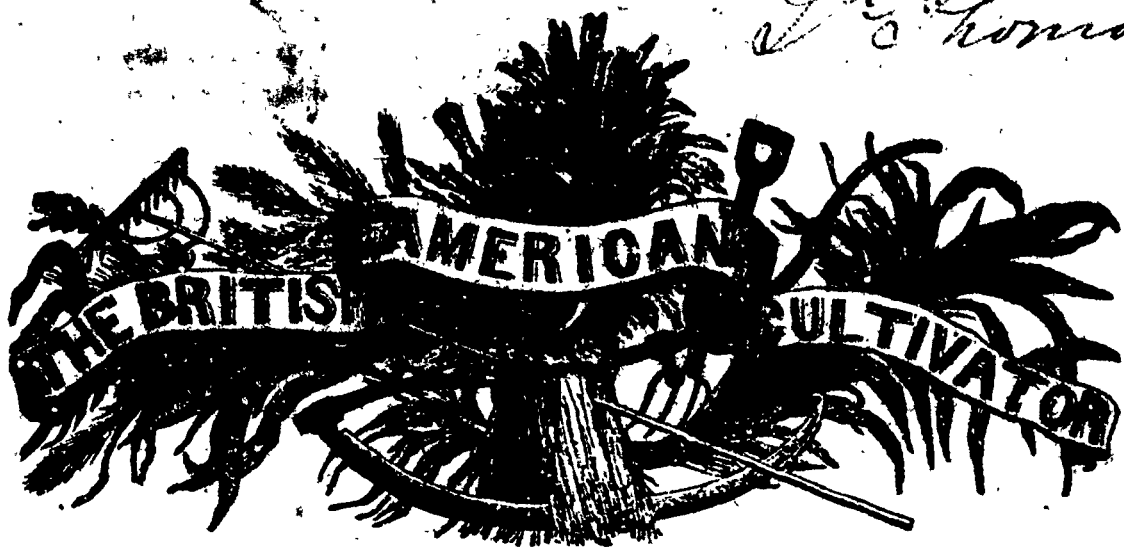


Charles Hunt

J. L. Thomas ^{1/2}



"Agriculture not only gives Bishes to a Nation, but the only Bishes she can call her own."

New Series.]

TORONTO, SEPTEMBER, 1845.

[Vol. I.—No. 9.

WORK FOR THE MONTH.

THE harvest being now generally ended, the farmer's year may be said to be completed; but his toils are never ended; no sooner is one harvest finished than he must prepare his ground for another.— From the first to the fifteenth of this month fall wheat should be sown; and to judge from the past few harvests, it would appear that the period for sowing had a material influence upon the crop—that which had been sown during the first week of September has almost invariably been more productive than what was sown during the second and third weeks of the month. No one now-a-days at all skilled in wheat-growing, thinks of sowing after the twentieth of September, excepting upon new land, or rather that which had been recently cleared from the forest, in which case it might answer a good purpose, under favorable circumstances, to sow as late as the first of October.

Every pains should be bestowed in selecting good seed; that which was grown upon very lean land is to be pre-

ferred to that which was grown upon a rich vegetable mould. No one should think of sowing their seed-wheat without steeping, and thoroughly putting it thro' a course of purification; for without this precaution frequently the most thorough cultivation will prove unavailing in securing a profitable crop. What we wish to have understood by purifying the seed is, that *chess* must be eradicated, and also rye and every other species of grain than wheat; and the fungus deposited upon the grain by the weevil or any other insect which is supposed to attack the wheat plants, to be destroyed by a powerful steep, which we shall presently describe; and above all, that most calamitous disease called smut, should be destroyed, which can be effected by the same simple remedy.

Of all the steeps used to prevent smut, that of sulphate of copper, or blue vitriol, is the most efficient, which may be prepared in the following manner: Into two gallons of boiling water put one pound of blue vitriol; and while it is quite hot, three bushels of wheat are wetted with

five quarts of the liquid; at the end of three hours the remaining three quarts are to be added, and the wheat suffered to remain three hours longer in the solution. The whole should be stirred three or four times during the six hours, and the light grains skimmed off. Then add a sufficient quantity of slacked lime to perfectly dry it.

A strong pickle made with salt and water, and stale urine, are sometimes employed as steep to prevent smut; but we have every confidence in stating that blue vitriol is a certain remedy for smut, when used as previously directed; and as the other solutions sometimes partially fail, it would be advisable to employ the most certain antidote. When salt or urine are used, it would be well to mix about two pounds of the sulphate to as much of the liquid as is used for twelve bushels of wheat. Smut is an infectious disease, and is not caused, in our opinion, by any particular influence of the weather; and where the seed to be sown is entirely free from the disease, it is unnecessary to prepare it by any of the substances we have enumerated; but it is of such rare occurrence to meet with grain free from smut, that it would on the whole be advisable to ward off the evil by employing the most certain medicine.

It is desirable to bring the plants early forward in the autumn, so that they may become deeply rooted before the winter sets in: to secure this object, eight ounces of common saltpetre may be dissolved in water, and mixed with the seed after it has been removed from the steep, and previous to the application of lime.—When this powerful stimulant is used, in very favorable autumns the plants might possibly become so gross or forward, that they would commence stooling; to prevent this calamity the crop should be

watched, and the moment any danger were apprehended on this score, young calves and colts and such other stock as would not injure the heart of the plants, should be turned upon the crop to pasture it down, and to prevent its further growth for the season.

We know of no better method to prevent the transmutation of wheat into chess than to sow none of the latter grain. Chess is as much a species of grain as oats or barley; and such farmers as desire to cultivate this plant would do wisely to separate it from their other grains before sowing, especially wheat, as it considerably injures the sample of both wheat and flour, thereby entailing a heavy loss to the grower, when mixed in large quantities. Chess is the least valuable of all the grains cultivated; and it would therefore appear advisable to substitute the most profitable. We are prepared to assert, that no farmer need grow this pest with his wheat crop, and the antidote is within the reach of all.—Simply clean the ground, and sow no chess, and the evil will certainly be avoided.

The wheat-grower will observe, that our views upon smut and chess are given with a large degree of assurance; we have been prompted to adopt this course from the circumstance that we have repeatedly experimented, with a view to ascertain the correctness of our notions, upon those disputed points, and the results have invariably strengthened the truth of our theory upon our mind. If every farmer in the Canadas would only adopt the plans we have here pointed out, it would be the means of adding to the wealth of the country as much as the entire public revenue. This may appear to some an exaggerated statement, but nevertheless it is a fact, that the loss to

the province in chess and smut alone, equals yearly the sum of some hundreds of thousands of pounds. We now come to a more interesting, and at the same time intricate as well as important branch of the science of wheat-growing, viz:—

Rust.

We have long entertained the opinion, that in a great majority of cases, rust might nearly, if not altogether, be prevented; this opinion has not been hastily formed, but has become more deeply established in ratio with our increased experience. Every observing person must have noticed that rust is less frequent on some soils than others—those which most usually escape, being denominated lean soils, and those which most promoted the disease, of the opposite quality, or such as contain a large share of decomposed vegetable matter. It is now generally supposed that rust is occasioned by the overflowing or bursting of the sap-vessels, produced by too luxuriant a growth of the plant. Some attribute it to other causes, but this appears to us the most feasible. Some seasons encourage the disease more than others; for instance, the summer of 1839 was so well calculated to produce a pretty general rusty crop of wheat, that a person acquainted with its cause and operations could have foretold the result some months before the calamity happened. The present season has been one of the opposite character. No one scarcely calculated on rust the present harvest, and few have suffered to any considerable extent. The weather has a powerful influence in promoting or allaying this direful foe to the wheat-grower; but, on the other hand, the cultivator has nearly as much.

As proof of this bold assertion, we would instance the fact, that in the year

1839, the year of general rust in North America, there were scores of fields which escaped, although being immediately in the vicinity of some fields which were totally destroyed; and the present season, which will be long noted for the absence of the disease, there can be found in almost every section of the country, some fields or patches so seriously injured, that they have not paid the expense of harvesting. The soils which produced wheat free from rust in 1839, was either a calcareous clay, limestone-gravel, stiff sandy loam, or all of the other description of soils which are noted for their comparative barrenness in vegetable matter; and those upon which the wheat crop have failed the present year, are of a deep rich vegetable quality, which are better calculated to produce straw than wheat.

The skilful cultivator will avoid, if possible, making his land so rich that his wheat-plants will be in danger of becoming surfeited with vegetable food,—the means of doing this will be found in manuring the land for the crops which will precede or follow the wheat crop, and by deep ploughing and liming or marling the land for this crop in all cases where the soil is deficient in calcareous substance. Much of the land in Canada is too rich for fall wheat, and on all soils that would be likely to produce a great bulk of straw, it would be advisable to reserve such for spring wheat. We feel a certain degree of delicacy in extending our remarks upon rust, because we are confident that our readers are not prepared to agree with the deductions we have made. At another time we may have greater confidence in going more into the details of this highly interesting, and to some most intricate subject; for the present, however, we shall conclude

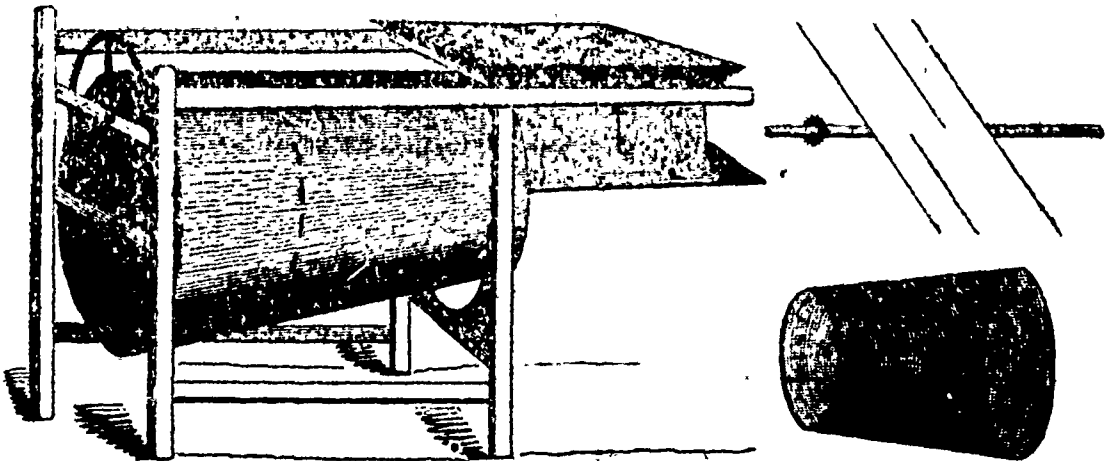
this branch of the subject by stating, that no farmer in the province has better opportunity than ourself for ultimately settling this long-discussed and yet difficult question, inasmuch as we have quite a variety of soil under cultivation, a large share of which is of the precise quality that will produce rust under ordinary treatment; and if there be a possibility of totally preventing the disease on the soil we cultivate, others may then take courage, and follow the directions we may from time to time think proper to give.

The next topic in order is the proper quantity of seed which should be sown on a given space of ground to ensure the largest return with the least possible risk. There is scarcely any point upon which there is so much difference in opinion as this. The better plan would be for each farmer to settle the matter, by experimenting himself, which can be done this season as well as any other.—Not less than three, nor more than eight pecks should be sown upon an acre; and to test the matter fairly, at least a rood should be allotted to each experiment.—It might not be out of place here to mention, that we have been a little disappointed with the experiment we mentioned on the 205th page of the present volume. The nine acres we alluded to was on the whole a good crop, but the product was not so great as if we had sown six pecks per acre instead of three. The yield in straw was most abundant, and the heads were uniformly large, but the great space which the plants had to tiller prevented its ripening as soon as it otherwise would have done, by at least a week. On soils of a leaner quality than ours, this experiment might have proved more satisfactory, but on the whole we feel it a duty we owe our sul-

scribers as well as ourself, to recant from Mr. Hewitt Davis' specious though false theory of thin sowing of grain; and the present season we shall sow as formerly, six pecks, and possibly a small trial with seven and eight pecks per acre. The most successful wheat-grower we have any knowledge of, sows his seed so abundant, that he calculates each plant shall only produce three ears, and at the same time those ears are not over two and a half inches in length. The quantity of seed necessary to produce such an extraordinary thick growth, on average soils, would not be less than ten pecks per acre. We do not wish to be understood to advise this extreme sowing, but we simply mention the fact, and would prefer others to adopt such a course as their judgment and experience would under the circumstances dictate.

Experiment with Tar.—I promised to give you the result of an experiment which I had made with tar in preserving the peach and nectarine trees. It is so very simple and cheap, that all admirers of good fruit may have flourishing trees, and a chance for eating good fruit. As soon as the scion attains the size of a man's finger, which is generally about the first of autumn, remove the earth from the root, and deposit around the stock of the tree a half pint of soft tar, rubbing at the same time the body of the scion for six or eight inches above the surface with tar; then replace the dirt previously removed. This process must be repeated each succeeding year, say in the month of June, increasing the quantity of tar according to the growth of the tree. My own experience enables me to say, that his receipt is infallible.—G. C. DONSON.
Mayoning, Va., Jan. 31st, 1845.
—*Southern Planter.*

DESCRIPTION OF A. COOLEY'S REVOLVING IRON FANNING MILL.



The whole is to be constructed of iron, except the frame, which is composed of timber two inches square. The cylinder, which contains the fan, screen, and sieve, is made of sheet iron, in length three feet and in diameter 24 inches at the upper end and 30 inches at the lower end. When the cylinder is suspended in the frame, the bottom will be on an angle of about 15 degrees, while the top of it is level. The upper end of it is supported by two friction rollers, while the lower end rests upon a rim of flange, 8 inches in diameter, which is attached to the back side of the spur wheel. There are two sets of arms or spokes extending from the centre to the inner surface of the cylinder—one set at the lower end, and the other about midway of the cylinder. A turned iron shaft 20 inches long and $\frac{1}{4}$ of an inch in diameter, to which the wings of the fan are attached, is suspended or running through the centre of these two sets of arms, while the lower end, to which the small cog-wheel, or pinion is attached, rests in a box in the frame. The fan is constructed somewhat like the propellers in steamboats, the wings of which are attached to the shaft between the two sets of arms or spokes, extending from the shaft to within one inch of the inner surface of the cylinder, barely giving room for the wheat to pass under them. While the fan is driven at the rate of 500 revolutions, the cylinder is moving in a contrary direction only at the rate of 20 revolutions per minute. In the upper portion of the cylinder, extending down to the middle set of arms, is a screen, surrounding the inside and supported by hoops at each end, one inch in thickness, which keep the screen one inch from the inner surface of the cylinder, giving room for the chaff, cockle, and other foul stuff to pass through the screen upon the inner surface of the cylinder, and by its revolutions is carried down to the hoop at the lower end of the screen, and discharged through holes cut in the cylinder.

Within and extending the same length of the screen is a cylinder sieve approaching somewhat to the form of a cone, the small end downward; the sieve is constructed in this form for the purpose that the bottom portion where the grain and

chaff may fall, shall incline a little backward, so as to allow the wheat heads and other heavy substances to pass off with the chaff. Both the sieve and screen are attached to the cylinder, and revolve with it. As the grain passes through the sieve into the screen, the revolving motion carries it to the lower end of the cylinder, where it discharges itself. The hopper sets upon the back end of the frame, over the shoe, and is stationary. The shoe is suspended by two wire hooks under the hopper, and a slight motion is given to it by means of an eccentric, attached to the end of the shaft of the fan. The fan is propelled by a cog-wheel, 18 inches in diameter, which meshes into a 3 inch pinion. The cylinder, as before described, is carried in a contrary direction as a flange or rim on the back side of the cog-wheel. The sieve is kept to its place by means of springs, so that one quality can be readily taken out and another for a different kind of grain be put in its place. Only one sieve is required for wheat, rye, or barley, and that is the finest quality used in the common fanning mills for wheat. The revolving motion keeps the wheat and the chaff in such motion that the sieve will not choke, as in the common mill.

Advantages over the Common Mill.—1. It is built entirely of iron, except the frame, and covered inside and out with Japan Varnish, rendering it impervious to water; consequently it will not swell, shrink, rot, or rust.

2. There is no shaking process, as in the old fashioned mill, but on the contrary it moves with a steady revolving motion; therefore it will not be shaken to pieces, nor is there any danger of its getting out of order with common usage, but will endure for a century.

3. It will clean wheat fit for market by once running through (if it is not very foul,) and clean at the rate of forty bushels per hour.

5. It turns one-half easier than the old wooden mills.

5. It will cost no more.

6. The weight of it is not more than one half of that of the old-fashioned mill—consequently more portable.

THE CROPS, &c.

The present season has been one of almost unexampled drought; and the result, as might obviously be expected, is, that the potato, hay, and most of the spring crops are far short of an average yield. The potatoes in many instances are an entire failure; and so also are the meadows in some exposed situations. Potatoes, oats, and hay, from their great scarcity, must necessarily bring extraordinary prices the ensuing winter, and it therefore becomes every one in hand to economize with those crops as much as possible. The wheat crop is one of the largest in quantity and best in quality that was ever gathered in Canada. Good samples of wheat, this season, are not confined to sections of the country, as in former years; in every part of the province good samples in large quantities may be seen,—and strange to say, most superior qualities of wheat may be found grown under the most objectionable methods of cultivation. Late sown spring wheat is partially a failure, and in fact, except under the most favorable circumstances, it will not yield as well as winter wheat. If the prices be at all remunerating, more than double the quantity of Canadian wheat will be thrown into market than has been the case in any previous year. High prices are now out of the question; but under the present British tariff, the farmers of this country may safely calculate upon four shillings per bushel for their wheat, and in many seasons even more. There is under the present Canada Corn Bill a guarantee that wheat will never be extremely low in price in the Canadas, so long as it remains in operation, which should stimulate the farmers to increase their business and effect every improvement that would be calculated to make their noble

calling more profitable. The wheat trade in Canada will now assume a degree of importance hitherto unknown; and we shall be greatly mistaken if the past favorable harvest will not be the precursor of better times in Canada. A few such harvests as the past, accompanied with fair remunerating prices for their produce, would elevate the spirits of the Canadian population to such a pitch, that no other people could scarcely be found that could equal them in accomplishing permanent improvements upon their farms, and in the acquisition of useful practical agricultural knowledge.

The hay crop being a short one, the provident farmer will at once see the propriety of economizing his limited stock in such a manner, that his cattle will not be stinted either in quantity or quality. The best method known in making up for a bad hay and oat crop is, to employ an improved straw cutter,—one which may be worked either by man or horse. Of this description of machine there are a number of kinds in use, but none in our opinion appears as simple, and at the same time so efficient and cheap, as those manufactured by Mr. Absalom Blaker, of the village of Newmarket, one of which we have in use that will cut when propelled by horse-power, as fast as a clever man can feed it. It is always in repair, and ever ready for use, and we think that every farmer would find it to his advantage to purchase an implement that is so wisely calculated to make up for a partial failure in the hay and oat crop. The price of Mr. Blaker's machine is £5 in cash, and we believe that he attends to no orders from a distance unless the cash be accompanied with the order, free of postage.

To Clean the Teeth.—Rub them with the ashes of burnt bread.

TORONTO NURSERY.

When last in Toronto we paid a visit to the above establishment, and was agreeably surprised in witnessing the extent of the improvements effected the present summer by its enterprising proprietors, as well as the general taste displayed in planning and arranging the grounds to attract the attention of visitors. The largest collection of choice varieties of cherries that we have met with in any Nursery establishment in this province, we had the pleasure of seeing in the Toronto Nursery; and we were assured by one of the proprietors that it is their intention to cultivate all the approved varieties of cherries, apples, pears, and plums, and such other fruits as are adapted to our northern climate, on a scale sufficiently extensive to supply the market. The Toronto Nursery being in connection with that very respectable establishment, "*The Mount Hope Nursery*," near Rochester, is in possession of facilities for supplying the Canada market with every choice variety of fruit which no other can boast of; and from the very fact that the proprietors have been bred to the Nursery business, and that they will invariably warrant the varieties to be pure, and to their sorts, they deserve the countenance of the Canadian public. We rejoice to see men of enterprise settle among us, and shall ever feel it a duty we owe to our country to extend our aid to such useful branches of industry as require fostering at the commencement. Although the one under notice is yet in its infancy, it is nevertheless prepared to execute any reasonable amount of orders with the greatest possible despatch, and upon the most reasonable terms. Nothing but the *will* hinders the inhabitants of Canada West, in properly supporting one, two, or

even more respectable Nursery establishments; and to show evidence of their good taste, we hope that every farmer will resolve to plant out an orchard of choice fruits without delay, and to patronise such establishments as will furnish varieties that can be relied upon. If this advice be acted upon, large sums of money may be kept at home, which would otherwise be sent out of the country for fruit trees, and fruits, which could be propagated and matured in the province equally as well in an average of seasons as among our neighbors.

We have secured the services of Mr. Barry, one of the proprietors of the Toronto Nursery, to take the editorial charge of the Horticultural department of the *Cultivator*, and from his well known acquaintance with the science as well as practice of Nursery and Horticultural pursuits, we have great confidence that his able assistance will prove acceptable to every reader of our widely circulated journal. We hope that the independent farmers of Canada will benefit by the wholesome advice that Mr. B. will from time advance for their especial use; and if they have not already supplied themselves with a good selection of fruits, and a well cultivated garden, that they will do so as soon as possible, so that it may no longer be said that the inhabitants of Canada are behind the age in improvements and general civilization.

To Make Vinegar.—Take eight gallons of clear rain water, add three quarts of molasses, put into a good cask, shake well a few times, then add two or three spoonful of good yeast, or two yeast cakes. If in summer, place the cask in the sun; if in winter, near the chimney where it may be warm. In ten or fifteen days, add to the liquor a sheet of brown paper, torn in strips, dipped in molasses, and good vinegar will be produced. The paper will in this way form what is called the "mother," or life of vinegar.—*New Gen.*

Through the politeness of Mr. Thos. Champion of this city, we have been favoured with the following "Letters on Agricultural Improvement," which were published by their enlightened and zealous author in the cause, and distributed gratuitously by him to promote the great and important cause of national agricultural improvement. Those letters being six in number, will appear in this and subsequent numbers of the *Cultivator*, and we trust that our intelligent readers will receive, as we have done, much pleasure and benefit in their perusal.—There can scarcely be two opinions upon the point, that in Canada far too little capital and skill is invested in agricultural pursuits. In England capital is abundant, and labour is comparatively low to what it is in this country; but the inducements for investing capital in agriculture is not so great in that country as in this, inasmuch as a much higher rate of interest can be realised from money invested in this pursuit in the new world than in the old, when employed by men possessing a thorough practical knowledge of their noble and independent profession.

It would be folly for the farmers in this country to imitate the author of these letters in carrying out agricultural improvements, but the subject deserves much more attention at their hands than has hitherto been given it, and we trust the day is not far distant when every farmer will manifest *the will* to effect such substantial improvements upon his farm as will not only pay a handsome interest upon the investment, but will at the same time elevate his exalted calling in his own estimation. We have a desire to see the cultivators of the soil proud of the name of husbandmen, and this can best be done by becoming mas-

ters of the several branches of their profession.

LETTERS ON AGRICULTURAL IMPROVEMENT.

BY I. J. NECHI.

LETTER I.

Sir,—As Agricultural Improvement is the order of the day, allow me to mention an extreme case—the expenditure of £6200 on a farm of nine, 130 acres (Tiptree-Hall, near Kelvedon, Essex,) that only cost £3250. In due course, when the results are accurately ascertained, I shall deem it my duty to submit statistical details and drawings of the buildings to every Agricultural Society in the Kingdom, in the hope it may give confidence to those who, having the means to improve their property, are doubtful as to such improvements paying a remunerating profit to both Landlord and Tenant. The expenditure above mentioned has been appropriated to

1st. The perfect and permanent drainage of the land with stones and pipes, 4 yards apart, and 32 inches deep—between 80 and 90 miles of drains.

2d. To the entire removal of all timber trees, which cannot be profitably grown in corn fields.

3d. To the removing all old, crooked, and unnecessary banks, fences and ditches.

4th. The cutting new parallel ditches and fences, so as to avoid short lands.

5th. The enclosure of waste, and conversion of useless bog into good soil.

6th. The economizing time and distance by new roads, arches, and more direct communications with the extremities of the farm.

7th. The erection of well-arranged farm-buildings, built of brick, iron, and slate, in a continuous range, excluding all cold winds and currents of air, but open to sunny warmth.

8th. The building a substantial and genteel residence, with all due requisites for domestic comfort and economy.

9th. The erection of an efficient threshing machine, and needful apparatus for shaking the straw, dressing the corn, cutting chaff, bruising oats, &c., so constructed as not to injure the straw; avoiding by its perfect action, that immense waste of grain visible in almost every truss of straw we examine.

10th. The avoidance of thatching and risk of weather, by ample barn room, with convenience for in-door horse labor at threshing, &c., when not employed without, so as to have no idle days for man or beast.

11th. The saving of every pound and pint of manure by a tank (90 feet long, 6 feet deep, 8 feet wide, with slated roof facing the north, and with well and pump,) into which is received the whole drainage from the farm-yard and stables.

12th. The conveyance by iron gutters and pipes of every drop of water from the roofs of each building, so as in no manner to dilute the manure in yards.

13th. The perfect drainage of the foundations of the barn, and every building on the farm.

14th. A steam-house to prepare food for cattle. I am thus particular in detail, because it is from each of the above branches of expenditure that some portion of remuneration is expected. But, during the progress of my undertaking, I have been warned, entreated, and dissuaded by my farming friends, who protested that a profitable return for such an enormous expenditure was impossible; my calculations, however, were made, and mere assertions without facts and figures weighed nothing with me. Although the operations were only commenced early in 1843, the results, as far as they go, are gratifying and convincing. As one instance of success, a field of oats, sown on the 16th May, after drainage, was harvested and stacked, before another (sown two months earlier on better but undrained land) was ready to cut. Hereafter you shall have detailed statistics of every department in which saving is effected and increase produced. In a moral and social point of view, these improvements have acted beneficially. They have excited the energies of the tenant and his laborers, stimulating them to think, compare, and improve. They have awakened the attention and curiosity of the neighboring farmers, who are watching the result, and already have they caused many undertakings in drainage, which otherwise would not have been thought of. Had I invested my money in the funds, there would have been an end of the matter; but now I have the satisfaction of having fulfilled a public duty (without injury to myself) by calling into action temporarily and permanently, a considerable amount of labor. I conceive that the highest order of charity, which, by providing employment to the willing laborer, confers a favor unseen, and leaves uncompromised (his most valuable privilege) his self-dependence.

If every one who has the means follows my example, where requisite, there will be little need to complain of the want of employment for our peasantry or our capital. Whilst every thing has been done for the farmer's profit and comfort, the cottages have not been forgotten. A few gutters and pipes to their residences, and some drains in their gardens, have rendered the former dry and healthy, and the latter productive; and this at the trifling cost of a few pounds. I may be asked, "what can you as a Londoner know about farming?" I will answer, "I always loved the beauties of nature, the pure air of Heaven, the sports of the field, and the hospitality of our honest yeoman. I have seen one farmer making a fortune, and his next neighbor losing one. I have seen one field all corn, and another nearly all weeds."

I asked, "how is this?"—enquired into the causes—noted the results—obtained from all the best farmers and all the best agricultural books within my reach, every information bearing on agricultural pursuits—practiced on my own little garden, on a small scale, a variety of experiments; and after carefully weighing the evidence,

I come to the conclusion, that want of drainage, both in land and buildings, waste of manure, shallow ploughing, and short leases, are amongst the greatest curses to this country; and I, as far as my individual means will permit, am resolved on remedying them.

I am, Sir,

Your obedient Servant,

I. J. MERRI.

4, Leadenhall Street,
London, March 15th, 1844.

P. S. As Tiptree Heath is notorious for poor land, and as the Essex farmers, generally, are extremely sceptical as to these improvements answering, I would recommend their inspecting the crops (there will be no long fallow) about July next; and then, having the facts before them, they will be enabled to draw correct conclusions. I may as well add, it is intended to trench-plough and disturb the soil to the depth of fourteen or sixteen inches. The implements used on this farm are, Crosskill's clod-crusher roller and liquid manure cart. The threshing-machine is constructed under my own direction, by Mr. Bewley, of Chelmsford, on the Scotch principle, with rakes, chaff-cutter, and corn-bruiser.

LETTER II.

THE DRAINAGE AT TIPTREE-HALL FARM.

Sir,—As I have frequent enquiries, I will endeavour to give you a tolerably succinct account of my draining operations at Tiptree Hall farm.

The land is of such various qualities, and so particularly situated thereby for the retention of both top and spring water, that the Essex people considered it never could be improved even to become of tolerable goodness.

About two-thirds of it was a strong yellow loam subsoil, in a state between putty and bird-lime, according to the season, here and there mixed with a hodge-podge of stones, to which its attachment was so affectionate that there was no separating them, and it was only by the constant use of water that the land drainers could get their spades in or get rid of this adhesive substance; at intervals might be found veins of silt (the reverse of adhesive,) and here and there the soil would assume a rusty appearance, indicating iron, with a blueish or slaty character: then a patch of gravel occasionally amongst the loam in which would rise a small weak spring, sufficient, however, to ruin the crops in its immediate neighborhood. Over this subsoil and between it and the cultivated soil, was a hard, dry and impervious pan, formed of the subsoil, but hardened and rendered solid by the heat of the sun and the action of the plough-sole. The soil itself partook in some considerable degree of the nature of the subsoil, being, however, ameliorated by mixture of manures and by cultivation. Still so great was the fear of the wretched subsoil that the pan was never disturbed, consequently, there being but nine or ten inches of cultivatable earth with an

impervious basis, a dry summer burnt all up, and a wet one ruined the crop by rotting the roots. A showery season was the only suitable one for this description of land.

Now, however, after draining, in the short space of a few months, we are subsoiling to the depth of fourteen or sixteen inches, and working it like a garden; the water having left it, and the frosty air following the water, it is as mellow and friable as could be desired. In fact, during the last month, whilst our neighbors were unable to move, we were harrowing on our wheat and beans like a rich garden; the earth crumbling down after the drill like sand—very much to the astonishment of the Tenant and Labourers; and this after so much carting and disturbance, and so much of the subsoil thrown up, that two months previously it was thought a whole summer would hardly suffice to condition the soil.

The drains cross, at a very acute angle, the slope of the land; they are four yards apart, with a leader to every fourscore rods—the leader being rather deeper than other drains, but not wider.

Still, as it never runs full, it proves in practice my subsequent proposition, that “the filtration of water, in strong soils, is far inferior to the velocity of its passage through the drains.”

Each acre contains twelve score rods: and costs ten pounds, requiring 3200 pipes and 360 bushels of stones.

The style of drainage applied to this part of the farm is as follows:

First, a double turn of the plough takes out nine inches; then a narrow spade (sufficiently wide to admit the drainer's foot) takes out ten inches; then comes a still narrower spade (fourteen inches long, three and one-eighth wide at top, and one and a half at bottom,) which removes thirteen inches more—making the whole depth from the surface thirty-two inches. The drain being well cleared out, we first fill in the drains, to the depth of ten inches, with nice clean gravel-stones, and then place, on the top of these stones, a drain-pipe, thirteen inches long and three inches wide outside, having a two-inch bore. This fits so exactly into the space made by the last or narrow spade, that it not only rests on the stones, but binds against the sides of the drain, thereby preventing the stones being choked by the superincumbent earth, but also forming the earth above it into an arch; which in the stronger soil would, it is presumed, retain its form even if the pipe were broken or decayed. As this is a plan of my own, and contrary to the entertained opinions, that the tiles should be at the bottom, I will give my reasons for so doing; because,

1st. It is cheaper.

2d. It is more durable, and less liable to choke.

3d. There is a larger area of space for the escape or filtration of the water; and this I consider of the utmost importance, and not sufficiently considered. It is quite evident, that the filtration of the water must be according to the area of the pores presented to the air in the drains.

It might be illustrated by saying, it is of little

use having a large passage unless you have enough sidedoors to admit a sufficient number of passengers to travel down it.

The pores, in contact with air, which are constantly admitting the water by its superior gravity, should form, if practicable, by admeasurement, a superficial area equal to the solid unoccupied contents of the pipe or drain (reduced to an area;) the velocity of passage in the drain being certainly, in a general way, equal or superior to the velocity of percolation.

It must be considered, that in dense subsoil, the continued winter rains expand the particles and render filtration more difficult—especially during the first year or two after drainage; therefore, I prefer deep and narrow stone drains, protected from earth by a pipe over them, because they afford ready access to a large and porous surface; filtration going on both on the tops and sides of the drain.

I would observe, that even on the recently drained strong loam, but little surface water ran away, most of it percolated, except in cases of the ground being frozen hard, and very heavy and sudden rains. It appears to percolate tolerably clear according to the season—but on this point my observations must be more extended. On cutting across some of the drains that had been made six months, the stones were found to be washed as clean as the gravel in a brook.

The other third of this farm was the reverse of the first two thirds, and required an entirely different system of drainage. It is mostly black, sandy, and boggy soil, with numerous springs rising at various points where obstructed by perpendicular walls or veins of dense clay or hard gravel, sometimes both.

The drainage here has been effected by a person named Pearson, from Warwickshire, a man of extensive knowledge and ability in this department of drainage, who I understand has essentially improved Lord Digby's estates by his judicious sub-draining of the springs. His plan is to take his fall from the lowest point, and gradually work up to where the spring shows itself, having previously ascertained the whereabouts by digging, and by those plants that invariably show themselves over a spring. As springs are generally attended by sand-beds, a single drain will often lay dry a large extent of ground. In one case, where there was swamp of four acres, the drain was opened at two feet, and continued in a trench till it reached eleven feet in depth—the sand boiling at intervals like water in a cauldron, of course it was necessary to shore up the sides, and when his level was accurately taken, he commenced laying his pipes on hay (two half pipes, four-and-a-half inches diameter were put together, being internally nine inches by four-and-a-half,) but so strong was the force of the water, it was necessary to have two strongly made iron skeleton arches with wooden sides, about thirty inches high, and the width of the drain two feet. In these arches were laid the pipes, and firmly loaded to the top of the arch with soil to keep the

pipes from being forced up by the boiling waters and sand; when loaded, the arches were removed by a lever, the mouths of the pipes being carefully stopped with hay, till the next length of pipes was laid in the next arch (two always being in use, one in front of the other.)

The result is, that one such drain laid perfectly dry four acres of bog (having a smaller spring over or across it;) the first drain runs *permanently* 30,000 gallons every twenty-four hours, and several others nearly as much. It has laid our neighbour's wells dry, a quarter of a mile off (being in a bed of sand, below their level). The land (which has been double spitted) is now always perfectly dry, although previously dangerous for cattle and entirely worthless.

In conclusion, allow me to say, I have derived most valuable information in draining from those excellent and standard works on Agriculture, "Stephens' Book of the Farm," "Loudon's Encyclopædia of Agriculture," and "Morton on Soils." There may be found ample and satisfactory evidence and matters of fact in every branch of draining. It is with extreme regret I frequently see money completely wasted by placing tiles without soles, and pipes without stones, and temporary and imperfect draining by bushes. That soil in a few years becomes absolutely much worse than it was originally, for when the drains choke, there is a much larger accumulation of water to the destruction of the crops.

I hope that in time to come, farming will be treated as a science, and that there will be as much uniformity in cultivating land as there is in manufacturing cotton. That can only arrive by our young farmers deriving an uniform agricultural education—the mechanism for which does not at present exist. Let us hope it may hereafter, and that whilst we have collegiate education for the learned and other professions, we shall at least have agricultural universities and apprenticeships. There can be no doubt that agriculture is the basis of society—the most paramount interest in a pecuniary point of view—the regulator of currency and manufactures, which are subservient to it. If we want a proof of this, let us consider that the stomach cannot wait a day; its claims are paramount, and to hunger must succumb all our other enjoyments, whether of manufactures or luxuries.

Let every Landlord and every Tenant improve their land, where opportunity exists, and the Anti-Corn Law League may visit other countries, whose fear of our exportations will then be great. For it is quite clear, that if all the land in this country that required it, were perfectly drained and cultivated, we should be quite as able to export our superfluous corn and meat as our superabundant cotton; a result devoutly to be wished, when we consider the effect of ample food and employment to our laboring population in a moral, physical, and social point of view—to say nothing of the immense pecuniary advantage of employing our capital at home, instead of lending it to other nations, to enable them to compete

with our own already insufficiently employed countrymen.

I am, Sir,

Your obedient Servant,

I. J. MERRI.

P. S. As ten pounds per acre is deemed extravagant by the Essex gentlemen for permanent drainage, the following calculations will prove it to be the cheapest:—

	s.	d.
Twelve score rods per acre, done temporarily with scuds, bushes, &c. at £4 per acre, calculated to last ten years.		
Interest on £4 at 5 per cent,	4	0
Principal sunk in ten years is 8s. per year	8	0
Annual charge	12	0
Interest on my permanent draining at 5 per cent.		
Annual charge	10	0
Annual saving per acre in favor of my plan	2	0

We find, during the last week, that while the stone and pipe drained part of one field is perfectly dry and friable, the scud-drained part of the same field, done the same depth, distance, &c., (about three acres,) is a fortnight later in its drying. This is an important fact worth noting, the soil being exactly the same. It is well known that after six or seven years, the scud and bush draining becomes annually less and effective. If so, how pre-eminent must be the permanent drainage in gain as well as in saving.

I will say nothing of the calculation that one extra sack of oats would pay this drainage charge, besides twenty other advantages that might be named. Sometimes a whole crop depends on a day or two—witness the clover seed of 1842, carted into the yards for manure, all for drainage, which would have matured them a week or fortnight earlier.

NEW YORK STATE AGRICULTURAL SHOW.—We beg to inform our friends that the annual exhibition of the New York State Agricultural Society will take place on the 16th and 17th inst. at the City of Utica. We doubt not but that this exhibition will be well sustained by the wealthy and enterprising farmers of central New York.

We hope to be present at the above exhibition, and shall take notes of such particulars as would be likely to interest our readers. Those of the Canadian farmers that are anxious to have a Provincial Agricultural Society established in this province, would do well to attend the New York State exhibition, by which means they could better judge of its adaptation to our circumstances.

SIGNS OF A POOR FARMER.

He grazes his mowing land late in the fall, and his pastures early in the spring, and consequently runs both. Some of his cows are much past their prime. He neglects to keep the dung and the ground from the silis of his buildings; and it costs him twenty dollars to make repairs, when one dollar's worth of work would have been sufficient if performed at leisure time, ten years before. He sows and plants his land until it is exhausted before he thinks of the manuring. He has generally too much stock, and many of them unruly. He is almost sure to have a good deal of stake and pole fence. He says that he cannot farm it for want of money: this is frequently the case with good farmers, but you may know a sloven by his inattention to small things—his children's shoes are spoiled for want of shoe-strings to tie them, or for want of a little tallow to supple them—his door hinges comes off for want of a nail, and the floor is destroyed for want of a hinge, and his mow is trampled on and cattle gored for want of a door, and all this loss is occasioned by not timely driving and clenched a single nail. Nothing is in order—he has a place for nothing, and nothing in its place. If he wants a gimblet, a chisel, or a hammer, he hunts up the chamber, out at the barn and corn house, in the cupboard, and lastly when he has spent more time in pursuit than it takes him to do the job, he finds it in the cellar. He keeps no stock of the smallest things: if a button or a bail to a peil gives way, or a key to a yoke, or a pin to a sled, or helve to an axe, a string or a swingle to a flail, or even a tooth to a rake, he has none to replace them. He seldom does anything in stormy weather, or in an evening, and is sure to keep no memorandum of little jobs that are to be done. You will perhaps hear of his groaning about the hardness of the times frequently in a bar-room. Death and the tax gatherer he knows must come; yet he makes no provision for either of them. Although he has been on a piece of good land for twenty years, ask him for a grafted apple, and he will tell you that he could not raise them for he never had no luck. His indolence and carelessness subjects him to many accidents. He loses soap or cider for want of a hoop—in the midst of his busy ploughing, his plough breaks because it was not housed; and when he is employed away from home, his hogs break into his garden for want of an additional board. He does not take the advantage of his business by driving it when he can, and consequently he is like the old woman's son, "so busy that he never does any thing," or at least he seldom finishes one thing before he begins another, and therefore brings little to pass, and is often seen in a great hurry. He is seldom neat in his person, and will sit down to table without combing his hair, and suffers his children to do so without washing their hands and faces. He frequently drives his cattle with a club, and is generally late to public worship. His children are also apt to be late to school,

and their books are torn and dirty. He is careless; his children and domestics are so too. As he has no enterprise, so he is sure to have no money. If he must have money, he frequently makes great sacrifices to get it; and as he is slack in his payments, and buys altogether on credit, he pays through the nose for every thing. His want of forethought, economy, and exertion makes him poor, and his poverty tendeth to poverty. You will generally see the smoke begin to come out of his chimney long after daylight in winter. His horse stable is not daily cleaned out, or his horses littered and carried. Boards, shingles and clapboards are to be seen off his buildings month after month without being replaced. He feeds his hogs with hole grain, and suffers them to be much injured for want of a warm bed and warm pen; he seems to live without thinking; if his lambs die, or the wool comes off his sheep, he does not seem to think that it is for want of care and food.

He is generally a troublesome borrower, and frequently forgets to return the thing which he has borrowed.

In a word, a poor farmer in the strict sense of the word, is a poor creature—he is a poor husband, a poor father, a poor neighbor and a poor citizen. A good farmer may be poor, but a poor farmer cannot act his part well; in other words, he cannot be good as a man or as a christian.—*Farmers' Messenger.*

THE BEE MOTH.

The bee moth in most parts of the United States is very destructive to bees, while in other sections it is unknown. It is supposed to be imported from Europe with bees. This moth in its perfect state resembles some of the varieties of millers that are often flying into a light on a warm summer evening. It is usually less than three-fourths of an inch in length.

The female is larger than the male. They lay their eggs from the latter part of April to the close of August. In the evening they are active and lay their eggs; and in day lie quiet in cracks and crevices of the hive and bee-house. If a hive be not well guarded they will enter it and deposite their eggs in joints or cracks of the hive, where the young on being hatched finds a supply of wax which is its natural food. When the moth cannot gain access to the inside, she lays her eggs on the outside in the cracks or joints, and when the worm is hatched he eats his way through wax, or under the edge of the hive to the inside, and there he takes up his residence, and lives on the comb.—He throws around him a web, or silken tube, which protects him from the bees, and he moves about among the comb, carrying destruction in his course, filling the hive with webs and filth.

The bees become discouraged from the constant encroachments of an enemy against whom they have no means of defence. These worms or caterpillars in about twenty days from hatching attain their full size, which is about an inch in length. Then like the silk worm they spin

their silken cocoon. They then change to the chrysalis state, and in a few weeks come forth in the perfect or final state, as moths or millers. Those which come out late, remain in the hive in the chrysalis state during the winter, and come forth perfect animals in the spring.

Remedies.—Various are the remedies and the modes of protection that have been offered; but few of which, if any, have proved effectual against this most formidable enemy of a useful insect, a gatherer of the sweet produce of nature for the use of man. The only animal as we lately observed, that furnishes itself with its own sustenance, and some to spare for our benefit. It well deserves every means that we can devise for its protection.

Many hives have been invented and patented, claiming to protect bees against the moth, but they generally fail. We have used as a preventive common whitewash of lime, with plenty of fine salt in it. Early in the spring we put this on the bottom board, after cleansing it, and on the lower edge of the hive, and on the inside of the hive up to the comb. It should be used occasionally in the summer, and plentifully too on the lower edge of the hive and on the board.—This is grateful to the bees, and conducive to their health; it is a remedy for diseases, particularly for diarrhea. We have never been troubled with the moth, which we have attributed to the free use of the whitewash, for in this case the young worms are supplied with salt and lime, instead of wax for food.

A gentleman who paid much attention to bees said that he prevented the depredations of the moth by making a small channel in the board just inside the door, filling it with fine salt and then filling up the interstices with liquor from the *blue pot*, which term will be understood by old farmers. He said this was pleasant to the bees, and no miller would cross it.

Moths are often caught by hundreds in the evening, by setting around the hives sweetened vinegar in white dishes. Honey and water, made weak, is also recommended for this purpose. It is stated in a Western paper that an apiarian has used whey for this purpose, for three years, with excellent success. These dishes should be used during the active season of the bees, and placed at nightfall, and removed or covered, early in the morning.

If any of our readers know of a good protection against the bee moth, we should be pleased to hear from them.—*Bust. Cult.*

CRADLING.

BY A CHURCHILL.

Messrs. Editors:—I shall not inflict on your readers a disquisition on the art or mystery of cutting grain with a cradle, for none would pay attention to it. Every man who swings the cradle is fully satisfied that he knows best how to do it, and can cradle a little more than any other man; and though he swings it in such a way

that all others knows he is working much harder than he need, and though his raker tells him that he lays four bands where but one is wanted, and makes heads on both ends of the straw, he heeds it not. He in his own mind cradles better than any other man can cradle. In fact I never could teach any one to swing his cradle as easy or lay his grain *as well as I can*. I never could teach a boy to cradle until I had chased him down and fairly tired him out; then he would begin to think about trying to do his work easy.

But I took my pen with the intention of describing to those who are not initiated into the sublime mysteries of the art of cradling, and the pleasures and pains thereunto appertaining.

A man with a cradle on his shoulder feels as conscious of his superiority and consequential dignity as he would if he had obtained a patent of nobility—and why should he not? he knows that millions are to fall by his arm. And if no blood is to be spilled, he is determined that some sweat shall flow from those who attempt to cradle by his side; and I am sure that in nine cases out of ten the raker must sweat to untangle the grain which he tears down.

But you will occasionally find one *cradler*, who cuts his grain level, lays it even, and *all in his own swath*: one who swings his cradle as if it were a part of himself; such a one it is a pleasure to see work.

My rule for building a cradle is as follows: give the snath so much *crook* that when the nib is on, a line from where the left hand holds the snath—past the centre of the nib, will strike the scythe one third of its length forward from the heel. Elevate the snath at the nib so that the said line will rise one third the height of the cradle on the fingers. Measure the length of the scythe on the snath, and set the point of the scythe its length from this point. Raise the end of the snath and place the spot which you would naturally hold in the left hand to the knee. In this position of the snath, the scythe should lie flat on the floor, and in this position bore the port hole perpendicularly. Upper fingers six inches shorter than the lower, and the points drawn in more.

In cradling I carry my left hand nearly as high as my shoulder, and only move it from shoulder to shoulder.

Avon, April, 1845.—*Frairie Farmer.*

Plum Pudding for the Million.—Take half a pound of flour, half a pound of currants, half a pound of grated carrots, half a pound of grated potatoes, a quarter of a pound of suet, and a little seasoning. Mix them together, and boil them in a basin an hour and a half. You will then have an excellent plum pudding for a trifle more than sixpence! Just try the experiment.—*Shropshire Conservative.*

It gives us great pleasure to notice that the friends of agricultural improvement in the Midland District have lately adopted a Constitution, by which the parent and branch Agricultural Societies are so closely connected in interest, that their united efforts cannot scarcely fail in elevating the condition of the agriculturist of this old and populous District to a high standard of excellence. There is much to admire in the principles of this new Constitution, and we therefore give it insertion, as a guide for others. Although no mention is made of the liberal support which is given to the agricultural press, by this old and popular Association, it might not be thought out of place to mention the fact, that in addition to each of the members of the society being supplied with a copy of the *Cultivator*, twenty-five copies are subscribed for, and sent gratuitously to each branch Agricultural Society in the District. The extra copies that the branch societies receive, are paid for with their own funds. Such an example of liberality as the one in question has in no instance occurred in this province, and we trust that the officers of the Midland District Agricultural Society will never have occasion to regret that they have established their Society on sound, broad, and philanthropic principles, and that they have given an unexampled liberal support to the agricultural press.

The plan of holding the regular meetings of the District Agricultural Societies, at the time and place of Sessions of the District Councils, is in our opinion wisely calculated to advance the interests of such institutions; and in all cases where Township Societies are organized and act in concert with the Parent Society, it is almost indispensable, that regular meetings should be kept up as often as once per quarter; and by selecting District Councillors, when they are efficiently qualified to perform the duties of a Director in an Agricultural Society, full meetings may be kept up without any cost, and by this means the ball may be kept constantly in motion:—

CONSTITUTION OF THE AGRICULTURAL SOCIETY OF THE MIDLAND DISTRICT.

Articles:

No. 1.—One General Agricultural Society, to be formed in the Midland District, called "The Agricultural Society of the Midland District," having Branch Societies in the several Townships.

No. 2.—The Members of the Society shall consist of all persons who pay an Annual Subscription of not less than five shillings, whether

paid to the Funds of the Society, or to the local Funds of any Branch Society.

No. 3.—The Officers shall consist of one President, one Treasurer, and one Secretary; annually chosen, together with three Delegates from each Branch Society, all of whom shall form the Board of Directors, who shall have power to regulate the business of the Society and control its Funds.—Seven to form a quorum.

No. 4. The General Annual Meeting of the Society, for the Election of Officers, and the auditing of the Treasurer's accounts, shall be held at the Court House, Kingston, on the second Wednesday in May, at the hour of one o'clock, P. M., in every year; at which a show of hands shall determine the choice, unless a ballot be demanded, which shall be conducted in the ordinary method. The Treasurer's accounts shall be audited by a special Committee of three persons, to be chosen by the meeting. The President shall have power to call special General Meetings of the Society.

No. 5.—The Meeting of the Board of Directors shall take place Quarterly, in the Court House Kingston, on the second Wednesday in the months of February, May, August and November, at which time the ordinary business of the Society shall be transacted. The President shall have power to call Special Meetings of the Board.

No. 6.—One Branch Society may be formed in each Township in the District, with power to elect Officers and make Bye-Laws, provided such Officers and Bye-Laws are in accordance with this Constitution.

No. 7.—The Treasurers of the several Branch Societies shall pay over annually to the Treasurer of the Society, on or before the last day of the August Session of the District Council, the amount of subscriptions received in or for his Township for that year, together with a list thereof, and the names and places of residence of the subscribers.

No. 8.—The Treasurer of the Society, as soon as is convenient, after he has received the Annual grant of money from the Government, shall return to the Treasurers of the Branch Societies, the several sums received by him, together with such further sums of money, out of the general Funds of the Society, as shall be annually voted by the Board of Directors, at their Quarterly Meeting, held in August.

No. 9.—The Officers of the Branch Societies shall forward to the Secretary of the Society, a detailed account of the receipts and expenditure of their several Societies to be laid before the Board of Directors, ten days, at least, before the Quarterly Meeting of the Society in November.

The sting of a Bee, it is asserted, owes its poisonous nature to its being an acid; and therefore liquor potassia, by neutralizing the acid, becomes one of the best remedies. As it is very caustic, and corrosive to the skin, it must be applied at the precise spot, on the point of a pin or on the tip of a camel's hair pencil.

POTATOE PICKER.

In a former number we alluded to the fact, that an important machine has been recently invented in one of the sister provinces, by the aid of which a man and a span of horses can properly execute the work of twenty men, in picking potatoes; or in other words, three acres can be picked per diem with the implement. The inventor, Mr. Wm. Watts, Frederickton, N. B. has lately secured a patent, which extends throughout British America, and we therefore now feel at liberty to bring his extraordinary machine more prominently before the public.

In a letter dated 26th Dec. last, Mr. Watts writes us as follows: "I have been for some time engaged in agricultural operations on a small scale, and finding the usual process of digging potatoes exceedingly tedious and unpleasant, my attention was turned to the construction of an implement by which time and labour might be saved. In this I have succeeded beyond my expectations, and have perfected a machine which, with the aid of a pair of horses, will enable one man to perform the labor of at least twenty men, or dig three acres of potatoes in a day, the tops being first removed and carried off from the ground to be operated upon. Several practical farmers have seen it in operation, and there has been but one opinion among them as to its being a most efficient implement, and a great acquisition to the agriculturist—the greatest, perhaps, with the exception of the plough, of any instrument in use."

We have consented to act as agent, to introduce Mr. Watt's potato pickers in Canada West; and as we have ordered one for our own use, shall shortly have an opportunity of giving it a fair trial, the results of which will be laid before the public at an early period. In the meantime we would state, for the information of our readers, that the cost will not exceed £8 each, and probably less; and that we shall attend to any orders that may be sent to our address, Newmarket, provided that the money is accompanied with the order. The latter condition, to meet with success, must invariably be observed.

Top dressing for Wheat—Salt; salt and lime; salt, lime and ashes; soot, soot and ashes, make excellent top dressings for wheat. If salt should be applied alone, 2 bushels to the acre, is the proper quantity: if salt and lime, 2 bushels of salt

and 10 of lime should be sown to the acre: if soot alone, from 10 to 20 bushels per acre, and if soot and ashes, 10 bushels of each will form a most valuable mixture.

A certain Secretary of a County Agricultural Society in one of the Western Districts of this Province has thought proper to address himself to us in the following language: "I beg leave to say, that unless some attention is paid to the Society to which I belong as Secretary, I shall immediately advance a proposition to throw up the *B. A. Cultivator*, and subscribe to another." For the information of the gentleman, we would state, that if he thinks proper to take umbrage because we did not comply with his unreasonable request to insert the local proceedings of the Society to which he is the Secretary, he is quite at liberty to carry his threat into execution.

We are quite resolved to give insertion to such proceedings of local Agricultural Societies only as are calculated to interest and instruct the general reader.

If any Agricultural Society or individual feels disposed to communicate any useful instruction to the agricultural classes, upon the practice or science of agriculture, such a medium of communication as ours is wisely adapted to give such information a wide circulation, and at the same time promote the important cause of Agricultural improvement. Such proceedings are at all times desirable; and whether they are sent us in manuscript, or we meet with them in the local prints, we shall ever feel it a pleasure in giving them a place in our journal; but in no instance shall we be threatened or coaxed to fill our sheet with matter of a purely local interest, unless the interested parties pay us at the regular advertising rates. Rather than comply with the wishes of those who are governed in their actions by selfish motives, we would prefer that such parties should "throw up" our Journal "and subscribe to another." As a conductor of an agricultural press, we fancy that we know our duty,—our business is to benefit all without affection or favor. We give full value for the paltry wholesale subscription we get for our paper, and we would beg our sensitive friend to remember, that he has no more right to expect advertising done gratuitously in our journal, than a man in the mercantile trade has a right to expect a similar favor.

TO ANALYZE SOILS.

1st. Take a small quantity of earth from different parts of the field, the soil of which you wish to ascertain, mix them well together and weigh them; put them in an oven heated for baking bread, and after they are dried, weigh them again; the difference will show the absorbent power of the earth. When the loss of weight in 400 grains amounts to 50 this power is great, and indicates the presence of much animal or vegetable matter; but when it does not exceed 20, the absorbent power is small, and the vegetable matter deficient.

2nd. Put the dried mass into a vase, with one-fourth of its own weight of clean water; mix them well together; pour off the dirty water in a second vase, and pour on as much clear water as before; stir the contents and continue this process until the water poured off is as clear as that poured on the earth. What remains, in the first employed vase after these washings is sand, silicious or calcarious.

3rd. The dirty water, collected in the second vase, will form a deposit, which after pouring off the water, must be dried, weighed and calcined, that is, reduced to a powder. On weighing it after the process, the quantity lost will show the quantity of animal and vegetable mould contained in the soil.

4th. This calcined matter must then be carefully pulverised and weighed, as also the first deposit of sand, but without mixing them. To these, apply separately, sulphuric acid and what they (the earths and acids together) lose in weight, indicates the portion of calcarious earth contained in the first vase after deducting the lime is siliceous; that in the other, alumina. Carbonate of lime, termed calcarious earth, is composed of 55 parts of lime and 46 carbonic acid; this acid is displaced, and driven off by the muriatic acid, in consequence of its stronger affinities for the vase. Hence if the earths and acid weigh 45 grains less after the mixture than before, supposing the quantity experimented upon to be 400 grains, it shows that 45 grains of carbonic acid have been driven off, and that the soil contains 25 per cent. of calcarious earth, or one-fourth. The proportion of this earth in good soils, varies from 10 to 30 per cent.—*Prac. Far.*

HOMŒOPATHIC TREATMENT OF HORSES.

BY W. H. SMITH, V. S., OF PHILADELPHIA.

To the Editor of the Spirit of the Times.

Sir,—I find on perusing the "Spirit" of 22nd instant. an account of the successful homœopathic treatment of glanders and farcy in horses, in Europe. I cannot express the satisfaction it has given me, as it now enables me to lay before the readers of your valuable journal, facts which I have long wished to make generally known.

In the spring of 1841, I was induced to make

some experiments on cases of this loathsome and hitherto incurable disease, and must say that the success I have met with, has been beyond my utmost expectations. The first case I will cite, is that of a bay horse, six years old, given me for homœopathic experiment, affected both with glanders and farcy. The remedies employed in this case were dulcamara mercurius solubilis hepatic sulphuris, acidum phosphoricum, and silicium in the sixth dilution. In two weeks from the commencement of the treatment, I had the satisfaction of observing a marked improvement in the symptoms, which gradually continued. At the end of three months he was perfectly cured, except a thickening of the integuments of the near hind leg, which had been covered with ulcers called farcy buds. This I removed by thuya in the third dilution, given every other day as M. Leblanc describes, two or three drops in a small quantity of sugar of milk placed upon the tongue. I refused frequently for this horse £300, from a gentleman who saw him in the worst stage of the disease, and who witnessed the progress of the cure. He is now owned by a gentleman of this city, and has never had an hour's sickness since he has been in his possession—upwards of three years.

A sorrel horse, aged, was attacked with glanders: with the aid of the above remedies, I effected a complete cure in six weeks. During the last four years I have treated fourteen cases of glanders, and twelve of them successfully, in from one to three months. I have in my possession at this time, a horse twenty-two years old;—one of the twelve above named—it is now two years since his recovery. He never was in finer health or condition than at the present time. This will conclusively show that glanders and farcy are diseases within the control of homœopathy, and that hundreds of valuable animals have been sacrificed. During the last four years, I have treated every disease to which the horse is liable, on the same principle, and the result proves the fact, that diseases thus treated are cured in a much less time, and with little or no loss of condition to the animal.

Should you deem this communication worthy of notice in your valuable paper, you will oblige me by inserting it. I have kept a diary of all the cases worthy of note that have come under my care, and shall feel most happy in giving you some of them in detail.

I remain, dear sir,

Yours, respectfully,

Wm. H. SMITH, *Vet. Surgeon.*

To render Boots Waterproof.—Boiled oil, 16 parts; turpentine (spt.) 2 parts; bee's-wax, 1 part; resin, 1 part; turpentine (Venice,) 2 parts. Melt, and use hot.

Botany Bay Cement for China.—Yellow gum, 16 parts; fine brick-dust, 17 parts. Mix.

Common Bottle Cement.—Resin, pitch, ivory-black; equal parts. Used to secure the corks.

MISSOURI CAVE.

In our last number we noticed a remarkable cave recently discovered in Howard County, Missouri. The following interesting particulars are related in the 'Glasgow Pilot,' by a person who had explored this wonderful place to the distance of some hundred yards. After entering the cave with a lantern, the writer says:

"I had not proceeded far, before I entered the principal chamber that by a single light presented the most magnificent scene that I ever beheld. The ceiling of this splendid cavern is some eighteen or 20 feet high, and of a hexagonal form, the whole ceiling presenting a shining surface, as though it was set with diamonds."

Very near the mouth, another writer says there is a stone shaped like a horse, but not so large, being only about three feet high:

"The head, neck, and the body are entirely finished, and part of one hind leg and all the rest in solid stone. The neck is made of three pieces, and stuck or fastened together something like cabinet-makers put the corners of drawers together (dove-tailed) the rest is all solid."

In another part of the cave, the walls on one side are very smooth. On these walls numerous letters, figures, and hieroglyphics appear, most of which, however, are so defaced as to render them unintelligible. Nevertheless, the figures 1, 2, 6, and 7, are quite plain. Just above these figures the letters DON and CARLO are legible. Farther on, the letters J. H. S. appear on the wall.—An arm of the main cavern has also been discovered, and has been explored some 200 yards.

"The walls and ceiling of this extraordinary cave are pretty much the same as in the other rooms. The walls have a peculiar and extraordinary brilliancy, occasioned I discovered from the fact, that instead of stone as we first believed, we found to be of metal very much resembling sulphate of iron, but more of a silvery appearance. We had not proceeded very far before we heard a rumbling noise that occasionally broke out upon our ear in notes the most thrilling and melodious I had ever heard. We stood a considerable time in breathless silence to catch the most enchanting sounds that ever greeted the ear of man, and it was only at an interval that we could summon courage to explore its source, which we did, and were much surprised to find it proceeded from a gushing spring in the side of the wall. The sounds we heard we found to be produced by the fall of water, and varied by the current of air before alluded to, which we then found to be very strong. We each took a hearty draught of the limpid water of this gushing spring, and after surveying the diamond wall of the greatest natural curiosity in the world, we commenced retracing our steps to its mouth, when we found it to be quite dark, and eight o'clock at night."—*N. Y. Far. & Mec.*

To improve the Flavor of Coffee.—To each pound of roasted coffee add forty to fifty grains of carbonate of soda. In addition to improving the flavor, the soda makes the coffee more healthy, as it neutralizes the acid contained in the infusion.—*Am. Ag.*

Poll Evil.—This disease sometimes proceeds from the horse striking his poll against any hard substance, or from bruising the part with the halter. First abate the inflammation by hard bleeding, physic, and the application of cold lotions to the part. This will sometimes disperse the swelling. If it matters, hasten its formation with warm fomentations, poultices or stimulating embrocations, then open the swelling so that *the whole of the matter should run out* and continue to do so. This is done by a seton. Keep it clean with warm water. A piece of the skin of old bacon rubbed on with a hot iron is a good application. Poll evil has been cured by the following mixture (apparently at least by it in some instances.) Take finely pulverized flint glass, 3 spoonful, put into urine, one pint in a bottle, and bury it in the ground for three or four days; after which take one spoonful or more of the mixture, well shaken up, and put that much into each ear, once a day for three, four or five days.—*Prac. Far.*

Hollow-Horn in Cattle.—Having seen in your valuable paper several articles upon the hollow-horn in cattle, I have thought that it might be useful to relate an instance of that disease and its cure, which came under my observation about five years ago. A cow in my care was most violently attacked by the disease, and, in spite of the usual mild remedies, declined so much in a very few days as to be unable to get up or stand. On going out in the morning, I found her body much bloated, her limbs distended and stiff, her eyes set and glassy, and apparently nearly dead. The next morning I took my knife for the purpose of skinning her, but, on going to her, I found her still alive. The following morning I went to her again for the same purpose, but, to my surprise, she was still breathing. I then thought her a fit subject for experiment. With a three-eighth inch spike gimlet I bored a hole through the centre of her forehead, about an inch below a direct line running between the horns. I found her head perfectly hollow and dry. I then poured into the hole I had made, a large spoonful of vinegar, made thick with black pepper, and left her. Before night she began to recover. The next morning she was on her feet, and with careful nursing only she was in a few days apparently perfectly well.

AN ILLINOIS FARMER.

—*Louisville Journal.*

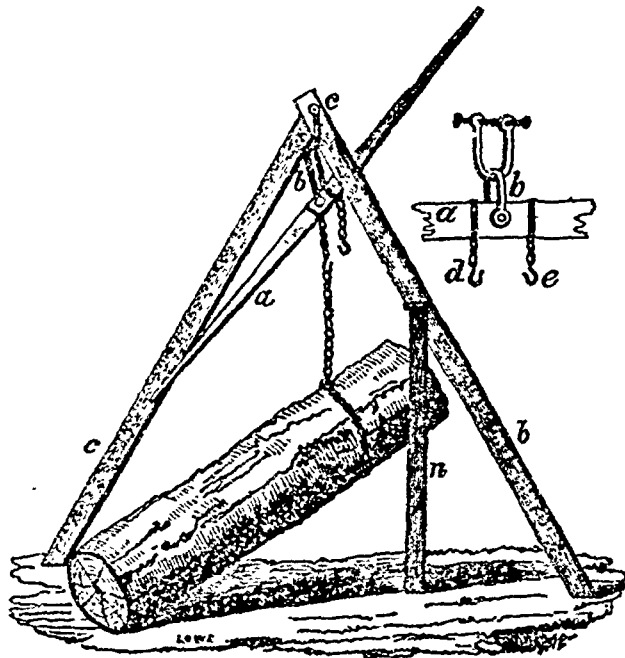
BACK VOLUMES OF THE CULTIVATOR.—We have been frequently asked the question, whether we could supply the whole of the back volumes of the *British American Cultivator*, bound, and at what price? In reply to such enquiry, we would state, that we have a few hundred sets of volume 2 and 3, neatly bound in one, for which we charge only five shillings, being the former price of a single volume unbound: and to persons in trade, or agricultural societies, we make the very liberal discount of 25 per cent, or in other words, charge only 3s. 9d. for two volumes bound in one, when more than one book is purchased. In addition to the above, we have on hand 3000 full sets of the back numbers of the current volume, and can sup-

ply that number of new subscribers with the present volume from the commencement.

Agricultural Societies would confer a lasting blessing upon their members if they would adopt the plan of awarding cheap agricultural works as the lowest rank of prizes in each class. They would by this means aid in creating a spirit of competition among the farmers, and would more especially awaken a zeal for improvement and research, which have hitherto been too much neglected in this province.

To prevent Tooth-Ache.—Wash the mouth with cold water every morning, and rinse it after every meal.

A LOG LOADER.



A Log Loader.—With this I send you a sketch of a very simple and useful machine, both in the farming and mechanical arts, by the means of which great labor and much time may be saved.

It consists of a double acting lever, *a*, 10 feet long, suspended in the middle by the clevis, *c*, which is hooked in the clevis, the bolt of which passes through the upper end of two shear poles, which admits them to open and shut, as best suits. The hooks *d* and *e* are placed $2\frac{1}{2}$ inches from the fulcrum, connected to the staple by a link and swivel, which enables the hooks to be turned in the links of the chain either way.

The shear poles may be of a length suited to the weight and height of the object to be raised. For loading logs on a wagon, they should be $6\frac{1}{2}$ feet; if it is a short or round object, a third shear pole should be set against a pin in one of the other legs. The machine is to be placed over

the object to be raised; a chain is then to be placed around it, one end of which is fastened to one of the hooks of the lever, the lever is then worked, and the hooks to be hooked one below the other alternately.

V. H. HALLOCK.

Milton, N. Y., April 22, 1845.—*Am. Ag.*

To cure a Snake Bite.—An exchange paper says that the bark of the yellow poplar, bruised, made into a poultice and applied to the wound—at the same time that the wound is bathed with a strong decoction of the same, and the patient given half a pint to drink every half hour, will effect a cure.

Charcoal made into a paste with hog's lard and changed often, is also pronounced sovereign. To which we add indigo, treated in the same manner.—*Prairie Far.*

PROCRASTINATION.

"Going! Going! Be in time! Be in time!"
AUCTIONEER.

Friends:—Always bear in mind the above words of the auctioneer; many a glorious chance is going; many a fine day shines o'er us when we too frequently forget "to be in time" and sinks deep into eternity never to be recalled by mortal man.

"In vain we war with nature's force;
Time's rapid ear pursues its course,
Nor wisdom, nor ambition's pow'r
Can stop the quick revolving hour."

To those whose energies are always active, and whose minds comprehend in some degree the position which they hold on earth, I would merely offer my text as a gentle stimulus to their continued useful industry: but to the inanimate, the sluggard or the idler, I would shout loudly as the auctioneer does—"Going! going! be in time!" and if I succeeded in awakening him from his lethargy, in the most humble manner and with the greatest caution to respect what I conceive to be his rights, I would request his attention to the many evils which can be so readily seen around us, caused, as I believe, through the want of punctuality and the proper self-dependence of each individual.

Many a fortune has been lost through procrastination; and Oh! how cutting must be the feelings of the disappointed one, who would frequently exclaim—"If I had only been in time," "only just a little sooner and all would have been well!" But no! I lingered still without a care, thinking, as usual that it could not be so late; but now, alas! I have found the truth, that "time and tide wait for no man," and I am ruined."

Let us then bear in mind that good old saying, "Never put off till to-morrow that which ought to be done to-day," and we can go to bed every night with easy minds, satisfied that we have performed our duties, and the better prepared for our next day's labor. By making good use of every moment of our time do we not enjoy more of our life? Do we not lengthen our days? And, above all: do we not the more benefit ourselves and fellow creatures?

Farmers are frequently reminded by agricultural works to attend to the repairing of their implements, to the putting of things to rights in the stables, barns, etc., in wet weather, but it is to be hoped now that the majority of them need not this advice, though, still there is no harm in repeating it.

I feel well aware of the many difficulties which a farmer in the West has to contend with, and the many drawbacks which he experiences in his progress: the more need then for his energy; and such hardy pioneers must not be daunted, but with heart and soul turn to their work. It is not for themselves alone that they labor, but also for generations yet to come.

We now stand and contemplate over a splendid city and think of the activity and industry of our forefathers. Generations yet to come will travel to some elevated spot and contemplate o'er the rich and fertile valley which their ancestors had reclaimed from dark and mighty forests—not the work of the idler, not the work of the gossip; but, the work of the industrious and energetic.

So many good things result from industry that we are sure the employment of the poor in our large cities and densely populated countries would materially decrease crime. Industry, too, is the best thing to make honest men and women; when they are usefully employed their attentions are taken off the continual criticisms of their neighbors' actions, they have not so much time to sit in judgment upon other people's conduct, they therefore are not troubled with so many bad feelings, so many jealousies, or aggrieved so much by that which does not concern them; besides, see what good appetites the industrious have, how they enjoy a simple meal, and for rest, nothing can equal the rest of a weary man, it seems the greatest blessing he can enjoy; the luxurious noble or pampered aristocrat can never experience such sweet sensations.

When a man is unfortunate and distressed will men run to his aid when they see him standing idle, grieving over his position? No! Would even benevolent individuals strive to get his wagon out of the mire when he stood by and looked on? No! Then a man must help himself, "God helps those who help themselves."

Rouse then ye sluggards? Rouse ye drones, and be industrious. Industrious men are punctual men; punctuality in men saves fortunes and lives; industry and punctuality prevents procrastination: then a great evil is avoided, and the existence made happier and healthier.

Delay no longer but "be in time," plow in season, gather in season, and last, but not least in importance, send in your *twenty-five* cents for the Plow Boy, then will peace and contentment be your reward.—*Plough Boy*.

A nice and wholesome Sweetmeat for family use.—Pare, or not, as you choose, a quantity of sweet apples, to fill an earthen or stone jar; add a little sugar or molasses, and if the apples are not sufficiently juicy, a little water; cover with a thick paste of flour and water, and put into a brisk oven with your bread. Let them stand till morning. They will have the flavor of baked pears, and can be had fresh at all seasons.—*Am. Ag.*

Lemon or Orange Water.—Peel the outside rinds from oranges or lemons, pound it fine in a mortar, and pour boiling water on it, and cover it close when cold; bottle for use as a substitute for essence.

Brown or Head Cheese.—*Blanc-mange.*—*Pig's-foot Oil.*—*Sore Throat.*—*Souse.*—in a farmer's kitchen the stale adage is often verified, "God made nothing without its use," and the farmer's wife can testify there are various uses to which one thing often may be applied. An instance I can supply from my late country observations. Boil pig's feet—a dozen of them if you have them—for several hours, till the bones can easily be removed. Strain the liquor from them and set aside to cool. Remove the bones carefully, and reserve equal portions, if you choose, for souse and *brown or head cheese*.

To make the latter, chop moderately fine, add sage and thyme, or sweet marjorum, plenty of pepper and salt, and if you like, a trifle of spice and a glass of wine. Tie all firmly when well mixed, into a crash cloth, which must first be well wrung in cold water, and let it stand in a press twenty-four hours. You have then a handsome mould of head cheese.

A delicate *blanc-mange*, not inferior to the best isinglass, may be made of the jelly formed by the liquor when cold. From this you must first skin every particle of oil, which must be carefully preserved as it forms—

An excellent remedy for *sore throat* or *croupy* affections, externally applied, or simmered with molasses and vinegar, to give your children when the case demands it before retiring at night.

I see it lately asserted, that cattle's feet prepared in the same way for boiling as pig's feet, afford an equally good jelly for *blanc-mange*.

To make *souse*, add to the feet when well boiled, the pig's head. After boiling three or four hours, remove from both all the bones, and place the whole in a stone jar. Boil in vinegar a few cloves or any other spice, with pepper and a little salt; mix with this a little of the liquor in which they were boiled, to prevent too great acidity, and with this liquid cover the meat. Cut in slices when you use it, and after beating in a frying-pan, pour off the liquid and brown it; or if you prefer, dip the slices in batter and fry in a pan rubbed with butter or lard.—*Am. Ag.*

Foot Rot.—C. W. S., in the *English Agricultural Gazette*, directs that the hoof be cut away sufficiently at the lower part to permit the escape of any matter that may be confined, and that the diseased part be touched, by means of a feather, with a little hydrochloric acid, which may be repeated if any fungus flesh grows on the part; if otherwise, the sore may be dressed daily with a powder composed of equal parts of sulphate of copper, alum, fine charcoal, and Armenian bole. The sheep must be kept in a clean dry place; dirt and moisture are prejudicial.

To prepare *Sugar for Candying.*—The first process is *clarifying*, which is done thus: Break the white of an egg into a preserving pan; put to it four quarts of water, and beat it with a whisk to a froth. Then put in twelve pounds of sugar, mix all together, and set it over the fire. When it boils, put in a little cold water, and proceed as often as necessary, till the scum rises thick on the top. Then remove it from the fire, and when it is settled, take off the scum, and pass it through a straining bag. If the sugar should not appear very fine, boil it again before straining it.

To *Candy Sugar.*—After having completed the above first process, put what quantity is wanted over the fire, and boil it until it is smooth enough. This is known by dipping the skimmer into the sugar, and touching it between the fore-finger and thumb; and immediately on opening them a small thread will be observed drawn between, which will crystallize and break, and remain in a drop on the thumb, which will be a sign of its gaining some degree of smoothness. Boil it again, and it will draw into a larger string; it is now called *bloom sugar*, and must be boiled longer than in the former process. To try its forwardness, dip again the skimmer, shaking off the sugar into the pan; then blow with the mouth strongly through the holes, and if certain bladders go through, it has acquired the second degree. To prove if the liquid has arrived at the state called *feathered sugar*, redip the skimmer, and shake it over the pan, then give it a sudden flit behind, and the sugar will fly off like feathers.

It now arrives to the state called *crackled sugar*; to obtain which the mass must be boiled longer than in the preceding degree; then dip a stick in it, and put it directly into a pan of cold water, draw off the sugar which hangs to the stick in the water, and if it turns hard and snaps, it has acquired the proper degree of crystallization: if otherwise, boil it again until it acquires that brittleness.

The last stage of refining this article is called *carmel sugar*; to obtain which it must be boiled longer than in any of the preceding methods; prove it by dipping a stick first into the sugar, and then into cold water, and the moment it touches the latter, it will, if matured, snap like glass. Be careful that the fire is not too fierce, as by flaming up against the sides of the pan, it will burn and discolour the sugar.

Making Jelly.—Those who would make fine jelly should always avoid boiling the juice of the fruit, when it is desirable to have the article, when made, retain the flavor of the fruit from which it was prepared. After the juice is pressed from the fruit, and the proper quantity of sugar added to it, let it be heated until the sugar is dissolved; after this is effected, no further heat is required.

Extraordinary yields of Wheat.—Professor Colman, in the second part of his European Tour, says:—"Another witness, before a Parliamentary committee, testifies, that on the estate of Lord Howard, Barbot Hall, in Yorkshire, a rood—a quarter of an acre—of land was dug and planted with wheat by his lordship's direction, and 28 bushels of wheat were obtained, which would be at the extraordinary and unheard of rate of 112 bushels per acre.

"The authenticity or rather accuracy of such a statement as this may well be questioned, but I have the pleasure of presenting one, exhibiting a most extraordinary yield, on which full reliance may be placed.

"In visiting Horsham, (the last summer,) in the county of Sussex, my attention was strongly attracted by two small pieces of wheat in a garden by the road side, exhibiting an extraordinary luxuriance; and I have been able to obtain a detailed history of its culture and yield, through the politeness of C. S. Dickens, Esq. of Coolhurst, near Horsham.

"The seed of this wheat was brought from Australia, being the product of some wheat which had been sent there two or three years before. The quantity of land sown, in one of the pieces, was 34 square yards. The wheat was dropped in rows 9 inches apart, and in holes 6 inches apart, and only 1 grain in a place. The number of grains planted was 632, out of which 33 failed in germinating. The cultivator obtained 4 gallons of good wheat from the land, exclusive of several of the finest plants which he saved. The usual number of stems from each seed was 18 to 20, a considerable number gave 30 to 35, and one was counted which had 40 full sized stems, and 3 of a smaller size. The product was at the rate of 71 bushels to the acre."

To secure the Fruiting of a Tree.—Select a tree furnished with blossom buds, just as they are beginning to expand.—Take a potatoe fork, and with it make holes all over the surface of the space occupied by the roots, heaving the earth by pressing on the handle, and having dissolved 1 oz. of nitre to 3 gallons of water, fill the holes with a solution. No manure must be given. Should, after stoning, the tree appear unable to sustain the fruit, the following preparations may be applied in the same manner. To 1 gal. of blood add 1 gal. of water and 1 oz. of potash. Stir the whole well together, and when it has settled, pour off the liquid, and mix 1 gal. of this liquid with 1 gal. of water, and pour into holes made in the manner already described.—*Gard. Chron.*

Agricultural Anecdote.—Furius Cresinus, as mentioned by Pliny the Roman historian, was originally a slave. Having been made a freeman, he purchased a small lot of ground, from which he obtained through his unwearied industry, much finer crops than many of his neighbors, who had much larger farms. This excited general envy, which his enemies carried to such a length, as to accuse him of employing magic charms to render his grounds fertile and to impoverish theirs. The edile caused him to be summoned to appear and answer the charge before the people of Rome. Cresinus obeyed the mandate, accompanied by his daughter, a fresh and healthy colored girl, charms which appeared to greater advantage from the simplicity of her dress. The accused also brought with him the tools and implements of his profession. His mattocks were remarkably heavy; his plough was of an enormous size, and his cattle were all sound and fat. "Behold!" said the truly dignified farmer, "behold my whole magical equipage! behold the charms which I have recourse to! There are others, indeed, which I am not capable of producing before you—I mean the sweat of my brow, and the incessant toil both of day and night!" This native eloquence decided the matter; he was honorably acquitted by the unanimous voice of a numerous and applauding assembly.—*Southwestern Far.*

To Destroy Flies.—A correspondent of the *Cincinnati Chronicle* gives the following:—

It is perhaps not generally known that black pepper, not red, is a poison for many insects. The following simple mixture is the best destroyer of the common house fly. Take equal portions of the fine black pepper, fresh ground, and sugar—say enough of each to cover a ten cent piece—moisten and mix it well with a tea spoonful of milk, a little cream is better,—keep that in your room and you will keep the flies down. One advantage over other poisons is, that it injures nothing else; and another that the flies seek the air and never die in the house—the windows being open.

Pickling Cabbages.—Quarter the firm head of the cabbage; put the parts in a keg, sprinkle on them a good quantity of salt, and let them remain five or six days. To a gallon of vinegar put an ounce of mace, and one of pepper corns and cinnamon. Cloves and allspice may be added, but they darken the color of the cabbage. Heat the vinegar scalding hot, add a little alum, and turn it while hot on the cabbage, the salt remaining. It is necessary to turn the vinegar from the cabbage several times, and scalding it, return it again while hot. This makes them tender. Purple cabbages, the heads not large, but fine and firm, are best for pickling.—*Alb. Cult.*

BUTTER.

We have no sympathy with those farmers who complain of hard times, and yet make no personal effort to remove them from their own shoulders. Numberless instances of neglect and bad management occur in their operations, which, if guarded against, would afford a ready and profitable sale to their products; but now, will either not sell at all, or at a price which does not at all compensate for the labor and money expended on them. Probably in no article of farm production is this more clearly manifest than in the greater proportion of butter which is made in the interior of this country, and especially at the West. The soil yields good grass, unexceptionable grass; and the cows yield good milk, unexceptionable milk; which, in its turn, yields good cream, and the beginning of unexceptionable butter. But the moment art steps into the completion of what nature has so happily begun, there is an end to perfection, unless it be to the perfection of blundering and mismanagement; and the whole operations of master and dairy maid, are, in the quaint phraseology of good old Tusser, "so slabbed and soft," that what might with care and good management, have been in the highest degree palatable, is made absolutely execrable. We have repeatedly been forced to notice the wretched stuff which passes under the name of butter, found in many of our farm houses and on most of the tables of public houses in the interior,—and which has compelled us to limit our choice of eatables to dry bread and tea or coffee, rather than poison ourselves with the addition of that miserable stuff, which is equally offensive to nostril and palate, and which plentifully besmears every dish that can be spoiled by its presence.

With those who are content to use it at home, or can sell it to such of their neighbors for consumption, as can tolerate it on their premises, the loss is no greater than that of one of the good things of this life which might have been enjoyed by the same expenditure of labor, that an intolerable article is provided.

But in sending the article to market, another result follows, which touches the miserly producer in a far more tender point, than in his taste. Choice butter sent to any of the large eastern markets, will command from 15 to 20 cents per lb. at wholesale; while the wretched stuff usually sent there, is worth only the price of grease, for which purpose, it is bought up in large quantities at from 5 to 7 cents per lb., and sent to England for various uses. Now let us look at the statistics of this matter. The product of the dairy for Ohio and Indiana, were estimated, in the report of the Commissioner of Patents for 1842, to be, in round numbers, \$2,600,000. If we take one and a half millions of this for butter, and allow one third of the whole quantity to be sent to market in bad condition, (and we think we are entirely within bounds, for though no states can make better butter, none certainly make worse than much of it which they export,) we have a difference of about 6 cents per lb., amount-

ing in this case to three hundred thousand dollars, which is annually lost to these two states, from the neglect of ordinary care and attention to this one article alone.

For the proper mode of making and packing butter for a near or distant market, we refer to numerous articles on this subject, in the former volumes of the *Agriculturist*; and we do not hesitate to say, that they are as complete and concise as anything ever written on this interesting subject. We will now merely state here, that the first requisite is, to have all the articles in use perfectly sweet, and in the utmost state of cleanliness. Milk pails, milk pans, churns, and butter bowls, should be scalded thoroughly, and scoured before using. The second is, to work out by a dab or paddle every particle of butter-milk. Some dislike working it in cold water, but if properly managed in other respects, we do not consider this objectionable. A third requisite is, to use the very best, perfectly pure salt, finely pulverized, and have this intimately blended with the butter in sufficient quantity to make an agreeable taste. The fourth is, to have the butter, as soon as ready for packing, carefully put down in clean white-oak firkins or stone jurs, crowded so closely as to fill up every part of them, and have the top carefully covered with a clean linen cloth, with salt one inch deep placed on this, and cold water enough added to make a brine. Then keep it in a cool place till ready for shipping.

Since the above was written, we have received our foreign journals of the past month, containing reports of the late proceedings of the English Agricultural Society. In these we find an article "on preparing butter for the London market;" and as the good house-wife is never tired of reading subjects of this kind, we copy it in our columns, thinking she may get a hint or two from it which may prove serviceable even here in our own country. Working butter with the hand, and some other things recommended in this article, may be admissible in the cool climate of Great Britain, but should never be practiced in this country.

"The following is the most approved method of making and preparing butter for the London market, and is submitted for the advantage of farmers and dairymen throughout Ireland. Butter made on this system, with care and quick dispatch, will ensure high prices and quick returns. The agents comment on each dairy's butter, and improvements are still going on. The best land is old pasture, as free from weeds as possible, with abundance of good water. The cows should not be heated or tormented in any way; housed at night, and fed on green food, and the pasture changed when practicable. In milking, take saltpetre in the pail, one-eighth of an ounce to 8 quarts of milk. The dairy should be perfectly clean, airy, of equal temperature (say 50°), very little light, and completely shaded from sun, by trees or otherwise; and in winter a stove may be required. Strain the milk into coolers, sweet

and dry (never mix warm and cold milk,) keep it from two to four days, then put the whole of the milk and cream into a clean churn, which is not to be used for any purpose, except during the time it is in operation. Boiling water to be added to raise the temperature to about 68° or 60°, if horse or water power be used. The time occupied is from one to two hours, depending on the size of the churn; but churning should not be continued beyond the proper time. After churning put the butter into two bowls or pans of pickle, made from pure water and fine-stoved salt (as common gives the butter a bad flavor.) It should be well washed, and the pickle changed frequently, until all milk is extracted, working with the hand the two pieces alternately, until the grain becomes quite close and firm; when it is to be cured with the finest dry-stoved salt and sugar. The proportion to be one ounce of refined sugar to one pound of salt, to be well worked into the butter with the hand; but the quantity of curing materials will depend on the time and labor given by the dairy-woman, in working and beating the butter (after the salt and sugar are applied,) which should continue until all pickle is driven out. The butter should be finished the day it is churned, and then be pressed as closely as possible into the cask. The cask should be well seasoned for some days previous, with strong pickle, frequently changed, or hot pickle; and must be strong and air-tight; the size is of no consequence, if filled and sent off in one week. If not filled at one churning, the butter is to be covered with pickle until the next; but no cask to contain more than one week's butter. If butter should, at any time, appear pale in color, after churning has commenced, a little grated carrot-juice may be put into the milk, and will not injure either milk or butter.—*Am Ag.*

Hydrophobia.—The Rev. J. Edwards, in a letter to the Editor of the *Peterboro' Chronicle*, gives the following receipt as a preventative against hydrophobia; and for the efficacy of which he cites apparently good proof:

Let, then, any individual who has been bitten by a mad dog, observe the following simple directions, and there will be no need of cutting and burning the wound, nor of fearing Hydrophobia.

1st. Burn some Oyster shells to lime, let them be well bruised and sifted through a piece of fine gauze or muslin.

2nd. Take for an adult, two table spoonsful (heaped measure,) of this sifted lime, and mix it up with eggs until it is of the consistency of batter for pancakes.—Fry it in a pan, into which has been put a piece of fresh butter, or some sweet oil.

3rd. The pancake thus prepared, to be eaten in the morning before any thing else, and neither food nor drink to be taken for six hours afterward, when the usual diet may be taken.

4th. Three such cakes are to be taken in the same manner, on three alternative mornings.

Dressing for Asparagus—Give it salt and water every fortnight while the summer-shoots are growing; and when they cease doing so, cease salting also. Your stable-dung will no doubt prove a capital preparation, in addition, for the crop of next year, which will be much improved by not cutting this year. Add guano to the salt and water during this summer, the result will pay you. Nitrate of soda will not act well unless succeeded by wet; in dry weather it does more harm than good.—*Gardeners' Chronicle.*

Hanging the Scythe.—*Mr. Editor,*—As something has been said respecting the rules for mowing, and the difficulty of delineating on paper directions that will be of much service, I would say, that the first step to be taken after one has procured a scythe is to hang it properly. I mean for actual use, "not on a tree." and this, I undertake to say, may be by a mathematical rule that is very easy and simple. The rule which I am about to give, is one that accidentally entered my head about forty years ago, when I was but a boy; and one, which I have invariably followed ever since; and, am fully satisfied by experience, that it gives a scythe the most proper pitch in order to have all parts of it do their duty of any position a scythe can be hung. The rule is as follows: take a straight stick as long as your scythe and measure the length of your scythe from heel to point in a straight line; then measure the same length from the bottom of the heel up the front side of the snaith and make a mark, then extend the scythe in or out till the same length will just reach from the mark on the snaith to the point of the scythe, forming, as it were, an equilateral triangle.

This rule, I confidently believe, will give any scythe, let its shape be very crooked or otherwise, the most proper and suitable pitch for performing work easy and well and giving every part of the scythe its due proportion of cut, of any rule that can be adopted; as to hanging the edge high or low much depends on the nature of the ground and the fancy and habit of the mower.

Respectfully yours,

JONAS CLAYES.

Framingham, July 14, 1845.

—*Mass. Ploughman.*

Real Value of Crops.—“A circumstance most particularly to be attended to in the estimation of crops, and one far too apt to be neglected, is, that bulk and weight are not necessarily true indices of the real value, as they not always represent correctly the amount of nourishment contained, and we need scarcely remark that the latter is the true object for which every crop is cultivated. * * *

* * * In some experiments related in Professor Johnston's “Elements of Agricultural Chemistry,” the results are stated in 2 tables; 1st, the number of bushels of wheat, oats, and barley, obtained for each bushel of seed sown; and, 2nd, the amount of starch and gluten contained in 100 parts of each of the samples. The real value of the crops, therefore, closely approximated by comparing the two tables together. * * *

In the experiments alluded to, cow-dung produced 16 bushels of oats for each bushel sown; whereas night-soil (generally esteemed much the strongest manure) produced only 14½ bushels. Arguing from this alone, therefore, one would be apt to suppose night soil inferior to cow-dung for oats, and in fact, without the aid of chemical analysis, such would have been the legitimate conclusion. When, however, the oats were analysed, it was found that the grown with cow-dung contained 3½ per cent. of gluten only, whereas the night-soiled specimen contained 5 per cent. Comparing these together, therefore, we arrive at the important conclusion, that whereas, by measure, the night-soil was to the cow-dung as 14½ to 16; when the real nourishment was ascertained, the proportions were 72½ to 56, or as 12 to 9 nearly, showing a real increase of ¼, where, by the ordinary method, a deficiency of about ⅓ was apparently proved.—*Dr. Madden, on the Advantages of Extended Chemical Analysis to Agriculture.*

Vomiting of Blood.—1. Take two spoonful of nettle juice. This also dissolves blood coagulated in the stomach.

2. Take as much saltpetre as will lie on half a crown, dissolved in a glass of cold water, two or three times a day.

Hovey's Seedling Strawberry.—This fine variety, which was originated by Messrs Hovey & Co. at Cambridge, near Boston, in 1834, and which has obtained the highest premiums of the Massachusetts, as well as many other Horticultural Societies, for several years, as the best, taking it altogether, yet seen, is now being cultivated in the neighborhood of our city, as well as in many other parts of the West, to a very considerable extent. Last fall specimens were exhibited by Mr S. S. Jackson, at the Horticultural Show, measuring five and a quarter inches in circumference. It has been described thus: “Fruit very large, round, or slightly ovate, conical; deep shining red, paler in the shade, seeds inserted in a slight cavity; flesh scarlet, paler in the largest berries, and firm, abounding in an agreeable acid and high-flavoured juice, not surpassed by any other variety; footstalks long, and elevating the fruit from the ground, and every berry attaining a good size; leaves large, and rather light green; vines very vigorous.” The blossoms are chiefly all female; it must, therefore, be grown in rows, near to, or alternate with the Iowa, Virginia Scarlet, or similar kinds, which will cause it to bear enormously. This must be allowed to be the most splendid and valuable of all strawberries yet known to us: We look forward to the time when this noble fruit will form the chief strawberry in our markets, notwithstanding the Hudson, now becoming very common here, is considered, and we believe justly, the best and highest flavored. Another reason that it will be preferred to all others here by the market-gardeners, is the facility it affords from its great size of easy gathering.—*West. Farmer & Gard.*

Large Chests.—Horses that are round, “barrel-chested,” are invariably more muscular and enduring than those of the opposite kind. Scientific sportsmen are, in a great measure, guided in their opinion of a horse's racing qualifications by his girth just behind his shoulders; by this test, a well known jockey foretold the reputation and prowess of the celebrated racer “Plenipotentiary,” almost from the period of his birth. Cattle-dealers and butchers, in like manner, judge by the chests and shoulders of cows and pigs what amount of fat they are likely to gain in the process of feeding. All animals that have large lungs are remarkable for the vigor of their appetite, and for the facility with which they appropriate their nutriment; such animals will feed upon the coarsest hay and straw, whilst their less fortunately constructed companions are fattened by no kind of food. An amusing anecdote is related of a simpleton, who, in trying to sell his horse, declared that “the animals eating was a mere nothing.” The intelligence would, contrary to intention, have sufficed to ruin the prospect of sale, but that the buyer, with a rare discrimination, inferred from the horse's chest that the capacity of his appetite had been unwittingly mistated. He bought him on the hazard of an opinion, and had no reason to repent of his judgment.—*Medical Times.*

Bridles.—The Duke of St. Albans having presented to the Council, at the previous meeting, a bridle for the effectual control of a strong and vicious horse, in which the principle of leverage was conjoined with punishment effected by a sharp rectangular curb-chain, Mr. Shaw thought it might not be unacceptable for the Council to receive a so a bridle intended for a horse of similar propensities, but less vicious and powerful, invented by Mr. Martin, and of which the principle introduced was that of impeding the horse's respiration. This was effected by a leather strap, each end of which is attached to the ring of the upper end of the bit-iron, and being crossed forms a loop which passes over the horse's nose. On drawing the curb-rein, the upper ends of the bit-iron are projected forward, and carrying with them the two ends of the nose band, the loop is drawn tightly over the nose; the muscles which regulate the expansion of the nostrils rendered ineffective, and the horse consequently unable to draw his breath with that freedom which is essential to the increased respiration his going off, or continuing at speed would occasion.—Col. Challoner remarked that he had observed, when in Italy, that the Neapolitan cab-horses were driven without bridles, by a simi ar contrivance, of the nature of a cavesson, commonly used in England for breaking horses, being a leather band passing over the nose, lined inside with sharp studs, and furnished outside with two short projecting ring-stems, to which the reins were attached, and the horse driven without the slightest inconvenience.—*Ag. Gaz.*

To prevent Tea Kettles coating with Lime.—J. J. T. in the *Albany Cultivator* says that an oyster shell put into a tea-kettle, will prevent the coating of lime on the surface, by appropriating it to itself. Our whole western country, with the exception of the lake water, so far as we know, is strongly impregnated with lime; and in some sections it will incrust itself on the inner surface of the kettle, after a few boilings, as thick as the kettle itself.

Agriculture in Lower Canada—We learn from the Report of the legislative council committee on the population and property of Lower Canada, that the number of occupied acres of land is 7,549,459; of which 3,083,940, or nearly one half are under cultivation. The produce in wheat, barley, rye, oats, peas, Indian corn, buckwheat, and potatoes, for the year 1843, was by far the largest crop. next oats, then barley, peas, buckwheat, &c. Of wheat the product was 914,909 bushels. There are in the province 63 colleges, academics, convents, &c. and 1557 elementary schools, making a total of 1619 educational establishments, attended by 56,578 pupils. Of wool, 1,209,782 pounds were produced in 1843, and 2,264,537 yards of fulling cloth, flannel, linen and cotton were manufactured.

Salt Sown to Kill Worms.—Mr. Wm. Tribou of North Bridgewater, tells us he has been sowing salt among his cats for the purpose of killing the worms that infested the soil. He ventured to sow 3 x bushels of cheap salt to the acre, with his seed oats, and he says he has never raised so fine a harvest at any time.

He sowed grass-seed at the same time, and he says his grass has been as much benefitted as his cats—he can see a plain difference between that part of the field where he sowed salt two years ago and that where none was sown.

Our readers may remember that we have advised to sow as many as five bushels per acre in the spring, and gave an opinion that such a quantity would do no injury—that in the fall, on fallow ground, three times as much may be sown with safety. We want more trials to determine how much may be sown in the spring with English grain.

Mr. Tribou is satisfied that salt will destroy the common worms that infest our gardens and fields—it may be that enough may be applied to kill every worm in a garden, if it is sown in September, when it will not be likely to injure vegetation.—*Mass. Ploughman.*

Labels.—I submit to your inspection a specimen of a label which I have used both for pots and in the open ground for some years with as much convenience or more than any other I have met with. It fully answers the purpose intended, and every consideration of economy. The specimen sent is the smallest size I use, and has been in use four years, but of course the size can be varied to any extent. I use them from 3 to 8 inches in length, and of suitable width. They are cut with a pair of strong brazier's small shears out of a plate of zinc, and being cut intersectionally, a 2 foot plate will produce a great many, which being painted with white paint and well dried, may be written on with a pencil when wanted. The writing may be renewed at pleasure by applying a coat of the same paint. I used to paint them all over, but I find it better to merely paint enough of the top to carry the writing; for by the constant action of wet upon the paint in the earth it blisters and corrodes as is the case with the one I send.—*J. H.* [This was a thin triangular zinc label, measuring 3 inches in length and 1 inch in width at the top, where a small piece had been clipped off each corner to give the label a neat appearance.]—*Gard. Gaz.*

Never-failing Recipes for Soap.—Soft Soap.—To 25 lbs. of clean fat, add 16 lbs. potash dissolved in four buckets of water, and boil it until the fat is entirely destroyed. This you must do by taking out some of the soap in a clean cup, add a little water, and let it stand to cool. As the soap becomes thicker and clearer by the addition of water, and continues so, the soap is done; but should it become thinner and whitish, the ley has not combined sufficiently with the fat, and the boiling must continue until it will bear the water test. When it has arrived at this point, add water until it becomes a thick jelly, then let it boil one hour slowly, when it will be finished and fit to be barreled. The most frequent cause of failure is, that the ley is not strong enough for the quantity of fat; therefore, when home made ley is used instead of potash, the ley should be strong enough to float an egg freely. To each gallon of strong ley add three quarters of a pound of clean grease; if cracknels be used, take one pound to each gallon. Boil it very fast, and stir it frequently. A few hours will suffice to make it good soap.

Hard Soap.—Add salt in proportion of one pint to three gallons, let it boil a few minutes, and put it in tubs to cool. Should the soap be thin, try it in a cup if it requires water. If very strong ley be used, water is necessary to thicken it after the incorporation is complete; this must be done before the salt is added. Next day, cut out the soap, melt it, and cool it again; this takes out all the ley, and keeps it from shrinking when dried. The fat should be prepared before soap-making day, by boiling it in clear water and straining out all the bones and flesh, as they give out but little grease and always make the soap impure. Be careful to save the bones and scraps thus left, as they form the best manure for rose bushes, flowering shrubs, and peach trees.—*Am. Ag.*

Mr. M'Hannon, near Reading, Ohio, has given us his plan to measure a tree standing; it is as follows:—Take two sticks of equal length, no matter whether six inches or six feet long, but about two feet is recommended; place the end of one exactly in the centre of the other in the form of a T, by driving a nail through one into the end of the other; bevel off the end of the centre-piece, so as to take a true sight; hold the bevelled end to the eye, and step back till the bottom and top ranges with the two places to cut it off, or as far as the timber will mark; then measure plumb from the eye down to the ground, and the distance to the tree is the length of the stick of timber. This is very useful for persons buying timber, or cutting building timber.—*West. Far.*

Is that man prospering, who spends every year more than his income? Is that farm well managed which is becoming less productive as the successive crops are taken from it? We ought not to draw upon the fertilizing matter of the soil, which may be termed its *effective* capital, without returning an equivalent. The soil is generous, yet just. It will reward you according to your works, and there is no long delay before you are made acquainted with its decisions. With skilful and scientific management our farms may be made more productive and fertile than they were when first brought under cultivation. In too many instances, however, the first crops were the best, if not the only good crops which the farm has produced. We need not let the lever slip through our hands until we are forced to pry with the short arm. Some have thought it a trouble to save and apply their manure, because they could, for awhile, get good crops without it. The fertilizing matter of their farms has run to waste, their land has become impoverished, and now they cannot raise good crops without manure, and they have little or none to apply.—*Maine Far.*

Destroying Wasps.—Your correspondent's plan of putting the spirits of turpentine into a bottle instead of a cup, is a decided improvement. If he has an opportunity of doing so, would he try a plan I have suggested more than once, but do not know whether it has yet been tried? Let a small quantity be squirted into the hole as far as possible, and then let the hole be blocked up with clay. It is possible the soil may imbibe so much of the turpentine as to prevent success, but the experiment is worth trying.—*J. S. Henslow, Hitcham.*

Iron a Remedy for Blight in Pear Trees.—A Correspondent states, that he has found iron ore, or cinders of iron, placed around the roots of trees, drives away the insect which deposits the eggs that produce the worm. Having tried this remedy in a sandy soil, and in a stiff soil, and in places distant from each other, and having driven off the insect when the trees of others were very much injured or destroyed in the neighborhood, he advises all those who are troubled by these insects to try the use of iron, rather than be under the necessity of continually topping of the limbs which contain the worm, or young insect. He thinks it probable that the iron is unfavorable to the worm, which creeps from the branches, and makes its wintering place at the root of the tree, and then the insect avoids an unfavorable place for its young. But whatever may be the theory, it is sufficient that iron has the desired effect.—*Gardeners' Gazette*

To prevent the Smut in Wheat.—Steep the grain in lime-water, or a weak ley of wood ashes or potash.

INFLAMMATION OF THE PALATE— LAMPAS.

The palate of the horse, although a fibrocartilaginous substance, is, and especially in young horses, very subject to inflammation. Until the second teeth are grown, and sometimes after that, the bars at the fore part of the palate swell, and become hot and tender; and when they become on a level with the front upper teeth, or even extend below them, they seriously interfere with the feeding of the horse, on account of the pain which he feels when the food presses upon them. He loses his appetite, or is afraid to eat, and the food falls half-chewed from his mouth.

The principle cause of this affection of the bars is the irritable state of the parts until the process of dentition is completed, and also occasionally some temporary indigestion.

A great deal more is made of this disease than is necessary. If it is merely a trifling enlargement of the bars, it will generally subside after a few mashes, with one dose of laxative and two or three of fever medicine; but if bars are level with the teeth or below them, and the horse *quids* his hay, some blood should be taken from the part. The bars should be cut across, and, if they are cut deep enough, plenty of blood will flow. The bleeding may be encouraged as long as the surgeon pleases, depending on the degree of enlargement and fever: and will usually be stopped at pleasure, by the pressure of a sponge charged with cold water on the part.

This is not recommended as a proper way of bleeding in ordinary cases, for the quantity of blood taken away cannot be measured, and in a very few instances, when the palatine artery has been divided, the bleeding has been arrested with considerable difficulty. If, however, the incisions are made about an inch from the front teeth, and in the direction of a line extending backwards, from between the central and second teeth on either side, not only will more blood be obtained, because the principal vessels lie there, but, by means of a string tied round the front teeth and across the palate, a compress may be easily placed over the incision.

The farrier usually recommends the searing of the bars with a hot iron—a most injudicious and barbarous operation. The animal must be sadly tortured in order to burn down the enlarged bar, and after all it will not be perfectly done.

Connected with the lampas, and often existing at the same time, is what is commonly termed bags or washes, which is enlargement of the membrane lining the cheeks, and particularly that adjoining the anterior molar teeth, so that when the horse attempts to masticate, this membrane gets between the teeth, and occasions much pain. When this materially interferes with the feeding, a portion of the membrane should be excised with a pair of scissors or a bistoury, the bleeding from which will lessen the inflammation, and as the wound cicatrizes it will contract the membrane, and prevent it from interfering with the teeth.—*Clater.*

Labors of a Locomotive—Hon. Wm. Jackson, one of the most practical rail-road men in Massachusetts, has given some statistics of the labor of a locomotive on the Western rail road, which are interesting. Trains of cars leave Boston and Albany every morning, each train carrying 100 tons of merchandize, running at an average rate of 12 miles an hour, or 100 miles a day including stoppages. A horse would carry 1200 lbs., over the mountains 25 miles per day. Divide the load of this one engine by 1,200 and the number of horses for 25 miles a day is 167. Four times this number, or 668 could carry this load 100 miles each day. Hence the iron horse's every day, fair or foul, doing the work of 668 horses.

Mad Itch.—The effect of cattle following hogs that are fed on green corn, cut up and thrown to them when in the roasting-car state, is very fatal. The hogs will chew the corn-stalk, and extract all the sap, and then throw it out. These fibres, thus thrown out, with the sap extracted, will be eaten voraciously by the cattle. It contains no nutriment to give fermentation, to enable the animal to ruminate; and it thus lays dormant and inactive in the manufolds or stomach; becomes perfectly compact and undigestible—creates a fever, and in the end destroys the animal. “I have lost many fine cattle in this way,” says Gov. Vance of Ohio, “and have never been able to save one thus afflicted. The entire symptoms are similar to what is called the ‘mad itch,’ which I have no doubt is created by the same cause, by taking in indigestible matter, incapable of fermentation and rumination.”

A Method of Preserving Fruit Fresh all the Year.—Take of saltpetre one pound, of bole-armenic two pounds, of common sand, well freed from its earthy parts, four pounds, and mix all together. After this, let the fruit be gathered with the hand before it be thoroughly ripe, each fruit being handled only by the stalk: lay them regularly, and in order, in a large wide-mouthed glass vessel; then cover the top of the glass with an oiled paper, and carrying it into a dry place, set it in a box filled all round to about four inches thickness, with the aforesaid preparations, so that no part of the glass vessel shall appear, being in a manner buried in the prepared nitre: and at the end of a year such fruits may be taken out as beautiful as when they were first put in.—*Family Receipt Book.*

Sting of a Bee.—I beg to inform a correspondent in a former number, who applies for a remedy for the sting of a bee or wasp, that the application of a washerwoman's blue-bag, moistened, is the best remedy, and acts almost like a charm instantaneously; it is far preferable to liquor potassæ, or any alkaline solution.—*Medicus Carcugiensis.*

To Gather and Preserve Fruits.—They should in most instances be collected ripe, and kept in sand or straw.

Early Rising.—Late rising is not the habit of the very highest classes, for royalty itself sets the contrary example; and we have met, before now, princes taking their ride before breakfast at six o'clock. The present king of Hanover we have repeatedly seen out at that time. We have known Lord Brougham, when chancellor, make appointments on matters of business at his private residence for eight o'clock in the morning; his own time of rising being four in summer, and half-past six in winter. Supposing that a man rises at six, instead of eight, every morning of his life, he will save in the course of forty years, twenty-nine thousand hours, which is a great accession of available time for study or business despatch; being, in fact a gaining of three years, four months, two weeks, and six days. To any person of foresight, calculation, and industry, this fact will prove a sufficient temptation to practice the healthy and useful habit of early rising.—*Chambers' Journal.*

Tar the Sheep's Noses.—In August and September, and perhaps the latter part of July, a fly, which is very troublesome to sheep, lays eggs in their nostrils, which are hatched, and the young worms ascend into their heads, where they become very distressing often causing death, unless some powerful remedy be applied to cause their ejection or destruction. The better way is to prevent the evil.

Tar is considered the best remedy. By tarring the sheep's noses the injury will be avoided. The better way to effect this object is to lay tar on boards or in throughs in a sheltered situation, and then strew on salt, and the sheep will perform the operation of smearing; or take a stick of timber, dress the upper side, and bore in some large augur holes two or three inches deep, put some salt in these holes and once a week, or oftener, put tar around the edges of the holes.

Sheep suffer much from these flies at the time they are assaulted, and they often run with their noses to the ground in order to avoid these vexatious flies, or they will run their noses into the dust when an opportunity presents; for this purpose some persons plough up the earth on spots often frequented by sheep in hot weather.

The application of tar, as here recommended is conducive to the health of sheep, otherwise than by preventing the evil we have named. It is good for colds and other disorders.—*Bost. Cult.*

Hydraulic Cement.—The following may be useful to some of your readers; it is from the supplement of Ure's Dictionary, an English publication, which work has been recently reprinted in your city: 'All sorts of lime are made hydraulic in the humid way, by mixing slacked lime with solutions of common alum or sulphate of alumina; but the best method consists in employing a solution of the silicate of potash, called liquor of flints, or soluble glass, to mix in with the lime and clay. An hydraulic cement may also be made which will serve for the manufacture of architectural ornaments, by making a paste of pulverised chalk, with a solution of silicate of potash. The said liquor of flints will likewise give chalk and plaster a stony hardness, by merely soaking them in it after they are cut and moulded to a proper shape. On exposure to the air they get progressively indurated. Superficial hardness may be readily produced by washing over the surface of the chalk, &c., with liquor of flints, by means of a brush. This method affords an easy and elegant method of giving a stony crust to plastered walls and ceilings of apartments; as also to statues and busts cast in gypsum mixed with chalk.—*N. Y. Mech.* W.

Potatoe Rolls.—Take five middle sized potatoes—boil, peel, and mash them. Then rub the mashed potatoes through a sieve. To each potatoe, allow a pint of sifted flour, a table spoonful of strong fresh yeast, a gill of milk-warm water, a small spoon of salt, the yolk of an egg, and a bit of fresh butter, about the size of a large hickory nut. Mix together the flour, the mashed potatoes and the salt, in a large broad pan. Make a hole in the centre of the mixture, and pour into it the yeast mixed with the warm water—sprinkle a little flour over the top, and mix in a little from round the sides of the hole. Cover it with a clean towel, and over that a flannel, and set it near the fire to rise. When the dough is quite light, and cracked all over the surface knead in the yolks of eggs (having first beaten them well) and also the butter. Then divide the dough, and make it into long-shaped rolls. Cover them, and set them again to rise in a warm place. When perfectly light, lay them in a pan sprinkled with flour, and bake them well. They are best when quite fresh.—*Gard. Chron.*

To Dissolve Coagulated Blood.—1. Bind on the part for some hours a paste made of black soap and crumbs of white bread.

2. Take grated root of burdock spread upon a rag; renew this twice a day.

Bed Bugs.—In treating of different animals, we must not omit the *bed bug*, as he claims particular attention at this season of the year. We have no cut to represent his *bugship*, nor need we attempt a description, as he is well known, we only treat of his destruction, as he is one of the most blood-thirsty animals that man has to contend with, and he often proves quite formidable in disturbing one's quiet and repose. A correspondent of the *Farmer's Visitor* gives a remedy which he obtained from a good lady among the Enfield Shakers, the substance of which we give in short, first remarking that we have often heard that *unguentum* is an effectual remedy.

"Paint the bedstead with a good coat of verdigris, or merely paint the tenons, mortices, joints, and holes through which the cord passes. Be careful that the inside of the holes be thoroughly bedaubed, and have a good coat, as the rough wood will absorb much paint. Then besmear profusely the joints and holes with '*unguentum*,' and put it together; and if thoroughly done, bed bugs will not inhabit it for 15 years, if ever."—*East. Cult.*

Testing Essential Oils.—Since these oils are more or less adulterated in the present day, a ready mode of testing impurities is a desideratum to dealers and others, Mr. Vogil considers concentrated sulphuric acid to be the best reagent for detecting adulterations of essential oils with oil of turpentine. The peculiar color which the essential oils assume under the action of sulphuric acid is much altered by the intense reddish brown color which the oil of turpentine yields; and, moreover, the heat involved with the oil of turpentine is much greater than that with other oils. In testing, the oils are best dropped on a glass plate, beneath which is placed a piece of white paper; to five drops of the oil add one drop of the fuming sulphuric acid, and mix them with the finger.—

How to Manage a Stud Horse.—I know a stud horse in my neighborhood, which is led out of the stable by the bit, the rein passing from the right side under the jaw through the ring of the left side. The horse takes his groom at ease where he pleases, and as fast as he pleases, till he reaches the mare to be covered. I know another stud horse which was equally unmanageable till the following mode was adopted. The rein passes from the ring of the right side of the bit, up the right side of the head, and over it behind the ears, then down the left side through the ring of the left side of the bit, which gives a purchase upon the mouth that cannot be resisted; the groom thus manages him with the greatest ease. Try it. HORSEMAN.

FROM THE PRACTICAL RECEIPT BOOK

Sheep Husbandry. 1. If the production of wool is the object, take the Merino and Saxon, and, if possible, procure Rambouillet and Paular rums to cross on the first, as they are the largest and most superior class of animals we know, they being originally derived from the same source, viz: the Merinos of Spain.

2. If delicate mutton is wanted, with a medium fibre of wool, take South Downs.

3. If larger mutton, with somewhat coarser quality of wool than the last, though much longer and more of it, is desired, procure Cotswold, Leicester, Bakewell, Lincoln, or New Oxford.

4. Many of those who have crossed the South Downs with the Leicester and the other long-woolled sheep, prefer these, for the reasons stated in No. 2.

5. Others greatly prefer a cross of the Leicester with the Merino, half and half, and then breeding those grades together. Their reasons in favor of this cross are these:—1st. It gives a large sheep, with plenty of mutton. 2nd. A large fleece of wool, and of sufficient fineness for all purposes of domestic manufacture, and gets rid of the troublesome length of pure Leicester. 3. The animal is in good shape, good constitution, thrifty, hardy, and comes to maturity one year sooner than the Merino, has nothing of his rugged appearance, and has little or no gum in his wool.

To Dye Woollens Black.—Take the cloth previously dyed blue and boil it for two hours in a bath of gall-nuts, then pass it for two hours through a hot bath of logwood and copperas.

Black Varnish.—Take any varnish, of the class you wish, 16 parts; lampblack, 2 parts. Grind the black in a small quantity of the varnish, then mix it with the remainder.

To Clean Black Veils.—Pass them through a warm liquor of bullock's gall and water; rinse in cold water; then take a small piece of glue, pour boiling water on it, and pass the veil through it, clap it, and frame to dry.

Bleeding of a Wound.—1. Make two or three tight ligatures towards the lower part of each joint; slacken them gradually.

2. Apply tops of nettles, bruised.

3. Strew on it the ashes of a linen rag, dipped in sharp vinegar and burnt.

4. Take ripe puff-balls, break them warily, and save the powder. Strew this on the wound and bind it on. This will stop the bleeding of an amputated limb.

Spitting of Blood.—1. Take two spoonful of the juice of nettles every morning, and a large cup of the decoction of nettles at night, for a week.

2. Take three spoonful of sage-juice in a little honey. This presently stops either spitting or vomiting blood.

3. Take 20 grains of alum in water every two hours.

Common Black Paint.—Ivory or lampblack, 1 cwt.; road dust, 2 cwt.; lime-water, 15 gallons; oil to grind (facititious linseed.)

Blistering Ointment for Cattle.—1. Yellow resin, 14 pounds; spirits of turpentine, 4 pounds; tallow, 2 pounds; lard, 20 pounds; powdered Spanish flies, 10 pounds; euphorbium, 1 pound; vinegar, 1 gallon. Mix.

2. Tallow, 16 pounds; oil of origanum, 4 pounds; powdered flies, 1 pound; powdered euphorbium, 1 pound. Mix.

3. Lard, 7 pounds; oil of turpentine, 1 pound; tar, 1 pound; powdered flies, 17 ounces. Mix.

4. Lard, 5 pounds; resin, 5 pounds; spirits of turpentine, 5 pounds; powdered flies, 2 pounds; oil of origanum, $\frac{1}{2}$ pound. Mix.

Blistering Plaster.—1. Burgundy pitch, 12 pounds; turpentine, 4 pounds; Spanish flies, 6 pounds; wax, 1 pound; suet, 1 pound. Mix.

2. Yellow resin, 8 parts; yellow wax, 4 parts; suet, 3 parts; powdered Spanish flies, 7 parts; simple plaster, 10 parts; vinegar, 4 parts. Mix.

Compound Blistering Plaster.—Venice turpentine, 18 pounds; Burgundy pitch, 12 pounds; Spanish flies, 12 pounds; yellow wax, 4 pounds; verdigris, 1 pound; mustard, 3 ounces; black pepper, 3 ounces. Melt, then stir in the flies.

To Prepare Bladders.—Soak them for twenty-four hours in water, to which a little chloride of lime or potash has been added, then remove the extraneous membranes, well wash in clean water, and dry them.

Twelve Experimental Receipts on the Earths—1. Pour a little lime-water into a wineglass and put some solution of oxalate of ammonia, equally transparent, into another glass. If the two clear liquors be poured together, a white precipitate of oxalate of lime will immediately become visible.

2. Pour a little lime-water into a phial, and throw some carbonic acid into it. The carbonic acid will seize the lime, and precipitate it in the state of carbonate of lime.

3. Take the phial made use of in the last experiment, with its contents, and convey an additional part of carbonic acid into it. The carbonate of lime will now be re-dissolved, and the liquor rendered transparent.

4. Take the transparent liquid produced in the last experiment, and give it heat. The earth will now be precipitated in the state of carbonate of lime, as before.

5. Pour some lime-water into a wineglass, and a little solution of carbonate of potash into another glass. When these two transparent fluids are thrown together, an abundant precipitate of carbonate of lime will be the consequence.

6. Proceed as in the last experiment, but instead of carbonate of potash, pour a solution of Epsom salt into one of the glasses. When these transparent fluids are poured together, a mixed precipitate of carbonate of magnesia and sulphate of lime will be produced.

7. For another experiment, take in the same manner, separately, lime-water and a solution of alum. The union of these solutions will produce a mixed precipitate of alumina and sulphate of lime.

8. If a strong solution of caustic potash and a saturated solution of Epsom salt be mixed, the union of these transparent fluids will produce also an abundant precipitate. But this will consist of magnesia and sulphate of potash.

9. To a glass of water suspected to contain carbonic acid, add a small quantity of any of the other acids. If carbonic acid be present, it will become visible by a sparkling appearance on the sides of the glass and surface of the fluid.

10. Prepare two glasses of pure water, and into one of them drop a single drop of sulphuric acid, and mix it with the water. Pour a little muriate of barytes into the other glass, and no change will be perceived; pour some of the same solution into the first glass, containing the sulphuric acid, and a white precipitate of sulphate of barytes will be produced.

11. Prepare two glasses of water as before, conduct the experiment in the same as the last, but instead of muriate of barytes, use nitrate of lead. In this case sulphate of lead will be precipitated.

12. Fill a glass tumbler half full of lime-water; then breathe into it frequently, at the same time stirring it with a piece of glass. The fluid, which was before perfectly transparent, will presently become quite white, and if suffered to remain at rest, real chalk will be deposited.

A Braise.—1. Immediately apply molasses, spread on brown paper.

2. Apply a plaster of chopped parsley mixed with butter.

Pain in the Stomach from bad Digestion.—

1. Take fasting, or in the fit, half a pint of camomile tea. Do this five or six mornings.

2. Take from twenty to forty drops of elixir of vitriol in sage tea twice or thrice a day.

3. Take two or three tea spoonful of stomachic tincture, in a glass of water, three times a day. The tincture is made thus; gentian-root, sliced, 1 ounce; orange peel, dried, $\frac{1}{2}$ ounce; proof brandy 1 pint. In three or four days it is fit for use. This is useful in all disorders that arise from a relaxed stomach.

A White Swelling on the Joints.—1. Pump on the part half an hour every morning. This cures also pains in the joints. It seldom fails.

2. A stream of cold water one day, and warm the next, and so on by turns. Use these remedies at first, if possible. It is likewise proper to intermix gentle purges to prevent a relapse.

3. Boiled nettles applied to the part.

To Clean Black Silks.—To bullocks gall, add boiling water sufficient to make it warm, and with a clean sponge rub the silk well on both sides; squeeze it well out, and proceed again in like manner. Rinse it in spring water, and change the water till perfectly clean, dry it in the air, and pin it out on a table; but first dip the sponge in glue-water, and rub it on the wrong side, then dry it before a fire.

Biles.—1. Apply a little Venice turpentine.

2. An equal quantity of soap and brown sugar, well mixed.

3. A plaster of honey and wheat flour, or figs.
 4. Or a little saffron in a white bread poultice.
 It is proper to purge also.

To dissolve White or Hard Swellings.—Take white roses, elder flowers, leaves of fox glove, and of St. John's wort, a handful of each; mix them with hog's lard, and make an ointment.

2. Hold them morning and evening, in the steam of vinegar, poured on red hot flints.

To Fasten the Teeth.—Put powdered alum, the quantity of a nutmeg, in a quart of spring water for twenty-four hours. Then strain the water and gargle with it.

A Simple Barometer.—Take a common phial, and cut off the rim and part of neck, by means of a piece of cord passed round it, and moved rapidly to and fro, in a sawing direction, the one end being held in the left hand and the other being fastened to any convenient object, while the right hand holds and moves the phial, when heated, dip it suddenly into cold water, and the part will crack off; or separate it with a file. Then nearly fill the phial with clean water, place your finger on the mouth and invert it, withdraw your finger and suspend it in this position with a piece of twine. In dry weather the under surface of the water will be level with the neck of the bottle, or even concave; in damp weather on the contrary, a drop will appear at the mouth and continue until it falls, and is then followed by another in the same way.

Incombustible Wash.—Slack stone lime in a large tub or barrel, with boiling water, covering the tub or barrel, to keep in all the steam. When thus slacked pass six quarts of it through a fine sieve. It will then be in a state of fine flour. Now to six quarts of this lime add one quart of Rock or Turk's Island salt, and one gallon of water; then boil the mixture and skim it clean. To every five gallons of this mixture, add one pound of alum, half a pound of copperas, by slow degrees, three-quarters of a pound of potash, and four quarts of fine sand or hard wood ashes, sifted. This mixture will now admit of any coloring matter you please, and may be applied with a brush. It looks better than paint, and is as durable as slate. It will stop small leaks in the roof, prevent the moss from growing over and rotting the wood, and render it incombustible from sparks falling upon it. When laid upon brick work, it renders the brick impervious to rain or wet.—*Emigrant's Hand Book.*

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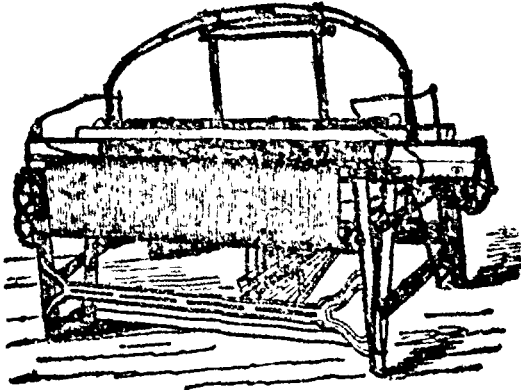
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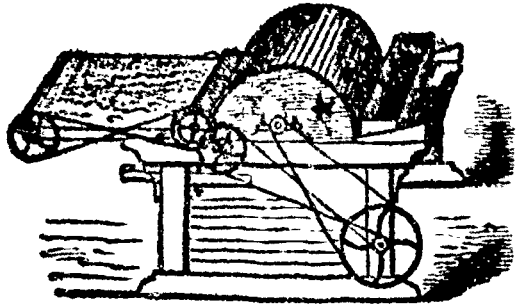
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W. BARBER & BROTHERS.

Esquesing, April, 1845.

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(New Series,)

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W. G. EDMUNDSON, } *Proprietors.*
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W. G. EDMUNDSON, *Editor.*

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☞ Editors of Provincial newspapers will oblige the Proprietors, by giving this advertisement a few insertions.

Toronto, Jan, 1845.