admits that his "opinions, as to the immutability of wheat, *were long ago shaken*," he does *not believe*, "that the heads of cheat, or chess, which are often found in wheat fields, *take their origin from seeds, like those they bear.*"—And, "having had a liberal share of *agricultural controversy*," (*on this subject?*) he seems to have hastily seized upon this fact, as a kind of *back handed missile*, in his retreat from the field. This should be remembered.

Another *fact*. Cabinet, vol. ii. p. 201. R. C. McFarlan seems to admit, that cheat will "yield seed after its kind," as he took some pains to have clean seed. Yet his ground had probably become foul, and might have received the seeds of cheat from "the stable and barnyard." The probability of this is greatly increased, by the fact that he, afterwards, cut his crop of cheat, "about the *middle* of June, and it made excellent hay." I say the probability is increased, because cheat, of strong growth which stands till the "middle of June," will yield ripe seed, and, if he was so *deficient in good husbandry*, as to allow such a quantity of pernicious seeds to go to the stable and barnyard, that year, I cannot suppose he had been very nice, in excluding them from the manure, which had been applied to his ill-fated crop. A farmer who would suffer the seed of six bushels sowing of cheat, to mingle with his manure, need not be surprised—nor should he complain, if his crops of wheat should turn to cheat, for half a century to come, especially when injured by the fly or winter.

A third *fact*, by a Virginia correspondent, is found on the same page of the Cabinet. The skinless oats, which fell to the ground, and came up in the fall, he says, "he expected *would* perish in the winter," and I have no doubt that it *did* so perish. Yet, we are told that "in the spring, they put forth and grew finely, and when the heads came out not a single grain could be found, but as fine and flourishing cheat as I have ever examined." He anticipates the objection, that the ground contains seeds of the cheat, for he says "no grain had been sowed within a quarter of a mile, or housed or stacked near it for forty years." It must be remarked that this statement implies an admission that if there could have been cheat conveyed into the garden the plants might have originated in that way; and also, that the grain did contain cheat. Now, it is probable, that grain had been "sowed, and housed, or stacked" near the barnyard or manure heap, during the specified time; and, it is equally probable that the "garden" which we are told had been planted "with different kinds of vegetables for thirty years," must have been often manured, during that time. A far more likely way, surely to introduce cheat into the garden, than by sowing or stacking grain near it.

So much for the *facts*. Whether my explanations are adequate, the reader must determine. I consider them sufficient. I would, however, prefer to acknowledge my ignorance, than to annul the "laws of nature," by admitting the mutability of wheat, on the one hand—or, to give countenance to the infidel doctrine of *equivocal generation* on the other. If we can doubt the presence of a pre-existing germ, where a plant of cheat springs up, we may entertain the same doubts respecting every other being, of whatever kind. The same fortuitous chance which could produce a plant, could also produce a man, without the necessity of recurring to a "Great First Cause." And, if plants and animals can thus spring up, spontaneously, from nothing, so can all the innumerous worlds, which people the infinity of space—an idea too revolting for any serious and contemplative mind to entertain for a moment.

* See that work p.

The question is often asked—if the seed is contained in the soil, why does it only grow when sown with wheat? I answer, frankly, that I do not know. It is thought, however, that the growth of one plant may somehow affect the soil so as to dispose certain kinds of seeds, contained therein, to vegetate—for example, that the wheat crop may promote the vegetation of cheat.

Different manures may also favor the growth of different seeds. A dressing of ashes will cause clover, red or white, to spring up in almost any soil. In places where the locust tree (Robinia pseud-acacia) abounds it is remarked that the seeds seldom grow—yet they spring up abundantly in those spots where brush heaps have been burned. The same remark is also true, of the common poke weed, (Phytolacca decandra) and the fire weed, so called from the circumstance (senesio hieracifolius.) Now, in what way shall we explain these facts? Are the plants which thus spring up the mere transmutation of others? or are they the fortuitous productions of chance? Does the ashes itself grow, sometimes producing a clover—sometimes a locust tree—and sometimes a poke-weed? Or does it stimulate into action the dormant vegetating powers of the seeds, which pre-existed in the soil? Every one will, I think, admit the latter explanation. Experience teaches that many of the hard shelled seeds will not vegetate for years, if at all, unless the shell is prepared so as to admit moisture to the kernel. This may be done by cracking the shell, or by soaking in ley of wood ashes, or a solution of potash. Hence an easy explanation of the effect of ashes in producing plants not before observed.

New Garden, 2d Mo. 24th, 1838.

For the Farmers' Cabinet.

Summer Pruning of Trees.

Experience is the best teacher.

The right time for pruning trees is after the first running of the sap, from the middle of June to the first week in July. The reasons for it are—in the first place, when a tree is in full leaf you can better judge what branches to remove than when it is leafless. In the next, the wound heals over more kindly and effectually after summer trimming, than after winter or spring pruning: and lastly, suckers are not so likely to shoot out after midsummer trimming as if it was performed in the spring of the year. The writer of this has performed the operation extensively on a large number of trees of various kinds, the last week in June, with the greatest success, and has never seen a tree, in the least degree, injured by it. The practice is now becoming general among those who have the most knowledge of the subject, and it is hoped that those who are timid at departing from an old custom, will make a trial of it this season, on a scale proportionate to their faith, and rest assured disappointment will not follow the experiment. Pyrus.

For the Farmers' Cabinet.

Moisture on Plants.

Dear Sir:—I was much pleased with the communication of your correspondent X., upon the subject of the *deposition of moisture upon plants.* The common mode of accounting for the cause why some plants show more moisture than others, even of the same kind, by ascribing it to greater powers of attraction, is as your correspondent observes, altogether erroneous. His own explanation is doubtless correct, as far as it goes, but there is one agency he has omitted to mention, the operation of which is more effective in the production of refrigeration or cooling, than evaporation. I allude to the process of *radiation.* It has been shown by actual experiments that almost all substances in nature possess the power of throwing off heat in different degrees, and as a general rule, those which reflect heat and light most rapidly, radiate or shoot off the heat most slowly. Reflection of heat is therefore a very different process from radiation. The first is effected most readily from bright and light colored surfaces, whilst those substances which shoot off or radiate heat most rapidly are usually rough and dark colored. Thus, if a piece of tin or any other polished metal be laid upon a grass plot, after sun-set of a clear evening, the bright metal will retain its warmth, and consequently remain dry, whilst the grass will shoot off or radiate its heat into the clear sky, and thus become cool so as to condense the vapor in the atmosphere, just as is done by a tumbler of cold water in warm weather. Here then we have the whole theory of the formation of dew, as beautifully explained by our countryman, the late Dr. Wells. Many who have not read the Doctor's treatise upon the subject, or heard it spoken of, may yet entertain wrong notions relative to the origin of dew, by supposing it a light precipitation from the atmosphere like a very fine rain; or an emanation from the ground; but the whole process is effected through the agency of radiation by which the plants and different objects on or near the surface of the earth throw off their heat in the absence of the sun, and becoming cooler than the surrounding air, condense the vapor coming in contact with them. Dew, as is well known, hardly ever forms, except the atmosphere be clear and calm.—Clearness is essential to active radiation, and calmness permits the air to rest in contact with the cooled surfaces sufficiently long to allow of the condensation of its vapor. The

different quantities of moisture collected upon plants or any other objects, depends upon their respective powers of radiation, those which become coolest always displaying the most moisture. Leaves which spread themselves in greatest luxuriance generally become the coldest. This luxuriance may proceed from the application of some stimulant to the roots, such as lime, ashes or plaster of paris. These substances do not therefore, as commonly supposed, attract atmospheric moisture directly of themselves, but merely render plants more capable of being cooled by the refrigerating agents which have been mentioned.

VARRO.

Philadelphia, May 21st, 1838.

For the Farmers' Cabinet.

Canada Thistle.

"Thou shalt not sow thy field with mingled seed."

Great mischief has arisen to our farmers generally, by sowing grass seeds which were mingled with the seeds of noxious and pernicious weeds, by which means they have been disseminated throughout our country. The Canada thistle was brought from the northern part of the State of New York in timothy seed, and is spreading rapidly in some neighborhoods to the great dismay of many farmers. I perceive that it has been noticed in your useful Cabinet, but I have not yet seen any thing stated in your columns that can be depended on as a remedy for eradicating it. I hope your correspondents will keep a close watch on this unwelcome intruder, and furnish you with the first successful experiment which results in getting rid of it. A farmer last season who had it among his oats, mowed it with the oats and burnt the whole together. This season it has made its appearance in his wheat, which will be destroyed by it in the part of the field where it has taken root. I hope you will excuse my calling attention to this subject, as it is one of great interest to many

FARMERS.

Bucks Co. June 1, 1838.

For the Farmers' Cabinet.

Capons.

In the last number of your highly useful periodical, I observe an article very properly recommending the production of Capons by our farmers and others, for the city markets. Your correspondent has the merit, so far as my knowledge extends, of first publicly noticing this important matter of agricultural economy. I say "publicly" noticing this matter, inasmuch as several gentlemen of my acquaintance have in various ways endeavored to accomplish this desirable object; but I regret to say without the least approach towards success.* Fowls have been by them operated upon in the West India mode by puncture, and in the Chinese and European manner by incision, but so far the result has been death to the animal, or its nature unchanged. They have endeavored to get information from books, and have even had the assistance of those who *say* they performed the operation frequently in Europe, but notwithstanding all of their attempts at mutation the object has not, in a single instance which I have heard of, been effected. I am aware that in the West Indies, China, Western Europe, and other countries, women and children are successfully employed in this kind of surgery, but it somehow happens that I have never seen a Capon in this country; although I must confess that I have frequently heard of them, and with your correspondent 'Civis' understood that the art was "easily acquired." Mrs. Glasse, in her directions for cooking a turbot, says, you must "take him;" and I should, by parity of reasoning, suppose that to eat a Capon you must first *make* him. Now will our friend 'Civis' put us on the right tack between this and next August, by which we may in the course of another year both take and *eat* of this delicious bird. If he feels the same interest which myself and many others do, he will doubtless comply with the request. I also agree with 'Civis' that it may be made a profitable business in this country, and may hereafter endeavor to point out the mode whereby persons with a very small capital, near our great cities, may make a livelihood, if not a fortune, in an easy manner. It should be remarked that the operation is not confined to the dunghill fowl, but that it is successfully extended to the turkey, goose and duck, both male and female. Should your correspondent find leisure to give us his experience and the *modus operandi* in your next or the succeeding number, I shall then endeavor to offer some suggestions which may be profitable to our farmers and others. RUSTICUS.

* See Cabinet Vol. II. page 145.

To the Editor of the Farmers' Cabinet.

Peach Trees.

Sir:—By an error of the press, the latter part of the communication at page 308, "On planting peach trees," is rendered unintelligible; the manuscript reads thus:—"The subsoil of Jersey is ferruginous and acidulous; Lime and the calcareous earths, are correctors of these evils."

The worm in the root of the peach tree and the excressence on the branches of the Morello Cherry, are not the *cause*, but the *effect* of disease, which arises either from a poisonous subsoil, or an exhausted surface; the cure might be effected by carefully removing the soil about the roots to a considerable depth and distance, and replacing it with fresh rich

mould, with which lime or calcareous earth has been well mixed. The *old folks* understood well the advantage of this treatment, for at the 7th verse of the 13th chapter of Luke, we find the dresser of a vineyard petitioning the owner to let the fruitless fig tree stand another year "till I shall dig about it and dung it;" and I knew an excellent farmer, who, at the time of killing his hogs, reserved the blood, with which to dress his fruit trees; and this he did, by opening the ground about the roots, and pouring it upon them, closing the earth over it. And when, through age or infirmity, he found it necessary to remove a tree, he was careful to take away the earth in which it had grown, to a considerable depth, and replace it with the best mould he could procure, always mixing lime with it, and into this the young tree was planted. I have even known him to lay a pavement in the bottom of the hole before filling, if he found that the roots of the old tree had penetrated to a wet and sterile subsoil, to prevent the young tree from throwing its roots so deep. And for this man also, as well as for Mr. J. Reeves (see p. 297) *peaches would always grow.* His trees were so strong and healthy, and full of foliage, that they could bear a little frost, and throw off an attack of blight, which would be sufficient to prostrate the hopes of his neighbors for the whole year. The disease called the "yellows," I am confident, arises from the cause above mentioned.

An old Farmer.

For the Farmers' Cabinet.

Poultry.

"She that won't stoop to pick a pin,
Shan't stoop to pick a bigger thing."

For many years past, there has been a great demand for poultry and eggs, at high prices, and it seems likely to continue; for the causes which produced it are still in operation and are likely to continue and increase. The increase of steamboat and rail-road traveling in our country has produced an increased demand for all the luxuries of the table, beyond the current means of supply at moderate prices; it therefore becomes the interest of farmers to devote a little more attention to producing those articles which always sell readily and at a good price; particularly as the labor connected with the rearing of poultry, if labor it can be called, is light, and can be performed by the younger members of a family, without infringing on the time devoted to the more important labor of the farm. It is an agreeable relaxation if engaged in, in a right spirit, and has connected with it many pleasant associations.

It should be the care of those who engage in the business of rearing poultry on a large scale, to study sound economy in feeding them, otherwise they may be disappointed in the expected profit. With some there is great carelessness and waste apparent, particularly in feeding with food of a more expensive character than is necessary. Having seen large quantities of poultry raised and fattened for market principally on boiled potatoes, I take the liberty of directing the *girls*, who are your readers, to it; hoping that daily, when they boil potatoes for family use, they will put enough in the pot, over and above what may be necessary for the family, to feed the chickens till the next day, and so continue it from day to day, occasionally alternating it with other kinds of food for a relish, and depend upon it you will find,

"That a penny saved, is two pence earned."

Q.

For the Farmer's Cabinet.

Veterinarian.—No. 4.

2. Stone in the urethra.

I have adverted to the fact, that small calculi may, and probably very often do, pass away from the bladder, through the urethra. But such is the length, narrowness, and curvature, of the passage, in the ox, that we might *a priori* expect that they would sometimes become obstructed—and such is found to be the fact.

The general signs which denote the lodgment of a stone in the urethra, are somewhat similar to those we have before enumerated. The retention of urine is more complete—the obstructing body can often be felt in the trach of the urethra—and the canal, above the obstruction, will feel full and present, an elastic and fluctuating sensation.

When the stone can be felt, it may be forthwith removed, by a longitudinal incision. It may be proper to mention, that there are two *retractor muscles*, which originate from the pubic bone, and run downwards to be inserted into the middle of the penis. Their office is, to retract that organ within its sheath. This retraction causes it to bend upon itself, so as to form a double curve, opposite the scrotum. An obstruction at this curvature, is not so easy of detection—nor can it be *directly* operated upon. If there is reason to believe the mischief seated at this part a longitudinal incision must be made into the sheath just before the scrotum. The operator will then grasp the penis, and draw it forwards, so as to obliterate the curve. He will then be able to discover, and remove, the obstruction. The external wound may be closed with stitches.

This is, probably the most frequently fatal form of stone, among cattle. Many oxen are believed to die, of this cause when a little skill would have saved their lives. A neighbor of mine had a fat 9 cwt. ox with symp-

toms of obstruction of some of the urinary passages. Nothing was attempted, for his relief, and he died. The bladder was found ruptured, and a large quantity of urine had escaped into the abdominal cavity. A small stone was found, impacted in the urethra, very near the extremity of the penis, which had caused all the mischief. I have the stone in my collection, which weighs only *eight grains*—showing how small a matter may produce the most fatal consequences. A trifling operation would have removed the stone and saved the animal.

I have known several other cattle to die, under circumstances so similar as to leave little doubt, that their death, was occasioned by the same cause. How long will it be before sympathy for the suffering brutes, and a regard for their own interests, will awaken the owners of cattle, from their present apathy, to a sense of the value of veterinary medicine!!

The short and capacious urethra of the cow, affords a ready passage for calculi, from the bladder, and, in a great degree, exempts her from the sufferings of calculous diseases of the lower organs—but her organization does not protect her against such affections of the kidneys and ureters.

The formation of stone depends on a morbid state of the animal fluids, or, of the secerning organs, or both. When a superabundance of the earthy carbonates exists in the blood—or, is separated from it by the kidneys—the urine, unable to hold it in complete solution, will possess a tendency to deposit it, in the form of stone. In this case the deposit will be composed, principally, of the carbonates of lime, and magnesia. But when the acid products of the digestive process, are most abundant, the deposition from the urine will be of a reddish or brown color—a more light, porous, chrystaline structure, and consist of acid. The calculi of cattle, are said to consist of these two kinds. All that have come under my notice, have been of the former sort.

If a stone has been discharged, in any of the ways I have described—or, if a sandy deposition has been observed where the urine has been voided, it will be prudent to adopt the proper treatment, before more serious mischief results.

When there is a deficiency of acid in the urine, the deduction of chemistry will indicate the employment of acid remedies. The supertertrite of potash (cream of tartar) is well adapted to the purpose. If the acid is superabundant, the alkaline, and earthy basis, will be as strongly recommended. Of these, lime, soda, and potash, are most commonly employed.

These hasty remarks, on the calculous diseases of cattle, are intended to elicit inquiry and observation, rather than to afford a large amount of instruction.

I cannot dismiss this subject, without expressing my regret, that the subject recommended in my first number—the establishment of a Veterinary College, has been entirely overlooked, by the readers of the Cabinet. Companies can be formed, and funds obtained, almost any where, to build a theatre,—construct a rail-road, or dig a canal, even where the enterprize is of doubtful expediency—but the paramount interest of every agriculturist, the preservation of his stock from the ravages of disease, is almost totally neglected. When will the farmer study his own interest—and learn to attend to his own business?

New Garden, 4th mo. 24th, 1838.

For the Farmers' Cabinet.

Cultivator.

Pulverize well the soil.

The cultivator or hoe-harrow is now accounted among the most valuable implements possessed by the farmer; it destroys the weeds and pulverizes the soil effectually and cheaply. Those that are so constructed as to admit of being widened or contracted at pleasure, possess decided advantages for many purposes, particularly for working amongst root crops. As many of us have embarked more or less in raising sugar beet and mangel wurtzel this season, I take the liberty of calling attention to a cultivator made by William Beach, No. 428 Market street, between 12th and 13th streets, Philadelphia, which I think will be found superior to any other made in this part of the country for pulverizing the soil and clearing out weeds; it admits of expansion and contraction, is strong and durable, and every way adapted to the uses for which it is designed. BETA.

For the Farmers Cabinet.

Important to Farmers.

A machine has been invented by MILTON DAYTON, of East Hampton, Long Island, by which he threshes his own grain, at the rate of fifteen bushels per hour,—grinds it at the rate of two bushels per hour,—saws his own timber at the rate of one foot per minute, and dresses his flax in proportion. The machine is carried by a two-horse power. The expense does not exceed three hundred dollars, and a mere trifle will keep it in repair. It will be of great advantage to farmers, and especially in neighborhoods denied the advantages of water- power.

If a man deceives thee, trust him not again. If he insults thee, go away from him.

Communicated for the Farmers' Cabinet.

Sow Pure Seed.

"One year's seeding makes seven year's weeding."

It is very material when about to purchase seed, that we should select a seeds-man of first character, who has made the business his study, and obtained a thorough knowledge of it in its different branches, and not trust ourselves to transient dealers who may have their attention divided between many other articles of merchandise. Such persons may be strictly honest, and yet lack that information which every dealer in the article ought to possess. Always buy the best that is to be had without regard to a small advance in the price over a common quality, and put plenty on the ground, as I hold it to be no economy to save a few dollars in the purchase of seed at the risk of having it impure, or a less crop than the land ought to produce. It is also of great importance that we should become good judges of seed ourselves, or we may fill our fields with weeds that will require years of trouble, and much expense to get rid of. Many are unacquainted with the seeds of the most common weeds found in clover, timothy, orchard grass, &c.; such as wild carrot, daisy, (called underbloom by some persons, and Bensalem clover by others,) wild chamomile, (this also is called underbloom in some districts.) St. Johnswort, wild amaranthus, field sorrel, &c. &c., and as these pests are the common attendants of the grasses, their seeds should be known to us all. To attain this knowledge, I would advise every farmer to collect when ripe, the seeds of every weed they meet with, fold them carefully in paper, mark and put them away in some secure and convenient place to refer to at any time, until they become so familiar with them that they can detect them easily when mingled with any seed they are about to purchase, and should there be any weeds unknown to any of us on our premises, it would be well to dry specimens of them carefully, and send them in a fold of paper, tied between two pieces of pasteboard to the office of the Cabinet, where they would be marked by some one of the patrons of that work, and left for the inspection of all. In this way, there could soon be a collection made (to which the writer would contribute all in his power) that would enable the farmer to detect and extirpate many a troublesome weed, which would otherwise overrun his grounds.

To ascertain the true character of plants, they should be taken when they are in bloom, and they may be preserved simply by placing them in some large book with a sufficient weight to press them until they are dry, this will be accomplished in a few days.

Farmer.

For the Farmers' Cabinet.

Machine for planting Seed.

A very simple, useful and convenient apparatus for drilling beet and other seeds has recently been made and brought into use. It consists of a tin tube about an inch or less in diameter, and three feet and a half in length, the top widening like a common funnel. This is carried in one hand with the bottom of the tube on the ground where the seed is to be deposited, and the seed is put into the funnel with the other hand and immediately descends to the place of deposit. In this way a person passes on depositing the seed in the tube as he progresses with it along the row, by which means it is evenly dropped, and may be covered with a hoe or rake. This saves stooping, which is painful and inconvenient to those who have not been early in life habituated to it, and is particularly useful and grateful to those who have *long backs*. These simple machines, with a general assortment of tools for gardeners and farmers, and seeds in all their varieties and of the best and most approved kinds may be purchased of Landreth's in Chesnut street, above Second street. S.

For the Farmers' Cabinet.

Grazing Neat Cattle.

This is a matter of great interest, and in order to its successful management it is all important that we start on right principles. The Editor of the 'Complete Grazier,' says that the feeding and fattening of cattle, whether for labor or for sale, is the most important in the whole economy of the grass farm. It, therefore, follows that the farmer should previously consider the *nature* and *fertility* of his pastures, and the extent and quality of his other resources—and, according to these, he ought to regulate his system of *grazing, soiling or stall feeding*. Those beasts only should be selected which evince the most *thriving disposition to fatten* with the *least consumption of food*, and depasture them upon such lands as are best calculated for the respective breeds.* Cattle ought not to be taken from rich to inferior soils—it is desirable to choose them from lands of nearly the same quality as those intended for their reception. It would be well for graziers to choose their purchased stock from an inferior soil. It is also proper in all situations not fully supplied with wholesome water, to avoid selecting cattle from those districts where it abounds in a state of purity.

The *practice* of *grazing* necessarily differs according to the nature of the land. In stocking lands, as the proportion of beasts must depend upon the fertility of the soil, it will generally be found that local custom

* Complete Grazier, 6th ed. p. 72.

which is generally the result of experience, will afford the surest guide. Instances are recorded in English works, of fifteen large bullocks and one hundred and fifteen sheep having been fattened on fifteen acres. The subdivisions of land, kept for the sole purpose of pasturing, should depend as well upon its fertility, as upon the number of different kinds of cattle to be fed upon it.* To render the grazing of cattle profitable it is necessary to change them from one pasture to another, beginning with the most inferior grass and gradually removing them into the best. By this expedient, as cattle delight in variety, they will cull the uppermost or choicest parts of the grass, and by filling themselves quickly, as well as by lying down much, they will rapidly advance towards a proper state of fatness. By this process, inclosures are rendered necessary, but great difference exists as to the most suitable size.

John Nicholson, Esq. in his valuable work, the Farmers' Assistant, says, "If a farmer has but three cows, and has three acres of the best pasture land, he ought to divide this into at least two parts, so that the one can be growing while the other is feeding. Again, if he keeps twenty cows, and has twenty acres of the best pasture, he will find his reward in having it divided into four parts, and pasturing each inclosure three or four days alternately. In this way pasture land will keep at least one-fourth more of cattle, and will keep them better, than if the pasture were in one field. Not only a change of pasture is beneficial, but a change of different kinds of cattle, in the same pasture, should be attended to. Thus let the milch cows take the first cropping of each field in rotation, then the horses and oxen, and the sheep next. In this way the last feeder will eat much grass that has been rejected by the former." Pastures should never be *overstocked*; that is, there should always be a sufficient quantity of food for the animals. It is also desirable that the large and strong cattle be separated from the weaker ones, as it frequently happens that where they are indiscriminately mingled together, the more powerful beasts will master the others, driving them from place to place, and trampling upon and destroying more food than they can eat.

To prevent these inconveniences, and also to stock the land to the greatest advantage the Complete Grazier recommends the following method of feeding and fattening cattle. "Suppose there are four inclosures, one ought to be kept perfectly free from stock till the grass is in its full growth, when the prime or fattening cattle should be put into it, that they may get the best food—the second best should then follow, and the young stock after all, making the whole feed over the four inclosures in the following succession:—

I. Free from stock, till ready for the best cattle.

II. For the reception of the best cattle, till sent to No. 1.

III. For the second best cattle, till sent to No. 2.

IV. For the young cattle till sent to No. 3.

Thus the fourth inclosure is kept free from stock till the grass is got up, and it is ready for the prime cattle. To which we will add that the inclosures should be finally gone over by sheep, by which they will be eaten down to a close and even sward, to the great benefit of the after growth."

In the management of land kept in pasture, no manuring is required to maintain its fertility, which will be increased and not diminished by the effects of pasturing. Any species of manure, however, will add to the productiveness of land in grass, and when from any peculiar cause, it is thought expedient to manure land in grass, the best kind of manure is usually lime, or composts of earth and lime, marl, &c. These should invariably be applied as a top dressing, that is, simply spread upon the surface, where vegetation has become inert at the fall of the year, or before it has become vigorous in the spring.‡

The above remarks are gathered mainly from agricultural writers of deservedly high reputation, and, you will oblige one deeply interested in the prosperity of agriculture, by inserting them in the Cabinet. J. P. B.

Burlington, N. J. May 30.

* See Farmer's Assistant.

‡ Professor Low's Elements of Husbandry.

For the Farmers Cabinet.

Injury from Destroying Birds.

The culture of the earth is the most primitive, natural and extensive employment of civilized life. It brings with it cheerfulness and affluence, and fosters them under its broad wing; never deserting nor weaning them from its parent protection. Every wise observer of cause and effect can tell that its increase in honor as an employment, and in profit as a support and source of individual and national prosperity, is a great result and criterion of refinement. A vagrant life and subsistence, like beasts of prey, by the uncertain toils of the chase, are the untaught evidences of ignorance and barbarity; hunting and fishing, but the instinctive resorts of human nature in its wildness.

The teeming dust from which Omnipotence framed the wonders of our animal economy is a fitting and proximate source, whence we might hope to derive its nourishment.—The savage of the wilderness permits the

land over which he roams to lie fallow, only because ignorance has sealed to him the letter and effect of that revelation which declares, "God formed man out of the dust of the ground." The unfoldings of that revelation, its diffusion, and the gradually increasing light of its expanding beams, have been ever the heralds, and cause of civilization, and with this agriculture goes hand in hand. The past, in all its manifold views and bearings, gives the proof of experience to the remark; futurity will sustain it by bringing to pass the prophecy concerning christianity and the effects of its spread, "they shall beat their swords into ploughshares, and their spears into pruning-hooks."

But agriculture is not only the most natural, it is also the most alluring and pleasant of the myriad pursuits of humanity. The variety of the apartments and furniture of nature, the glory of her colorings, the fragrance of her odors, and the ever varying hue and aspect of her seasons, are the great fountains of a variety, without which the existence of a changing and change-loving creature, would be a terrible monotony. It is pleasant too to plant in hope, and to watch through years of youth and bloom to decay. It is pleasant to train the vine, to pluck its ripening clusters, and to repose in the shade of its spreading greenness. It is pleasant to anticipate through winter, the flowers, the dew and the bright sky of spring. It is delightful to view the waving fields ripen unto the harvest. And though in turning the rank and reeking soil we may remember with a sigh that we are moving the wasted mould of many a one once as free in thought and life as him who guides the plough, the next flower that attracts the eye will chide our useless melancholy.

But we would not run wild with a general view of a theme so enticing to thought and fancy; we would but pursue a branch, a single small but important and prolific branch of this extensive subject; one which, though in its mention it may seem paltry and trifling, richly deserves a discussion among other branches which have received attention, to the exclusion of this, only because they are more superficially apparent.

This subject naturally presents itself in the two following divisions—and they will embrace the consideration of the whole object which we have in view. 1st. The intimate connection which exists between the interests of agriculture, and the increase and diminution of our indigenous birds, and the injury resulting from their wanton and indiscriminating destruction. 2d. The best means of putting an end to this injury with its cause—and as far as possible in the limited space which is allowed us—we will endeavor to prove that these topics are not by any means to be overlooked and slighted in the different views of the general subject of agriculture.

Those who believingly adopt the atheist theory of a chance creation, must in consistency discard that ultimate doctrine of christianity, that every thing however diminutive it may be, is formed for some end. We are glad that we differ from them. We rejoice in believing that every existence animate or inanimate is a member of a vast and united family of servants and worshippers, that nothing is formed in vain, that every atom has its task to perform, as surely as every spirit an account to render. Idleness is an unnatural word coined to describe an unnatural propensity. In the wide sense of subservience to a divine design, the world knows not the term, nor the trait which it describes. There is nothing idle, for good or for evil, for weal or for woe, rearing or casting down, building, or bringing to nought, for judgment or in mercy, creation is a vast and faithful agent, doing the biddings of an Almighty and Omnicient Governor. Our subject is intimately connected with the idea, let us apply it more practically.

We think we may say, without fear of contradiction, that none of the birds of the air, not even those which are now most sought, for that purpose, were originally created expressly for food, and yet that seems to be the only light in which we regard them. Our first parents and their posterity, till after the flood had ravaged the earth, and changed our race and the laws of life and conduct under which they were created, were forbidden to eat of that which had life. The whole animal kingdom was interdicted as food, a fact which modern epicures may believe with wonder. And even now, when by permission rather than command, the primitive rule is abandoned, and we destroy life to appease the cravings of hunger, thousands of species, both of beasts and birds, bear, whether rightly or through mere caprice, the character of uncleanness. Nay, even of those of the feathered creation, which do not come under the latter class, a vast number are too small and worthless to be seriously sought for as food, too diminutive and paltry in appearance and availability as conducive to subsistence, to reward the labors of those who would look to them for a supply of their wants—unavailing as far as any direct influence upon man is concerned but to please his eye, and thrill his ear with their melody, and yet it is with these smaller members of the tribe that we have now, chiefly, to do, in pursuing our subject. These diminutive and seemingly worthless, though pretty creatures, are, strange as it may seem to those who think that to kill them is so pleasant and agreeable a sport, of immense advantage in the great design and economy of na-

ture. That these species, then, were created at first, or are now permitted to exist and increase, merely to supply food to our race, is an idea, which any one but he who is endowed with a Lilliputian mind or appetite will discard. For what then were they formed! for certainly they are the work of design—the produce of a hand whose omnicience covers at an onward glance, the whole existence of the object he is framing. What is their duty in the great business of the universe! With the solution of this question we open up our subject to the reader, and give it forth to the agriculturist from its obscurity, as a subject worthy, at least of thought.

The nature and habits of birds, are as widely different, as those of the more familiar, because more accessible beasts, and therefore we would not be understood as saying, that all, even of these more diminutive species, are useful to the farmer. It is not so. Some are of no use, others decidedly injurious, and with the latter we would hold no terms; we would say, destroy them in any manner which in itself would not do more injury than it would prevent if successful—but a large number of these creatures are most useful and faithful servants of the tiller of the ground. And that is not all; their labor is manifold. A great multitude unite with some of the beasts and larger birds, in doing the vast and indispensible duty of removing the impurities of decaying vegetable and animal matter, which but for them would be a much more prolific source of miasma and disease. They are the great unpaid and unthanked scavengers of the earth. While myriads, as we have said before, are the assistants and ready instruments of the farmer, and through him of mankind. Let him who would derive information to strengthen our remark and his own convictions, consult the natural history of this curious and beautiful race—and his doubts will vanish and give place to a light which should long since have shone upon him and guided him in reference to this matter. He will find that almost all our most common and numerous birds nourish themselves and their young by the insects which are so destructive to greenness and fruitfulness—a very few species, to which we have referred before—destroy the useful produce of the earth, and even they do not half the injury which is caused by the trespasses of their paid slaughterers. But their ravages are far overbalanced by the multitudes, and they the most persecuted because the most inoffensive and exposed, whose sole occupation is the rearing of their broods and the instinctive search for and destruction of these insect enemies of vegetation—the worm which consumes and corrodes the thriving and spreading root—the fly which wastes the green and shady leaf—and the myriads of other tiny but baneful creatures—the almost microscopic vermin of our fields and gardens, which canker, decay, and disease, if they do not devour, the tender and budding plant—and which are only less in number and less formidable than the locusts of Egypt because of the services of the race which some look upon as only made to be destroyed.

But let us further inquire if we would have still larger and more impressive ideas of the importance of our subject, what are the most numerous and general causes of the great and distressing fluctuations in the quantity and quality of the produce of our fertile and almost illimitable country, and the necessarily consequent variations in those branches of our commerce of which agriculture is the more direct and immediate parent and even in those which are more remotely connected with it. What destroys, year after year, the growing fruits of many a faithfully wrought garden, the luxuriant and hard earned grain, of many a waving field, nipped in their bloom and consumed in their beauty and promise by some untimely and alas increasing cause. The great staples of many of our states are wasted and ruined too often to allow of supineness upon the subject. We would point a finger which would warn while it instructs, to the teeming answers to the questions we have proposed, which stand forth in the numberless paragraphs which the journals of many a season of want and hunger unfold, and which tell sadly of a cause and effect, in regard to whose prevention we are powerless, without the aid of the persecuted tribes whose services we have been eulogizing. And what is still more alarming, as the hum of business and settlement increase, as the mouths which are ready to devour the produce of the soil become more numerous and clamorous—the cause of this want is increasing, and its only remedy becoming every day less proportionate in power to the duty which it performs. It is a gloomy thought, but gloom is not enough; the evil is serious, but like other evils whose progress is slow, and whose causes are minute and ramified, they are not duly appreciated; the subject needs combined reflection and steady action. Let our remarks especial impress on the young the thought, that every missile aimed in sport tends to take food from the mouths of the poor and famishing—that if successful in its aim it destroys its pretty victim, however small in proportion may be its immediate and perceivable effect,—it deprives the agriculturists of the life-time labor of one faithful servant at least, perhaps of more who perish in a deserted nest. Let them make him remember that every swallow which pierces the air, so long the sprightly mocker of his ambitious sportsmanship, so long aimed

at in hope, but perhaps in vain while on the wing but slain in revenge when it alights to rest, is making more sure and effective the seed of the sower, is surely increasing the bread of the reaper, and food for industrious poverty and national wealth. The race was not formed in vain. Each one has its task to perform; we sin in wantonly destroying them, first against him who made them for his glory, then against ourselves, willingly ignorant of their untaught "labor of love."

We would appeal, then, to the young, the most active and thoughtless enemies of the feathered creation: to the rising generation, the hope of the country, who are unwillingly, and perhaps, as far as motive is concerned, innocently doing that country which it is their high ambition to serve, an injury, which is irreparable, and deep. And what is more directly interesting to themselves, though perhaps not so deserving of thought, they are by every act of destruction, injuring that disposition, and those sensibilities, which are so lovely in many of the young, but which is lost as manhood steals apace, perhaps by the united indulgence of this and other hardening habits. If to such an aspiring youth, joyful and giving joy, in the glad hope and promise of future usefulness, the soft intercession against cruelty of a tender mother or a fond sister, come in vain, or are derided and disobeyed, as the weaknesses of feminine hearts, we would offer the higher and more sacred consideration, that if they are too manly to yield to such mild petitions, they should be manly enough to feel and to be proud to feel, a responsibility for their country's welfare, breaking in with every ray of knowledge, and beating with every pulse of young and buoyant life. They are not too young to be gladdened and ennobled by the thought that even they are contributing their mite, and that in a comparatively important way, to national honor, growth and advancement. We appeal to all their warm and peculiar feelings which can be brought to bear upon the subject, that we may induce them to give, if not their positive assistance in helping on the work of reformation in this respect, at least their negative aid in restraining their own strange propensities and temptations to slaughter, for amusement, this useful race.

If then, these creatures, when considered collectively, are of so much advantage and profit to the cultivator, and have so important a connection with the agricultural interests of the community—if their destruction is so widely and inconsiderately carried on, and their decrease so rapid and alarming—if the fact presses upon us that even in this the youth of our government, when our jubilee of republicanism has scarcely passed, and in his thinly settled state of our country, we are fast losing from eye and ear the flight, the song, and especially the services of these feathered fellow-workers in the culture of the soil—if they are fast disappearing from among us and around us, fast yielding to the hum and the danger of crowded settlements and busy and wanton life, and leaving their annual work undone,—we must awake; as a great agricultural people we must awake and look to our interests; we must protect these servants in their old habits and employment —or we will gradually, but irrecoverably lose their services. With these reflections we are brought to the remaining part of our subject—Is there no remedy for the evils we have described?

And first we would propose the attainment of this great object, to the parents, guides and preceptors of the young—they are the great fountain head of effort, the sources of deep and well directed endeavor. We would propose it to them as patriots, as friends and upholders of the stalwart farmers of our country, the strength of the community, the honor of our government, and especially as affectionate well wishers to the youth over whom they have the charge and oversight. They must feel its importance; let the feeling guide them in social counsel, training and government. Let them teach, with other more usual branches of instruction, the sin and folly of the species of cruelty which constitutes the injury complained of; and we need not look beyond their labors for the remedy of this evil. They are supreme, each in his own circle. Let them in kindness, but with unyielding steadiness, perform toward their offspring, this with other family duties and the work is done. But we are not over sanguine in this view of the subject. United and combined effort in this quarter, cannot be reasonably expected. Truth may take root and flourish here and there; but as for a general and immediate attention to the object proposed—it is scarcely thought possible at least it is improbable.

Again we would appeal to the self-interest of owners and cultivators of land. They must, surely, be ignorant of the injury which is in progress when they allow it to go on unreproved before their eyes. We would appeal even to their own selfishness and love of gain, if no higher motive will reach them, and entreat them as their influence gives them opportunity, to give themselves to a work, the first consequent of whose success will be their own welfare, the second the welfare of their country. They are supreme, each one over his own territory, be it large or small. Let them resist and punish every trespass of the wanton slaughterers of birds —let them declare war against the whole tribe of truant murderers, whose daily sport

is the spoiling of the nest, the invention of new and the use of their old and destructive snares, and the more immediate devastations of gun and bow, and missile. Let our sturdy farmers hold themselves forth as steadfast resisters of every such act, and more particularly of every entry, for this purpose, upon the lands for which, as stewards of our country's prosperity, they are more immediately responsible; let them do this work with all their might, and again we say we look not beyond them for ultimate success. To encourage such an action, to make it more universal and more strong, to embody public sentiment, to warm to feeling and exertion by comparison of views and mutual counsel, to reciprocate alarm and warning, to give a salutary tone to public aim, and to throw a greater light upon the subject, the assembled strength of our agricultural community might do wonders. Let them meet in their power and give a start to the object in view, a fair experiment to the means which lie in their own power as teachers of the young and possessors of the soil, and some good may be done—the ball of reform may be set in motion. But as we have said before we are not over-sanguine in our hope concerning the success of any or all these schemes and appeals; we look high for the source of assistance and remedial action, to which we think the way lies clear, our readers will pardon us if we retrogade in presenting it.

To foster and protect the agricultural interests of the community is a high and sacred duty of every government, but especially of one which boasts itself republican. Agriculture, to use the language of another, "is the breast from which the state draws its support and nourishment;" and we may add, it is the great index of prosperity and refinement. It is the great popular pursuit. The resource of indigent, but enlightened industry; the reservoir of large and busy, but stable capital; the mild seducer from idleness and worthlessness; the quiet and honorable retreat of reformed or high minded poverty, the first love of those who grow weary of the crowd and hum of a city, the last love of those who retire upon wealth or a competency. It should be the protegé of those in power, the representatives of constituents who are its zealous votaries.

We look then to legislative enactment for our remedy. It protects game for sportsmen, who disregard all fear of trespass in its pursuit. In many states it offers a large reward for the destruction of the noxious birds, whose numbers are small, but whose paid destruction is of evident injury to the farmer! Those who take advantage of the bounty offered being, usually, miscreants who care no more for the laws of property, than for the lives of the myriads of serviceable birds which fall in common with the proscribed species. We look to legislative power for the uprooting and extermination of this evil. Will not our representatives protect their constituents and their country!

We will not stay to specify the particulars of the law which we would wish to be fulminated against this evil. We would only say that with half the ingenuity which is yearly expended upon more favorite enactments, the power of offended government might be readily brought to bear upon offenders, by a well contrived system of rewards to discovery and prevention, and punishments to transgression. This united with and enforced by the labors of possessors of the soil, and trainers of the young, would soon be effectual, in the attainment of our object.

In concluding these remarks will the reader pardon us in again reiterating the importance of the subject. The evil done by insects is often unseen and unknown, but enormous; the number of their destroyers is fast decreasing, and can never be renewed; without them we are helpless; and agriculture deprived of servants and services which cannot be replaced.*

A Mulberry Plantation.

In the selection of a site for a mulberry plantation, the following considerations should be strictly observed:

1.—The soil should be *sandy, gravelly,* or *light loam,* with a loose subsoil in either case, because these are the soils that the mulberry delights in.

2.—The situation should be high and dry, with a southern exposure, because, first, high situations are less affected by the frost, there being a difference of about 14 degrees between the temperature of elevated and *very low* situations,—and secondly, *because* vegetion is earlier on a southern exposure than on any other, and the mulberry planted thereon would afford foliage two weeks earlier than on others.

3.—The mulberry orchards would be best if protected by a woods on the *north* and *west:* should there be no woods, a hedge of white mulberry might be raised in a few years, with but little trouble: and this, in addition to keeping off the piercing winds of winter, would afford considerable foliage for feeding.

4.—The *water* should be *soft,* such as promptly yields a rich lather in the operation of washing, as without the water is soft the cocoons do not wind off well. Water impregnated with iron or limestone is particularly unfavorable to the operation of reeling.

Farmer & Gardener.

*Will the author inform us when and where we may have an interview with him.

For the Farmers' Cabinet.

Deposite of moisture on pulverized earth.

Those who have accustomed themselves to regard the growth of trees and plants must have observed the powerful agency of a free, open and deeply pulverized soil in promoting their healthy, vigorous growth and expansion. This was so much regarded by Tull, the celebrated agriculturist, that he at one time embraced the opinion, that nearly all that was necessary to insure the return of a luxuriant crop, was to preserve the earth in a thoroughly pulverized state to a great depth. His success in carrying out this theory was great, but there were other circumstances constantly aiding in the production of his results, which he did not perhaps duly estimate; for science in his day had not unfolded the mysteries connected with the nutrition of the vegetable world; but the benefits derived to agriculture and horticulture from his experiments in thoroughly pulverizing the soil to a great depth can scarcely be appreciated at their full value by the cultivators of the soil. It is of vast importance to us to know, not only that certain causes produce given effects, but also to know how, and why those effects are produced. Many rest satisfied with knowing results, and trouble themselves not with the examination into the various causes which have conspired to produce them.

Every intelligent farmer is fully convinced that frequent stirring the soil of his corn field, essentially promotes the growth of the plants, and enables them to withstand the absence of rain for a long time during our summer droughts, without much, if any, injury to the crop. The reason of this is not apparent to every one without some reflection, for I have heard it blindly asserted by the inexperienced, that turning the soil over and over in very dry warm weather would more thoroughly dry the whole mass; but this is evidently not the fact, for daily experience proves that frequent, and thorough stirring of the earth, enables it to absorb, preserve and retain a much greater quantity of moisture than it otherwise would.

The atmosphere at all times, and particularly during the heat of summer has suspended in it a very large quantity of moisture in a state of minute division. Davy says it is equal to 1-14 of the volume of the air, and 1-21 of its weight. Now the soil being finely pulverized and kept loose and open, the air with its accompanying moisture, pervades the infinity of interstices between the particles of the earth, and deposites its moisture which is absorbed by the dry earth, and kept in store till the absorbing fibres of the roots seize upon it for the nourishment of the plant. This process is constantly going on, and particularly so during the absence of the sun's rays, and keeps the plants, where the soil is properly pulverized and frequently moved, in a healthy flourishing condition under circumstances which appear very unfavorable to their growth. But in order to insure so copious a deposition of moisture from the atmosphere as to be beneficial in any considerable degree, the soil must be kept in a state of minute subdivision, for it then presents a much more extensive absorbing surface to the action of the air, and the aggregate amount of the open spaces or interstices between the earthy particles is vastly increased by it. A cubic foot of earth presents a surface of six superficial feet, but if it were broken into small particles not larger than a grain of sand, the aggregate amount of the superficies of all those particles would be many millions of feet exposed to the action of the air, and absorbing moisture from it. All substances, when pulverized, are increased in bulk by it, and this increase is proportionate to the minuteness of the subdivisions. A ton of plaster of paris may be ground so as to measure 18, 20 or 25 bushels. The finer it is ground the more bushels it measures, but the weight of a bushel is less, if it is finely pulverised. This is occasioned by the interstices being increased, because more numerous, in consequence of the increased number of particles being less compactly arranged.

Plants must have their food in a state of solution, and for the preparation of it, moisture is indispensible to dissolve it, and in dry weather they must either suffer for want of nourishment; moisture must be applied by artificial means, which would be impossible on a large scale; or the soil, must be kept in such a state of subdivision as to permit the atmosphere to come in contact with the greatest possible amount of surface of the particles of the soil, to make its deposites of the fertilizing moisture; which it will never fail to accomplish, provided the farmer performs his duty by keeping the ground sufficiently open to enable it to have free ingress and egress.

It has often been noticed that a piece of ground which has been suffered to become consolidated, is perfectly dry, and the plants in a state of starvation; while a contiguous plot which has been duly pulverized, and frequently stirred, has been found to be sufficiently moist throughout to preserve the plants growing in it, in a high state of health and vigor. Our good farmers, and all of our successful gardeners in the neighborhood of Philadelphia, are fully aware of the benefits derived from keeping the soil loose and finely pulverized, particularly in dry weather; experience has taught them this, and they are diligently teaching it to those they have about them; but I thought it might not be amiss to

throw a few hints together for your very useful Cabinet on this very important and vital subject, particularly as I have observed in my travels through the country that if the theory is understood, there are many who do not practice in accordance with its requisitions.

I hope that farmers generally will keep their cultivators moving briskly through their corn fields this season, to stir up the soil to greater fertility and profit.

"He that by the plough would thrive,
Himself must either hold or drive."

X.

For the Farmers' Cabinet.

The Strawberry and Grape.

It is a matter of importance to farmers who attend market regularly with butter, poultry, and other productions of their farms, to turn their attention more than most of them do, to raising fruit of the most valuable kinds for sale in the market, as well as for home consumption. Attention to fruit trees, furnishes an agreeable pastime to the younger members of the family, and produces *home attachments* which are important to be inculcated in youth of both sexes, and at the same time may become a source of considerable profit to an industrious, intelligent family.—A good strawberry bed, occupies but little room, and requires but little time to keep it in good and productive order, which the pleasure derived from so agreeable and wholesome a fruit would repay four fold—but if it should be extended a little beyond the wants of the family circle, and their friends, would become a source of considerable income. I have seen a strawberry bed, not half the size of a common kitchen garden, which produced to its worthy owner more than five hundred dollars a year clear profit; a sum much greater than is realized on an average from more than half the farms in Pennsylvania, of 100 acres and upwards.

The grape is also a fruit much sought after in our markets, occupies but little room, requires but little labor, and meets with a ready sale at good prices, and furnishes an agreeable, cooling, refreshing relish in a family. The more delicate kinds of foreign grapes are too uncertain to justify their cultivation in our climate unless under peculiar circumstances; but the Isabella, the Catawba, and the Elsenborough are all hardy, native grapes, and can be raised with certainty of success in any part of our country.

There are other valuable kinds of grapes that stand our climate and do well, but those named are readily procured, are well known, and the fruit much esteemed. A gardener near the city, who has been referred to in the last number of the Cabinet as eminently successful in the prosecution of his profession, informed me that a few years since a friend gave him a few of the Isabella vines, which he planted on an arbor near his dwelling, and that last season after giving away several hundred weight to his friends and customers, and amply supplying his family circle, he sold six hundred and sixty pounds at ten cents per pound, producing $66.00. The expense and trouble connected with their production, is too small to be taken into the account.

A worthy gentleman residing at Camden, N. Jersey, causes to be sent to the Philadelphia market several thousand weight, annually, of the Isabella and Catawba grapes which are sold at from 10 to 12 cts. per lb. The Elsenborough grape is small, but it is perhaps the best native grape we have; vast quantities of them are raised by the gardeners and private citizens of the ancient and honorable city of Burlington, and the exhibitions of the Horticultural Society annually display quantities of the finest specimens of this most delicious and valuable native fruit.

I bring into view the strawberry and grape only, each of which is raised with less expense and trouble than the potatoe, and is much more profitable to the producer; but there are many other descriptions of fruit equally worthy of the attention of farmers and perhaps equally profitable; the raising of which is shamefully neglected, but which it is sincerely hoped will soon claim the attention of all worthy cultivators of the soil, for the profit to be derived from it, for the purpose of cultivating habits of industry and *home pleasures* as well as the public good.

"They shall plant vineyards, and eat the fruit of them,"

WEST.

For the Farmers' Cabinet.

Marl.

The Cabinet having an extensive circulation in different parts of the United States, and the marl or green sand of New Jersey having claimed the attention of some of the writers in it, and as this is a very different substance from the marls of Europe, which are often referred to in books on agricultural subjects, it may be a means of preventing erroneous opinions from taking root, briefly to note their difference.

Chaptal says, "that numerous analyses have been made by him of the marls of the centre and south of France, and that he has found them to contain from 10 to 60 per cent. of sub-carbonate of lime, from fifteen to fifty of alumina, (or clay,) and from fifteen to sixty-six of silicious sand; and he further states

that marl is often produced by the decomposition of silex or flint."

The late Dr. H. Seybert, was, it is supposed, the first who analysed the green sand or marl of New Jersey. He found in a specimen from Rancocus creek, Burlington Co.

Silex, - -	49.83
Alumina, -	6.00
Magnesia, -	1.83
Potash, - -	10.12
Water, - -	9.80
Protoxide of Iron,	21.53—99.11

With a trace of Chrome.

By the above it will be perceived that there is no lime in its composition. Professor Rogers who has made a geological survey of New Jersey which is before the public, furnishes the analysis of various specimens from different localities, accompanied by many interesting practical remarks in regard to its application to the soil, and its effects on vegetation, which have been of great value to the farmers of that state. The result of his analysis don't differ widely from the above. Sometimes more or less carbonate of lime was present, and the other component parts varied their proportions; but in all cases where it has been applied to the soil as a manure, the effect produced by it, was in due proportion to the predominance of potash in its composition, without reference to the other ingredients which are in combination with it. This article is not found in Pennsylvania, nor is it known to the writer to exist in any part of our country, except in the sandy, alluvial soil of New Jersey, Delaware and Maryland, and perhaps the alluvial parts of the states farther South.

Extensive preparations are said to be making to use the green sand or marl in Delaware and Maryland, where you have numerous subscribers, who would feel under great obligations to any of your correspondents who would enlighten their path in the practical use of this comparatively new and valuable manure. T.

Management of Grass Lands.

IRRIGATION.

The fertilizing effect of water on the earth is one of those natural phenomena which every where force themselves upon the attention of mankind. Water is seen to be essential to vegetable life. In those climates where evaporation is the greatest, nature has generally provided the most plentiful supply of this fluid, in rains and dews. But the rains often occurring at a particular season of the year, are insufficient for the life and nourishment of useful plants during the remainder, and the art of the irrigator is therefore necessary to produce fertility. Without the artificial conveyance and distribution of water, some of the most fertile countries in the world could not have supported their inhabitants; and the earliest husbandmen accordingly knew and practised the watering of lands as an art. In Egypt, where the great inundation of the Nile soon taught the inhabitants the value and uses of irrigation, this art is known to have been practised on a scale of surpassing magnitude; and the canals and vast artificial lakes of that celebrated people, though less enduring, are more praiseworthy monuments of their genius, than all the temples and cemeteries with which they have covered their country. From the valley of the Nile, it is to be believed, the knowledge of the art would be extended to many countries. To the Greeks and the Romans it was well known, and the rustic writings of the latter abound with allusions and rules relating to the watering of land. Without water collected by art, rice, which furnishes food to the greater part of the human race, could not be cultivated; and over the vast regions of Southern Asia, accordingly, the watering of land from rivers, brooks, lakes, and wells, is a labor essential to the support of the inhabitants. In all the southern countries of Europe, the art is more or less practised. It is there that the water is conveyed in little channels to the corn fields, to the vineyards, and to the olive-trees. The conducting of it from the rivers and canals, and measuring it out in determined quantities, form, in several parts of Italy, a nice part of the science of engineering. In Piedmont, and the whole valley of the Po, the water is frequently paid for by the hour, and the utmost care is bestowed in economising so precious a substance.

The main object of irrigation, however, in all the intertropical countries, and in the warmer parts of the temperate zones, seems merely to be to convey to the ground that quantity of water which is necessary for the growth and nourishishment of the plants to be produced. Sometimes, as in the case of rice, the earth must be saturated for successive months, and, in others, merely watered at intervals, during the periods of greatest evaporation. In all these cases the main purpose is the same, namely, to supply the deficiency of water in the soil; and this creates a great distinction between that species of irrigation which has been described as called for by the wants of man over so great a part of the globe, and that to which we apply the term watered meadow.

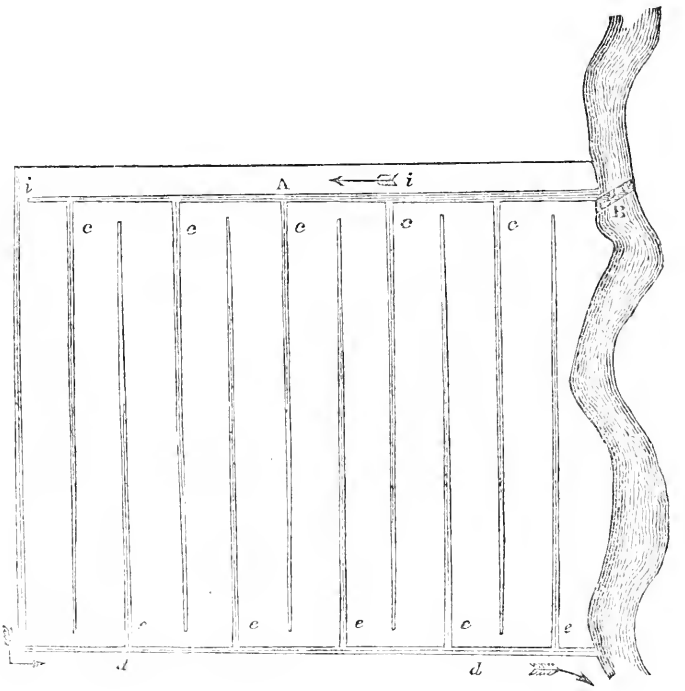
In the latter case, the purpose is not to supply the deficiency of water in the soil, for the water is conveyed over the surface at those times, namely the months of winter, when there is an excess, and not a deficiency of moisture. Nay, it is held necessary in every well-formed watered meadow, to drain the

ground very thoroughly of all subterraneous water. Nor is this the only distinction between the two kinds of irrigation. In the one, the water is generally allowed to stagnate until it shall have saturated the soil; in the other, it is never allowed to stagnate, but is maintained in a constant flow over the surface.

In one respect the two kinds of irrigation may serve a common purpose, that is, by the deposition of mud or other fertilizing matter upon the surface. The principal effect, we may believe, which the Nile produces in its periodical overflowings, is the supplying to the soil of the mere element of water, without which an arid soil, in a country where the rain is scarcely known, would hardly produce any thing. But this effect is plainly greatly increased by the large quantity of mud which the river deposites. In the case, too, of the watered meadow, the water may, in like manner, deposite a fertilizing sediment; but this, though it always adds greatly to the effect, is not essential to the producing of it; and waters entirely free from all perceptible sediment, are yet successfully employed in the case of the watered meadow.

In the watered meadow, a stream of water is to be conducted to the surface, and caused to flow over it in a constant manner; the meadow to be watered, for the most part lying upon the bank of the river from which the water is conveyed, and forming a flat surface, or rather a gently inclined plane. To the highest part of this inclined surface, the water is conveyed in what is termed the main conductor, either by building a wear or dam across the river where the water is to be taken off, or by bringing it from a higher source. In the following diagram, A represents the main conductor, and B the wear or dam.

Fig. 63.



From the main conductor, and as near as possible at right angles to it, are taken off the various feeders, *ccc*, &c. These consist of small trenches four or five inches in depth, made widest, as a foot or sixteen inches, where they issue from the main conductor, and gradually lessening as they recede from it. They may be formed at the distance from each other of forty feet, or less, being nearer where the soil is stiff and retentive, and further distant where it is loose and porous.

The water is thus conveyed to the surface of the meadow. But it is necessary that it should maintain an equal flow over the ground, and so be carried off as quickly as it is admitted. This is done by means of the main drain *dd*, formed at the lower part of the meadow, and the several smaller drains,

ccc, &c. passing between the intervals of the feeders, in the manner shown in the figure. These small drains are of the same dimensions as the feeders, but are larger where they enter the main drain, and become gradually smaller as they recede from it. The main drain conveys the water back to the river from which it was taken.

But often this main drain becomes in its turn the main conductor to another meadow on a lower level. For the water which had floated the upper meadow being collected in this drain, can be carried from it by means of feeders in the manner described, and again collected in a drain below: and in this manner various meadows may be successively floated by means of the same water. And even where the lower meadows are nearly on the same level as the higher, it is still expedient to resort to this repeated collection of the water in drains, for it is found in practice difficult to preserve the equal flow of the fluid over a very large extent of ground.

In order to keep the water as it descends through the feeders, at the necessary level, and to cause it to overflow the surface, it is interrupted in its course by what are termed stops, placed in the feeders. These sometimes may consist of small pieces of plank, each resting on two little stakes; but oftener they are merely sods placed in the feeders, which are sometimes fixed down by wooden pins.

It is the province of the person who superintends the meadows, when floated, to adjust these stops in such a way as to maintain an equal current over the ground. Further, in order to convey the water quickly from the feeders to the drains, the surface of the meadow is generally formed into low ridges, the feeder being on the top of the ridge, and the drain in the hollow, a transverse section of which would appear thus:—Here *b* represents the feeder, and *aa* the drains. In the language of the irrigator, the interval from *b* to *a* is termed a pane; and in fig. 63 the space *ii*, which is left for a carriage-way above the main conductor, is termed the main pane, and is watered from the main conductor. This is the perfect form of the watered meadow.

Fig. 64

☞ Our worthy correspondent, J. J. M. from whom we hope to hear soon again, is mistaken as to the *wherabouts* of Agricola.

If you have a wife, take care of her; and if you have not, get one immediately.

If you are persecuted regard it not, but beware of persecution.

Elements of Practical Agriculture.

DRAINING—Concluded.

Sometimes, in place of an auger-hole, wells are sunk at intervals along the side of the drain, and filled with stones in the manner shown in the figure.

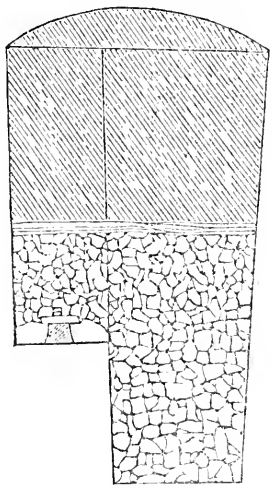


Fig. 65.

In all cases of draining where the water to be reached is at some depth, the drains should be made of sufficient dimensions. They should not be less than 4 feet deep, even when the pervious strata lie at less depth; and the reason is, that they may be more permanent, and better defended from injury from mud and sand carried down by surface water. It is not necessary that they be made deeper than 4 feet when that is found to be sufficient; but they must be carried, if necessary, to the depth of six feet, or even sometimes of seven feet, though the expense and difficulty of executing the work increase, in a great proportion, as the dimensions of the drain increase.

The importance, in this species of draining, of proceeding upon principles in laying out the lines of drains, instead of acting at random, as so many do, cannot be too strongly impressed upon the attention of the drainer. Every drain, however rudely devised, and imperfectly executed, may do some good.—But one drain well laid out, and of the required dimensions, may perform a purpose which no multiplication of minor and insufficient drains can effect. These may lessen the effects of wetness, but the other is designed to remove the cause of it; and the more perfect practice will usually be found in the end to the most economical as well as the most efficient.

The drains of the larger class described, it will be seen, are intended for the removal of

water which is contained in reservoirs and channels below the surface.

But frequently the water to be intercepted is very near the surface, as between the soil and subsoil, or the subsoil is so homogeneous to a great depth, that no pervious strata can be readily reached. In such cases, the drains may be of smaller dimensions, and increased in number, so as to afford many outlets to the water with which the soil and subsoil are charged.

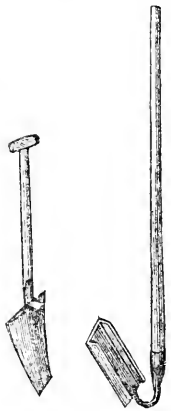
A system of draining, having relation to this condition of the soil and subsoil, has been termed the Essex system, from its having been extensively practised in that flat and clayey district, and it is now very generally termed furrow-draining. The system consists in forming a series of small drains parallel to one another, in the open furrows between the ridges. In this species of draining, the design is not to reach the water as it percolates in pervious channels beneath the surface, but to afford numerous outlets to the water which the soil and subsoil retain. The system is for the most part greatly more expensive than the other: yet as it is efficient, is easily practised, and produces an immediate effect in drying the ground, it is often preferred even where the purpose might be otherwise effected. It may often, however, be combined with the system of deeper drains; the latter being employed to intercept the springs and larger body of water, and the former to give an increased degree of dryness to the surface.

The materials that may be employed in this species of draining are tiles or stones, the latter being broken to the size of small road metal. Of these materials, tiles are held to be the most convenient and economical, from their requiring a smaller trench, and from their being more easily carried, and more readily taken up and replaced when injured. They are formed into an arch of a semi-elliptical form, and they are made to rest on flat soles in the manner shown in the figure 65. The size of the arch varies with circumstances: the usual size is from three to four inches wide within, and from four to five inches high, and the length of each tile is about fourteen inches. The soles are flat, or slightly curved, and made to project about a quarter of an inch on each side of the tiles. These are the usual dimensions for the smaller parallel drains; but, where main drains are formed to receive the water from the smaller drains, the size of the tiles is increased to seven or eight inches wide within, with a corresponding height.

The principle adopted in laying out this class of drains, is to form one or more main or receiving drains across the ground to be drained, and to conduct into these the minor drains which follow the course of the ridges. The receiving drains are formed of greater size, by employing the larger form of tiles, or by placing two tiles side by side, and sometimes with their edges together, so as to combine the two arches into one tube; and sometimes three or four tiles are employed variously arranged. The minor drains lead to these receiving ones, and the water is permitted to enter by chipping off corners of the larger tiles, at the places where the tiles of the smaller drains terminate. It is better, however, that sets of tiles be prepared at the tile-works, in which case the apertures can be made either through the sides of the tiles, or at the corners.

The depth or the drains should be sufficient to place the tiles completely beyond the reach of injury from the deepest ploughing. A medium depth of the smaller drains is from eighteen to twenty-four inches. They are formed by first taking up a spit with the common spade, and then employing the narrower spade, shown in figure 66, so as to

Fig. 65.



form the trench with a slope to the bottom, where the width should be just sufficient to receive the soles of the tiles; and in order to clear out any mud or loose earth in the trench, there is employed the species of shovel, fig. 66. Sometimes, in order to save some expense in digging, the earth at the surface is first removed by the plough, which passes along without the mould-board, and then returns by the same track, with the mould-board attached, so as to push the earth to a side and form a furrow. In proportion as the trenches are formed by one set of workmen, the tiles are laid by another. The workman in laying the tiles works backwards, the tiles having been previously laid along the line of the drains, and there is usually an assistant to hand them to the person in the trench.—This part of the operation must be performed

with care, so that the soles shall be placed firmly and evenly on their bed; and so that the acclivity shall be always sufficient to cause the water to run. The earth is shovelled back upon the tiles, and care should always be taken that the looser soil of the surface be laid next to the tiles, so that the space above them may be rendered as pervious as possible to water. When there is any sod upon the surface at the time of draining, this should be laid aside, and placed upon the tiles with the grassy side below, and then the looser soil next the surface is to be shovelled in, and lastly the more tenacious subsoil. And it is even an improvement in this kind of drains to lay over the tiles some gravel, sand, peat, or other pervious matter, before replacing the earth. This species of draining is of admirable use in drying the soil, by affording outlets to the water with which it may be charged, but care should be taken not to apply the principle to cases to which it is unsuited. It is plain that the method is not well adapted to the removal of springs and swamps produced by water beneath the surface. It may indeed keep the stratum of soil comparatively dry, even when the wetness is produced by the rising of water from beneath, but then it is a very inartificial method of producing the effect, since the water may be far more effectually removed by intercepting it by a drain along the line of the descent, in the manner before explained.

This kind of draining is mainly to be recommended for its efficiency, and for its speedy action in rendering the soil dry.—When the tiles are good and laid with care, these drains will last for a long period.—When choked at any particular part, they can be easily taken up at that part, and the tiles replaced, or new ones substituted.

Thorns, brushwood, and branches, are frequently employed in the filling of drains. They serve the purpose of affording a more pervious channel to water, but they soon decay, and the drains are very apt to be choked. Sometimes, indeed, the channels formed by the water remain, when there is a considerable current, long after these materials have decayed. But this cannot be depended upon, and such materials, therefore, ought not to be used if better can be obtained.

Sometimes a species of draining, termed Wedge-draining, has been employed. The general method of performing this is to form a narrow trench with a long narrow shovel. The spit being taken out as deep as the shovel can go, a scoop is employed to clear out the mud and loose earth at the bottom. Then another spade narrower than the first is used, and a second spit taken out, and lastly a corresponding shovel still to clear the whole out, forming a trench with a ledge as in fig. 67.

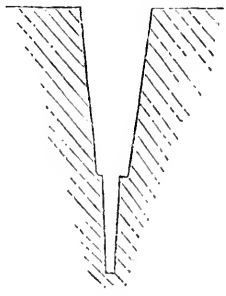


Fig. 67.

A piece of sod, with the grass side below, is then forced down, and resting upon the ledge, a space is left for the water below. Sometimes the ledge is dispensed with, and the sod is merely formed into a wedge, narrowed towards the grassy side, and this, when the little trench is cleared out, is pressed into it and covered with earth; and as it does not reach the narrow bottom, a channel remains below, through which the water percolates.

This simple species of drain has been extensively adopted in some districts; and as it is easily formed, and as the number of drains may be multiplied at little expense, considerable benefit has resulted from the use of it. But although drains of this kind will sometimes remain open for a considerable time, they are exceedingly apt to be closed up; on which account, the use of tile is in most cases to be preferred.

For the Farmers' Cabinet.

Working Dress for Farmers.

Good sense is shown in dress.

Every person should be clad in a dress adapted to his occupation or calling; this indicates sound judgment and good taste, and enables a family to save a good many stray dollars in the course of a year. In our country, but little attention has been paid to this important matter, and much unnecessary expense is annually incurred for want of adopting a cheap and simple costume for a working dress, which we should not be afraid of having dirtied or injured by the business we are engaged in, and which can be quickly put on or off, as occasion may require. In France, where convenience and economy has been studied by the agriculturist, there is a particular dress worn, which contributes much to comfort, and has a very neat and pleasing appearance. It much resembles what is called the "hunting shirt" in this country, is made for summer wear of unbleached linen, comes half way down to the knees, has a breast pocket on each side with buttons, and an open slit in the seam on each

side opposite the pantaloon pockets, to give ready access to them; the collar fastens with a hook and eye, and two buttons close the bosom slit. Around the waist is a belt either of the same material, or of leather buckled in front.

This dress, which in France is called "*Bleuse*," is cheap, light, cool, convenient, tidy, good looking and tasty, and consequently every way adapted to the every day business of the farmer and gardener, and ought to be worn by men and boys when engaged in their daily work, to the exclusion of the inappropriate, and inconvenient dresses, with which many are attired. A person who is desirous of introducing this useful and appropriate dress among our farmers, has had a few made from an European pattern, which may be seen at No. 14 North Sixth street, Philadelphia.

O.

For the Farmers' Cabinet.

Silk Growing, &c.

Letter from Chauncey Stone, of Burlington, N. J., to Dr. J. S. Naudain, of Middletown, Del., on the subject of silk growing, &c.

Sir:—When I had the honor of your visit in this place, last month, I proposed to write you when I should commence feeding silk-worms; accordingly, as I have made a small beginning, by hatching a few thousand eggs, I proceed to redeem that promise.

My mulberry trees are growing very well, and those I left in the field, either whole or the tops cut off and the roots remaining in the ground during the past winter, are growing rapidly, as they took an earlier start this spring. This shows that much can be gained in getting foliage early, by leaving the roots in the ground during the winter.

When in Burlington you said that you would be pleased to know our management of the silk worm. I will freely and cheerfully impart to you any information I am in possession of on this subject.

I first bring my eggs from the ice-house, where I deposited them during winter in a box imbedded in the ice, into a warm room not exposed to the rays of the sun, and in six or eight days they will begin to hatch; and what is very curious, their time of hatching is, with rare exceptions, between the hours of seven and ten in the morning. Their first appearance, though small, is active, and they are ready to eat, if leaves are laid before them; but it will be quite necessary to separate every days' hatching from the unhatched eggs, and put them on hurdles by themselves, so that those of different ages shall not be together. A very good way to separate them is by sheets of paper or newspapers, in which small holes are cut or punched, and lay over them and sprinkle fine leaves on the paper, when they will find their way up through to eat, they can be taken to the place designed for feeding and fed on the paper for a few days before being placed on the net work hurdles. The leaves must be cut fine before given to the worms while they are small as they cannot well get hold of the leaves to eat.

There are three things most important in the treatment of the silkworm, namely, *cleanliness, free circulation of air*, and a *seasonable supply of fresh leaves*. Many minute particulars are to be observed. The silk-worms ought to be fed, I think, five times in a day, though we do not always feed them more than three times. If leaves are gathered and laid in piles they will soon begin to heat, but they must not be fed to the silk worms until spread and aired. If leaves are gathered when wet it will be better to spread them to dry as much as they will, before feeding them to the worms. The worms may be fed in the evening even after sun set. I have fed them at 9 o'clock, in the evening, and found they would eat with avidity, and devour the quantity given them before morning. When we consider the silk-worm in its native condition on the tree, we will at once notice that it keeps hid during the day from the rays of the sun, and to protect itself in some measure from being a prey to birds, &c., and just at night will appear out on the branches to eat. The same can be noticed of the caterpillar.

Some silk worms moult only three times, but most species we use moult four or five times, they being the larger kind, and feed generally about five weeks before winding their balls. When the time of moulting comes, they appear sleepy and sluggish and don't eat, but raise their heads up. The old skin becomes troublesome as the worm increases in size, and first bursts open on top of the head and closes over the mouth, but before this the silk-worm will spin a few threads to attach themselves to some object to assist them to draw off the old skin, and of course it is not proper to disturb them, to move or feed them. Thus you will perceive the necessity of the worms that feed on one hurdle, being of the same age. The time of sleeping or moulting lasts about one day and night, sometimes longer; and when that is over they are active and will eat greedily. They should then be changed from their old beds, to clean hurdles, and well fed.

They are remarkably sensitive—dislike any sharp, shrill noise, near them, as they will instantly stop eating, and rear their heads. They dislike to be in an atmosphere impregnated with any impurity. Strong tobacco smoke is fatal to them.

I will give you a short description of our frames and hurdles. The Messrs. Cheney, Gummere, myself, and others, of this place, have adopted to use for our silk worms this season, though I do not pretend to give any certain or infallible rules or modes of management at this early stage of the business, as applicable to all future years; but you know we must have a starting point, and then be governed by the best light we can collect on the subject. We are erecting our frames by having uprights made of boards one inch thick, by six or eight inches wide, placed four feet apart, with kleets nailed on each side, beginning one and a half feet from the floor, and continuing one tier above another, about one foot apart, then rest our shelves, made of half inch boards, on the kleets, and on which the hurdles are placed. The frame part of the hurdles are four feet by three, square, made of boards two inches wide, by a little less than one inch thick, and covered across with a net work made of twine with meshes about one inch. The hurdles are placed on the shelves, and the worms, after being fed on the papers a few days, are placed on the net work hurdles. They will not fall through the interstices unless the leaves fall through with them. When the silk-worms want cleaning put another hurdle over them and sprinkle leaves over it. They will soon come up to eat, and then raise the top hurdle which contains the worms, and remove the under one and clean the shelf with a brush, and lay the hurdle having the silk-worms down upon the shelf. By this mode of changing there will be no occasion of handling the worms during their growth.

Our fixtures for spinning will be sawed lath, about one and a half inches apart, placed so the worms can readily spin between them. Several different ways are used in the construction of the lath. The mode of changing the silk worms to clean them, and the fixtures for spinning are original in this country. The Chinese being a very precise people and having the greatest practical knowledge in the silk business of any other people, without doubt, do the business exceedingly well in their way; but from their writings it would not be advisable for us to adopt their practice of feeding and manufacturing. They clean the silk worm by taking up the leaf, with the worm, clear away the filth, and then lay it down again. Other similar modes they practice in feeding. When the spinning time comes, the worms are carried away to spin in what they call the cocoon room. Their fixtures for spinning are generally of bamboo reeds and rice straw, placed so the worms can go in amongst them to form their cocoons. The carrying of the worms away to spin is not practicable, save where there are but few, for they will spin somewhere when they finish eating, and where there are a large number of them together they will waste their silk before they can be removed. By the Chinese accounts, I find each person or family feed but a few worms together, and, of course, much pains are taken to do the business precise.

The Chinese weaver will select a tree, or generally two trees, on which to hang his harnesses and apparatus for weaving, and warp his web to a number of little pins stuck in the ground forward of him, and that composes his loom. We learn from history our finest satins are made in this way. And after all this defective manner of doing business, the Emperor of China a few years since issued his edict, that there should be no change in his empire, in their system of doing business, as they had every thing as perfect as could be.

We are very sanguine of success in the silk business in Burlington, and are carrying it on with energy and spirit. We will be pleased to see you here, at any time and any friends you may have to accompany you.

I will here mention that my silk operations in this place are connected with the Hon. Garret D. Wall, and on his farm, about one mile from the city wharf. Although Mr. Wall's well gifted mind is principally employed in public business, he has a great solicitude to encourage all agricultural pursuits likely to be beneficial to our country. He has full confidence in the good success of the silk business, and expresses an earnest anxiety to pursue it with a prudent hand, until we can arrive at some degree of perfection. Respectfully yours,

Chauncey Stone.

Burlington, June 5, 1838.

New kind of Food for Silk-Worms.

Communicated by the Agricultural Society of Penn'a., 16th May, 1838.

Communicated by Mr. Bonafous in Nov. 1837, being an extract from his translation into Italian of a French translation by Julien from the Chinese, which work Mr. Bonafous presented to the Institute. His Italian translation was accompanied by notes, stating the results of his own experiments on the subject, which led to some singular results, worthy to be known. The following one in particular: They give to the silk-worms pounded rice-flour, by powdering the mulberry leaves with the rice-flour which the worms ate with avidity, as also the flour of other vegetables, particularly the sediment of potatoes.

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NEW KIND OF FOOD FOR SILK-WORMS.

Communicated to the French Institute by Mr. Bonafous, being an extract from a trans-

lation from the Chinese made by Mr. Julien. Experiments successfully repeated by Mr. Bonafous—the result was, that the Chinese give to the silk-worms flour of rice with which they powder the mulberry leaves and the worms eat it with avidity. Mr. Bonafous found that other flour from vegetables answered as well, particularly flour or sediment from potatoes.

For the Farmers Cabinet.

Butter made from four Cows.

Great credit is due to numbers of enterprising individuals who have at different times introduced from abroad improved breeds of cattle; particularly the improved Durham or short horn stock so valuable for taking on fat readily; but it has long been the opinion of many of the best farmers in this country, that the best specimens of our native cows are equal, if not superior, to the imported stock, for milk or butter.

Being recently on a visit to Cyrus Cadwallader, Esq., of Bucks county, he showed me a statement of the quantity of butter made from four native cows last season; commencing 4th mo. 25th, 1837, and ending with the season. They were pastured in the usual manner, and not otherwise fed, and there was made from the four cows 740 pounds of butter. I thought this statement, which can be implicitly relied upon, might be usefully published in the Cabinet, in order that comparisons might be made with others who keep dairies, who I hope will furnish for publication the results of their observations on the quantity of butter made by their cows. R.

6th mo. 6th, 1838.

For the Farmers' Cabinet.

Observations on a Wheat Crop.

From a communication of David Comfort, to the Philadelphia Agricultural Society, May 16, 1838.

In the autumn of 1836, I ploughed about six acres of clover and timothy sod, and sowed two bushels of bald white wheat to the acre about the first of tenth month, October; but in consequence of the coldness of the season, it did not come up for two weeks, and then looked very bad; the fall continuing cold, it grew but little. Winter set in, and when the spring opened, the wheat still looked bad, the ground was dry and hard, and the whole appeared very unpromising. About the first of April, I sowed two bushels of live wood ashes, and one and a half bushels of plaster mixed together per acre. In a short time after this application, the wheat commenced growing finely, and the timothy sprang up thick among the wheat, and both grew together. About the time the wheat shot in ear and while in blossom, owing to much damp and foggy weather the leaf was struck with the red-rust, and the straw with black mildew, in consequence of which the grain was shrivelled and light at the common time of harvesting; yet the straw was as well grained as my neighbors, and in as good condition for gathering as any in the neighborhood. The timothy was now coming out in ear, and the heads were generally from nine to eleven and some twelve and thirteen inches long; I therefore resolved to let my wheat stand for the timothy to ripen. I gathered in my other wheat, and my neighbors gathered theirs, mildewed and rusty with a light grain. In four or five days after I had gathered my other grain, I visited my wheat & timothy and found it doing well; In five or six days more I visited it again, and found it improving finely. In sixteen days after common harvesting was over, I cut my wheat and timothy together, in fine condition; the grain of the wheat had improved full twenty per cent., and the mildew and rust were gone and the straw had a fine yellow appearance; not one head had fallen to the ground. The miller who ground of this wheat for family use, informed me that it was the best he had seen that season, and the miller who bought of it, gave an advanced price, stating it was the best white wheat he had obtained that season. My desire is that if farmers should be annoyed with mildew and rust, that they try the experiment and publish the result. Although this wheat stood sixteen days longer than usual harvest, there was no shattering or loss of grain, it appeared just the time for gathering it.

Pennsylvania Horticultural Society.

The monthly meeting of the Pennsylvania Horticultural Society was held on Tuesday, the 15th of May; the President in the chair.

The committee on plants and flowers awarded the premium to Robert Kilvington, gardener to William Loyd, for the six best auriculas, exhibited at the society's intermediate meeting of the 2d of May; there were two competitors.

The committee on vegetables awarded the premium to William Chalmers, senior, gardener to Mrs. Stot, Turner's lane, for the three best bunches of asparagus; they also awarded him an honorary premium, for some suphrieur sea kale; likewise an honorary premium to Henry Rasche, gardener to Mr. Borie, for some very fine beans, called "early six weeks," exhibited at the society's intermediate meeting of the 2d of May.

The committee on plants and flowers awarded the premium for the best display of plants in pots to Wm. Chalmers, senior, gardener to Mrs. Stot. Turner's lane, who exhibited cereus splendens, ixora coccinea, begonia insignis, b persiflora, b aggrastigma, torena scabra, hoya carnosa, verbena tweediana, ardisia crenulata, petunia nyctogeneflora, fuchsia gracilis, f microphylla, f tubiflora, gloxinia rutulla, mimulus wheelerii, m variegata, calceolaria compressa, c tricolor, c sanguinea, erica andromdæflora, schizanthus pinnatus, senecia elegans alba, swainsonia galegafelia, camellia myrtifolia, cistus purpurea, dinanella cærulea, ballata purpurea, metrosideros lanceolata, pelargonium Queen of Scots, p ne plus ultra, p de vere, p capitatum, yellow noisette rose, monthly cabbage, and a fine double stock; he likewise exhibited vegetables, viz: winter spinnage, spring do, two bunches of very superior blanched rhubarb, asparagus, sea kale, early potatoes, cauliflower, onions, lettuce, and mushrooms.

The premium for the best ten china roses was awarded to Andrew Dryburgh, who exhibited rosa amie vibert, r yellow noisette, r thea madam Deprez, yellow tea, blush tea, r thea triumph de Luxembourg, r palavarina, r Admiral de Ferrie, r thea Charles Deprez, and r faustine; there were two competitors. Mr. Dryburgh exhibited besides, rosa glorie de France, r gloire de jardin, r bizane de la China, r vaestana, r Madam d' Arbely, r la bische, r moss de meax, r white bath moss, r Louis Philippe, r white tea, r scarlet tea, r Ile de Bourbon, r Maria Leonida, r dela fileche, r d'angers perpetual, r grand perpetual, r grand perpetual, r Josephine Antoinette, geseneria bulbosa, polygala speciosa, euphorbia splendens, cereus speciosa, e jenkensonia, muraltia heisteria, swainsonia galegnifolia and a fine green edged auricula.

The premium for the 25 best tulips was awarded to Robert Buist, and for the six best to Alexander Parker; there were three competitors.

The premium for the best American seedling rose was awarded to M'Kenzie and Buchanan, a seedling from the tea, sweet scented, being in flower three months after the seed was planted.

The premium for the best boquet was awarded to Robert Kilvington.

The committee on vegetables awarded the premium to Daniel Reilly, gardener to Pierce Butler, Esq., for the best forced cauliflower; not less than three.

The premium for the best forced potatoes, not less than half a peck, was awarded to James M'Kee, gardener to Charles Chauncey, Esq.

The premium for the best blanched rhubarb, not less than two bunches, two pounds each, was awarded to Walter Wilson, Burlington, New Jersey.

The premium for the best lettuce, grown in New Jersey, in the open ground, not less than eight heads, was awarded to James M'Kee, gardener to C. Chauncey, Esq.

The premium for the best display of vegetables was awarded to James M'Kee, who exhibited three different kinds of potatoes, lettuce, blanched rhubarb, cauliflower, asparagus, &c. The committee likewise make honorable mention of William Chalmers for his fine display, especially his blanched rhubarb; also of James Beadle, gardener, Turners lane, especially for his leeks, being the best ever exhibited before the society; likewis of Robert Weston, gardener to Mrs. Roland, especially for the large quantity of very superior mushrooms.

Robert Buist exhibited rosa thea Margaretta, r thea hortensia, yellow tea, pink tea, fuchsia elegans, tropæolum tricolor var., t adunceum, rodoclecton volubile, verbena tweediana, v arraniana, lantana fucata, cereus splendens, gloxinia speciosa, gardnia cytsus racemosa, amaryllis johnsonii, ixia, crocata lechanaultia formosa, dillwynea florabunda, gnidia aurea, epidendrum parmeverti, oncidium flavescence, polygala cordata, pelargonium Admiral Napier, p tricolor, p superbissima, p purpurea cœrulea, p Adelina, p Buist's fair Maria, p b conquerer, p b purple perfection, p b beauty of Philadelphia, p diomede, p diversum, p Wheeleri, p Queen of Scots, p lucifer, p ne plus ultra, p ecclestia, p Americanum, p man of ross, p Countess of Munster, p Balls General Washington, and 6 auriculas, rosa thea lilacina, r thea Madam Deprez, r t triumph de Luxembourg, r Bengal trumphant, yellow tea, r t fragrantissima, r t mixabilis, r t St. Claude, r t jaune panasche, and yellow noisette. The above roses competed for the premium.

M'Kenzie and Buchanan exhibited amaryllis johnsonii, eryturina crista galli, alstrœmeria tricolor, a pelargrina, lechanaulia formosa, indigofera coccinea, calceolaria integrifolia, tropæolum tricolor var., verbena tweediana, v chemœdrifola, dodecathean integrifolia, fuchsia myorophylla, mahemia odorata, lobelia cremis, ornithogolum nivenm, pelargonium Lord Denman, p Adelina, p diversum, p wheeleri, p hericartianum, p lucifer, p belvidere, p nimrod, p navarino, p tory, p involueratum superbum, p Napoleon, p Admiral Nelson, p Admiral Napier

The meeting was one of the most interesting the society has ever held, from the numerous well kept exotics exhibited, as well as the fine appearance of the vegetables, being superior to anything of the kind ever shown before; the cauliflower and blanched rhubarb were very superior indeed, and do the greatest credit to our gardeners for their great zeal and perseverance in bringing the culinary vegetables to such perfection. The general appearance of the men attracted a great deal of attention, from the neat manner that each had their plants and vegetables arranged. Great merit is due to the gentleman committee on the room, for the tasteful and appropriate arrangements they have made for the benefit of the numerous ladies and gentlemen that now attend the meetings. G. WATSON, Rec. Sec.

Philadelphia, May 23, 1838.

Proceedings of the Agricultural Society.

An adjourned Quarterly Meeting of the Agricultural Society of New Castle County was held at Cantwell's Bridge, 6mo. 2d, 1838. A large number of the members from all parts of the county were present.

On motion of Dr. Thomson, the following resolutions were adopted.

1. Resolved, That this Society is deeply impressed with the importance of Sheep as a valuable and essential part of agricultural stock, the raising of which has regularly declined in this county and state for some years past; and believing that a *Dog Law* for the protection of sheep is *absolutely necessary* to promote their increase and remunerate the farmer for his losses; the Society therefore recommend to the farmers of each hundred in the county to prepare and forward to the next session of the Legislature, a memorial in favor of the enactment of such law.

2. Resolved, That the collection and diffusion of practical information through Agricultural Journals is of immense importance in promoting the interests of the farmer, and as local publications are generally preferred, that we therefore recommend to the farmers of this county the two following works, as proper channels for their communications and worthy of their patronage, viz: The Delaware Register, published monthly at Dover, for five dollars per annum, and The Farmers' Cabinet, issued monthly at Philadelphia and Wilmington, for one dollar per annum.

On motion of Anthony Higgins, the Corresponding Secretary was authorised to subscribe for five of the principal Agricultural Journals in the United States, in the name and for the use of the Society; and at the end of each year to have the same bound and deposited in the library of the Society.

On motion of Dr. Thomson, it was Resolved, That this Society views with deep interest the extensive introduction of the mulberry tree for the cultivation of silk in this county, and earnestly recommends the business to the attention of all our farmers, as perfectly practicable and sure of success.

On motion of John C. Clark, a committee was appointed to visit the Agricultural exhibitions at Brighton and Albany, and any other similar exhibitions, to be held at the North the present year; also, the silk establishments of Connecticut and other states which they may think worthy of particular attention, and report an account of the same to the annual meeting in October next. P. Reybold, Dr. Thomson, M. Canby, John C. Clark, Dr. I. S. Naudain, and Samuel Canby were appointed, with authority to fill vacancies.

A Horticultural Exhibition was directed to be held in Wilmington some time during the present month, and the following committee appointed to have charge of it, M. Canby, S. Wollaston, Dr. H. Gibbons, S. Hillis, and James Webb.

A Premium List, for 1838 was adopted—which will in a few days be published. H. GIBBONS, Sec.

For the Farmers' Cabinet.

Chester and Delaware Co. Ag'ral Society.

At an adjourned meeting of the citizens of Chester and Delaware Counties, favorable to the formation of an Agricultural Society, held in the Hall of the Chester County Cabinet of Natural Science, Dr. Wm. Darlington was called to the chair, and Joseph T. Jackson appointed Sec'ry. The committee appointed at last meeting reported a Constitution which was read and adopted.

On motion, a committee was appointed to nominate officers for the Society and report at next meeting. Adjourned to meet on Saturday the 12th, May.

Saturday, 12th.

The meeting met pursuant to adjournment,

JOHN JAMES in the chair. The committee to nominate officers reported the following ticket which was elected:

President—John D. Steele.

Vice Presidents—William Painter, Richard Pimm, Hon. Henry Myers, Gen. Joshua Evans.

Corresponding Secretary—Wm. Jackson.

Recording Secretary—Geo. Thomas, M. D.

Assistant Recording Secretary—Caspar W. Sharpless, Esq.

Treasurer—George Brinton, Jr.

Directors—John James, Wm. W. Barber, Thomas S. Woodward, Paschall Morris, Jos. T. Jackson, Abraham W. Sharpless, Isaac Newton, Dr. John T. Haddleson, James S. Peters, Hill Brinton.

Dr. William Darlington, of Chester, and George Roberts, of Montgomery county, were unanimously elected Honorary Members of this Society.

Resolved, That the Society hold its next semi-annual meeting at the house of John Jacobs, in Delaware county.

Resolved, That the proceedings of this meeting be published in the papers of the two counties, and in the "Farmers' Cabinet."

JOHN JAMES, President.

JOS. T. JACKSON, Sec'ry.

We have been politely furnished for publication in the Cabinet, with the following correspondence between the Corresponding Secretary of the New Castle County Agricultural Society, and Benj. Webb, of Wilmington.

For the Farmers' Cabinet.

Sugar Beet.

Wilmington, May 1st, 1838.

BENJAMIN WEBB,—Dear Sir:—Intending to carry out the views and wishes of our agricultural Society by addressing *practical farmers* and obtaining such facts and observations as they may be willing to communicate on subjects connected with agriculture for the benefit of the Society, I hope you will be disposed (at your leisure) to give me the result of *your experience* (for I am aware you have been paying particular attention to the subject) in the cultivation and use of the *sugar beet;* and, if you please, of root crops in general. The queries proposed below will afford you some idea of the information sought.

1st. What variety and how long have you cultivated the sugar beet, and what has been its yield per acre with you?

2d. Have you attempted and succeeded in making sugar from it on your farm—if so, to what amount and by what process?

3d. How simple may the utensils be to effect its manufacture by the farmer, and how will its cost compare with the southern and West India Sugars at the common prices current?

4th. How valuable do you consider the cake or residuum after the extraction of the saccharine juices, as compared with the *root itself*, as food for horses, and all kinds of stock?

5th. Does your experience with the beet or other roots, lead you to believe that they can ever be substituted *entirely* for the grain the farmer is accustomed to feed to his horses, oxen, and fattening cattle and sheep?

6th. How does the sugar beet answer for dairy cows—compared with ruta baga, carrots, turneps, &c., and what is your mode of feeding it to them? and to your stock and in what proportion?

7th. How do you *preserve* your crop of sugar beets and other roots through the winter, and whether it is best to bury them in the earth or keep them in cellars?

Your friend,

JAS. W. THOMSON,
Cor. Secretary Ag. Society.

Wilmington, 6th month 1st, 1838.

Dr. JAMES W. THOMSON,
Cor. Sec. Agricultural Society.

It is with some reluctance I agree to answer the above queries upon root culture, as that agreement is a sort of admission of my practical knowledge of agriculture; while those best acquainted with my business have good reason to doubt it, or at least consider me nothing more than a noviciate in the art of farming. I am so much engaged in other pursuits that I feel conscious of knowing but little of agriculture, and much of that little has been gathered from books and periodicals of the present and past times.

I am aware, however, that the members of the Agricultural Society of New Castle County, can appreciate as well the advantages as the difference between experiments, and theories, and shall therefore communicate such knowledge as I have, carefully marking the line between facts and opinions, and leave others to draw their own conclusions, as to the probable advantages of either.

Answer to the first querie.—We have cultivated the Silecian sugar beet these two years past; the yield has not exceeded 800 bushels per acre; the expense of raising the sugar beet, the mangel wurtzel, and the ruta baga, when compared with corn, has upon all the experiments I have made, exceeded the grain three to one; that is, one acre of roots has cost more than three acres of corn, but the produce has been ten fold, for we have raised more than 900 bushels of ruta baga to an acre, and have never raised 80 bushels of corn.

Answer to the 2d, 3d, and 4th queries.—We attempted to manufacture sugar from the

beet, but without success, having no other apparatus than what could be picked up about a farmers kitchen. The best samples came out but little better than tolerable molasses.

I have seen two samples of beet sugar made in our country, one by E. Chandler, and J. Duncan of Wilmington Delaware, and the other by Judge Chambers of Chester Town, Maryland, showing that sugar can be made in a domestic way. I am acquainted with no facts in relation to the expense, but am inclined to the opinion that the manufacture of sugar on a small scale will not be pursued in our country as a matter of profit.

Answer to the 5th querie.—My experiments will warrant no conclusion like making the sugar beet or any of the root family an *entire substitute* for grain in feeding stock. I look upon roots as important anxiliaries, not substitutes, in the economy of food. Col. Powel relates an experiment of feeding two heifers; one upon Indian meal, and the other upon roots, in which he is inclined to give the preference to the root feeding; but if he had put up a third heifer and fed her upon chopped oats and corn and ruta baga, or sugar beets, he would have discovered that the combined qualities of grain and roots will act with far greater effect in forming large secretions of either milk or beef, than they can possibly do when fed separately.

Answer to the 6th querie.—I consider the sugar beet preferable to the ruta baga for dairy cows, but that preference would not induce me to cultivate the beet to the exclusion of the turnep; those two roots are planted and of course cultivated at different seasons, which divides the labor both in planting and dressing, which is an object with the farmer in the summer season, when every moment of time is valuable; besides the Ruta baga is very hardy, it will bear late frosts, and rough treatment in harvesting; you may tilt them from a cart into a cellar from the second story of a barn without injury. We fill our turnep cellar in that way with great ease and expedition; but the mangel wurtzel, and sugar beet require delicate treatment, they must be carefully handled every time they are moved, or they will bruise, and then spoil through the winter. Our mode of feeding is to give a bushel of roots per day with grass, hay, or straw to one yoke of working oxen: and the winter allowance for a dairy of twenty cows, is from ten to fifteen bushels of roots, and from one to three bushels of chopped corn and oats per day, with as much hay and straw as they can eat, giving always the fresh cows greater quantity of feed than strippers.

I find that no rule of feeding by measured quantities of either roots or grain, will give the most profitable results in milk or beef; the proportion of roots, grain, hay and straw, should be meted out to each animal according to its condition. Some cattle require more succulent food than others, to keep up a healthy action of the system, a costive state indicating the necessity of more roots and less dry food, and visa versa. The man who tends the stock, by observing their evacuations, will soon ascertain the proportion of food to suit the habits of each animal.

We have not fed our horses upon, roots sufficient to ascertain any definite results, but there can be no doubt of their beneficial effects upon their health of all animals, for the reasons already stated; but I would prefer carrots for horses, they are not quite so certain a crop as turnep and beet, but with a little care and good soil, a heavy crop may be raised; we tried half an acre last season and succeeded on one half the ground; but the other part was a failure owing to bad seed.

Answer to the 7th querie.—We stored our sugar beets in a cellar, but found they wilted, or became so dry as to loose some of their nourishing qualities; I intend to cover them next winter with grass sods in the cellar. I tried a lot of potatoes in that way last winter, and was well pleased with the result, they retained that fresh and plesant flavor so peculiar to them in the fall season.

Thy friend,

Benjamin Webb.

For the Farmers Cabinet.

Coal Ashes.

Mr. Editor:—Attention having lately been directed to Anthracite Coal Ashes as a fertilizing agent, it may be interesting to the scientific farmer to know the precise materials of which these consist, together with the proportions. These are given below as taken from the VII vol. of the Journal of the Academy of Natural Sciences of Philadelphia.

The average results of the Analyses of Tamaqua Anthracite made by Professors Rogers and A. D. Bache, gives,

Silica, (or sandy matter)	47 per ct.
Alumina, (or clayey matter)	36 "
Oxide of Iron,	14.5
Lime,	1.5
Magnesia,	1.0
	100.0

The specimens analysed were taken from the various seams of Anthracite mines on the Little Schuylkill, called the Tamaqua mines, the geological position of which is intermediate between the hard Lehigh at one extremity of the coal region, and the softer Pottsville coal towards the other. They exhibited a great diversity of character, and the proportions of earthy and incombustible remains, constituting the ash, varied from 9.3 per cent. in the

buff colored ashes with white specs, to 4.1 per cent in a salmon colored ash. The average of 17 specimens analysed was 7.3 per cent.

The white ash Anthracite contains a larger proportion of Silica, and a smaller amount of oxide of iron.

There can be no doubt that the ashes of Anthracite coal taken from the city and applied to lands in the vicinity as top-dressing and otherwise, have produced excellent effects upon grass and other vegetable products. Whether these good effects were wrought through chemical or mechanical agencies exerted by the Anthracite ashes themselves, or were due to any admixture of wood ashes, slops, &c., we will not undertake to determine. We only state the facts from actual observation. Some persons have asserted that in trials made with Anthracite coal ashes as a top-dressing for grass, not the least advantage was perceptible. Possibly in this last case, the ashes were, like those subjected to analyses, free from wood ashes or other foreign admixture. DAVY.

Philadelphia, June 6, 1838.

For the Farmers' Cabinet.

Paring and Burning Soils and Clays.

Burning improves the texture of clays, rendering them less cohesive and thus not only more permeable to water, but more easily penetrated by the roots of plants.

"All soils," says Davy, "that contain too much dead vegetable fibre, and which consequently lose from one-third to one half of their weight by incineration, and all such as contain their earthy constituents in an impalpable state of division, i. e. the stiff clays and marls, are improved by burning; but in coarse sands, or rich soils containing a just mixture of the earths; and in all cases in which the texture is already sufficiently loose, or the organizable matter sufficiently soluble, the practice of torrefaction cannot be useful."

"All poor silicious sands must be injured by it; and here practice is found to accord with theory. Mr. Young, in his Essay on Manures, states, "that he found burning injure sand;" and the operation is never performed by good agriculturists upon silicious sandy soils, after they have once been brought into cultivation."

"An intelligent farmer in Mount's Bay told me, that he had pared and burned a small field several years ago, which he had not been able to bring again into good condition. I examined the spot, the grass was very poor and scanty, and the soil an arid silicious sand."—(*Agricultural Chemistry, p.* 243.)

If you have lost your credit, be industrious and honest, and you will gain it.

For the Farmers' Cabinet.

Coal Ashes---Peach Trees.

Respected Friend:—In looking over No. 16 of the "Cabinet," which was handed me this morning, I see thy correspondent "S. J." condemns the use of *coal ashes*, and having had some experience with peach trees, and conducted about 40 experiments for their preservation from the worm, I am prepared to agree with him in regard to the unfavorable influence of unleached ashes on the young trees, and after leaching it is useless as a preventative against the fly.

From the 5th to the 15th of the 7th month, may sometimes be detected about the root of the peach tree, a very timid steel blue insect, resembling a wasp in form, and nearly in size; immediately at the surface of the ground, it has been actively engaged making several very slight punctures in the bark, and depositing its eggs in them, finishing its work by coating them over with a little greenish looking slime. The eggs themselves are of a dirty white hue, and so small as to be scarcely perceptible to the naked eye. In a few days the young worms appear; only a few of the strongest of these survive the first few days and commence at once the work of destruction, eating into the wood, and then downward below the surface several inches, throwing out their refuse, mixed with thick gum from the tree, always keeping clear their road in which they glide up and down at pleasure.

At the setting in of cold weather they retreat to the bottom of their dens, and lay dormant till the warmth of spring calls them to activity again. They now feed with voracity for some time, preparing themselves for their third stage, which is short. About the latter part of this, and the first few days in the next month, by carefully examining at the roots of the trees, which have been injured last year, the chrysalis may be found, snugly enveloped in its shell; in a few days it will burst forth; a few hours enjoyment on the sportive wing, and it then commences laying its eggs; and in a few days more, is dead. Such is its history—and knowing this, it teaches, that anything offensive at the spot necessary for the mother to deposite her eggs, will be a preventative. Among the many applications I have made, none have proved effectual except *slacked lime* applied to the surface of the ground and raised high enough around the body, to keep the rains from washing any earth against the tree, as this would afford a lodgment and protection for the eggs. About a peck of lime I have found sufficient for trees two or three years old.

Although I have kept the fly at bay and preserved many trees from its ravages, yet we have not now a peach tree on the farm

That fatal disease, the "yellows" cut them all off a few years since, and invariably takes them *now*, at one or two years old.

Respectfully, &c.,

Mahlon T. Kirkbride.

Morrisville, Bucks County, 6th mo. 6th, 1833.

To prevent the ravages of the Cut-worm

Many things have been prescribed to prevent the grub or cut-worm from destroying Indian corn in its infancy; most, if not all of them, I believe to be ineffectual or inert, and some of them pernicious to the growth of corn. And as the season when the grub commits its ravages is near at hand, an effectual means to prevent its mischief I believe might be of vast importance to the agricultural part of our community.

Believing myself to be in possession of a knowledge of means that will completely prevent the cut-worm from destroying young corn, I shall endeavor to communicate the same to you, and shall consider myself fully compensated, without any reward from church or state, if they shall prove serviceable to the farming interest.

The remedy consists simply in feeding the grub. Many farmers are in the habit of badly ploughing their corn ground for this purpose; for bad ploughing leaves much grass for the grub to live on. But the practice of bad ploughing vastly increases the labor, and consequently the expense of raising Indian corn. The better practice is to plough well at first, and afterwards to apply the remedy.

The grub is not a dainty feeder, and will eat almost any green herbage. The best I have found to be the following: young elder sprouts and their leaves, milk weed, clover, mullein, and almost any green vegetable that happens to be at hand. My time and mode of applying them, is to apply them two or three days before the young corn makes its appearance through the ground, in compact handfuls in every fifth row, between every fifth and sixth hill, pressing the handfuls, when dropped to the ground, with a tread of the foot. The grubs, if numerous, will soon collect under these handfuls, in dozens, scores, and hundreds, and there remain for shelter and food as long as they find good accommodations, which will last for ten days or more. In the mean time it will be an easy matter to destroy them with a sharp instrument, going from handful to handful, along the rows in which they are deposited. I have in this way killed more than two hundred under a handful, and thus saved my corn.—Handfuls of fresh herbage must be re-applied if necessary.

The remedy may appear to many at first notice almost as bad as the evil; but I believe that a smart man will gather and apply the remedy to more than five acres in a day, and to destroy the grubs when collected is an easy matter. At all events, I believe, after a fair trial, that the remedy is the cheapest and most effectual that can be applied; and depend upon it, the remedy is no quack prescription, for it has its foundation in the animal appetite and disposition, that animal nature can be more readily coaxed than driven. —*Cultivator.*

Mangle Wurtzel and Ruta Baga

The period has now arrived at which I promised to give you my opinion of Mangle Wurtzel as a food for cows, and my plan of cultivating and securing them. I consider them to be very valuable. My cows fed upon them last winter, kept in fine health and flesh, gave a large quantity of very rich milk which made superior butter. They saved me much hay, and my cattle were remarkably fond of them throughout the winter. Farmers should by all means have them or Ruta Baga, and indeed both, for their cattle.

MANGLE WURTZEL.

In cultivating them, I select a piece of land in good tilth, draw furrows two feet and a half or three feet apart, which I fill with good manure. I then throw a furrow from each side upon the manure, rake the top smooth, make a drill, drop the seed about ten inches apart, and cover with the rake. This should be done the latter part of May. I till them with the hoe-harrow and hand-hoe, and if need be with the plough, and keep them free from weeds. The bottom leaves are good food for cows and hogs, and the root is benefited by their removal. The crop is a very heavy one, though I did not ascertain the amount per acre. The crop should be taken in before there is a severe frost. The leaves should be rung off, not cut, as that makes them bleed and rot. They should then be placed in a dry warm cellar, with the front carefully piled. Thus put away, they will be good for feeding until late in the spring. I have not fed sugar beets, but have been told by those who did so last winter, that cattle do not generally like them; beside they cause them to scour. In Mangle Wurtzel there is no mistake.

RUTA BAGA.

My plan of cultivating ruta baga, is the same as above. I plant them all in June.—They are not injured by slight frosts. I cut off the tops and secure them in heaps well covered with straw and then with earth about six inches thick, which I obtain by digging a ditch round the heap. They should not be put below the surface of the ground, as they are thereby rendered liable to be wet and frozen, particularly on clay subsoils.—*Germantown Telegraph.*

To make Farming Profitable.

Some farmers think, that to make money by the business, it is only necessary to cultivate large farms—of several hundred acres; others think that to raise and harvest crops at the least possible expense is the great secret; some again, think that covering their land with wheat crops, is to pocket the most cash; and others that to raise cattle, or to devote the farm entirely to a dairy, or to raising sheep goes ahead of every thing else.

They are not all correct. Which of them is? We will first say who is not. Cultivating a large farm is not profitable unless it is thoroughly done, for a man who makes nothing on one acre, will not be likely to make more on a thousand, with the same kind of culture. Those who own very large farms too frequently attempt to cultivate them with the least possible expense, or else neglect them entirely; and this superficial farming, is after all, by far, the most expensive, as we shall proceed to show. It is generally quite as expensive to cultivate an acre of land which is in a bad state, as one in fine condition, and often more so; if for instance, the crop is so small that it is only worth the expense of raising it, there is no profit whatever; but if the land be good, the expense the same, and the crop twice as great, one half of course, will be clear gain. Hence the vast importance of adopting such a course of farming as to tend constantly to the improvement of the land. This course is not close cropping with wheat, nor suffering it to remain constantly in meadow or pasture.

But to effect improvement in land, it is necessary to pursue a course of rotation in crops, to manure as much as is practicable, either by stable manure or by turning under green crops, with a proper use of lime, and to render all wet ground sufficiently dry by under draining. For this capital is necessary; and hence a farmer must not only have land to cultivate, but he must have means besides in sufficient quantity to carry on his operation to the best advantage.

It is true that many farmers have made money by close cropping with wheat; but there is no doubt that if instead of this, they had pursued a proper course of rotation, they might have done as well at the time, and instead of exhausting their land, been constantly rendering it more productive. A proof of this is afforded by an experiment made several years ago. One portion of land was cropped every second year; on another portion a longer time intervened between the crops of wheat; by a judicious system of rotation, and although wheat was the main crop, yet the increased fertility which this course caused, and the consequent increase both in the wheat and intervening crops, rendered the latter course ultimately the most profitable, with the additional advantage of leaving the ground in the best condition.

Corn, wheat, oats, barley, &c. being all similar in their effects in exhausting land, it becomes necessary to introduce the culture of some other crops more generally than exists at present, in order to form a proper rotation. Peas and beans are both excellent for preceding any of the grain crops just mentioned; and the red eyed China bean cultivated in drills or hills or would doubtless be as profitable as wheat or corn.

The culture of root crops is a most powerful means of enriching land. A crop of corn the last summer, was twice as productive after ruta baga as after corn, fertility and manuring being the same in both cases.—*Genesee Farmer.*

Laying down Arable Land into Grass.

It cannot be doubted, that if one-fourth part of the land, which at present is sown with grain, were properly laid down in grass, for the purpose of feeding stock, it would be of the greatest benefit both to the farmer and the public, as the other three-fourths, would be better manured, more easily cultivated, and would produce as much for consumption, as the whole now does. The failure of new crops of grass, is in a great measure owing to a deficiency of seed, or to the land being sown, when out of condition, and without an adequate supply of manure; and great tracts have, in these circumstances, been continued under a course of aration, to the impoverishment of the occupiers, and the loss of the public. Whereas, improved rotations, and in particular, a greater number of green crops, would enrich poor, or exhausted arable land.

The laying down a portion of the arable land of the country into grass, is a subject of great importance, which may essentially contribute to prevent any apprehension of scarcity. Indeed nothing would give so much relief to any difficulty with respect to grain, as to increase the number of cows. Milk used with rice, bread, biscuit, or with pot-barley boiled like rice, or meal or flour, would save a large proportion of the consumption of those articles. Nothing can be substituted so quickly, or so cheap. Each cow, so used, would save one load of wheat per annum.

It is a great error, in laying down land to grass, to sow an insufficient quantity of small seeds.

Another point to be strongly inculcated is that land intended to be converted from tillage to grass land, must either be dry by nature, or be made so by art, before it is possible to get a valuable crop of natural grasses;

all the best sorts abhor a wet bottom when they are young, and will not root deep enough in it, to bear the vicissitudes of the seasons; and not increasing by the roots as they ought to do, will die when they have perfected their seed, and leave the land bare.

The advantages to be derived from the alternate, or convertible husbandry, cannot be too much dwelt on. None but those who have tried it, can be fully aware, of the vast improvement effected, by laying down old ploughed land into grass, as well as converting pasture lands into arable.

Under this system, also, when judiciously conducted, the crops are always abundant, and the soil is kept in a constant state of increasing fertility. At the same time, it is proper to remark, that too much pasture in a populous country ought to be avoided. It diminishes the necessaries of life, while it increases and cheapens the luxuries, and its produce is much less efficient, in furnishing subsistence to man.

On the whole, it has been justly remarked, that the alternate system of husbandry, is most beneficial to the cultivators and the public. A considerable capital is necessarily required to commence and carry it on; and it must occasion some trouble in its execution; but these are circumstances, which indispensably accompany every improved system. If one half of a farm be kept under artificial grasses, and other green crops, as much live stock may often be supported, and fattened upon their produce, as if the whole farm were pastured; while the other half, enriched by the large quantity of dung produced by the consumption of these crops, will furnish as much disposable produce, for supplying the market with the various sorts of grain, as if the whole farm had been sown with culmiferous crops. Hence the superior advantages, and profit, derived from a conjunction of stock and of grain husbandry; by the union of which, wherever such a plan is practicable, husbandry can be more substanstially improved, than by any other means that has hitherto been suggested.

Quantity of rain which has fallen in each month since January 1, 1838.

	inches.
1st month,	2.20
2d month,	2.19
3d month,	3.17
4th month,	3.58
5th month,	3.57

Philad. Hospital, June 2, 1838.

Many of our readers are anxious to hear again from A Penn Township Farmer.

If a man cheat thee once, shame him; if he cheat thee twice, shame on thee.

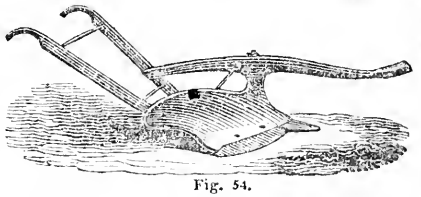

Fig. 54.

CONCAVE SELF SHARPENING PLOUGH.

This is considered as a superior article. It is of lighter draft, turns stubble, weeds or manure better, and without choking, than those in general use. The inventor says that they not only save the trouble of going to the smith shop, but also four-fifths of the expense of the other plough. We invite the attention of farmers to this plough. It is offered for sale by the inventor Mr. Wm. Beach, 426 Market street, who has on hand a variety of cultivators (see page 327) hoe-harrows, straw-cutters, &c., of the most approved kinds.

For the Farmers Cabinet.

Good Suggestions.

Mr. Editor—I was much pleased with the proposal of your correspondent, that our children should be furnished with tools suited to their strength, made in all respects like those used by men, their size and weight only excepted—not mere playthings. It is a happy thought, and I hope that, ere long, we shall be supplied with such from the stores, as a regular matter of business.

Allow me to remark, in passing, our farming implements are made too heavy and clumsy, that they might have a greater appearance of strength; this I have discovered to be an error. My neighbor Kendall's tools were made so large and heavy, particularly the handles of his rakes, shovels and forks, that it was difficult to grasp them; and I have known his men, designedly, to put them under the wheels of his wagons, to break them. At last, he got one constructed of light materials, and then the men looked out for that, to take care it did not get injured—This convinced *him* of *his* error.

Too little regard is paid to the children of Farmers; they are generally considered an inferior class, destined to turn the sod, of which they are supposed to form a part, and to be beneath the care and attention which is bestowed upon those intended for the counting house or workshop. But why should this be? All admit that the employment is the most independent, and favorable to reflection and observation, and the time is not far distant, when it will also be admitted that the scope which it offers for experiment and improvement, is not inferior to, what are called, the *professional labors.*

I have long thought that there is room for a lad's book on this subject, which, if it were

well got up, might become very popular, and be of great utility to the *most useful class* of the rising generation. It might consist of dialogues between a father and his son, on the subjects of Agriculture and Husbandry; and if the boy be intelligent and the father well instructed in his *profession*, which would be found to embrace much that is not usually considered as relating to farming in the abstract, I am convinced that the work might be read to profit, by other than mere children. One thing is pretty certain, in the hands of an acute lad of 12 years of age, accustomed "to follow in the fields his daily toil," the Father would not enjoy a sinecure. And, to follow up the idea, suppose I give you a sort of outline, in the shape of a preface to such a book, for your approval. The title might be, "The Young Farmer, or dialogue between a Father and Son, on the subjects of Agriculture and Husbandry."

Preface or Introduction.

The Grove Farm is situated on the great western road in the county of ———, and contains seventy-nine acres of land; the fields lie on the declivity of a hill, and the soil is so varied that the different inclosures present almost every gradation, from sand to clay, that might be found on estates of ten times its magnitude. The present occupier's father was the tenant fifty years ago, and by dint of good management, the son contrives to pay three times the rent, which was paid by his father at that period.

The family consists of a wife, almost unequalled in every desirable qualification; a daughter, 14 years of age, the pattern of her mother, and of the same name; a son, Francis, of the age of 12, and an infant. The father is a working farmer, and his boy has been his companion since the time he was able to follow him into the fields: this will account for some of the inquiries which he will be found to make, which, but for this circumstance, might be thought premature, and when it is known that the farm is in the vicinity of a town, from whence books and other means of instruction are easily obtained, and that our farmer had received a respectable education, and his wife is a superior woman for her sphere, it will not be wondered that their leisure is spent in instructive conversation, leading to examination into, and reflections upon, the phenomena with which persons of such occupations are peculiarly conversant, or that their children are superior in attainment to the generality of those of their rank in life.

As the soil of the farm is various, so also are the crops which are cultivated thereupon; and from the circumstance of the fields forming as it were a belt around the ascent of the hill, they are in general of small dimensions, being in many instances divided by small streams of water and *vallits*, and courses and ditches made for the purpose of carrying off the superabundant moisture, which in many places rises to the surface, in consequence of meeting with beds of clay in the substratum, giving the opportunity of practising Elkington's mode of draining, with complete success. From the number of trees growing around the house, it has taken its present name. At the time of the entrance of the present occupier's father, there was not a tree growing upon the farm: the owner, finding him an intelligent man, presented him with fifty dollars with which to purchase trees for planting at his discretion, and from this trifling circumstance it is that the estate has changed its name from 'Rainwell's' to that of

THE GROVE.

Citron Pumpkin.

Mr. Samuel Sower, of Schuylkill township, Chester county, presented us last month with a citron pumpkin, of his own raising. We cut it on the 25th of of May, and it was as sound and perfect as on the day it was taken from the vine, and we believe it would have kept in good order until fall. It was decidedly superior to any pumpkin, or any other member of the same tribe of vegetables. In gathering this pumpkin, Mr. Sower was careful to leave about three inches of the stem attached. It has been found that by cutting off near the insertion of the stem, the air is apt to penetrate the pumpkin, and decay soon ensues; whereas, if two or three inches of the stem be left, this evil is guarded against. Great care should be taken in separating from the vine; a sharp knife or fine saw ought to be used.

A New Form of a Horse Rake,

Planned by a Practical Farmer.

The *Flexible Horse Rake*, is distinguished from all others by a joint in the centre of the head, by which the rake yields and conforms to any uneven ground, and takes the hay clean; also by the form of the teeth, which glide over hillocks, &c., like sled runners; it also has a smooth back board on a level with the teeth, that supports it and is not liable to become entangled with the hay when it casts over forwards to be emptied. Twenty-four acres a day are raked perfectly clean with this instrument—one man holding it and a small boy riding the horse; the labor of managing it is less than that of holding a small plough. The price of this article is less than the sum it will save any farmer in *one single hour* when a shower is coming.

For sale at the Implement and Seed Warehouse, No. 63 Chesnut st. Those interested are invited to call and see it.

David Landreth & Co.

NOTICE.

We have the pleasure of informing our subscribers in the Peninsula, that we have made arrangements with Mr. Peter B. Porter, by which the Farmers' Cabinet will, from this date, be published simultaneously in this city and in Wilmington, Del. This change is made with the view of accommodating our numerous patrons in Delaware and the Eastern Shore of Maryland, and those portions of our own State with which the communication is more frequent and direct, with Wilmington, than this city. ☞ This arrangement does not interfere with our old friend Mr. Geo. Reynolds, who will receive and deliver the Cabinet to his subscribers as usual.

The Wilmington office is at the Book Store No. 97 Market st.

We publish the following notice of the establishment of Mr. ELLIS, with great pleasure; and we are satisfied that many of our patrons, will gladly avail themselves of the opportunity of testing the relative value of the manures now offered them on very liberal terms. Our intelligent and valued correspondent who dates from Wilmington, Dela., as well as the great mass of practical and intelligent farmers en ertain the highest opinion of the good properties of these articles, especially in restoring exhausted soils, and areribes his great yield of grass, (see Cab. Vol II. page 35 and 36,) mainly to the application of bone-dust, plaster, &c. We hope that this effort of Mr. Ellis will be abundantly rewarded, especially as those who may purchase and properly apply these fertilizing agents to their lands, will derive essential benefit from the same.

BANK NOTE REPORTER.

About the first of July a copy of a newspaper containing a list of all the banks in the United States, with the standing of the notes of each in this city—with a full description of all counterfeit notes, will be sent gratuitously to each of our subscribers. The paper will also contain a list of the Broken banks, frauds, &c. with a full prices current, &c.

☞ *As this sheet will have an extensive circulation, it will afford a good opportunity to persons who have property to dispose of, to advertise the same.* Advertisements should be sent in by the first of July. Terms of advertising one dollar per square, 20 lines being equivalent to a square; columns same width as those of the Cabinet.

We are much pleased to learn that among the recent additions to our imported stock, is the justly celebrated Durham cow, Red Rose, imported by *Mr. Paschall Morris*—she is now on his farm near West Chester, Chester county, Pa. This is another evidence of the enterprise of our intelligent farmers. Success will, unquestionably, attend their efforts.

Labor Saving Machine.—A notice of Mr. Mercer's Machine for shelling or hulling clover seed, rye, barley, oats, corn, and grinding of corn &c. will appear in our next.

☞ The regular monthly meeting of the Horticultural Society, will be held at the usual place, on Tuesday evening, the 19th inst.

The meeting of the Agricultural Society will be held in the Philosophical Hall, in Fifth street below Chesnut, on Wednesday morning, the 20th inst., at 11 o'clock.

Our next number will be enriched with portraits of the celebrated cattle raised by Mr. Tonkin, of New Jersey, who has kindly promised to furnish us with a correct account of them. Mr. Tonkin, is, we understand, engaged in raising some animals of great beauty and promise.

THE FARMERS' CABINET,

A MONTHLY NEWSPAPER,

IS PUBLISHED BY

JOHN LIBBY, NO. 45 NORTH SIXTH STREET, PHILADELPHIA.

ABOVE ARCH STREET.

PETER B. PORTER, NO. 97 MARKET STREET, WILMINGTON, DEL.

New York—Publication Office at the Book Store of Robert Carter, No. 112 Canal Street.

The Cabinet is published on or about the fifteenth of every month. Each number will contain thirty two octavo pages on good paper and fair type. The subjects will be illustrated by engravings on wood whenever they can be appropriately introduced. TERMS.—*One dollar per year, payable in advance.* The Cabinet by the decision of the Post Master General, is subject only to *newspaper postage*, that is one cent on each number within the state, and within one hundred miles of the place of publication, out of the state—one cent and a half on each number to any other part of the United States. ☞ Seven copies for five dollars. All subscribers must commence with the volume No. 1, or with the half volume, No. 7.

Neall & Shann, Printers, North East Corner of Eighth and Market Streets.

THE FARMERS' CABINET,

DEVOTED TO AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

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Wilmington, Del.

The Productive Powers of Nature.

The powers of nature to create vegetable productions appear never to diminish; the process goes on year after year with increasing energy, and brings forth an increase of vegetable matter to be again decomposed and returned to the soil. This is the natural process by which the decomposing vegetable matter which we find in the soil is formed; and there has been a continual succession of production, decay, and reproduction, of vegetable matter going on ever since nature first sprung into existence, producing vegetables which, when dead, are decomposed into the elements of which they were originally formed.

No loss is sustained by the decomposition of vegetable or animal matter in the soil; all is reduced to the first elements of plants, which give fresh energy to vegetation by again entering into vegetable composition.

Thus the process of the growth and decay of vegetable matter goes on in a continual succession, and the decay of one crop becomes the nourishment of the next.

When nature is left to herself, the accumulation of decomposing vegetable matter on the surface becomes great; and if the soil is not possessed of the property of hastening their decay, the vegetable matter is merely increased on the soil, without adding to its productive powers.

On a careful examination, we think, it will be found that the production of vegetables never exhausts any soil: the yearly growth of grass, with its decay, adds yearly to its productiveness; and even a plentiful crop of weeds, when allowed to decay on the land which produced them, has the same effect: and thus it is, that land, which has been worn out by cross cropping, is by slovenly farmers left for nature to improve.

When the natural pasture is consumed by stock it is converted into animal food for man: and the excrement of the stock being left on the soil forms a rich decomposing animal manure, which gives to the soil increased energy to reproduce an increase of vegetable food for an additional quantity of stock.

Pasture land is full of vegetable fibre, from the surface down as low as the roots of plants descend. Some are the recent roots of grasses, others are those of every stage of decomposition. In arable land scarcely any vegetable fibre is to be found: this circumstance should teach us, that to form a good pasture, we should fill the soil with vegetable fibre as a manure, where we convert arable into pasture land.

The very small proportion of vegetable matter which is contained in the most productive arable soils, would almost seem to indicate that their richness does not depend on the decomposing vegetable matter, but on something else; for if all the straw or refuse of the crops it produced, was returned to it after it had passed through the stomach of some animal, this would scarcely be equal to one-third of what the earth produced.

A judicious succession of crops, and a profitable consumption of the produce by sheep on the ground, return to the soil such a quantity of manure as to give an additional means of increasing its productiveness.

"Water is necessary to the growth of plants. It is essential to the juices or extract of vegetable matter which they contain, and unless

the soil, by means of commutation, be fitted to retain the quantity of water requisite to produce those juices, the addition of manure will be useless. Manure is ineffectual towards vegetation, until it becomes soluble in water; and it would even remain useless in a state of solution if it so absorbed the water as entirely to exclude the air: for in that case the fibres or mouths of the plants would be unable to perform their functions, and they would soon drop off by decay." 179, Steward.

It is necessary that the animal and vegetable matter in the soil should have this decomposing disposition, and the soil have it in proportion, to the proper admixture of the materials of which it is composed.

A certain degree of heat, the influence of the atmosphere and water, are necessary to carry on the decomposition of animal and vegetable matter in the soil. The best constituted soil therefore has the power of imbibing, retaining, and giving up to plants a proper degree of heat, air, and moisture. When the atmosphere is warm, moist, and sultry, vegetable life is in the greatest vigor, which would indicate these to be necessary to vegetable life if not the very principles on which it depends.

Soil should not only have an affinity for the moisture of the atmosphere, but it should also have the property of readily transmitting it to the vegetables which grow in it.

The soil, therefore, which is best adapted for retaining and transmitting in all circumstances of wet and dry weather, the necessary quantity of moisture to growing plants, may be reckoned best and most productive.

If we impart to any soil that which induces vegetation, we improve it and increase its productiveness; but if we in any way withdraw from it that which tends to produce vegetation, we injure it and may make it sterile. Barrenness in soil is produced when the component parts of it are so firmly united, that air, water, and the influence of the sun cannot enter into combination with it. When a soil is pure clay, it is sterile and worthless, and so is that which is pure sand. The former resists effectually the enriching influence of the rains and dues, which merely fall on its surface, and either run off or lie there, without penetrating into it. The sun and wind also may beat on it and blow over it, but they can never penetrate its mass to awaken up the dormant energy that lies within; they only have the effect by their repeated attacks to dry and harden the surface, crack it into irregular portions, and more firmly to lock up any languid and dormant principles of vegetable life that may be within the mass. The latter is so porous and loose in its texture that the rain and dews no sooner fall on it, than they pass through it rapidly like water through a sieve; the rays of the sun and the wind evaporate and dry up the last particles that remain, producing only a transitory effect on vegetation, and because they have no regular supply of moisture, the plants soon wither and decay.

The energies of the soil are frequently held in bondage by some pernicious quality inherent in it, or imparted to it, which if neutralized or extracted the soil would become productive.

When light, sandy, and vegetable soils are artificially made lighter, they possess little of the principles of vegetation. The mechanical disposition of a clayey soil is also deranged by improper treatment, such as trampling or ploughing it in wet weather; and although the soil has a full supply of animal and vegetable manure in it, yet the mechanical derangement so totally locks up all its energies, that the fermentation so necessary is altogether stopped, and complete barrenness is the result.

This we have frequently observed to occur from land being trampled by sheep in eating off turneps from strong clay soil during wet weather, in the early part of the spring.

They convert the surface into a complete puddle, and when it becomes dry, the parts composing the soil are so closely united together, that it is like bricks dried for the kiln, and is entirely unfit for the production of plants. It is evident that the causes of sterility in these soils are opposed to each other; each therefore will require a mode of treatment peculiar to its case. The light, sandy, and vegetable soils, that are too friable, must be artificially rendered more firm; and the too tenacious clay soils must be made artificially friable and kept so, and be pulverized and mechanically altered before we can expect them to become productive. It is evident if these two soils could be mixed together, the mixture, with a proper quantity of vegetable and animal manure, would make a good productive soil.

John Morton.

For the Farmers' Cabinet.

Lime, Lime, Lime.

The extensive and increasing use of lime for agricultural purposes, indicates the opinions of farmers in regard to its usefulness; and although the theory of its operations in promoting the growth of plants seems not to be very well understood or explained, yet experience has taught us that the best and most profitable mode for its application is on the sward, or grass sod, as long before it is broken up by the plough as possible; it being found most beneficial to keep it as near the surface of the ground as practicable; and the same is true

in regard to the green sand, or N. Jersey marl. The reason for this is, that the specific gravity or weight of these mineral manures is so great compared with vegetable mould or common earth, that they soon find their way too deep into the ground for the fibrous roots of plants to derive the greatest possible benefit from their use.

Some good farmers of the old school, and many bad and indifferent ones, still resist the use of lime on their lands from a pretended apprehension that the ultimate effect of it will be injury to the soil; but some think that the real reason is, that it costs something in the first instance, and that they are of the class of people who are too stingy to grow rich, and may be said to hold a penny so near the eye that they can't see a dollar afar off. Be this as it may, I know not; but one thing is very certain, that those who have been spreading lime on their farms for the last eight or ten years, have been subjected to vast expense in pulling down their old barns and building greater, or adding immense codicils in the shape of hay houses to them; building barracks, and even subjecting their hay and grain to the danger of injury from the weather by stacking them out. Many also have been obliged to enlarge their barn yards, which have either become contracted in their dimensions by the use of lime, or the number of cattle and the quantity of manure have so increased by it that much expense has in some cases been incurred, and an additional quantity of ground been devoted to the purposes of making more ample accommodations for the herds of cattle, and space for the accumulation of vast quantities of manure. I throw out these matters for the benefit of timid farmers, so that they may not embark in the use of lime without being fully warned of the probable consequences which will soon ensue in the shape of increased expense in rebuilding of barns of larger growth, hay houses, and extending dung heaps over a large piece of most valuable ground. AGRICOLA.

Montgomery County.

For the Farmers' Cabinet.

Peach Trees, &c.

The sentiment of a Jefferson, that errors in opinion are only dangerous when reason is not left free to combat them, is only correct under certain circumstances. The promulgation of error may lead to the investigation of truth, and thus materially improve our knowledge of things. In this case, error is not dangerous—but it is only so, where such an investigation is gone into as will more effectually establish the truth. Unless this be done, errors in opinion, when promulgated, are always dangerous—for no one—and especially no one who writes for an agricultural journal—can be supposed so obscure, or so insignificant, as not to exert some influence on the minds of his readers.

An *Old Farmer*, in the last Cabinet, p. 325, complains, as many others might do, that a part of a former communication was rendered *unintelligible* by *an error of the press;*—and, in my opinion, he has rendered a part of his last one much worse than unintelligible, *by an error of his pen.* He says the worm in the root of the peach tree, and the excrescence on the branches of the morello cherry, are not the *cause*, but the *effect* of disease, which arises either from a poisonous subsoil or an exhausted surface! Perhaps none will deny the truth of a part of this sentence, and I hope that none, except some of the "old folks," will believe the other part of it. The *worm* and the *excrescence* are truly the effects of pre-existing causes, but they, like most other effects, become causes in their turn, producing their own consequences. It is with the alleged *cause* of the *worm* and the *excrescence* that I have to do at present—viz. That they are produced by "disease which arises either from a poisonous subsoil or an exhausted surface." I admit that a poisonous sub-soil may produce disease, and that an exhausted surface may impair the growth of the tree. I will also admit that, under the operation of these causes, the tree will be less able to resist the injury which insects may inflict upon it. But, I ask, can either the *poisonous sub-soil*, the *exhausted surface*, or their consequent *disease*, deposit the eggs which produce the worm in the peach tree, or the excrescence on the morello cherry? Until this question shall be fully answered, in the affirmative, by an Old Farmer, or some other of the old folks, the error of which I am speaking will not prove very dangerous.

The peach fly (Ægeria exitiosa,) and the cherry insect, which, so far as *I* know, has not yet been observed, appear to have begun their ravages to the eastward and progressed to the west. In their desolating course, no soil, no culture, has been found a sufficient protection—particular trees or plantations may have resisted them for a season, but those exceptions have occurred under every varying circumstance of soil and situation. The oldest peach tree in this vicinity, and the only one of many years' duration, sprung up spontaneously by the road side, under the protection of a large locust tree, where the soil is extremely poor, and never has been cultivated.

The position of the "Old Farmer" does not, therefore, appear to be sustained by facts, and is totally inconsistent with reason. It would be quite as rational to say, that the decay of the roof of my house, or the boiers

which penetrate its cornice, were caused by the poisonous quality of the sub-soil in which its foundations are laid—or, that the locust (cicada septendecem,) is caused by a periodical exhaustion of the surface, which takes place every seventeen years, as it is to say, that the worm on the peach tree, and the excrescence on the cherry, are produced by such causes. I hope that the time will soon come when agricultural investigations will be conducted more in conformity with principles of

COMMON SENSE.

Sixth mo. 23d, 1838.

For the Farmers' Cabinet.

Destruction of Bugs and Insects by Ducks.

In the absence of the birds in my neighbourhood, which have been almost exterminated by a succession of idle vagabonds, we have been almost eaten up by insects of a variety of kinds, whose names and habits we are entirely ignorant of, excepting that we have discovered that it takes a great deal to keep them—for they are most voracious eaters, and partake only of things that are young, juicy and tender.

Men of science might render much service to the country if they would turn their attention to this branch of natural history, and communicate to the public the results of their investigations in plain, intelligible language, adapted to the understandings of the people generally. A friend of mine, whose pumpkin and other vines were assailed with bugs, so as to threaten their entire destruction, placed a hen, who had charge of a large number of ducklings, in a coop in his field. The young ones being at liberty to wander abroad in search of meat, carried destruction into the enemies' camp, destroying vast multitudes of the bugs, which they shoveled into their crops, with such voracity, that in a few days there were none left to injure the plants. We must either raise and protect a new race of birds to keep the insect tribes in check, or we must turn our attention more than heretofore to propagating chickens, ducks and turkeys, to aid in the destruction of these formidable enemies.

T.

Radnor, July 6th.

For the Farmers' Cabinet.

What is the greatest quantity of Manure to be obtained from given means?

MR. EDITOR.—There are in agriculture, as perhaps in every science, some leading propositions, calculated in a particular manner to arrest attention by their prominent importance. Such I hold that of a "Subscriber" in your May number—"*What will an acre of land produce?*" and also the question which heads this article.

Were it possible at once to afford a complete and palpable solution to these two propositions, what mind can calculate the vast increase of treasures that would instantly become accessible to humanity? As, then, we cannot inquire too strictly, or know too much regarding them, I propose, after recapitulating a few of the principal statements of a "Subscriber" concerning the latter question, to furnish my own experiments upon the former.

He informs us that a single acre of his land, (see p. 305,) *with abundant manuring and superior cultivation*, was made to produce the sum of $348 40 cents per annum, for five successive years, besides the vegetables used in a small family. He further states, in substance, as his present conviction, that the quantity of soil cultivated has nothing to do with the secret of gathering money out of it; that "this altogether depends on a judicious selection of soil, *on the facility of obtaining manure*, and on the proper application of it as food for plants," &c.;—that he found, by actual experiment, made upon a large scale, "that the profit of capital laid out in land produced an interest of only *five* per cent. per annum, the capital laid out in manure upon the same land produced *twenty* per cent."

Now, my own experience, as I shall presently show, abundantly confirms the probable accuracy of all these statements. Let us distinctly understand, then, that it is not the great quantity of land, but *the abundance of manure* upon a little, that is alone required to give wealth and independence; that the man who owns five or six acres may, (according to the above data,) with the aid of manure and good management, draw from $1800 to $2000 from them each year, while he of a hundred acres may scarcely obtain half of it upon the common plan.

But where is the requisite manure to be obtained that shall so suddenly and surely enrich the farmer? In reply to this, I will simply give my own experience, and by it endeavor to convince the reflecting farmer what amount can, and in fact *has* been made from means incomparably more limited than is generally imagined possible.

Previous to 1829, I had followed in Philadelphia a sedentary occupation, which, by excessive application in it, had so enfeebled my constitution, that I was obliged to seek in the country for that measure of health which I might no longer hope for in the city. So I bought, with my scanty savings, a small place of ten and a half acres, and moved upon it the same fall, of 1829.

Not being acquainted with farming, I hired a man to plough two and a-half acres, and sow it in rye. The cost of seed and labor, in putting in, gathering, and threshing the said crop, was $8 56 cents. The crop yielded five and a-half bushels of very poor black rye, fit

only for hay feed—say at forty cents per bushel, (as good rye was then selling at fifty and fifty-six cents per bushel,) was worth $2 20 cents, and the nett loss sustained upon farming the ground was $6 36 cents. The season was moderately good for grain, and the two and a-half acres rather a favorable specimen of the rest of my land! I planted a potato patch the following spring, (1830,) of about the fourth of an acre, which I manured in the hills with one load of marl only, and the crop yielded but three and a-half bushels!

Being a total stranger to the nature and character of soils, but having previously, from some cause, entertained the notion that land in general produced about twenty-five bushels of wheat, or forty bushels of corn, or four or five loads of hay to the acre, the conviction I had now received of the absolute worthlessness of my land fell upon me like the shock of a thunder-clap. Discouraged by the greatness of my disappointment, but not quite confounded, I determined that manure, in future, should be every thing to me, and stand in the stead of both land and crop. Being greatly improved in health, by the change of situation and exercise, I plied my avocation with increased diligence for the maintenance of my family, and made it the amusement of my leisure hours and leisure moments to collect from every corner, and pannel of fence, every thing that I imagined could furnish a vegetable nutriment, and placed it in my cow yard, so combined with the litter as to absorb and retain every thing of a putrescent character that might be deposited there. By such means I have gone on, every year increasing the quantity of my manure, to an extent that I believe has astonished most of my neighbors. The following is a sketch of the means I possessed, and the methods I took to obtain manure for the present year.

I commenced last summer by collecting into the outer part of my hog pen every thing of the weed kind I could find about the place, till I had a layer about twelve inches deep, which I covered with a layer of earth about five inches thick, continuing the process till the pen was filled to about two and a-half feet deep. In the fall I littered my loose corncobs and the principal part of the buckwheat straw into the pen, interspersed with layers of earth in the same manner. The two stalls of my stables I served also the same, taking care to save therein all the chaff and refuse straw after threshing. In these stalls I poured weekly, through the fall and winter, (for I had no cattle in them except in bad storms,) the soap-suds and such putrescent fluids that might be obtained, keeping the corners and outsides, and under the mangers, carefully saturated.

As soon as my corn was gathered in the fall, I cut the stubs close to the ground, and wheeled them immediately, *while yet heavy*, into the barn-yard, where I packed them in every part of it, and also under the shed, being an area of ground about forty feet by twenty, and in a few days covered them also with a layer of earth, from a fence-row close by, to the depth of about eight or ten inches. Upon this earth I foddered my three cattle during the winter, occasionally depositing more earth upon the litter as it collected there.

Your readers will readily judge, that the object of all this preparation was not so much for the sake of saving the materials collected there as to obtain a menstruum, or rather *sponge*, if I may so call it, calculated to absorb and retain all the urine deposited in the yard during the winter. The compost masses, however, or layers, thus collected together, are not to be considered as manure prepared for the soil, but only as *materials* that require to be thoroughly *mixed*, in order to reduce them to a state fitted for a rapid and complete incorporation with the soil. Accordingly, with this view, I commenced late in April the operation of turning it, which, from its having become closely packed to the depth of twenty inches, with the stalks at the bottom, could only be done with the aid of a grubbing hoe, turning it in strips about a foot wide, reaching across the yard, and throwing the loosened manure back a sufficient space to allow a trench between, wide enough to work in. After removing the whole cover from the stalks, along a strip, as before mentioned, they were easily grubbed up, by first cutting them through all along the solid edge of the strip with the hoe, it being made pretty sharp for the purpose. In addition to this pile of yard manure, I have also emptied the contents of my hog pen and stables, extending the pile several feet, and lying upon the ground, when first loosened, more than two and a-half feet deep. Of this manure I have used sixteen loads this spring, for truck and garden, and, judging from the size of the pile yet remaining, there cannot be less than sixty loads, which, being turned once more, I intend to use for wheat next fall.

In this manner, from only three head of cattle, and the fattening of four hogs, I have made from seventy to eighty two horse loads of manure, the highly fertilizing properties of which are abundantly attested by my own former experience. I will not say that it is stronger than the best barn-yard manure, but from its closer affinity to the nature of the soil, and greater facility for being rapidly combined and incorporated, without loss by evaporation, I have no doubt it will be frequently found, upon trial, more effective and more durable.

In the process of turning manure, thus pre-

pared, I hold it of the highest importance to mix well the earthy and vegetable parts together. Few persons are perhaps aware how rapidly the earth facilitates vegetable decomposition, and to what a surprising degree *it absorbs the excess of fertilizing effluvia*, which must otherwise be evaporated during the process of decomposition. This circumstance, I believe, taken in connexion with the careful economizing of all animal excretions, constitutes chiefly the great secret (I might, perhaps, add *alleged* necromancy,) that has added already so much verdure to my previously exhausted soil, and been so profitable to me, and so surprising to my neighbors.

No farmer can imagine, that has not tried the experiment, what a prodigious quantity of rich, vegetable, and fibrous earth may be collected from corners and bye-places, which lie out of the way of cultivation, and which, from their retired position, have, perhaps, never so much as attracted his notice. All such refuse trash, and fibrous earths and weeds, by being conveyed to his barn-yard, at intervals, during the fall and winter, and judiciously combined with its contents, will be converted into a rich, fertilizing, and durable manure, merely by absorbing and retaining *that excess of putrescent fluids and effluvia*, which is otherwise lost by filtration and evaporation; that is, by soaking away and drying up. W. H.

Pittstown, Salem Co. N. J., May 20th, 1838.

For the Farmers' Cabinet.

A gentle shove to Farmers about Boiling and Steaming Food for Stock.

Those farmers who intend to save from one-third to one-half in feeding their stock the coming autumn and winter, should look out in time and procure and put up a proper apparatus for boiling or steaming grain, roots, and cut hay and corn stalks. It will take some time to think and talk about this very important, though not expensive fixture; the place where it should stand, and the particular manner of its construction will claim due consideration; and after these matters are determined on, the materials must be got together and a workman engaged to put it up; and by the time all this is done I fear it will be needed for preparing the food for the hogs; so that you had better begin to think it over soon, and not leave till another year what had better be accomplished this season. A farmer who put up a very simple and cheap affair for this purpose last fall, thinks that it saved him the whole expense incurred, in fattening his hogs alone. He gave them no grain that was not first boiled. B.

Men are too apt to be more concerned for their credit than for the cause.

For the Farmers' Cabinet.

Canada Thistle—(Cnicus Arvensis.)

I have noticed in the Cabinet several articles on the Canada Thistle, setting forth the injurious character of this vile plant, yet as I consider it of such vast importance to the farming interest to keep clear of this (of all others) most obnoxious weed, I cannot refrain from raising my voice against the further introduction of it among us. It has already made its appearance in several directions, to the no small annoyance of the proprietors, and if suffered to remain undisturbed, it will continue to increase until it has taken full and entire possession of the soil, to the exclusion of every other plant, and may be handed down from generation to generation as a permanent legacy. In some of the western parts of the State of New York, where it has partially taken possession, you may discover many respectable tillers of the soil reaping their wheat with gloves on, and binding with willows; and some fields may be seen where it has become so thickly set that the owners have given the ground up in despair, as not producing herbage enough to feed a rabbit. That this may not be the unhappy situation of any land holder in our beloved Pennsylvania, I would recommend the most watchful care to prevent the further introduction of it either by sowing or otherwise; and landlords would do well by procuring seeds themselves, and not trust to their servants, who, in some instances, may be induced to purchase seeds of doubtful character, on account of the price of the article.

Considerable quantities of very impure timothy seed is distributed every season by traders among our country store-keepers and others, who are commissioned to sell it for them; and by this means many an honest farmer is made practically acquainted with what he may in vain wish to discard. To those who are so unfortunate as to have their grounds already inoculated with it, I would urgently recommend their giving it immediate battle, show it no quarters, but cut it off before it has time to perfect its seed; then procure a sufficiency of salt, not only to cover the stump, but to extend a foot around it in every direction, to prevent the fibrous roots from the main stalk from shooting up and producing new plants; this, if properly done, will entirely eradicate it, and I believe it is the only effectual method yet discovered. As it is well ascertained that every small particle of the root, as well as the seed, will vegetate and produce fresh plants, it would be the height of folly to attempt to destroy it by ploughing; this will only distribute it over the ground and increase it many fold.

Farmer.

For the Farmers' Cabinet.

Birds the Farmers' true Friends.

In the last number of the Cabinet, your correspondent, in speaking of the habits of birds, (although he admits most of them to be of service to the farmer,) says some are of no use, and others decidedly injurious: with these he would hold no terms. Perhaps, upon closer observation of the habits of even these, he may find himself mistaken. Let us see:

There is the purple grakle, or crow blackbird, whose fondness for, and depredations upon the young corn, is so well known, is much more partial to the grub worm, and if permitted a resting-place on our premises, unmolested, would follow the ploughman in the furrow, and destroy great numbers of them, not uprooting a single grain of corn as long as this supply continued. Crows would do the same—to be sure they would, in default of finding grubs, help themselves to some of the corn; but cannot this be prevented by soaking the grain in something nauseous, or coating it with tar? These expedients should be tried before we condemn them to destruction.

Again, the different species of hawks, so generally considered as pirates, and destroyed without mercy, I believe do us more service in the destruction of field mice, moles, &c., than would be counterbalanced by the loss of a few chickens. HUMANITAS, JR.

For the Farmers' Cabinet.

Sumac.

MR. EDITOR.—In the fourteenth number of your second volume, "A Friend to Native Industry," invokes attention to the produce of one of our indigenous plants, namely, the sumac; more than 13,000 tons of which, he says, were consumed in England, in 1832 and 1833, for dyeing. Will "A Friend," or some other friend, should this meet the eye of such, be so kind as to inform us, whether a person collecting a quantity of the sumac berries, and drying them thoroughly, could dispose of them here at a price sufficient to indemnify him for his labor? What, in fact, is sumac worth per pound, or per hundred weight? Is the produce of the American sumac equal to that from other countries? By the bye, there is another most interesting production of some of our middle states, which, we think, ought to afford a source of profit, namely, the wax procured from the myrtle berry. This is of a beautiful greenish color, and possesses great solidity, being, on this account, much used by the poor for adding to tallow to improve candles. Should there be a fair price offered for this article, its collection would afford profitable employment to hundreds of poor persons. Can any one tell us what price the wax of the myrtle would command? ENQUIRER.

For the Farmers' Cabinet.

Life Insurance.

Every farmer should understand and appreciate the importance of fire insurance, and every farming district should secure the benefits of an office insurance against loss by fire. There is also another system of insurance less understood, but equally important; we refer to life insurance—by which is meant, that a person secures to his family, in the event of his death, a considerable sum of money, by the payment of a small annual sum during his life. From the monthly reports of the Girard Life Insurance and Trust Company, in Chesnut street, it is obvious that many see the importance of making this certain provision for their families, to be received by them when they most require it. It can be done, too, for a very small sum: for instance, a man thirty years of age pays $1 31 cents, and if he dies within the year, his family receives from the office $100. If he pays $13 10 cents, they receive $1000: thus it is evident how cheaply the advantages of life insurance may be had; and that a person, however moderate may be his income, can secure his wife and children from destitution.

In England, so many families have been saved from want and dependence by the intervention of life insurance, that the practice is general; and most persons of limited incomes, and whose families must rely upon their daily personal attention to their affairs, resort to life insurance as the best saving institution, and the most certain mode for a moderate provision for a family, in the event of one's death.

For the Farmers' Cabinet.

Insurance against loss by Fire.

A provident n an guardeth himself against loss by fire.

Scarcely a season passes by without hearing the melancholy tidings of some farmer having lost his barn, perhaps his house also, by lightning, or by fire, originating in carelessness or design. Some seasons we hear of many such catastrophes, even in a single county. The loss is always total, and generally falls on those who are least able to bear it, for the wealthy are generally so provident that they provide against such casualties by effecting insurance against eventual loss. How many are the cases where individuals, who were in comfortable circumstances, have been landed in the deepest distress in a few hours by the operation of fire; and then the course of proceeding is for the feeling and benevolent of the vicinity to embark in the charitable

work of creating a fund to lessen the burden of rebuilding to the unfortunate owner.

Now, where is the person who would not prefer to this precarious, and, generally, very inadequate relief, to apply to an insurance office for complete indemnity for his loss, and that, not as a matter of charity, but as a fair matter of contract, where a premium had been deposited to cover the contingency. I presume there are none but who would vastly prefer the latter to the former. Why then remain without insurance for a single week? The answer probably would be, that it is attended with too great an expense to justify it. Now let us examine this matter of expense, and see what it amounts to. Suppose your barn cost $1000 to build it, and you wish it insured for that sum; an insurance office for a barn will require a deposit to be made of three and a-half per cent. on the amount insured; that will be $35 to be deposited; and whenever you wish to discontinue the insurance, this sum, with a deduction of five per cent. from it, to compensate for trouble, may be withdrawn. So that the actual cost of the insurance, in the case stated, will be the interest of $35 annually, or two dollars and ten cents a year, with the addition, in the first instance, of three or four dollars for making the survey, and preparing the contract or policy. Then the cost of insuring a barn for $1000 for one year, and so on from year to year, as the owner may desire, is two dollars and ten cents, being the interest of the deposit money only, for that may be withdrawn if you wish to discontinue the insurance. Can any person expect or desire it done for less than this? It seems too cheap, and it could not be afforded for so small a pittance unless an office had a large number of such risks; for the deposites made on a very large number of risks, put to interest, produce a large sum in the form of interest, and this enables the insurers to make good their losses, and save something besides, when they are successful in business.

For insuring a farm house, however, the usual charge is a deposit of three per cent., being a-half per cent. less than for a barn, the risk being considered less. Of course, to insure $1000, a deposit of $30 must be made, the interest of which is $1 80 cents a year, for insuring a dwelling house in the country. In the city, the amount deposited for an insurance is rather less than in the country, on account of the great facilities for extinguishing fires, so that a total loss seldom takes place under ordinary circumstances.

My design being to make this important subject clear to those who do not understand it, I have made my communication longer than some may think necessary; but I hope its prolixity may not discourage those from examining it, who are unprotected by insurance, and to whom the loss of house or barn would be attended with the most disastrous consequences—when for four dollars per annum you may be completely protected from loss by fire.

Where is there a person to be found who would not be willing to pay even a larger sum than that above stated for protection from loss from contingencies by fire? I should suppose there were none. Farmers, look at it—consider it—make your own calculations—but be sure and don't be too long in making up your minds to insure your buildings from loss by FIRE.

Philadelphia Co., July 4th, 1838.

For the Farmers' Cabinet.

Weeds.

The presence of an abundance of weeds is a sign of a good soil, and a bad farmer.

Weeds are noxious herbs, which are neither food for man or beast, and are so well known to farmers as not to require any particular description. It is always desirable to get rid of these *loafers*, which are continually robbing useful and nutritious plants of the food intended for their sustenance. Of course, the right time to extirpate them is whenever you discover them intruding upon the rights and privileges of their betters. Some think one season of the year is best for this purpose, some another; but my plan is to attack them whenever and wherever I can find them, and treat them as common outlaws, who don't deserve the protection of the community.

Those who are so careless and lazy as to suffer St. John's Wort, Daisy, and other pernicious weeds to encumber their fields, and to perfect, ripen, and scatter their seeds, reap a rich harvest of trouble and vexation, as a just retribution for their indolence. I have lately come into possession of a most valuable little instrument for extirpating weeds, called a *spud;* it is somewhat like a chisel, about an inch and a-half across the edge, with a socket, for the insertion of a handle; and it has a reverse edge near the socket, so that it cuts either by pushing or pulling. The whole concern is not heavier than a common walking stick, for which it is a good substitute on a farm, as it is then always ready for action when any thing presents for removal, when the ground is too dry to admit of pulling it up, or, you may be indisposed to *stoop* for so *small* a purpose. It is said that good English farmers always carry one of these spuds in their walks over their grounds, and I find that a number of them have been sold at Landreth's, in Chesnut street, this season, at twenty-five cents each, which is a pretty clear indication that there are some farmers,

at least, who are disposed to promote their interests by making war on the weeds.

X.

Germantown, July 4th, 1838.

For the Farmers' Cabinet.

Remarks on Purchasing a Horse.

My neighbor Tyson, having occasion to purchase a horse for hard and immediate work, I advised him not to buy under five years of age. He yesterday took me to see a horse, for which he had partly agreed, warranted sound, and five years old. On examining the mouth, I inquired of the owner if he would warrant him five years old? He answered, "he is *coming* five." "Yes," I replied, "and will be so, for nearly two years to come; the fact is, he is a three year old colt." This common trick reminds me of a butcher I once knew, who, when he had old beef for sale would spread his hand upon it, and declare it was under five, meaning it was under *four fingers and a thumb*.

Few persons, even amongst those to whom the knowledge ought to be indispensable, are acquainted with the mode of judging of the age of a horse by the teeth: as the lesson can be committed to memory in five minutes, I copy it from my memorandum book, asking for it an insertion in your valuable Cabinet.

How to form a judgment of the age of a horse by his teeth.

At two years old, the horse sheds the two middle teeth of the under jaw. At three years old, he sheds two other teeth, one on each side of those he shed the year before. At four years old, he sheds the two remaining, or corner teeth. At five years old, the two middle teeth are full, no longer hollow, as all the others are; and the teeth have penetrated the gums. At six years old, the four middle teeth are full, the corner teeth only remaining hollow: the tusks are sharp, with the sides fluted. At seven years old, the corner teeth are full, the tusks longer and thicker, and the horse is said to be *aged*.

Note. It is not meant that exactly at the periods above mentioned these changes take place in the horse; much depends upon his constitution; whether he be a late or early foal; also upon the manner in which he has been reared, as to food and shelter, &c. The corner tooth too, might remain a little hollow after the age of seven, but the appearance is still very unlike the mere shells, which they are, at the age of six.

An Old Farmer.

The most common things are the most useful; which shows both the wisdom and goodness of the great Lord of the family of the world.

For the Farmers' Cabinet.

Conversation between two Emigrants.

Sir,—Permit me to narrate a conversation which passed a few days ago, between two emigrants from the old country. Although the subject might not strictly come under the head of either agriculture or horticulture, yet as it embraces that of *menticulture* (if you will allow me to coin a term) which is nearly allied to both; perhaps the lesson which it teaches will procure for it a place in your interesting pages.

John D. "Do you know why I left the old country and came to this? I am sure I do not, for I was well to do at home, and had plenty of work and all that I wanted; to be sure, at first sight the wages that are given here appear higher than they were with us, but if you put *this and that together*, I do not think there is much in favor of this country."

George W. "I am sure you do not wish me to tell you why you emigrated; but if you had gone to the English island of Jersey, perhaps you would have had the question put to *you*, as they sometimes inquire of emigrants, 'do you fly from justice or your creditors?' I think it extremely unwise in persons coming to this country to pretend that they had all they could wish for at home; and have had, sometimes, to remind such of the Quack Doctor's address, 'Gentlemen, you must not suppose that I came here for want—* * * I had enough of that at home!' But to be serious, you and I came from the same parish in England where we were farming servants, and I wonder you should so soon forget the hardships which we were driven to every winter, when our masters used to turn off their outdoor servants, who were then compelled to labor upon the roads as *paupers*, dragging gravel carts like horses, and at wages which were not sufficient to keep body and soul together. I happen to have in my possession one of the printed papers issued by the *Guardians of the Poor* to the Surveyor of the roads, which I will read to you; it states the rates of wages which he was to pay, and which you will have too much reason to know is correct. The original paper is in the hands of the editor.

RATE OF WAGES TO BE PAID PER WEEK.

	s.	d.
Single Man, not exceeding	5	0
A married Man, with a Wife, but no child living with him	6	6
A married Man, with a Wife and one Child	7	3
A married Man, with a Wife and two Children	8	0
A married Man, with a Wife and three Children	8	6
A Widower, with one Child	6	6
A Widower, with two Children	8	0
A Widower, with three Children	8	6
A married Man or Widower, with more than three Children	9	0

The number of children, in all cases, to be understood as of children who can earn no-

thing themselves, but are supported solely by their parents.

No boy to be employed on the Roads where the number of children does not exceed three.

No boy living with his parents to be employed on the Roads, who is under seventeen years of age.

Only one boy of a family to be employed, and his wages in no case to exceed the above mentioned.

The wages of the boys in all cases to be paid to the parents.

Where there are more than three children in the family, all beyond three will be taken in the House of Industry if the parents wish it.

Single men out of service to have 5 shillings per week only in those cases where they are not maintained by the parent.

And now let us put *this and that together*, as you proposed, and see if there is not some difference in favor of the wages in this country. I have hit upon a very simple plan of deciding this question; it is to expend a man's wages for one week, and see what can be obtained for the same, I get a dollar and a quarter a day, and you do the same; to be sure we work hard for it, but that is no hardship as we are able—'tis a great mistake to suppose it is wrong to obtain one's bread by the sweat of one's brow, and so the magistrates think, for when they determine to punish a man most severely they send him to the Penitentiary and *keep him* without permitting him to work—well then, for $7 50, (a week's wages,) may be bought

A new hat, - - -	$0 75
New pair of shoes, - -	1 00
New pair of trowsers, -	1 00
New umbrella, - -	0 75
25 lbs. of meat, - -	1 25
1 lb. of tobacco, - -	0 10
1 lb. of tea, - - -	0 25
1 lb. of coffee, - -	0 13
3 lbs. of sugar, - -	0 21
New gown for wife, -	0 56
An acre of free land, -	1 50
	$7 50

Now tell me, is there any other country in the world where this can be done! Why don't you speak?

I will leave you to lay out the wages for a week, such as we used to receive in the old country, for they are so small that I fear if I were to attempt to handle them, they would *slip through my fingers.*"

John D. was struck speechless, but when he recovers his senses he will be the better for the conversation so long as he lives.

I am, sir,

An Emigrant, and

Your Subscriber.

To the Editor of the Farmers' Cabinet.

Profitable Experiments.

Mr. Libby—*Dear Sir:*—It affords me great pleasure to communicate to your valuable journal the subjoined letter from Edward Tatnall, one of our best and most practical agriculturists. The rich results from his system of farming are *conclusive*, and should be extensively followed on *large* as well as *small* farms. With *lime* and *manure*, judiciously applied, he has made, you perceive, his fields, which were barren and overrun with noxious weeds, *productive* and *clean*, and yielding *such crops* as speak for themselves, and his superior mode of cultivation. Besides showing what can be done per acre by the same system, this communication teaches a lesson to owners of small and unproductive farms, (too numerous every where among us,) that they can be made valuable, and soon pay for themselves by this kind and proper treatment, and that the only way to farm *profitably* is to do it well; and to accomplish this, it is best always to commence enriching a few, rather than many acres. Yours truly,

James W. Thomson,
Cor. Sec. New Castle Co. Ag. Society.

Value of Manure.

Interesting Experiments in Farming.

James W. Thomson, M. D., *Cor. Sec. Ag. Society*:—Although I am not what might be called a practical farmer, not having had the time to devote to it that I could have wished, yet having done something in that line for a considerable number of years, I feel a freedom in submitting a few experiments in the raising of produce, which may be improved upon by those better calculated, have more time, and are more devoted to the business of farming than I am. But to proceed to the experiments. Having purchased a small tract of poor land, near Wilmington, Delaware, which was overrun with the Daisy, (or Richardson's Pink,) and wishing to eradicate that pernicious weed as early as possible, I determined to work the ground hard, by a quick rotation of crops, taking care to lime and manure in proportion. After progressing in this way for a few years, it occurred to me that it might be worth while to ascertain the amount raised, and the value per acre, by the process I had adopted. The first lot of ten acres was treated as follows. In the fall I put on twenty-six loads of barn-yard manure to the acre, spread it evenly, and ploughed it in: after which it was well harrowed, and so left until spring, when it was again twice harrowed; the last time crosswise. It was then run out as near north and south as the field would admit of, and planted in drill, as follows, the first two rows three feet apart, the third row

seven feet; the next three feet, and so on, alternately through the field. The object in planting every other row seven feet apart, was, that it might have all the advantage of sun and air—but not wishing to lose too much ground, by planting so wide apart, I planted a row of potatoes in each seven foot space—the produce as follows: 500 bushels corn, at 60 cents, $300; and 500 bushels potatoes, sold at 50 cents, (exclusive of small ones,) $250. The corn was cut off in the fall, and shocked in the field, and the ground sown with wheat, (except where the shocks stood,) which was sown in the spring with millet. The produce was 300 bushels wheat, at $1 10 cents, $330. Millet, 4 tons, with the seed, worth $16 per ton, $64. Directly after harvest the wheat stubble was ploughed in, and part of the field sown with turneps; the other part with buckwheat—produce 200 bushels buckwheat, which sold at 50 cents, $100; and 600 bushels turneps, fed to the cattle, at say 25 cents per bushel, $150; in all, $1194, independent of straw, fodder, &c. The field was then manured, and laid down in wheat, and sown with grass seed. The next experiment was on an adjoining lot of ten and a half acres, manured and tilled as the first, and planted in rows five feet apart one way, and two feet the other, and not exceeding three stalks in the hill, more frequently one and two; produce eighty bushels to the acre, at 75 cents per bushel, $630. The next spring it was ploughed, and planted in potatoes, in rows six feet apart, and manured in the row. I then struck out between the rows of potatoes, and planted corn two feet apart as above—the corn had no manure—produce as follows: 500 bushels sound corn, sold at 80 cents, $400; 1500 bushels potatoes, sold from 30 to 37½ cents, say 35 cents per bushel, $525. The seasons of 1835 and 1837 were unfavorable for corn with us, and it ripened late. Part of the above field is in with wheat, sown in the fall, with a light dressing of compost—the residue in spring wheat, without manure; both look well. In endeavoring to be as brief as possible, I am apprehensive I have not been sufficiently explicit to be clearly understood. Thy friend,

EDWARD TATNALL.

The smaller the drink, the clearer the head, and the cooler the blood: which are great benefits in temper and business.

In all debates let truth be thy aim, not victory, or an unjust interest: and endeavor to gain, rather than to expose thy antagonist.

The country is both the philosopher's garden and library, in which he reads and contemplates the power, wisdom, and goodness of God.

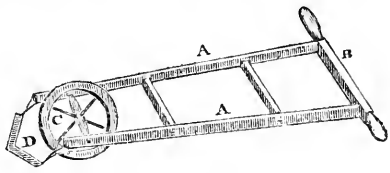


Fig. 69.

For the Farmers' Cabinet.

Implement for dressing Ruta Baga.

Friend Libby:—As the season for planting the Ruta Baga is now at hand, I send a drawing of an implement I made, and put in operation last year, for dressing them, while small, which, has received the name of the "*Hoe-ta-bagga.*" A A are two handles, six and a half feet long, made of one inch oak strips, two inches wide, and one foot apart, with the transverse handle B fastened on their ends, and by which the person using the machine propels it. C, a wheel eleven inches diameter, on which it is driven forward, the axis inserted five inches from the end of the handles: D, the cutter, made of steel, two inches wide, welded on iron shanks, which rise at such an angle to the handles on which they are bolted, as will bring the handle B nearly breast high to a man of ordinary height, the hoe having a very slight dip towards the earth.

The principle is that of the "German Scuffle." But the addition of the wheel, and lancet cutter, enables a man to go over one and a-half to two acres per day, with ease—rows two feet apart. I have dressed my sugar beets with it twice this season, and have no reason to complain of its operation. The highly respectable editor of the "Genesee Farmer," (who is good authority in such matters,) says, the Ruta Baga, planted in rows sixteen inches apart, and kept clear of weeds by the hand hoe, will yield nearly twice the quantity per acre as if planted thirty inches apart, and tended in the usual manner. Acting on this suggestion, I shall manure my patch on the surface, plough it under eight inches deep, harrow well, drill sixteen inches apart, thin the plants to sixteen inches in the rows, and cultivate exclusively with the Hoe-ta-bagga." This machine may be made at an expense of about two dollars.

Respectfully, &c.

M. S. KIRKBRIDE.

Morrisville, 7th mo. 2d, 1838.

Gleanings for the Farmers' Cabinet.

Budding or Inoculation.

Stone fruit, such as plums, peaches, and cherries, are more easily propagated by budding than grafting, as they throw out gum, which frequently prevents success in grafting. July and August are generally consi-

dered the best months for budding. The former is the most suitable season, as the trees are then in a more growing state, and buds inserted in thrifty trees succeed the best. A cloudy day, or an early or late hour, is the best time for budding, as the buds will then suffer less in being separated from the shoot. —*Yankee Farmer.*

Budding should never be done when the trees are covered with moisture, as it would then be difficult to prevent its swelling the bud, and thus prevent its adhering. Care should also be taken that the ligature be not bound round the stock too tightly, especially if the stock be young and tender; and that it be removed as soon as it begins to cut into the bark. There are some buds, such, for instance, as the peach, which are very liable to be killed by the winter. The danger of this may be avoided, by observing on the tree whence the shoots are taken, what buds of last year's growth have withstood the winter —these will be found to be such as grow on the most thrifty shoots, and which were earliest formed in the season. Such are, therefore, to be selected in budding, as the same buds which remain uninjured upon the tree, will remain unhurt when inserted into stocks. —*Genesee Farmer.*

"The only implement necessary is a budding knife, (fig. 70,) and the only preparation some bass matting, or the inner bark of the basswood or linden.

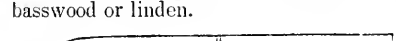


Fig. 70.

Professor Thouin enumerates twenty species or varieties of grafting, most of which are only practised by amateurs and professional gardeners. We shall describe only the common mode, which is in general practice in nurseries. We take it from the Encyclopedia of Gardening.

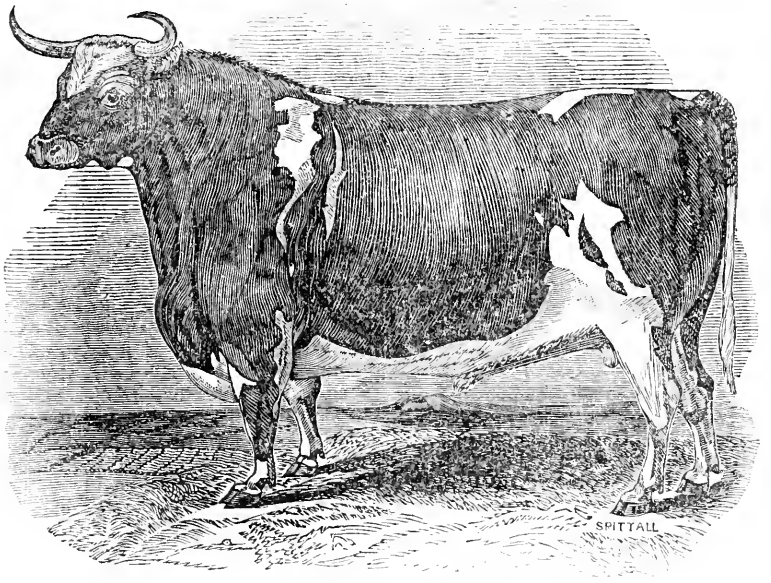
Shield-budding, or T budding, is thus performed:—Fix on a smooth part of the side of the stock, rather from than towards the sun, and of a height depending, as in grafting, on whether dwarf, half, or whole standard trees are desired; then, with the budding knife, make a horizontal cut across the rind, quite through to the firm wood; from the middle of this transverse cut, make a slit downward, perpendicularly, an inch or more long, going also quite through to the wood. This done, proceed with all expedition to take off a bud; holding the cutting, or scion, in one hand, with the thickest end outward, and with the knife in the other hand, enter it about half an inch or more below a bud, cutting nearly half way into the wood of the shoot, continuing it with one clear slanting cut, about half an inch or more above the bud, so deep as to take a part of the wood along with it, the whole about an inch and a half long; (*a* fig. 57,) then directly with the thumb and finger, or point of the knife, clip off the woody part remaining to the bud; which done, observe whether the eye or germ of the bud remains perfect; if not, and a little hole appears in that part, it is improper, or, as gardeners express it, the bud has lost its root, and another must be prepared. This done, placing the back part of the bud or shield between your lips, expeditiously, with the flat haft of the knife, separate the back of the stock on each side of the perpendicular cut, clear to the wood, (*c*) for the admission of the bud, which directly slip down, close between the wood and bark, to the bottom of the slit,(*d.*) The next operation is to cut off the top part of the shield,(*b*) even with the horizontal first made cut, in order to let it completely into its place, and to join exactly the upper edge of the shield with the transverse cut, that the descending sap may immediately enter the back of the shield, and protrude granulated matter between it and the wood, so as to effect a living union. The parts are now to be immediately bound round with a ligament of fresh bass,(*e*) previously soaked in water, to render it pliable and tough, beginning a little below the bottom of the perpendicular slit, proceeding upward closely round every part, except just round the eye of the bud, and continue it a little above the horizontal cut, not too tight, but just sufficient to keep the whole close, and exclude the air, sun and wet.

Fig. 71.

Future Treatment.—In a fortnight at farthest, after budding, such as have adhered may be known by their fresh appearance at the eye; and in three weeks, all those which have succeeded will be firmly united with the stock, and the parts being somewhat swelled in some species, the bandage must be loosened, and a week or two afterwards finally removed. The shield and bud now swell in common with the other parts of the stock; and nothing more requires to be done till spring, when, just before the rising of the sap, they are to be headed down close to the bud, by an oblique cut, terminating about an eighth or quarter of an inch above the shield. In some cases, however, as in grafting, a few inches of the stalk is left for the first season, and the young shoot tied to it for protection from the winds."

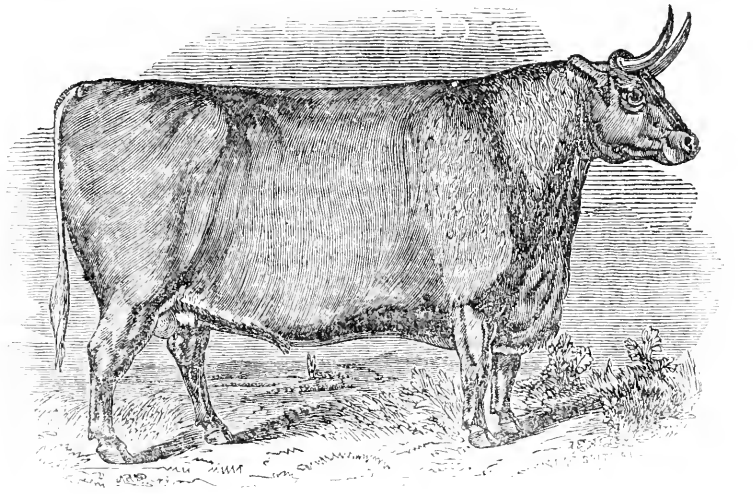
☞ The reader is referred to pages 88, 89, and 90, of the present volume of the Cabinet, for an interesting and valuable treatise on Grafting, Budding, &c.

The New Jersey Mammoth Oxen.



Duke of Gloucester.—Fig. 72.

We have the pleasure of presenting to our readers striking portraits of the celebrated mammoth oxen, raised by EDWARD TONKIN, near Woodbury, Gloucester county, New Jersey. These extraordinary animals have attracted great attention. They are eight years old this month. They received nothing more than ordinary treatment, until they were past three years, and subsequently, though stall fed, no unusual pains have been bestowed upon them. They were sold during the last winter, to some gentlemen in Washington city, for the sum of three thousand five hundred dollars; at which time their weight was as follows:



Earl of Jersey.—Fig. 73.

The Earl of Jersey, *three thousand and forty pounds*:—The Duke of Gloucester, *three thousand and forty-two pounds.* They have not yet been slaughtered. These justly celebrated

oxen are an honor to Mr. Tonkin, the state in which they were raised, and the country at large. They are of the short-horned Durham, crossed with the American native breed, and are descendants of the celebrated Comet. Their sire was imported into this country by Dr. J. Y. Clarke, in 1827. Mr. Tonkin, we understand, has now from fifty to sixty head of cattle of all degrees, from the full blooded down—among which are twelve noble bulls, which he will dispose of at moderate prices, to such farmers as are disposed to possess themselves of such superior cattle. All of them are in fine condition, and many of them bid fair to rival those superior animals whose portraits we now give to our readers. We may well say, America against the world!

For the Farmers' Cabinet.

Colic in Horses.

Horses that are afflicted with colic may be speedily relieved by drenching them with about a quart of common salt and water, made as strong of the salt as possible. It will also afford relief in cases of the botts, and the symptoms of the two diseases are often so similar that it is not easy to distinguish them. It is always safest to avoid the administration of medicines, the qualities and powers of which we are ignorant. A. B.

Horticultural Society.

The Monthly Meeting of the Pennsylvania Horticultural Society was held on Tuesday, the 19th of June, in the Hall under the Atheneum, the President in the chair.

The Committee on Vegetables awarded the premium of Three Dollars to Mr. Chalmers, Senr., gardener to Mrs. Slot, Turner's Lane, for 6 heads of early cabbage, grown in the open ground, at the Society's intermediate meeting of the 30th of May; no competitor.

The Committee on Plants and Flowers awarded the premium for the best display of plants in pots that evening, to Mr. Chalmers, Senr., who exhibited Crassula Coccinea, Ixora Coccinea, Gloxerea Speciosa G. Clandida, Ornithogolum Neveum, Trachelium Coerulea, Begonio Insignis, Tuchia Globasa, Vinca Rosa, V. Abba, Pelargoniums of various sorts, Ardesea Crenulata, Myrlus Plenoflora, Ajuga Orientalis, Tabernoe Mentana, Lychnis Coronarium, Carnation, Pleroma Hetromalis, Lautana Speciosa, and Gnaphalium Luceda.

The premium for the best 6 pinks was awarded to Mr. Hobson, Kingsessing; no competitor.

The premium for the 12 best varieties of garden roses was awarded to Robert Buist, who exhibited Reine Caroline, Shell Rose, Fairy Parasole, Royal Portugal, Broomley Rose, Unique White, Queen of Violets, White Moss, Cabbage Provens, La Negress Moss, and Brown's Superb; no competition.

The premium for the best Bouquet was awarded to Mr. Chalmers, Senr., gardener to Mrs. Slot, Turner's Lane; three competitors.

Likewise an honorary premium of Two Dollars to John Sherwood, Laurel Hill. Mr. S. exhibited a fine Sedum, name unknown.

The Committee on Vegetables awarded the following premiums, viz.: for the best early Lettuce, not less than 8 heads, grown in Pennsylvania in the open ground, to Robt. Meston, gardener to Mrs. Roland. For the best early Beets, grown in New Jersey, not less than one dozen roots, to George Reid, gardener to Henry C. Carey, Burlington. For the best early Beets, grown in Pennsylvania, not less than one dozen roots, to Jas. Beadle, gardener to Mr. Norris, Turner's Lane. For the best Artichokes, not less than 6 in number, to Mr. Chalmers, Senr., gardener to Mrs. Slot, Turner's Lane. For the best early Potatoes, grown in the open ground in Pennsylvania, not less than half a peck, to George Esher, Ridge Road. And for the best Bush Beans, grown in New Jersey, not less than half a peck, to Adam Price, Burlington.

The Committee on Fruit awarded an honorary premium of Three Dollars to Mr. Chalmers, Senr., gardener to Mrs. Slot, Turner's Lane, for three quarts of Keen's seedling Strawberries. And an honorary premium of Three Dollars to John Smith, gardener to Nicholas Biddle, Esq., for a very superior and uncommon display of Grapes.

McKenzee and Buchanan exhibited Gloxinea Grandiflora, G. Speciosa, G. Candeda, Fuchea Globosa Magor, Calceolaria Integrefolia, Pelargoniums, Lord Denham, Wheelerii, Diomede, Adeline, Hericarteancum, Purphurea Coernla and Superbessenia. The Arove Pelargoniums ever cut flowers.

James Beadle exhibited Lettuce, Early Cabbage, Red Turnep Beets, Asparagus, and Cucumbers.

Mr. Chalmers, Senr., Turner's Lane, exhibited Early Cabbage, Red Turnep Beets, Artichokes, Lettuce, Tomatoes, and three quarts of Keen's Seedling Strawberries.

Thomas Allen, Burlington county, N. J., exhibited some very fine Seedling Cranberries, of last year's growth, in very good condition.

Robt. Buist exhibited some very fine Rhubarb.

It is a laudable ambition in our practical gardeners and amateurs to strive for the prizes at our Monthly Meetings, not for the pecuniary item that is awarded, but the honor in producing the best article in competition.

The meeting, although not so interesting as the last in number of fine exotics, yet those exhibited were fine specimens, and in good order. The hardy garden roses of Mr. Buist were very fine, and many of them new to us. The flowers were large and well formed, notwithstanding the great heat, and we may congratulate ourselves in an accession of some of the most superior Roses in the country, and well worth the attention of every lover of that most exquisite of all flowers. The Gloxinia Grandiflora, as the name implies, has a large pale blue flower, very showey, and a very free flower, and is a new plant to us.

The fine appearance of Mr. Biddle's grapes, espccially the Black Hamburg, exceeded any thing of the kind we have ever seen for the size of the grape as well as the bunches. They were merely a specimen of what his fine grapery can produce. It is certainly a desideratum for the infirm in health and convalescent to have in command, at all times, such delicate and sanitive morceaus. The vegetables were good considering the backward spring. Mr. Chalmers' strawberries were uncommonly fine; after seeing them we are surprised the more common kinds should continue to be cultivated.

G. Watson, *Rec'g Sect'ry.*

Philadelphia, June 29, 1838.

A New and Improved Portable Horse Power and Threshing Machine.

Having obtained letters patent, bearing date February 6th, 1838, for an improvement on a Portable Horse Power, for propelling Threshing Machines, Clover Mills, small Grist Mills, &c., the subscriber takes this method of informing the public, that he will be prepared to supply all orders at the shortest notice. The superiority over other machines, consists in ease of operation, durability and simplicity. Being constructed principally of iron, both Horse Power and Thresher, the bearings being surrounded with oil cups which retain oil sufficient for one day, without replenishing, supercedes the necessity of hourly application of oil, which renders other machinery so liable to injury from neglect, and hazardous to those who may superintend them, consequently produced by applying oil during the operation, or from a neglect of its mechanical construction. The vertical and horizontal bearings are supplied with oil by nutrition and capillary, which is a great saving of oil, and prevents them from becoming dry and injuring the machine, which is so detrimental to other machinery. The Horse Power occupies the space of 3 feet by 3 feet six inches, which contains the moving machinery. This machine will thresh all kinds of grain; it also answers the purpose of cleaning clover seed, and with my late improvement is far superior to my former machines. This machine can be transported in a common cart or wagon, without any inconvenience. A further description is deemed unnecessary, as those who would wish to purchase will call and examine for themselves. The subscriber has constantly on hand the above described machines at his manufactory, north of Brandywine village, Del., where orders will be received and the machines sent to any part of the neighboring states. Hundreds of certificates can be produced that it is superior to any thing of the kind they have yet seen.

References to the superiority of this machine may be had in the surrounding counties of Philadelphia, Montgomery, Delaware, Chester, and Lancaster, Pa.; New Castle, Kent, and Sussex, Del.; and Cecil, Kent, and Hartford, Md.; Salem, Cumberland, Gloucester, and Burlington, N. J., where these machines have been justly celebrated and given entire satisfaction. Jesse Urmy.

P. S.—Corn Shellers made to order of the latest improvement. Also, repairing Horse Power, will be attended to with fidelity and despatch, at his manufactory, north side of the Brandywine, near Wilmington.

Wilmington, June 23d, 1838.

Farmer's Work for August.

BY FREDERICK BUTLER.

We suppose that your harvest is housed, your late potatoes are planted, and your turneps are generally sown. Your late haying, and your oats, now claim your particular attention. Proceed with your late haying as with your English and timothy; if you gather it in a careless and slovenly manner, and suffer it to be exposed to the rains, as being of little value, and not worth a careful expense, it will repay you in your own way, and will become truly of little value; but if you collect and house it with proper attention, it will be the more valuable, and will repay you with interest. Be sure to finish before the 20th of August.

OATS.

Watch your oats, as you have done your English harvest; cut them when the straw is partially green, and as soon as the oat has formed into a consistence. The grain will be better, the straw more valuable for feeding, and a handsome saving in the shelling; but when you house them, use a little more caution than with your grain, in ventilating your mows; the oats will pack closer, and be in more danger of heating, than your grain.

POTATOES.

Your haying being closed; your oat har-

vest secured; your cross-ploughing finished; your early-planted potatoes will now claim your attention. Your white and yellow potatoes are first ripe; take them before the vine is entirely dead, and haul them out of the rows with a three-tined hook-fork, (see page 374:) in this state they will generally adhere to the vines, and by one stroke of the fork they will be readily cleared; but if you suffer your potatoes to stand until your vines are dead, the coats of the yellow and white potatoes will soon begin to run and grow defective; they will also sever from the vines, and the expense of digging with the hoe, nearly, or quite doubled. To save expense and labor, is ready money in all business; but in farming, it is ready money with interest, because it saves time, which is more valuable to the farmer, who is engaged about his farm, than money. I can say from my own knowledge, that one man, with such a fork as above, can throw out of the row, after two hoeings, and when the vines are partly green, more than 100 bushels of potatoes in a day; but how many the same man could dig with the hoe in the same time, I have no knowledge.

Your potatoes should be gathered and housed, as soon as dry, to preserve them from injury from cattle and the weather. Your early potatoes generally command a good market, and a fair price; but one of your best markets is your hog-stye. The value of this root, when boiled and mixed with bran, corn, or oat-meal, and given to hogs to bring them forward to fatten, may be fairly estimated at 35 or 50 cents the bushel.

Gather your potato vines, coarse hay, and stout stubble, and fill your hog-pens. Cart in turf, and other rich earths, and cover the vegetables in your hog-pens; the great heat, and warm rains in dog-days, will bring your manure forward fast. Spare neither time nor expense; it will prove a rich mine.

FLAX AND HEMP.

Your flax next claims your attention; this, if you design it for the nicest domestic manufacture, you will pull when the blossoms begin to turn and fall off, after the Irish method, and rot it in water, after the manner prescribed below for rotting hemp. If you let it stand for seed, observe when the stalk begins to turn, and the under leaves fall off, then pull your flax, and, in both methods, bind up as you pull, in small bundles, and set up your bundles in small bunches to dry; or spread it upon the ground for several days, if the weather is good, and then bind and stack against the rains, in long stacks, with the buts or roots out, and cover your stacks carefully with loose flax that will shed off the rains, or your flax will be injured: the better way is to house your flax as soon as dried as carefully as you have done your harvest. You may rot it in the water, or dew rot it, by spreading it upon your grass grounds in September, after the seed is carefully beat off by the flail, in the usual way of threshing, or beat off by hand, by whipping each sheaf across a barrel, or some other permanent body, such as a flax or hemp brake, &c. The seed, when cleaned, is valuable, either for the home, or foreign market, and commands a fair price, and good pay. No time can be fixed for rotting your flax, either in the water, or on the grass; both depend upon the warmth of the weather, and the latter upon the moisture of the season.* The success of your crop depends very much upon a suitable rot; to obtain this, you must frequently dry a handful, and try it in your brake, and when the rot is perfect, lose no time in turning again your flax, to dry and take up; and when dried, lose no time in housing it; the least delay may expose it to a rain, at this season of the year; this, if the weather is warm, or if cold and long, will injure, if not ruin your crop, the same is equally true with your hemp.

HEMP.

Next to your flax, your hemp claims your attention; this requires a process somewhat different. When you observe the under leaves upon your male hemp begin to turn yellow and fall off, after the period of blossoming is over, divide off your hemp-fields into rows, 4, 5, or 6 feet wide, by pulling up the hemp clean, in alleys of two feet wide, in the intermediate spaces; bind up the hemp as you pull, and carry it out and set it up to dry 10, 15, or 20 bundles in each bunch, and house it as soon as it will answer, without heating. You may then go on to pull out the male hemp from the female, (which bears the seed,) by passing in the alleys and reaching into the rows and pulling up each male stalk separately; bind, and carry out, and stack as before, until you have separated the male from the female hemp; house when dry as before. After 10 or 15 days, when the burs in your seed-hemp begin to open, and the black seeds appear, lose no time in pulling, binding, and stacking your hemp, as before; the hemp-birds will become numerous and busy in quest of seed; your hemp will shell, and your loss will be great. In binding your hemp, select two spires of the shortest of the best coated hemp for bands; for if you use the short undergrowth, which has but a thin coat, your bands will fail you in rotting, and your hemp will suffer waste by

* When you rot flax in the water, a pond or pit answers best; this confined water renders the flax soft, but will not answer for hemp.

becoming loose, besides the difficulty, trouble, and expense of binding over again your bundles when wet and heavy. When you are ready to put your hemp into water, say about the first of October, (which should always be in some river, or brook, where the water changes often, and not in a pond, or any stagnant water; this will become foul and putrid, and the stench so great that few persons can be found to draw your hemp,) you may thresh off the seed with a flail, as in flax, or hold a bundle with one hand across a flax, or hemp-brake, and whip out the seed with a hand-staff, upon a tight floor: the seed is valuable for the same purposes as your flax-seed, either for the home consumption, or a foreign market. The rotting of your hemp is also critical, like your flax, and must be watched and tried, when dried, in the same manner. If you draw your hemp from the water in October, or even in November, and the weather proves warm, it will over-rot before it can dry in the bundle; you must spread and dry it as soon as possible, and house it for the winter; but if the weather should be cold, you may set up your hemp across your fences; and if it gets dry before the frosts of winter set in, house it as before; if not, and your bundles become frozen, you may let them stand over the winter, and house and dress in March, or dress from the field as they stand. The difference between the dressing of your hemp and flax, is this; your hemp-brake must be about twice the size of your flax-brake in all its proportions, for the first breaking; and then if it is run through a flax-brake for a second braking, it will greatly expedite the swingling. Your swingling-knife must be about half the length of the flax-knife; the swingling-board about 4 or 5 feet high. The shives must be separated from the hemp by stroking gently with your knife instead of whipping with a full stroke, as in flax, and by gently shaking the hemp, between the strokes, and all without the hatchel, as in flax. There is a great slight in dressing hemp; an expert hand will swingle clean about 100lbs. per day. When your hemp is dressed, it must be bound up in bunches of 20 or 30lbs. each, and then it is ready for market.

Hemp is a great exhauster of soil; requires the strongest lands and richest manures, in great quantity; requires also, much labor, and is, of course, an unprofitable crop in our country. In time of war it has proved profitable, and may become so again; of course its mode of culture should be correctly understood. Your hemp, as well as flax grounds, should be turned up into ridges in autumn; the ridges should be levelled with the plough in the spring, as soon as the frost will admit; your ground then dressed with 10, 15, or 20 loads of your best manures, well spread and covered with the plough, your furrows smoothed gently with the harrow, and your seed, say from 2 to 3 bushels to the acre, sown early in May, and covered lightly with the harrow. If you sow on the furrows, and cover deep with the harrow, or sow on a stiff soil, your hemp will pull very hard.

SUMMER FALLOWING.

This is one of the most important branches of good farming, and upon which has arisen a great variety of opinion and practice. Some farmers are of opinion that the ploughings for a summer fallow cannot be too frequent, and that all *fallow crops* are injurious to the land, and particularly to the succeeding crops. Others consider all naked fallows as a waste of expense without any adequate benefit, and insist upon some fallow crops, either of turneps, to be fed off by sheep, or of potatoes, to be dug for stock, or of buckwheat, or clover, to be ploughed in as a fertilizing crop. Both probably are in an error, and run into the opposite extremes. A strong stiff clay, or a hard gravelly soil, cannot be ploughed too often for a fallow; but a loose sandy soil may be greatly injured by too frequent ploughings. The latter may be tilled to advantage with a potato fallow; and the former by a turnep fallow, to be fed off by sheep; or after several ploughings, with the fertilizing fallows of buckwheat, ploughed in: but a rough stony soil cannot be tilled with a fallow crop to advantage; this land, and perhaps this only, requires a naked summer fallow. The great advantages to be derived from a summer fallow are these:

1. Frequent ploughings destroy the herbage upon the fallows, and the roots and seeds of herbage, and thus render the grounds clean for the following crops.

2. This is greatly promoted by a potato fallow, both in hoeing and digging,

3. The plough renders the earth light and mellow, to receive the seed when sown, and to admit the extension of the roots of the grain when it vegetates.

4. At each ploughing it changes the soil, and exposes a new surface to receive the benefits of the sun, air, rains, and dews with their fertilizing powers.

5. It renders the earth light and pervious for the admission of the sun, air, rains, and dews, and opens a free circulation for them to the roots of the grain, (or plants, whatever,) and thus they impart their fertilizing properties to the vital principles of the crop you cultivate.

6. The green fallow, when ploughed in, as well as the potato fallow, greatly promote this benefit by meliorating the soil. Upon this principle the plough, with the fertilizing

crops, upon a summer fallow, are the only substitute for manure under tillage; because the effects are the same, with this exception, that the meliorating effects arising from the fermentation of strong manures, are both greater for the time, and more permanent and lasting. The manure, also, will continue to assist the plough in meliorating the soil for after crops, by causing a new fermentation upon every new exposure of surface to the air, until the strength of the manure is wholly exhausted. Hence again, the value of your potato fallow to increase your number of stock, and quantity of manure.

Work in the Garden.

JULY.

You may continue to plant the white potato until the 20th, on rich ground. Continue to sow broccoli. Continue your transplanting, particularly your celery, and in the following manner. Dig your trenches one foot wide, and one foot deep, or more, if on a warm soil, and of any length you may choose; lay the earth upon both sides of the trench; then dig up the bottom of the trench 5 or 6 inches deep with a dung-fork, and manure at the same time, with rich hog, or horse-dung, or compost. Set your plants in the trenches (in the centre) about 5 or 6 inches asunder; earth up the plants as they continue to grow, from both sides of the tops of the trenches, until they are even with the surface of the earth, then continue to earth up your plants as they continue to grow, say 10, 15, or 20 inches above the surface, until they have acquired their height; be careful not to bury the plants at any time.

Pull rareripes, garlics, and even late onions, as they come forward and ripen; house them in dry weather, and bunch such as you choose to keep for use.

Continue to watch your vines, and destroy worms, bugs, &c. Continue to nurse your plants with the hoe in the morning; this must not be omitted, until the frosts and snows come. Your garden should be as free from weeds as your drawing-room. Continue to sow ruta baga, turneps, &c. Continue to clip your strawberries.

AUGUST.

Continue to transplant late cabbages, broccoli, ruta baga, celery, &c. Continue to gather seeds as they ripen, and dry them carefully; see to such seed-peas as were not gathered last month, and plant a new crop for autumn. Continue to pull late onions. Continue your hoeing in the morning when the dew is on. Let me repeat it, this is the best way of watering and manuring, unless it becomes very dry, a little water may then become necessary early in the morning, or at evening, upon a dry soil. Continue to earth up your celery, and nurse such potatoes as are not fit to dig. Dig such as are ripe, or have dead vines. Begin to sow turneps for winter's use, and transplant your ruta baga on to your early pea and potato ground, in rows 4 feet asunder, as before directed. In digging your ground, leave an open trench at each 4 feet distance; manure in these trenches plentifully, with rich manure; cover it with earth, and set your roots over the manure when the earth is fresh dug; keep your plants clean with the hoe.

For the Farmers' Cabinet.

Correction.

Dear Sir:—The writer of the article on Marl, at page 335 of your last number, has ascribed the credit of making the first analysis of the green sand marl to "the late Dr. H. Seybert." This is an error, which I wish to correct, by informing you that the merit, so far as I know, of making the first accurate analysis of this important mineral, and showing it to contain a large proportion of potash, belongs to Mr. Henry Seybert, a gentleman now residing in our city. The analysis furnished at the page referred to, is precisely the same as that communicated by Mr. Seybert, in May, 1822, to the Philadelphia Society for Promoting Agriculture, and published, in detail, in the fifth volume of their Transactions, (pages 18, &c.) E.

[Mr. Henry Seybert, the gentleman alluded to, is the son of the late Dr. Adam Seybert, author of the Statistical Annals, &c., of the United States.]

For the Farmers' Cabinet.

Hoven Cattle.

Don't kill if you can't cure.

A very simple remedy for relieving cattle that have eaten too much succulent clover or grass, consists in making a band of straw, and putting it in the animal's mouth, and passing the ends up over the head, and making it fast behind the horns. The animal will immediately begin to *chew* the band in order to remove it, and, this process going on, will soon bring up the cud from the first stomach, and will give relief, provided the animal is kept in motion, and the disease has not advanced too far to be curable by simple means. This plan has often been resorted to with success, though it is believed it is not generally known. A. B.

The ancients, by labor, prevented luxury in their young people, till wisdom and philosophy taught them to despise it.

Truth never lost ground by inquiry, because she is, most of all, reasonable.

Sense shines with the greatest beauty when it is set in humility.

For the Farmers' Cabinet.

Wood House.

Never burn wet wood when you can get dry.
MY WIFE.

Wood for family use ought to be cut the winter before it is intended to be used as fuel, so that it may be thoroughly seasoned. The advantages derived from the use of well seasoned and dry wood, over that which is green or wet, are many, and the economy and pleasantness derived from its use cannot have escaped the most superficial observer. When wet wood is used as fuel it takes nearly one-half the heat produced by its combustion to carry off the moisture from it, and this would be accomplished with much more economy by the air and sun, which cost nothing, before it was hauled to the dwelling, and in the removal of it much animal force would be saved. The expense or trouble of cutting it in advance is nothing, but in some cases there would be a saving by it; as I have frequently known farmers driven to the necessity of leaving very urgent and important business, and turn to and cut and haul green wood for immediate use, and a poor article it was truly, as the good woman could testify when she attempted to cook the family dinner.

Green or wet wood makes much smoke, and the chimney often rebels at being oppressed with it, and sends the excess, over what it can properly discharge in the natural way, into the kitchen or parlor, as the case may be, to the great annoyance of the female part of the family; to the injury of furniture and walls; and more often spoils the cookery, to the great mortification and chagrin of the industrious housewife, who sometimes under such trying circumstances is tempted to scold, and no wonder if she does.

Appurtenant to every farm house, there should be a *wood house* or *shed*, in which should be constantly kept a sufficiency of wood, cut and split ready for current use for some weeks or months in advance. The situation of this structure should be such as to furnish convenient access to the female part of the family in all kinds of weather with the least possible exposure; and it should be considered an incumbent duty of the head of the family always to see that there was an adequate supply of dry wood, cut into suitable lengths, so as to be properly adapted to all household purposes at all seasons of the year.

Those who have practised the foregoing system, know well there is a great saving of time and expense in it, and that it adds much to the comfort and convenience of a family, and causes the domestic arrangements to proceed with more quietness and composure.

The expense of such a structure as would be required is not for a moment to be put in competition with its advantages; I therefore hope that every respectable farmer will make his arrangements accordingly, and have a *wood house* constructed before the coming winter, when the females of his family and neighborhood will

"Loudly speak his praise."

MONTGOMERY.

For the Farmers' Cabinet.

Transplanting Trees.

It is really vexatious, after procuring choice trees, either ornamental or for fruit, to lose them, by the improper management that too often occurs, even with some of our practical gardeners: sometimes it is attributable to extreme carelessness, and frequently it arises from the want of proper knowledge of the art of transplanting. The early spring of the year I deem the best time for setting out trees of all descriptions, and those taken from nurseries have a decided preference over those from the forest, where they spring up spontaneously, and grow with little more than a deep tap root. When trees are dug from the woods, they always lose part of their descending roots by the operation, leaving but very few fibres to draw nourishment from the earth, and then, forsooth, the tops must be pruned off to correspond. In such cases it would be miraculous, indeed, if they should succeed—as well might a person plant posts, with the expectation of their producing trees—and yet, small trees may sometimes be prepared in their native state, and afterwards successfully planted into other situations; but it must be done when they are young, by piercing with a sharp spade, or other instrument, about one foot under the surface, to deprive them of a part of the tap, without otherwise disturbing the plant; when, in the course of another season, they have shot out many lateral roots, and become in a proper state to be removed. In every case of transplanting, a strong stake should be driven perpendicularly into the ground, and the tree made fast to it with some soft ligature, that will not injure the bark: by this means the tree will be held firmly to its place, and the fibrous roots will have an opportunity of striking into the earth, without the danger of being broken by the waving of the winds. Care should also be observed in digging the hole, to make it exactly the depth of the roots, so that they may remain firm on the solid or compact earth; otherwise, if the soil is removed deeper than is necessary, and then filled up again with loose earth for the roots to rest on, the ground below will settle with heavy rains, and the surface be supported, or kept from settling, by the roots, while the plant remains suspended by the stake; this must inevitably leave a

hollow or cavity, that will cause its dissolution, in consequence of there not being a sufficiency of earth in contact with the roots to sustain life. The earth should be completely pulverized, and thrown on in small quantities at a time, without neglecting to give plenty of water during the filling in, for the purpose of washing or conveying the earth among all the fibres: and when the business is finished, leave the surface near the tree a little lower, for the advantage of watering, from time to time, which should not be omitted.

Sylva.

For the Farmers' Cabinet.

Butter.

The business of making butter, for sale in the market, is a primary concern with a very large proportion of farmers who reside within a reasonable distance of towns or cities, and to obtain the best price for it, is, of course, an object of much importance in this money-making age of the world. Yet it is not a little surprising that, notwithstanding every body knows how to make butter, so small a proportion of what is taken to market commands the price of a first rate article. I think it may safely be said, that not one-fourth part of it can be assumed as first rate in quality, and, of course, much the larger part of it is sold at inferior prices. This, in many cases, must be ascribed to carelessness, inattention to neatness and cleanliness, and, perhaps, in many cases, to the impurities of the cellar or milk-house in which the milk or cream is kept. The atmosphere of the apartment where milk is kept, should be entirely pure and free from all contamination. No decaying vegetables, barrels of fish, saurkraut, musty casks, or other articles which tend to render the air impure, ought to be permitted to remain in the same apartment with milk or cream. Fluids absorb the noxious vapors of the air in a remarkable degree. A pitcher of water being permitted to stand over night in a room where a segar has been smoked, in the morning will be found to be strongly impregnated with it.

It will be found to be impossible to make butter of good flavor, and of first rate quality, if the apartment in which the milk is set is not kept entirely free from all smell of what kind soever. It will receive a taint from foul air, of which it can never be divested, by any process whatever; therefore, if you desire to obtain the highest market price for your butter, keep your milk-houses and cellars as sweet and clean as your parlors, and let the exhibition of it in the market place be so perfectly neat and tidy as to attract the admiration of purchasers, and be sure never to attempt to sell a pound of butter with a segar in your mouth. S.

For the Farmer's Cabinet.

Raise more Poultry.

Since the time that Esop wrote the history of the country maid and the milk pail, poultry and eggs have not sold for a better price, or at a greater profit, than they have within these few years. This is believed to have grown out of the immense amount of traveling, which has been increased and promoted by the fleetness and cheapness of rail road cars and steamboats. But whatever may be the cause of it, it is our interest to sell an abundance of eggs and poultry, so long as we can get a good profit by it. I was pleased with the suggestion made by your correspondent Q., in the last number of the Cabinet, for feeding poultry with boiled potatoes, inasmuch as it is a cheap food, and may be always at hand. A farmer near Liverpool, England, keeps a large stock of poultry of various kinds in the same enclosure, with singular success. He has nearly an acre of land enclosed, with a close fence, about seven feet high. Within this enclosure are put up sheds for the different kinds of poultry, to secure them well from the rain, which is of great importance. There is a small stream of water which passes through the lot, to which they all have access, and they are regularly fed, three times a-day, with boiled potatoes, which is their only food, excepting what grass, insects, and worms, they pick up in their movements through the lot.

All young poultry require to be kept dry, and most old ones are the better for it, and it is said that young turkies, during their tender age, are the better for having a small quantity of red pepper occasionally mixed with their food, to stimulate their digestive organs to greater activity when they gormandize too much.

The practice of cutting up chives, garlic or onion tops, and mixing them occasionally with the food of young poultry, is well known to most good housewives, and is thought to be very serviceable in promoting their health.

K.

Pequea, Lancaster Co., June 25th, 1838.

Turnep Seeds.

We can recommend, with great confidence, our farmers who wish to procure turnep seed, of all the various varieties, to the seed store of George M. Coates, 41 Market street, where genuine seeds of all kinds may be obtained. Would it not be well for our farmers, after giving their corn a last dressing, to sow turneps among it?

Less judgment than wit, is more sail than ballast.

To the Editor of the Farmers' Cabinet.

Imported Stock.

BREED *vs.* FEED.

SIR,—Intending to spend an evening with my neighbor Simmons, I took with me the Cabinet, and read from it the accounts of sales of improved cattle. On asking him what he thought of the prices which they brought, he replied, "Fudge! I think with the great man in England, I forget his name, *that all breed goes in at the mouth*, and that the blind man was right, when, on hearing some one exclaim, there is a beautiful horse! replied, *then I am sure he is very fat!* Now there is my Bull, which people are coming far and near to see, and to talk over his fine *points*, and which gained the premium at the agricultural meeting—did any of you think him such a beauty when I bought him at a year old for $12, thin as a split rail, and being nothing but *points* from head to tail! see what breed he now exhibits! all which, I am sure, has gone in at the mouth." Now, my good friend, said I, you do not do either yourself or the animal justice: I was at you elbow when you bought him, and overheard a conversation which passed between *you and yourself* in a whisper, while running over these very *points*, which you now affect to ridicule, finishing with the remark, "with care and good keep he'll make a splendid animal." Now tell me, would you have depended upon *keep* alone, if he had been saddle-backed, crupper-rumped, cat-ham'd, knock-kneed, slab-sided, buffalo-necked, pig-eyed,—"Stop," cried he, "I am convinced, and if you will divide the honors with me, I will acknowledge that *one half breed and one half feed's the thing we need*." To this I was compelled to consent, for to speak candidly, I also had been convinced of the truth of his quaint aphorism, much as it militated against my love of high pedigree. So we agreed that blood and bone require a good coat of flesh to bring them to the standard of Hogarth's line of beauty; and more than this, that, like charity, it will hide a multitude of imperfections.

AN OLD FARMER.

To the Editor of the Farmers' Cabinet.

Roots.

SIR:—A correspondent of the Germantown Telegraph, whose article you published in the June number of the Cabinet, objects to the sugar-beet, because some of his neighbors say that it scours the cattle. Now this scouring property of the beet is one of its bright recommendations. Judiciously administered, with other food, it has a tendency to keep animals healthy, and its nutritious qualities are undisputed. One of the many facts which prove this, was related to me a few days since by a farmer of Delaware county. He said he was surprised at the increased quantity and richness of milk which his cows yielded, whilst he fed them on the sugar-beet, and they increased so much in fatness, that, when some of them which he intended for his winter beef had become dry, they were in condition to be slaughtered.

It is my happiness to hold a friendly intercourse with many of the most intelligent farmers of this vicinity, and all of them who have used the sugar-beet, as food for their cattle, agree in recommending it as a most valuable acquisition to their stock of winter provender. Several have informed me that their neighbors were not sparing in their ridicule at this innovation on the old method of farming; but prejudice is giving way to the conviction, that root culture will become the basis of good husbandry, and that any evil effects, such as over-feeding with an aperient vegetable, is to be charged to ignorance alone. As well might we object to the fruits with which providence has so abundantly blessed us! Those who partake of them voraciously, are liable to cholera and other fatal diseases—To the prudent, they are the means of preserving health, enabling them to dispense with the use of medicines.

I hope your correspondent will not be discouraged by the mistakes of his neighbors from giving the sugar-beet an experiment. He is a *root-grower*, and must be a good farmer; and while we yield all that he claims for the mangle-wurtzel and ruta baga, we will defend the sugar-beet, not only at the point of the pen, but from the deep entrenchments which will be formed of this valuable root during the next autumn, as a resource in the hour of need. M.

July 4th, 1838.

For the Farmers' Cabinet.

Anticipation.

"Bring up a child in the way he should go."

Some years since an agricultural laborer arrived in Philadelphia from England, and after making inquiry for employment, he was hired for a year by a highly respectable and intelligent farmer of the county. It was in the autumn that he entered his employer's service, where his movements were such as to indicate that he had been properly drilled in his profession. During the winter there was a prodigious snow storm, that put a stop to all operations excepting feeding the stock; after this was accomplished one morning, George asked his employer for his scythes, sickles, cradles, and rakes, and told him that he would go to work and put them in order for hay-making and harvest now when they could do nothing else. The farmer stood aghast, almost speechless, at the idea of pre-

paring tools for harvest at such an inclement and boisterous season; however, on a few minutes' reflection, he recovered himself and let George go to work at them in his *workshop and tool-house*, and before the snow-storm was over all the implements for hay and harvest were brought into fine order, and were carefully put by ready for action at a moment's notice when the proper season should arrive for their use.

Commentary on this little incident seems almost useless, as every practical farmer can see the bearing of it on his best interests; how much valuable time would be saved by thus gathering up its fragments and making them available for the most important purposes. What an example this for our sons! Boys brought up in the midst of such doings as this could scarcely be otherwise than industrious and thrifty. George deserves a medal, but he will earn one; he will be rich if he lives, and have the command of a farm of his own, for he "takes time by the forelock."

Germantown.

BURDON'S EXCELLENT OINTMENT.

Yellow Rosin, the size of a hen's egg, to be melted in an earthen pot over a slow fire, to which add the same quantity of beeswax. When melted, add half a pound of hog's lard, and when that is dissolved add two ounces of honey and half a pound of common turpentine, and keep gently boiling a few minutes, stirring all the time. Take it off the fire, and when it has cooled a little, stir into it two ounces of verdigris finely powdered, then give the whole a few minutes gentle boiling, and pour through a seive for use. Nothing takes fire out of a burn or scald in human flesh so soon as this ointment.

I would suggest, that no store in a newly settled district ought to be without a plentiful supply of the above ointment for sale; it is equally good for cuts and bruises and putrifying sores, and might be denominated with propriety, *the universal remedy.*

James Pedder.

For the Farmers' Cabinet.

The Prong or Potato Hoe.

This is one of the most useful, simple, and improved implements that is employed in gardening. It is constructed with four flat prongs, sharp on the edges, with openings between them. It was made and used in the first instance for digging potatoes, facilitating in drawing out the roots and leaving the earth behind: but it was soon discovered to be a first rate article for loosening the soil around plants and young trees, and in fact for performing all the operations in the garden which the cultivator or hoe-harrow does in the corn field. It pulverizes the soil and cuts up the weeds without drawing the earth into heaps. It is excellent for forming beds for cucumbers, melons, &c., and for working between rows of vegetables. Those who have had them in use think they can't well be appreciated too highly.

Every farmer should be well supplied with an assortment of garden tools of the best quality, light and sharp, so that they can be used with pleasure and profit by females and children.

Adam.

THE FARMERS' CABINET.

JULY 16, 1838.

☞ Several communications of interest have been unavoidably deferred. They will appear in our next No. Correspondents will please accept our thanks for the communications with which they have favored us, and they are hereby most respectfully requested to continue to forward us such articles as may be deemed of interest to our readers. We are anxious to receive communications as early in the month as possible.

To our Patrons.

According to a notice given in our last, the Farmers' Cabinet will be discontinued to all whose subscription expires with the present number, which closes the second volume.—Several hundreds have ordered the work to be continued—many, especially at a distance, have paid several years in advance—and we are satisfied that all, that the great mass of our subscribers require is only an *opportunity* of renewing their subscriptions. Those who can make it convenient to pay their subscriptions at the office, are requested to do so. Those who do not visit the city, may remit by their neighbors when convenient, or pay over the amount to our agents, traveling or local, or to any postmaster willing to receive it and receipt for the same, as all postmasters are authorized and respectfully requested to act as agents for the Farmers' Cabinet—and any gentleman may constitute himself a *special* agent by forwarding five dollars, free of postage, for which *seven* copies will be sent as he may direct, for one year.

The Second Volume

Of the Farmers' Cabinet may be obtained at the office, half bound, in a neat and substantial manner. Price one dollar and a quarter.

☞ A few copies of the first volume can be furnished at the same price.

Binding.

Subscribers are informed that we have made arrangements by which their numbers,

if left at this office, can be bound at twenty-five cents per volume.

Treatise on Wheat.

A gentleman of this city has placed in our hands a copy of Le Couteur's celebrated and valuable "Treatise on Wheat," the republication of which (with the illustrations) we shall commence in the first number of our third volume. To wheat growers this work is one of great value. It is divided into the following chapters:—1. Wheat, its origin and varieties—2. Faults in ordinary practice—3. On the choice of Seed—4. A first comparative experiment—5. On the roots and growth of Wheat—6. On the necessity of preserving crops pure—7. On meal and bread—8. On manure for Wheat—9. On a change and choice of seed—10. On the tendency of wheat to degenerate—11. On the disposition of wheat to sport—12. On the early habits of some varieties—13. On the properties of some varieties—14. Classification—15. On the relative advantages of the drill or broad cast system—16. Result—17. Conclusion.

Ice Houses.

One of our worthy subscribers, S. W., requests to be informed through the columns of the Cabinet, as to the best plan of building ice houses; the most suitable situation, &c. &c. Who will answer in season for our August number?

Letter from a Subscriber to the Farmers' Cabinet.

Having been a subscriber for seven copies of the Farmers' Cabinet from its first publication, I now forward to you five dollars in payment, in advance, for seven copies of the third volume. Your instructive periodical I should not be willing to do without, for I esteem it amongst the most valuable and useful publications issued from the press in this country, and it is certainly one of the very cheapest. There is nothing in it that can do injury to any one; but, on the contrary, we find on every page much to instruct, animate, and amuse us. You may perhaps wonder what I can do with so many copies. Now I will condescend to inform you; and as I have not taken out a patent for my invention of the mode of disposing of them, any of your patrons who may choose to do much good in the world, at little cost, may adopt the same plan, without any infringement of my rights or privileges.

I first of all serve myself, as charity still continues to begin at home, by having one copy duly stitched and put on file, ready for reading, and being in order for binding at the end of the year.

In the next place, I distribute the remaining six copies regularly every month when they come to hand, to as many farmers, for the use of themselves and their children; and a very great benefit truly has been derived from it to all of us, as well as to those to whom it has from time to time been loaned.

I consider the investment of this annual sum of five dollars as producing a much greater interest than any investment I have ever before made; and I doubt not but this paltry five dollars which I forward you will be the mother of at least five hundred dollars by the end of a twelve month from this time. I don't say this to make you proud, for that would spoil all, but to animate and stimulate you to still greater exertions to beautify and enrich your already most invaluable little sheet—the "Farmers' Cabinet." J. B.

June 28th, 1838.

[The writer of the above is a gentleman of great intelligence, who takes as lively an interest in the advancement of agricultural knowledge, and the diffusion of sound intelligence among the people, as any other individual in our country. And he not only professes to feel thus, but he *acts* out his profession. In a word, he is a *practical man;* and he has set, not only in this, but in many other matters, an example worthy the imitation of others. It is very gratifying to us to know that our labors, however humble, are thus appreciated. That the Cabinet has, to a certain extent, exercised a beneficial influence, we are fully persuaded—and this fact encourages us to greater efforts to render it still more valuable and acceptable to its patrons. Our friends can aid us essentially in this. Let an individual in each neighborhood exert himself among his personal friends, to extend our subscription list, and our circulation, large as it now is, would be immediately increased seven-fold. May we not ask with confidence the aid of the friends of the enterprize in this matter? Any gentleman may, by forwarding five dollars, constitute himself a special agent. All are invited—who will respond, and that right early?]

Letter addressed to the Editor of the Farmers' Cabinet.

On the state of the Crops, &c.

As the hay is now in, and we have a very short blowing time, which is much interrupted by attention to our corn and sugar-beet, &c., I thought I would address a few lines to you, to let you know how things are going on in this district of country. We have had fine crops of grass, but, since it has been cut and got in, some of us have been examining our fields where it grew, and we are unanimously of the opinion, that our grass seeds have been sown too thin; for though it appeared to shade and cover the ground completely while it was growing, it now appears that not one-

third of the ground was covered, and the vacant spaces are beginning to produce that most pernicious little plant, called Euphorbia, or Spurge, which comes up and grows with the second growth of clover. On breaking off the stem of this plant, an acrid milky juice exudes from it, which we think is the cause of the slobbering of horses after eating of the second crop of grass or hay. In this we may be wrong, and, if so, should be pleased if some of your correspondents would set us right. I have never yet seen grass seed sown too thick, neither have I ever seen too many kinds of grass seed sown together on the same ground. If sown thick, it prevents the growth of weeds, and the stalks are not so gross, and it makes better hay, and it is easier made; for the gross, succulent stalks of clover are so long drying, that you are apt to lose the heads and leaves, and then the dried stalks are not much better than buckwheat straw. The pasture is also much improved by the roots being thickly set.

Some of our best farmers sow timothy, clover, and orchard grass, on the same field, and some have added herd grass. Frequently the clover is partially killed, or thrown out by the frost, and sometimes the season suits the growth of one kind of grass better than another, so that where several different kinds are sown together, and pretty thickly, it can scarcely fail of being a good crop if the soil is in tolerable order. The true reason for sowing grass seed thin is to save expense, as it is generally purchased; but some have discovered that this course of proceeding is a penny wise and a pound foolish, and are determined hereafter to reverse their course, and act according to the dictates of common sense and reason. The crops of grass have wonderfully increased since we have commenced liming, and particularly so where it has been put on the surface sod as a top-dressing. There is one circumstance in regard to the use of lime that I have not seen noticed in your Cabinet, or elsewhere, in print, and that is, that the color of the soil is rendered much darker by its use, though the lime itself is so white. I can't undertake to tell what the reason of this is, but some think that even the change of the color of the earth, to a darker hue, causes it to grow plants more luxuriously by its absorbing more heat, and not reflecting it so readily as a lighter colored soil does.

The winter grain looks as fine as I have ever seen it, and the sugar-beets are doing well, and, if they are kept clean, will no doubt make a heavy return for the attention bestowed upon them. This is one of the many new crops, which have been tried from time to time, that I think will maintain its reputation among industrious, thriving farmers, who know how to turn their fips into dollars; but the indolent and improvident will desert and decry it, as they do every thing else that causes them to bend their lazy backs.

The spring wheat has been much destroyed by the fly, which the winter wheat has escaped wonderfully; this shows conclusively that the wheat fly deposites its eggs in the spring, as well as in the fall of the year.

The Indian corn looks well, and has generally been well attended to with the cultivator; and so does the potatoes, and the citron pumpkins, the seed of which you were so kind as to give me. Fruit is likely to be abundant, as well as grain and grass, so that we have much cause for thankfulness to the great Author of all our blessings, who giveth the early and the latter rain. With the best wishes for the success of the Cabinet, I remain T. S.

Bucks County, July 2d, 1838.

Quantity of rain which has fallen in each month since January 1, 1838.

1st month,	2.20
2d month,	2.19
3d month,	3.17
4th month,	3.58
5th month,	3.57
6th month,	6.60

Philada. July 2, 1838.

☞ The regular monthly meeting of the Horticultural Society, will be held at the usual place, on Tuesday evening, the 17th instant.

The meeting of the Agricultural Society will be held in the Philosophical Hall, in Fifth street, below Chesnut, on Wednesday morning, 18th inst., at 11 o'clock.

THE FARMERS' CABINET,

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