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THE

Canadian Agriculturist,

AND

JOURNAL OF THE BOARD OF AGRICULTURE

OF UPPER CANADA.

VOL. XII. TORONTO, MARCH 1, 1860. No. 5.

LAND DRAINAGE.

We are glad to see that this important means of agricultural improvement is beginning to occupy public attention, and that our city press has taken up the subject in an earnest and patriotic spirit. Mr. H. J. Boulton, of Humberford, is doing much, both by precept and example, in enlightening the minds of our farmers in relation to this matter; and we hope to have shortly the opportunity of submitting to our readers the details and results of that gentleman's practice. In the present business depression of this Province, arising in no small degree from the scanty crops which the soil has of late years yielded to rural industry, every feasible plan that may be proposed for increasing the produce of our fields, ought to be received with a welcome earnestness by all who are really desirous of promoting the improvement and prosperity of their country. This is a movement that knows nothing of creeds and parties, and has the strongest claims upon men of all ranks in the community.

Of the importance and benefits of underdraining, in all countries of the northern temperate zone, where usually the rain-fall is more or less considerable, we do not here intend to speak. Suffice it to say that in Canada there are good data for concluding that if draining were generally introduced, not only would our soils be rendered drier, warmer, and more easily and cheaply worked, but the seasons for sowing and reaping would be earlier, the crops of all kinds more abundant; and with a judicious course of rotation, combined with more thorough culture, those dreaded enemies—the rust and midge—whose devastations have of late years become so alarmingly great, would be comparatively eradicated. We hold, therefore, the objects contemplated by the more extended application of draining to be of primary national importance, demanding the earnest co-operation of the Legislature, and municipal bodies generally, with our more intelligent and enterprising farmers. In what shape, and to what extent, such extraneous aid could be beneficially given, we do not propose here to speak; the matter is already occupying public attention, and those who study it the most will be the first to acknowledge the difficulties with which it is beset. In the case of Government loaning money for this purpose, the most stringent regulations would be required to pre-

vent abuse. At present the Legislature may feel both unwilling to enter into the projects that are proposed, and incapable of carrying them out, in connection even with the best exertions of the owners and occupiers of land. We would be sorry, even by implication, to suggest unnecessary doubts, and sincerely hope that the subject, when it comes before the Legislature, will receive a thorough and impartial investigation.

Our main object in the present article is to call the attention of farmers in general to the ruder and less perfect means of ridding the land of much of its wetness that are at all times more or less within their reach. There is some risk amidst what is now being said and written on the subject of thorough drainage and the means of accomplishing it, that a large number of farmers, especially in the more remote districts, will conclude that the performance of this important operation is wholly beyond their reach and means. If the purchase of pipes or tiles, and conveying them to considerable distances; the laying out and executing of drains on a uniform scale, in accordance with modern European practice, be absolutely essential requisites, why it is plain that by far the larger portion of Canadian farmers must abandon the idea, for the present at least, as impracticable and hopeless.

Upon the wet and too frequently exhausted lands of the older settled districts, something approaching the English system of thorough drainage, as it is termed, may doubtless be profitably carried out, provided stone or tiles can be procured near the spot, at a moderate cost, and skilful labor obtained on similar terms. Mr. Boulton, we think, has, to some extent, proved this in his own practice. But upon nine-tenths of Canadian farms there are certain preliminary operations to be performed before underdraining can be extensively, and, as we believe, profitably carried into effect.

In making a farm out of the forest, and for many years after the trees have disappeared, the first and most necessary operations are unquestionably not underdraining, but the extracting of stumps, the levelling of the surface, and the cutting of open ditches, for the exit of stagnant surface water, into which covered drains can be subsequently made to empty. The first thing to be done in most instances is to improve the natural or arterial drainage of a farm or a district, which will often give great relief. The next step is surface or furrow draining, which if properly executed will be found tolerably effacacious. Wherever the first condition has been obtained the second can in general be readily effected. These primitive operations, which were as well known to and practised by the ancient Romans as ourselves, will in general be found as much as the settler for many years will be able to accomplish; and, which indeed, but comparatively few do in fact effectually perform. A farm well ditched along the fences, enclosing conveniently laid out fields,—with a constantly improving surface, and well constructed water furrows, will be found upon the whole tolerably dry; at all events it will be relieved of any very injurious amount of surface water. When the natural outfall is insufficient, and cannot be improved without the co-operation of neighboring farmers; it will be seen to be the duty and interest of all parties concerned to unite, each doing his fair share in rendering the natural outfall sufficient. In case parties refuse to do what is reasonable in such a case, there is a law, we believe, that will compel them to do their part of the work; or the agrieved party can do it and charge the others with the cost. Until such preliminary operations as these be completed; the more refined and effective systems of draining, and indeed all other means of territorial improvement cannot be with any chance of success even begun.

Let no farmer conclude then, however distant his location or scanty his means, that because he cannot carry out under-

draining according to the modern practices of older and wealthier countries, that he is altogether impotent regarding this essential means of improvement. He can do something every year in the way suggested, and which will in a short time produce the most beneficial results. In going over any part of the country, the oldest settled districts even, on the breaking up of the spring, how large a portion of the cleared land, much perhaps that is in crop with winter wheat, does one observe partially covered with water,—which even with a spade—provided there were good ditches, might speedily be conducted away into the creeks and streams. A day or two's work in this manner at the approaching season, would frequently be found to afford considerable relief to portions of half drowned fields. To deepen a furrow here and there only a few inches will often discharge several thousands of gallons of stagnant water in a few hours. These are plain suggestions which every man can understand, and if he choose put into practice.

When a farm has got its natural drainage improved by deepening and straightening the water courses where needed, with open ditches and furrows through the lowest and wettest portions, and the surface sufficiently levelled and inclined to allow the surface water to escape freely into the natural or artificial channels thus provided, its owner may begin to think seriously of underdraining. Even when the latter operation is thoroughly carried out, open furrows cannot be safely dispensed with in this country, particularly when hollows or basin like depressions exist on the surface. The water which will be seen to accumulate in such places during the melting of the snow in spring, and not unfrequently during winter, should be conducted away to the nighest outlet by surface drains.—The frost in this country often penetrates so deeply that water may be seen to accumulate and remain several days, even though a covered drain lie beneath. It will take considerable time before a sufficient depth of the frozen surface becomes thawed for the water to find its way into the drain beneath, and when it does this suddenly and in large quantity the drain is frequently injured, if not destroyed. For this and other reasons we strongly urge the improvement of the surface, and the making of open furrows or ditches, preliminary to the commencement of underdraining.

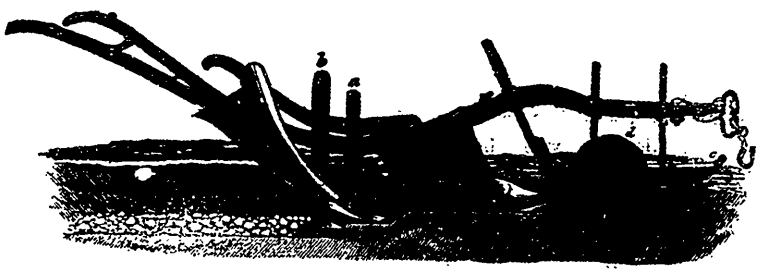
Nor need this latter operation(underdraining) be altogether deferred till the farmer is able to purchase tiles and execute the work in the most approved modern style, such as is now practised in older and wealthier countries. Much may be done towards relieving the land of superfluous water, by making here and there a drain, at the right places, with a view of cutting off the supply from the higher to the lower levels, and conducting the water to the nearest outlet. A single drain, cut to a proper depth in the right direction, will sometimes divert the water of a permanent spring, and thus cut off the cause of wetness from an acre or two of ground, that was before comparatively worthless.

As to the *materials* for making drains, where stones cannot be conveniently procured, and pipes or tiles are too expensive on account of distance of carriage, or otherwise, the farmer need not give up the idea of commencing the needful operation in despair. A trench dug out, gradually narrowing to the bottom, and filled ten or twelve inches with old rails, under-brush, &c., will generally prove effectual for several years. It was in this way draining in England was carried on for generations; even sod in grass lands was often used in constructing drains with great advantage. Such materials, (with the exception perhaps of sod, will be found sufficient in this country, for a beginning, and when no thorough system can be carrried out for want of means, or of the necessary preliminary preparations to which we have already adverted. In case of water being so abun-

dant that a conduit is necessary, a few boards can be nailed together, so as to form an efficient and enduring drain. We have seen hundreds of miles of drains in the old country, before the introduction of tiles, made from 30 to 36 inches deep in stiff clays, and filled at the bottom with heath or brush, and even with twisted ropes of straw, that have been in effectual operation, even on arable lands, after 15 or 20 years. In such cases the drain was dug with sides at a uniform angle, having a breadth at the bottom of only 2 or 3 inches, and the clay rammed closely down on the material at the bottom. The brushwood in a few years would rot and disappear, but the aperture would remain, the clay arch gradually attaining sufficient strength to support itself. This method is only adapted to stiff clays. And in this country such drains must be sufficiently deep to be beyond the reach of frost, (say 3 feet) and their mouths should be formed for a few feet with stone or other enduring material, to prevent injury from frost.

We wish to be distinctly understood in the preceding remarks as having no wish or inclination to slight or undervalue the benefits of a thorough system of underdraining, carried out in a permanent manner. Much land in the neighbourhood of large populations, where pipes of 2 inches diameter can be obtained for six or eight dollars a thousand, might be profitably drained, after the methods now pursued in Europe. But even on such lands we should always bear in mind that it is only the better class of soils, such as are naturally rich, and only require to be laid dry, that will yield to any system of draining the largest amount of profit. In carrying out the English practice of draining in Canada, we must take special care so to modify it as to suit the particular wants and means of the great body of our farmers, and also the climate and soils of this country. Our opinion is that in general we require deeper drains and at greater and not uniform distances, than they do on the stiff English clays. If the preceding remarks should afford any useful suggestions, particularly to our remote and more needy farmers, and in any degree prevent them from neglecting draining altogether, because they are incapable, from want of means and the unsuitable state of their lands, of carrying out a more complete and expensive system, which can only be adapted to more favorable situations and circumstances, our object will have been accomplished.

COTGREAVE'S SUBSOIL PLOUGH.



This Plough combines the common plough, the trench plough, and the subsoil plough in *one implement*. It is capable of tilling the land to any required depth, requires but little skill in holding, and pulverises the soil at one operation in an efficient manner. The land may thus be prepared, with advantage to the succeeding crop, a considerable time before it is required for use. It may likewise be ploughed

advantageously in the wettest weather, and one ploughing is sufficient for each course of cropping. The three operations performed by this valuable implement, viz: ploughing, lifting, and subsoiling, leave, it is said by those who have carefully tested it, the land as if it had been dug or forked over, bringing it into the best possible condition for planting.

Among other advantages possessed by this plough, it admits of changes in its form by the ploughman, and under each change can be used separately, and can be easily regulated to do the following work, viz:—

1st. By raising the Trencher and Subsoiler *a*, and *b*, it will plough single furrows in the same manner as a common plough.

2nd. By lowering the Trencher *a*, it will skim and trench.

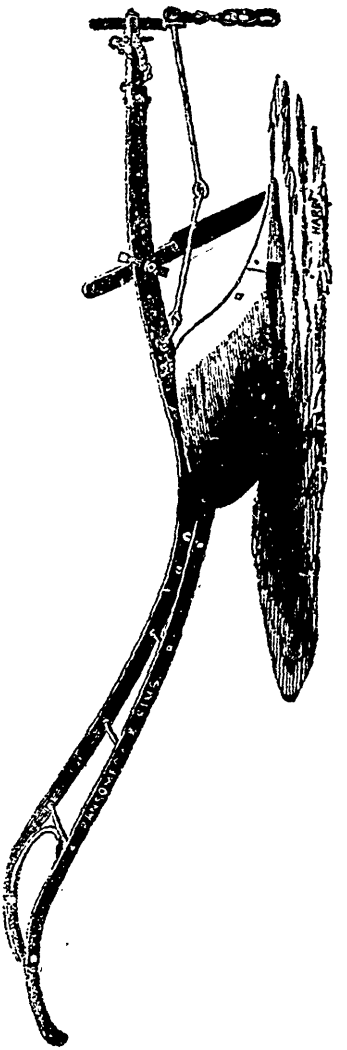
3rd. By raising the Trencher *a*, and lowering the subsoiler *b*, it will skim and subsoil.

4th. By again lowering the Trencher *a*, the three operations may be preformed at the same time.

The Guide *c*, is for regulating the depth of ploughing, &c.; it is provided with two revolving discs, which act as coulters. The Wheel *d*, is for regulating the width of furrow.

This novel and useful implement is manufactured by *Ransomes & Sims* of Ipswich, England, and has obtained medals at several of the Royal Agricultural Society's Shows. The price is £10, which must be considered very moderate for a well made implement combining the functions of three; thus effecting a large pecuniary saving in the farmer's first capital. The combining of different functions in one implement, when it can be done efficiently, as in the present instance, must be hailed as a great and most desirable achievement in agricultural mechanics.

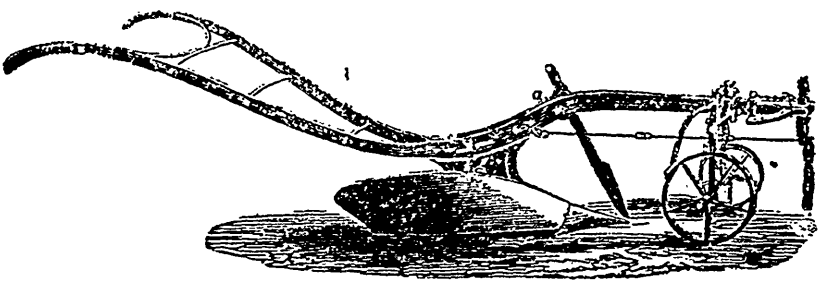
IMPROVED WROUGHT IRON PLOUGH.



This cut represents a very strong, simple, and effective plough, manufactured by *Ransomes & Sims*, of England, an extensive and old established firm, of world-renowned reputation. It is specially adapted for breaking up ground recently cleared for cultivation, where a strong, rough, and ready implement is necessary. It has been

subjected to the severest tests, and is considered one of the strongest ploughs yet introduced. For ordinary ploughing two horses are sufficient, and when the land is rough and full of roots, it is of sufficient strength for four horses. It is fitted with a strong wrought-iron lever neck, by which the share can be adjusted so as to give any required pitch as the point wears, or according to the state of the land. This implement would be admirably adapted to our rough lands in Canada; but where the stumps are very thick, the length of the stilts would in one respect be a drawback, while in all others it would be advantageous. As a swing plough, fitted with steel share, it sells in England for five guineas, and for an additional six shillings it can be fitted with a head wheel.

IMPROVED TWO HORSE PLOUGH.



This is also another of *Ransomes & Sims'* improved ploughs, adapted for use on any description of land. The greatest care has been exercised in combining in this implement, as far as practicable, the best points in the manufacturers' other ploughs. Its draught is exceedingly light, while the superior form of mould-board renders it adapted for most descriptions of soil. The share is fixed to a lever neck, which gives it more or less pitch as the share wears, or according to the state of the land. This plough can also be fitted with a skim-coulter, or miniature mould board and share, preceding the ordinary coulter, and pares grass and weeds on the surface, which, falling to the bottom of the next furrow slice, are completely buried, and decomposing, form a means of enriching the land. The wheels are made on a new principle, with a recepticle in the nave for containing grease. The wheels are new in design, and are fastened upon the beam, thus dispensing with the old sliding axle. The price fitted as a swing plough is £3 16s. 6d.; with one wheel, £4 2s. 6d.; with two wheels, £4 12s. 6d.

We observe that this wealthy and respectable firm received prizes and commendations for their productions of the Bath and West of England Society as far back as the year 1807; and to the end of the year 1858, they had received from the Royal Agricultural Society of England, and the Royal Agricultural Society of Ireland chiefly, 64 money prizes; 18 gold medals, 38 silver medals; 10 bronze medals; besides the most distinguished honors, in the shape of special medals and diplomas from the exhibitions of leading European nations. The price of English Implements generally may seem high; but it should be remembered that they are made of the best qualities of wrought iron, in the most substantial and workmanlike manner, possessing the qualities of strength and durability in the highest degree.

OUR CORRESPONDENCE.

We are delighted to find our letters from correspondents increasing. One of the greatest difficulties this journal has had to contend with heretofore has been, that the farmers of the country could not be induced to write short letters for its pages on any subject of interest which came under their observation, and thus give it a more practical and popular character. In the adjoining States the difficulty of the editors of some of the agricultural journals is, not to obtain contributions, but to *select* from the superabundant quantity that they receive, and some of those papers are almost entirely made up of contributions of this character. Whereas in this country, although, time after time, we might urge our subscribers to favor us with some of the results of their experience, no matter in how few words, they were so slow to respond to our wishes, that if we could get at the rate of about one letter in six months, we felt extremely grateful for the favor. It is not that the farmers of Canada have not the ability to put their thoughts upon paper, for hundreds of them are able to do it well. It is that they do not feel sufficiently that their observations may be of value to the public, and that they themselves would find a pleasure in communicating their ideas to others. It is only to make a commencement that is necessary; after that the keeping up the habit would be easy enough. And even if a farmer is not able to express himself in very correct language, or very polished style, that is of no consequence. We do not want elaborately written, or long scientific articles. We want simply the everyday observations of practical farmers and farmers' wives, or farmers' sons and daughters, on any subject that may interest them, whether the communication of a fact, or an enquiry for information, in plain, familiar language that every one can understand. And no matter how short the communications may be, or how many of them, they will be all gladly received.

We are much gratified, however, as we commenced these remarks with intending to say, that we have to note a great improvement in the respect under consideration since the commencement of the present volume. We believe that we have already, since the 1st January, received a greater number of communications for publication, than for the whole of the past two years. We hope that our friends who have commenced so well will persevere, and that many others will lend their aid in the work. We must acknowledge that one or two of our correspondents in the present number pay us some rather left-handed compliments, but we do not on that account decline publishing their communications. We are very glad to receive them, not only for their own value, but also because we are anxious by every means to enlist the interest of agriculturists throughout the country, in the contents of our journal. And we are also willing to show that, with the aid we hope to obtain from our friends, we have no fear of any comparisons which may be made with any other publication of the kind whatever. We conclude these remarks by again urging all of our readers who are interested in the diffusion of agricultural intelligence, to let us hear from them as often as they can.

THE BOARDS OF AGRICULTURE.

We copy the following official notice from the *Canada Gazette* of 18th Feb.:

Bureau of Agriculture and Statistics,
February 17, 1860.

The following have been elected Members of the Boards of Agriculture for Upper and Lower Canada, for the year 1860, under the 12th sec. 16 Vict. cap. 11:

UPPER CANADA.

R. L. Denison, Esquire,
E. W. Thomson, "
H. Ruttan, "
Hon. George Alexander.

LOWER CANADA.

B. Pomroy, Esquire,
J. C. Taché, "
J. O. A. Turgeon, "
E. O. Casgrain, "

WILLIAM HUTTON,
Secretary.

Correspondence.

CULTURE OF CARROTS.

To the Editor of the Agriculturist.

ST. CATHARINES, Feb. 9th 1860.

SIR,—Through your very excellent paper, I wish to get information on a subject that many of your readers, as well as myself, are deeply interested in. Eight years ago, I sowed a piece of ground with carrot seed, the ground having been well manured the year before. I gathered from that piece of ground at the rate of 1000 bushels per acre. I have sowed with carrot seed the same piece of land regularly for eight years, after manuring lightly annually, and every year I have found a decrease in the crop, and the last year, on two acres of land, instead of having 2000 bushels of carrots, according to the proportion I had eight years ago, I only had 750 bushels. Now, I am well convinced from the foregoing, that the carrot has extracted from the soil, some ingredient that is necessary for the production of that root, and I have no doubt, whatever, there is manure of some kind, which by applying to the soil, would render that equally produtive for the carrot, as it was eight years ago.—Probably some of your numerous readers could give some information on this subject, which I think is a very important one.

Yours truly,
JOHN GIBSON.

[We shall be glad to hear from any of our readers, with reference to the above enquiry, and to receive similar statements of results of particular modes of cropping, whether of grain or roots, that have come within their observation or experience.—Our correspondent says that he manured lightly every year, but from the progressive diminution of the crop, it is evident that he failed to restore to the soil, in their due proportions, what his repeated crops had taken out of it. We would suggest the desireableness of growing carrots, or any other crop, less frequently on the same soil. And as carrots, and roots generally, require the land to be well and deeply cultivated, as well as manured, it would be far more advantageous to bring fresh land under this kind of tillage as frequently as possible; thereby obtaining a two-fold advantage: a larger crop annually, and the mechanical as well chemical improvement of a much greater area of the farm. This mode would pay better in the long run than to incur the risk and expense of getting specific manures; the action of which is not often fully understood, and is frequently more or less uncertain. Carrots require not only a rich and deeply cultivated soil, of a lightish character, but it is often injurious to the healthy growth of the roots to manure with a large quantity of partially decomposed substances, just previous to sowing; thereby causing them to be what come is called forked, and less nutritious. Better take carrots after a former crop of a different kind, that had been well manured or to use such substances as farm yard dung, that have become thoroughly decomposed, so that they will perfectly incorporate or mix with the soil.—EDS.]

PROSPECTS OF THE COUNTRY—FARM IMPROVEMENTS, THE "AGRICULTURIST," &c.

To the Editor of the Agriculturist.

SIR,—As an agriculturist I am deeply interested in the progress and prosperity of farmers in Canada, and I hope to see the day when Canadian farming will be an honor to the noble country in which we live, and a pattern worthy of imitation by agriculturists generally over the entire continent.

It is obvious to every person, travelling in almost any part of Western Canada,

that the late financial crisis was a blessing to the country, and is now working beneficially, to the farming community especially. During that unparalleled season of good crops and famine prices, men became intoxicated with success; their ambition knew no bounds. Every man who could raise twenty dollars, or could get credit at all—and who couldn't then?—must speculate in some way. Among farmers there was a land mania. Land, more land, was their maxim, and no matter what the price. If they had to give four times its value, and hire money at 25 per cent. to meet their payments, it was done, without reflection as to consequences. We know the result. Markets fell as suddenly as they rose, crops failed, and thousands were ruined, while but few were permanently benefitted. Those who were content with one farm, and were not affected with the speculative fever, are now prospering, and many of them on the road to comfort and opulence.

Notwithstanding the gloomy forebodings of a few discontented persons about the "awful state of the country," and the "deplorable condition of the funds," Canada never had a better prospect before it than at present. Farmers are living within their means; and those who incurred debts during the good (?) times are fast freeing themselves therefrom. Piles of lumber and shingles; large quantities of hewn timber, and, not unfrequently, stacks of bricks and heaps of stones, are drawn together, ready for building operations during the next summer. This is the present state of things all over the country; and surely there is nothing discouraging in this?

It is also pleasing to know that the morbid desire for extension of surface is fast giving way to the more profitable and satisfactory mode of extension of soil, viz., by underdraining and subsoiling. More attention is given to the collecting and preserving the fertilizing elements contained in manures; a more systematic rotation of crops is adopted; naked summer fallows give place to root and green crops; more attention is paid to gardens and orchards; homesteads are rendered more attractive by planting ornamental trees, &c.; in fact farming is beginning to assume its proper position, and is now looked upon as a science, worthy the attention of the intellectual student.

You, Mr. Editor, have a great responsibility resting on you. The *Agriculturist* being the only agricultural paper in Western Canada, it should "lift its banner on high," and take a noble stand; endeavour to create a national literature worthy of the country and the people it represents; depend more upon home productions than foreign. There is sufficient talent among the farmers of Canada to make the *Agriculturist* one of the best papers on the continent; it only requires to be brought out in some way.

By reference to the columns of the *Genesee Farmer* you will find, that *eight* of the twenty-one premiums given to agents, were taken by residents in Canada West; and I have no doubt that the circulation of that paper is larger here than in any one State in the Union.

You will, also, find that there is about the same proportion of correspondents in Canada West. In my opinion the secret of their success lies in this general correspondence from all parts of the Northern States and Canada. Farmers have adopted it as their own paper; where they can freely communicate their thoughts and experience—it may be—in a home-spun way; still it is comprehensible and practicable. Now, I see no reason why this correspondence may not be diverted, or brought to contribute to the success of *our own Canadian paper*. Surely there ought to be sufficient patriotism among farmers to prefer a provincial before a foreign production, if the article is equally as good. There is no reason why any present subscriber to the *Genesee Farmer* should give it up when 37½ cents will pay for so much valuable reading—but I do think that we ought to do as much for the *Agriculturist*, and assist the managers to give it a national standing and render it not only interesting and profitable, but also a high authority on agricultural matters generally.

There is no reason why its circulation should not reach to twenty thousand copies. Its price is almost nothing; and it has the advantage of being free of postage.

I may be presuming too much, Mr Editor, but your cordial invitation in the last number has induced me to do what I before hesitated at doing. With your permission, I would now urge upon brother farmers to take this matter up, and see what will be the result by the end of the present year.

Yours, &c.,

SIGMA.

East Zorra, Feb. 14th, 1860.

MILLET.

To the Editor of the Agriculturist.

MORPETH Feb. 13th 1860.

DEAR SIR,—In the last issue of your paper, I find an article on the Cultivation of millet, from Mr. John Gibson; his impression as regards the quantity of seed per acre, coincides with mine, that eight quarts is not sufficient, I should prefer 12 quarts for broad-cast sowing, which I deem best for soiling purposes; but for raising seed, the plan of drilling proposed by him would be the best. His ground was the best that could be selected, for unless the land is rich, the crop will be very small, loomy soil is more retentive of moisture, and as the seed of millet is very small, and the plant consequently so when it comes up, it needs the most favourable circumstances to keep ahead of the weeds. I think the beginning of June will be found the best time for sowing. In putting in this as well as many other seeds, the best time for putting in the ground is when the plant can go forward to perfection, with the least or fewest drawbacks when small. Sowing at this time will prevent the ravages of birds as well as cause it to fill better. I would advise sowing on summer fallows, and, when ready to prepare for wheat, turn in the cattle and let them eat it off. Although I do not recollect seeing anything regarding the chemical change a plant undergoes on being cut, still I would hazard the opinion that millet, cut before it had ripened its seed, or nearly so, would be found wanting in some of those qualities so much relished by cattle; if allowed to ripen, the benefit is counterbalanced by the trouble of getting the seed out of the soil, as it sheds very easily when ripe, also preventing it being carried about the farm, when fed in a raw state. The quantity required for seed, could be more carefully handled and would not entail so much trouble.

Yours truly,

J. B. CORNWALL.

THE "AGRICULTURIST," NEW FORM—TREATMENT OF HEAVES IN HORSES, &c.

To the Editor of the Agriculturist.

DEAR SIR,—I am pleased to see the change you have made in the *Agriculturist*, both as it respects its matter and its semi-monthly form. It is now I presume unequalled in point of cheapness, and I hope it will be surpassed by none in interest and intrinsic value.

Brother Farmers, this is our own paper, and it will be just what we make it; therefore we must all take it; yes, every farmer must have it, every one must write, or cause to be written, at least one article in the year for its columns, and use the *Agriculturist* as the medium of all our scientific and practical knowledge that we may have to make known. If we do this it will become one of the most interesting papers that will or can enter our homes.

TO CURE THE HEAVES IN HORSES.—Take two pounds of nitre or saltpetre and quarter of a pound of tartar emetic; pulverize and mix. Give a teaspoonful once a day for four days; then stop three days, and begin as before; continue this for three or four weeks; it will help any horse, and cure many: the powder may be given in the horse's food.

Another cure for the same disease.—Kill a common red squirrel and chop it up fine, skin and bones and all; mix in the horse's food, and it is said to make a perfect cure.

Another cure for the same disease, given by Mr. P., of Richmond Hill, C. W., and published in the last number of the *Genesee Farmer*.—Take a tablespoonful of ginger and the same quantity of shorts, and as much tar as it will require to make a ball when well mixed; give a ball once a day. Mr. P. says the very worst of cases are cured by this remedy, and that the cure is permanent. If this be so, then all farmers ought to know it.

I would add further respecting horses. A short time since a friend presented me with a receipt for the management and taming of wild colts, as follows:—Lift one of the fore feet and fasten tight by the aid of strap or rope, so as to prevent its putting its foot to the ground; when the foot is thus made secure, drive the animal around until compelled to fall; then endeavor to keep it down; while thus lying, apply a little of the oil of rhodium or oil of cumin to the tongue of the animal, as also a little on your hands; you can then allow it to arise, and it will feel conquered, and while afraid will still be fond of the smell of the oil, and will therefore like to have you about it.

CHEAP FOOD FOR COWS.—Cut your straw; take a quart of flaxseed and boil in four pails of water for two hours; throw in a handful of salt; now wet your cut straw with this tea, and your cows will do well,

and eat their food up clean; you may feed your horses in the same way, only make the feed stronger, by adding more seed or cut hay or oat sheaves. Flaxseed can be bought for from one to two dollars per bushel, and as it is easily raised all farmers may have it by taking a little trouble.

WHO HAS THE BEST COW FOR BUTTER?—Let us hear from such as have extra good ones, and tell us of what breed they are. I have a native cow, which calved on the 25th of November last; we raised the calf, and for the first two weeks we gave it new milk altogether; we then began to mix skim milk with it, and soon fed it altogether with skim milk. My wife began to save the milk for use on the 29th of November and up to the last of January, two months, she made 70 lbs of butter and sold $1 62½ worth of new milk, besides using cream and milk for the table, all from this one cow. Who can beat it?

S. KING,
Ryckman's Corners, C. W.

THE "AGRICULTURIST"—PRIZE REPORTS, &c.

To the Editor of the Agriculturist.

Dear Sir,—I was really pleased the other day, to receive some numbers of the "*Agriculturist*" which from sheer carelessness on my own part I had not received for '59.

While opening the package in the post-office, I was asked, why do you not take the "*Albany Cultivator*" instead? I replied that I considered it the duty of Canadian farmers to support Canadian papers, but I was told the American one was decidedly superior. Here then is an argument, and a strong one, that we should support our own paper by our subscriptions, and thus give its conductors the nececessary *means*, not only to compare favourably—but if possible to excel even "the *Cultivator*."

I fear it is too common a query—why not take the *Cultivator*? but when placed in this light I feel sure our farmers have intelligence enough to acknowledge the force of the argument—and if even a very little interest were taken in the matter, by the officers of the various Agricultural Societies throughout the country, you would speedily be refreshed, physically and mentally—or in other words, you would have an endless list of subscribers, and lots of contributors.

I admire your plan of eliciting reports of every country in the land *upon principle*; and practically, because I have a secret purpose of pocketing your munificent prize of $30.

It is very desirable that these reports should be full, well digested, and reliable—to attain these, time is indispensable.—Might I ask your good offices—in my own behalf as well as for all similar aspirants—to secure us another month's grace, say till the first of May? We practical men, are busy in March—April being comparatively a leisure month, we could more easily devote to this work. Give us time for the work and we will not push you for the pay.

Might I also suggest that it would be advisable to have them transmitted to the board anonymously—designated by mottoes—as is usual with prize essays? It is more comfortable for the judge; and unsuccessful candidates will be more readily consigned to oblivion—at the same time in such a genteel way that they may not be deterred from making the attempt at some future time.

Yours,
EIN LAND BAUER.

[Our correspondent, as well as others who may desire information on the same point, will please observe that the act of Parliament, which we have not power to alter, prescribes, clause 42, that the Reports shall be sent in to the Board of Agriculture, on or before the 1st day of April;—and the secretary of the Board would desire to receive them, if possible, even some time prior to the latest date allowed. In regard to the reports being anonymous, if our correspondent will refer to the Nos. of the *Agriculturist* in which the notice regarding the prizes offered for reports appeared, he will find that they are to be the reports of the societies, adopted at the annual meetings, and it is not therefore necessary that they should be transmitted as the work of any particular individual. Neither is it absolutely necessary that the report should be actually written by any officer of the society, but it must be adopted by the society, and certified as a true copy of the annual report by the President or Secretary for the time being. The merely formal parts, such as the lists of mem-

bers, premiums paid, &c, which require little labour or time in preparation, must of course be submitted and adopted at the annual meeting, and would not require, or admit of, if correct, any change. But the portion referred to in the notice in the *Agriculturist* as part 3, and prescribed by the act in the words "together with such remarks and suggestions upon the Agriculture and Horticulture of the County (or township), and arts and manufactures therein, as the Directors shall be enabled to offer," necessarily admits of considerable latitude or discretion as to the matter it shall contain, on the part of the writer or of the society adopting it. It was therefore conceived that, in cases where there had not been sufficient time to draw up such a report as the society or the person writing it would desire to forward, it would not be contrary to the spirit of the act, for it to be adopted *pro forma* at the annual meeting, and afterwards amended; always provided, however, that the amendments should receive the sanction of the Directors, and that the report should be duly certified, and forwarded through the proper channel. But the amendment of the report could not be allowed in any case to prevent it being forwarded to the Board of Agriculture at the time required by the law. We are glad to find the subject of the reports attracting attention, and shall be most happy to publish that from our correspondent as receiving the highest prize,—*if he earns it.*—EDS.]

THE CULTIVATION OF FLAX.

Continued from page 77.

The handfuls of flax when pulled should be laid by themselves on the ground, or two or three diagonally across each other, taking care to have the but-ends even.—Three methods may now be adopted in its future treatment.

1st—It may be rippled immediately after pulling, and steeped at once.

2nd—It may be dried in stooks of a peculiar structure, the seeds beaten off, and the stems steeped shortly afterwards.

3rd—It may be dried too, stored, seed beaten off in winter, and the flax steeped in the following summer.

The first method is that most generally followed in this country—at all events it is the mode which I have experienced in the province of *Ulster*, where there are some of the most enterprising flax growers in Ireland. The rippling process means the separation of the seed-bolls from the stems by drawing them quickly through a machine made up of a row of iron pins about eighteen inches long, half an inch square, a quarter of an inch apart from each other at their base, and tapering nicely to within half an inch asunder at the tops, which are sharpened. When the ripping is going on a winnowing sheet must be placed under the apparatus so as to catch the bolls as they are rippled off. The sheaves are left on the right hand side of every rippler, he taking up a handful and holding it with one hand while with the other he spreads out the top so as to present a broad surface to the pins. If the bolls are thick two draws are necessary through the machine. Four men with two rippling apparatuses will take the seed off more than an acre in the day. The bolls are riddled to separate the long stalks that may be among them, and then put through fanners to blow of the leaves. If the weather be dry they should be spread on the winnowing sheet with the sun, and turned over two or three times a day. When dry or nearly so they should be removed to a corn kiln, and by a gentle heat they will be well finished, so as to keep dry for a length of time without fermenting.

If rippling has not been carried on as described it may when dry in the stooks be carried home on carts, and beetled, after which it may be steeped. This process of beetling is usually performed by what is generally called a beetle, which consists of a block of wood about ten inches long and and three or four inches square, into which a handle is inserted, more generally the handle is a prolongation of the head made small for the hand to hold. By such an implement the seed can be beaten out.

When the flax is steeped in the green state, as I invariably have seen it, the seed is separated by the ripplers. In the former case of beetling we do not require to put the bolls on a kiln at all, for in this case it is dry enough. We merely require to winnow like grain to free it from the chaff.

Steeping is the next point to be taken into consideration, no matter which of the aforementioned methods is practised. This process requires the greatest skill and attention on the part of the manager. The water best adapted to steeping flax is river or running water. If we resort to spring, or water containing minerals, the dam should be filled for a considerable time previous to putting in the flax; but if river water is used it should not be in the pond before use more than twenty-four hours.

Perhaps it may not be out of place to describe what the use of steeping is. Well, it is simply this:—A process by which the vegetable matter connecting the stem and fibre is decomposed by the immersion of it in water, and after which these portions are readily separated. The value of the fibre depends very much upon the care bestowed on the due performance of this process. The flax-dam should be made from four to six yards long, two to four yards broad, and three and-a-half to four feet deep. If a small stream be allowed to run through the dam constantly it is found to very much improve the fibre in color.

On putting in the flax to the dam it should be placed loosely in it in regular layers, sloping gently across the breadth of the pond or dam, with the root end underneath. After thus placing the flax in the dam we should put old scraws or sods with stones, &c., over these, so as to immerse it about four or six inches under the surface-water. It should be kept from the putting in till the taking out at this depth below the surface, but at the same time not to put on as much weight as would make the flax touch the bottom, which should not occur.

The time it takes for steeping varies according to the temperature of the weather and nature of the water, say from seven to fourteen days, or even more, if circumstances be not favorable. Every grower should learn to know how to test when the flax is steeped enough, as a few hours extra would materially injure the fibre. The best test may be stated thus:—Take a few stalks and break them at two places, three inches apart, near the middle of the stem, and if the three inches so broken separates easily when drawn downwards, without tearing or injuring the fibre, we may rely on its being steeped well. This test should be repeated twice a-day after fermentation subsides, for the change afterwards is very rapid. If we find, however, after lifting it out of the steep, that we did not allow it to remain long enough in, we may in a great measure rectify this by allowing it to remain a little longer on the grass. When raising the flax out of the pond let it be done by men standing in the water, who hand it up to others ready to receive it on the bank. Care should be taken not to make very large heaps on the bank, as it might heat. It ought to remain on dreep for at least twelve or fourteen hours before carting off to the place for spreading, a process presently to be noticed.

Spreading should be performed on a pasture field having a good clean sole; if any weeds, &c., be on it they should be mown down clean with the scythe. The flax is evenly spread on the grass by women or girls with the greatest facility. If the weather be rainy when spreading, or if it occurs immediately after so much the better, so as they be good sun-showers, as they are sometimes called. The flax should be turned over twice or thrice carefully with the hand, or little rods made for the purpose, in order to have it of a uniform color. Six or eight days may suffice on the spread if the weather be sunny and showery at intervals, but if dry it often goes as long as twelve days. A good test of its being ready to lift off the spread is to take a few stalks and rub with the hands from top to bottom, and if the wood breaks easily, and separates from the fibre, leaving it in good order without tearing, we may lift with safety. Also, when the reeds are raising themselves from the ground in the form of a bow, and a string running from one end to the other.

Perhaps the best way is to take a bundle in and scutch it on the stock. When lifting it is well to remark to keep the flax even at the ends, in order to avoid a loss in scutching, &c.

If not perfectly dry the lifters set it up in caps for a few hours before tied into sheaves or bundles. During all these operations the different qualities should be kept separate, as a mixture would lessen its value.

Sometimes drying the flax over or before a fire is practised, which is always most injurious. If properly steeped and grassed such drying is not only unnecessary but pernicious; exposure to a good sun is quite adequate for making it ready to be scutched, &c. I have seen "kilns," as they are called, constructed for the purpose of drying flax; and actually it is oftentimes absolutely burned, it being damp when put before the fire, and consequently the oily and rich appearance of the fibre is totally disfigured. This is a point which all parties concerned in the growth of this invaluable

production should pay the strictest attention to, as much injury has resulted from the drying of damp flax over or opposite fires.

We are now ready to send it to the mill to be scutched, &c., if not hand-scutched. The trouble which flax entails in the various processes which it has to undergo before it is ready for market is often objected to. This, however, will not be considered of weight by the careful and enterprising, when they find that their profits increase in proportion to the care and skill exerted in the different processes of management. It is by manual labour that nearly all the flax in Belgium, Holland, &c., is dressed. In Ireland a considerable quantity is also prepared in this way; formerly at least, it was the case, but now a-days, since machinery has become so extensively available, the greater proportion is scutched by mills. But in case of a small farmer, manual labor is preferable, being cheaper; but to the larger farmer, with a considerable crop and few labourers, it is tedious and expensive, and mill-scutching is far in the way preferable.

The comparative merits of the two modes of scutching must be regulated according to circumstances. When labour is plenty, and a man wishes to employ those who would otherwise, perhaps, be a burden to the parish, hand-scutching is undoubtedly to be preferred. Women and young lads can perform hand-scutching as well and much better, in fact, than men, and the farmer can regulate the period for dressing his flax according to the time when he has least out-door work to perform. In like manner, it is a most consoling employment to the cottier's family, when they have no other occupation. But I say when labour is comparatively scarce and the crops large, hand-scutching is much too longsome, and the mill is to be employed.

Flax, when scutched, should be tied up in bundles, say of a stone or two each, and stored in a cool place, a ground floor being more suitable than a dry airy loft. No damp should be allowed to effect it either; but it keeps better on the floor, for it gets dry and brittle, and does not appear so well when stored on dry lofts. It is vastly improved when it has been a few weeks stored—far better, in fact, than immediatly after scutching.

Belfast is the greatest flax market in Ireland, Leeds in England, and Dundee in Scotland. But in all the flax-growing districts in Ireland there are minor flax markets held on stated days, at which agents attend, and the farmer can bring his flax in carts to the nearest flax market, where he gets soon disposed of it, and, if all points have been carefully attended to, with ample profit to himself.

A vast deal more could have been said on this subject, as very many important items have been left out, as, for instance, the value of its seed for young stock, &c., as also the mode of preserving it, which has been slightly hinted at, and other points of no less import, which would require months to elucidate. But none of those points of any consequence with regard to its cultivation have been omitted.

January 10th, 1860.

EFFECT OF MANURES ON CROPS.

BY J. C. NESBIT, LONDON, ENGLAND.

I have now to speak on another point, namely, the effect of manures on the production of plants. Before doing that, let me observe that what we call the roots of turnips and mangel wurzel are not, botanically speaking, roots, but bulbous formations, intended to accumulate the necessary materials for the production of seed in a subsequent year. Now as regards the growth of plants, there is one thing ought to be borne in mind by those who are practically engaged in the work, namely, that you may over-produce a thing, or stimulate one portion of a plant to the detriment of another portion. You know that if you sow wheat upon a dunghill you will get straw, and no grain. The reason of this is obvious; and it applies not merely to wheat, but to a great many other plants to which it is not generally supposed to apply: it is, that the action of too large an amount of stimulating manure at an early period is, to cause the formation of large cellular tissues, by which the power of the manure is thrown too much into the formation or production of the first portion of the plants; and when you want afterwards to fill the cells with the materials of nutrition, it turns out that you have nothing to follow on with. In the case of turnips the result is simply this, that you have a large developement of leaf, and too great an extension of the cellular tissues of the turnips, which cells do not subsequently get filled up with the proper amount of starch and other nutritious substances. In the case of wheat the result is similar. You may stimulate wheat, or barley, or oats to such an extent that the product will be all stalk, there being no power to produce the ear of corn; or if the ear be produced, it

will contain no seed, or seed of inferior quality. It is for this reason—the question being one to which my attention has been directed for some years—that I have recommended the use of salt and lime, and other substances of the same kind, which have the power of arresting the too-early growth of wheat or other straws when your object is to obtain the ear. I think this cannot be repeated too often, for I am sorry to say that, notwithstanding all that has been said on the subject, the facts do not seem to be yet sufficiently appreciated by those who are practically engaged in agriculture. There are only a certain number of weeks after the first germination of the wheat occurs, before the ear is formed. Now if you can stop the too great growth of the straw in the early period before the formation of the ear, the power of the manures which you have put on the land will be thrown directly on the second period of the life of the plant, the seed will be greater in quantity, and the sample of corn undoubtedly better. I cannot cite a better illustration of this than that which is afforded by the experience of the last year, when we had, as a general rule, too much straw, and too little corn. If you do what I have referred to, in any single case, when you ultimately want the last product of the plant, you will find that you have done wrong. On the other hand if you require the mere grass or hay, you cannot manure too highly with ammonical and phosphatical matters in order to obtain the largest quantity of produce. In all cases in which you want the early product, the grass or hay, you cannot do better than apply ammonical and soluble phosphatical manures to the greatest extent in your power.

Agricultural Intelligence.

Land Drainage.—A public meeting was held in the Town Hall at Windsor, on the 15th February, for the purpose of discussing the question of petitioning Parliament for a Drainage Act, similar to that passed in Great Britain some years ago. The persons present did not agree in their opinions as to the advantages of a Provincial Act, but unanimously adopted the following resolution in reference to drainage in Essex:—

"That our respective legislators and representatives, Colonel Prince and Mr. McLeod, be requested to exert their influence with the Government, to grant aid from the public Treasury for the purpose of drainage of wet lands in the County of Essex."

Flax Growing in Waterloo.—The enterprising firm of Messrs. Perine, Brothers, Conestoga, have exported by railway to the United States about 60 tons of flax and tow grown in this county, being nearly double the amount exported last year. This fact affords the best proof that can be given of the rapid increase that is being made in the culture of this article. We are also glad to learn that the farmers who have tried the culture of flax, as an experiment, are well satisfied with the remuneration which they have received for their labor. We believe that its culture would, on the whole, prove more remunerative than that of wheat, while the risk of growing the former, as regards a good crop, would be by 25 per cent. less than the latter. These facts warrant us in stating that the culture of flax in this county, for the future, will be generally engaged in.—*Berlin Telegraph.*

☞The hay crop of Maine averages 1,000,000 tons, worth $10,000,000 per annum, and the amount of pasturage is as much more. Grass is and always must be the staple crop of Maine. Our long winters do it good, and not harm.—*Maine Farmer.*

Horticultural.

HINTS FOR MARCH.

"If the sun appear dim, surrounded with
And his disk ill-defined, and faded his rays,
If white at his setting, of power if shorn,
The signs are all certain, there 'll soon be a storm."

This month affords abundance of employment to the industrious gardener. The general work of the kitchen garden will be materially forwarded by drawing in a full supply of well-rotted manure, and distributing it in heaps ready to spread when the frost is out of the ground. If hot beds have been prepared according to directions given last month, they will now require constant attention to giving them plenty of *air* during the day, and covering them well up in cold nights to protect the tender plants.

To raise early cauliflower and cabbage, the seed might be sown in cold frames about the middle of the month, and if properly looked after, the plants will be ready to plant out the first week in May. Tomato and celery seed should be sown on a hot bed to bring the plants forward in time for planting out about the middle of May. Our climate will hardly admit of seed being sown in the open ground during this month; we shall therefore reserve general directions for sowing seeds till April.

The following is from Buist's *Family Kitchen Gardener*:—

Forcing Cucumbers,—The first requisite is to obtain four feet square of warm stable manure; turn it up into a heap for eight or ten days, to allow the rank vapour to pass off, when it may be placed into any form to suit a sash. The general size is four by six feet high at the back, sloping to two and a half or three feet at front. Either make or have made a frame of boards, at least fifteen inches deep, three feet wide, and five feet long, or the full size of the sash. Let the dung-bed be a foot all round larger than the frame. Should heavy rain or snow fall, or it be a severe frost, the manure should be protected with a covering of straw. Care, however, should always be taken that the reduction of the heat in the dung is not carried too far, before making up the bed, as, when that is the case, too little heat will afterwards be produced, and the young plants will be of a yellow colour instead of a rich green. The bed should be built square up, and regularly beaten down with the fork. When finished, put on the frame and sash; keep it close for a day or two, to draw up the heat; air should then be admitted for a few days, during the day, by tilting up the sash at the back a few inches, to allow the steam to pass off, which it generally does in four or five days or less. Supposing the bed now in order, put in a quantity (three barrow-loads) of light, rich loam; none better than that from the surface of the woods. In two or three days the earth will be sufficiently warm for sowing the seeds. If the plants are to be removed into other frames, sow them in pots; if not to be removed, sow them in a hill made in the centre of the bed, by placing one barrow-full more of earth in it. Sow a few dozen seeds to meet contingencies, or any extra supply, in pots, in case of damping off—which frequently happened in cloudy Winter weather. Cover the sash at night with straw mats, or any similar protection, and surround the bed with litter or boards to keep the piercing winds from carrying off the heat. The seed should be two or three years old; (it is better than new seed, which goes more to vine than fruit.) It will be up in twenty-four hours, and in two or three days will grow into strong plants. During their growth, admit fresh air every day at the back; give the young plants as much light as possible; when they have attained their third rough leaf, nip the point off the vine, to cause it to branch. If the soil or the plants appear to be dry, give them water in the forenoon, which has been kept in the bed during the previous night, that it may be in a warm state. The plants succeed best when they are transplanted, and plant them deep enough for the earth to reach to their seed-leaves. As the plants grow roots will protrude from their stems, to which earth may be drawn. The roots will also appear through the hill, to which a farther supply of fresh soil may he added. When the plants have grown and the sun is very warm, they may flag or droop; if so, sprinkle a few straws or a very thin mat on the glass, right over them, about mid-day; but it is best to grow them without this precaution; and it is unnecessary when they have sufficient moisture, heat and depth of soil. The requisite temperature is from 65° to 75°, and from 75° to 100° by day. Experience can manage these affairs with sight and feeling, but the untutored require the aid of a thermometer and a stick to poke into the dung-bed, to ascertain the internal heat of the material. When it begins to decline, give it a fresh lining of manure all around, of eighteen inches in thickness, and as high as to cover half of the frame. The vines, if well managed, will bloom within a month from the day of sowing. The male and female flowers are on the same plant, and art may render assistance, by taking the male blossom and putting its centre within the female, which is easily distinguished by having at its base a form of a cucumber, half an inch long. J. F.

Veterinary.

Keeping Horses' Feet and Legs in Order.—"If I were asked to account for my horses' legs and feet being in better order than those of my neighbours', I should attribute it to the four following

circumstances: First, that they are all shod with few nails, so placed in the shoe as to permit the foot to expand every time they move; second, that they all live in boxes, instead of stalls, and can move whenever they please; third, that they have two hours daily walking exercise when they are not at work, and fourth, that I have not a head-stall or rack-chain in my stall. These four circumstances comprehend the whole mystery of keeping horses' legs fine, and their feet in sound working condition up to a good old age." —*Miles.*

Miscellaneous.

Order of Rank among Furs.—A large proportion of the furs used in this country and elsewhere are cured and dressed in London; and although England does not use expensive furs, yet London is the greatest fur mart in the world. The ermine is considered the most precious, and next to that the Russian sable; but the real sables are rare, for, according to our latest Russian statistics, only 25,000 skins of this beautiful little animal were produced during an entire year in the Czar's empire. The prices paid for them are almost fabulous, a fine set being worth $2,000. The sable for lining of one of the Emperor's cloaks, exhibited at the World's Fair, in 1851, was valued at £1,000. Next to the sable in popularity and costliness, ranks the marten, or American sable—a fur rich and high-priced, yet so fashionable as to be almost universally sought for.

The Hudson Bay sables are next in value, and are almost as expensive as the Russian. Next is the mink, pre-eminent for beauty, wear and durability. It is not, perhaps, so delicate-looking as the stone-marten, or so artful-looking as the African monkey, or so captivating as the ermine; but is quiet and graceful, and more thrifty than them all. Besides the mink, the stone-marten, the fitch, the Siberian squirrel, and the Persian and Russian lamb, are in daily use. The skin of the black bear forms the most magnificent sleigh robe—a good turn-out of which, including robe and apron, costs upwards of $100.

The Canadian furs most esteemed in Europe, and of which they have no representatives, are the black fox and the silver fox. These are only found in the Hudson Bay territory, or on the North shore of the St. Lawrence. The raccoon and the muskrat are also confined exclusively to this continent. In England, valuable furs are but little worn—the climate not requiring the lengthened wear of furs at any one time. The muskrat and the rabbit, and the American hare, dyed, form, therefore, the bulk of the furs worn there. The value of those exported from the United States in 1857 was $1,116,041.—*New York Courier and Enquirer.*

In Turkey, it is a law that no male child born of any daughter of the sultan shall be allowed to live. This barbarous custom is still in full force at the Seraglio, and a son recently born to the sultana, the wife of Mahmond Pasha, was pitilessly strangled immediately after its birth.

A Publisher's Gift to his Native Place.—Mr. W. Chambers, of the old and well-known publishing firm of W. & R. Chambers, Edinburgh, has, at a cost of $100,000, purchased and presented to his native town of Peebles, Scotland, an ancient building in the High Street of the place, formerly known as Queensbury Lodge, and which he has transformed into an "Institution," comprising a reading-room and library, a gallery of arts, a general museum, a county museum, and a spacious hall for public assemblies. One year has been busily spent in this metamorphosis of the old Lodge; and at last, fully completed, the ceremony of presentation took place last month, in ceremonies of several days duration, and of a public and highly interesting character, comprising prayers and a sermon, music, instrumental and vocal, a procession, a public gathering when the presentation took place, a banquet and a ball. Over six hundred persons, comprising the residents of Peebles and its vicinity, and many distinguished persons from a distance, assisted in this unique celebration, many of Mr. Chambers's old friends, whom he had not seen for twenty years or more, came from distant places expressly to assist in the ceremonies.

At the public dinner, Mr. Chambers was toasted in the most flattering terms, and on rising was received with enthusiastic demonstrations of respect and attachment. In the course of his modest reply he made the following interesting remarks:—

"Ten years ago I came back to reside in my native county, after an absence of about forty years. I left in 1813, a poor lad, with my mother and father, and went to Edinburgh. I pursued a humble career for many years, unknown to fame, unknown almost to anybody; yet I felt within me a desire to persevere and to push forward, to the best of the ability which Providence had

conferred on me. I endured privations. I bore—what has been properly enjoined—the yoke in my youth. I was after a time successful. I never was, and never will pretend to say that I am, the originator of cheap literature. All I presume to claim is, that in the reign of William IV, about 1832, there was an extraordinary aptitude for the purchase and reading of cheap literature. Most of it was of a very poor an meagre kind—not of a quality which, I think, ought to have been addressed to intelligent readers. Having for some time accustomed myself to literary composition, I endeavored to turn the tide of popular taste, and get for it that material for which there was a craving, and in that attempt I was, as you are aware, eminently successful.

"*Chambers's Journal*, which was originated in the month of February, 1832, about six weeks in advance of the *Penny Magazine*, was received with a degree of acceptation which astonished me, and which astonished my friends and acquaintances. Assisted by my brother I entered on the career. With his graphic and elegant papers, that publication soon became more successful than I had ever any reason to expect. It went on and goes on now, with a degree of popularity which has astonished and surprised all who are connected with it. Having gained the public ear in 1832, it has not lost it in 1859. One thing led to another; other interprises were attempted, and which were also successful; and, at length, from the poor boy who left Peebles in December, 1813, I came back in 1849, the proprietor of an estate in Peebleshire."

The Telegraph Projects of the World.—There is no discovery or invention which has come so immediately and extensively into use as that of the magnetic telegraph. Every government seems to feel the necessity for it; and even in Japan it has been adopted as a useful agent for the government. Very soon the whole globe will be covered with telegraph wires, and every part of it be brought into closer connection and closer interests. Russia has determined to establish a line from St. Petersburg across Siberia to the river Amoor, and thence to Russian America, which will be but a short distance from our Pacific States. This will probably be the first reliable connection which will be made between the two continents. A project is already on foot for submarine cables from India to Australia, to be laid by the united actions of the governments of England and Holland. The English home government and the East India government bind themselves to connect the India peninsula with the island of Singapore; the Dutch government agrees to carry out the connection to the southeast point of the Island of Java, which belongs to Holland; and the Australian government will unite their continent to Java.—*Scientific American.*

The Climate and Resources of Morocco.—Morocco is called by the Arabs, "the land of the extreme west," from its position in Africa. Its territory is about 500 miles long by 375 miles wide, intersected from S. E. to N. W. by the chain of the Atlas mountains. The climate is very hot during the months of June, July, and August—the rainy season continues from September to April. Much of the year, however, the climate is pleasant and agreeable, and the winter is frequently interrupted by intervals of fine weather.—The soil of the country is fertile, and yields three crops in a year. Indeed, such is the productiveness of this empire, that if it were well governed, and proper encouragement given to agriculture and commerce, it could supply all Europe with wheat, barley, rice, and maize. In some portions, tobacco, cotton, saffron and sugar-cane are cultivated. Pastoral industry is most pursued however, the Berbers and Chelloks devoting themselves to it almost exclusively. According to the latest accounts, supplied by the European consulates, the live stock of the country comprises 500,000 camels and dromedaries; 400,000 horses; 2,000,000 mules and asses; 5,000,000 cattle; and 50,000,000 sheep and goats. These statistics, which are not far from the truth, show the resources of the country.

The piles under London Bridge have been driven 500 years, and on examining them in 1815, they were found to be little decayed. They are principally elm. Old Savoy Place, in the City of London, was built 650 years ago, and the wooden piles, consisting of oak, elm, beech, and chestnut, were found, upon recent examination, to be perfectly sound. Of the durability of timber in a wet state, the piles of the bridge built by the Emperor Trajan, over the Danube, afford a striking example. One of these piles was taken up, and found to be petrified to the depth of three-quarters of an inch, but the rest of the wood was not different from its former state, though it had been driven 1600 years.

THE TEA PLANT IN AMERICA.—The following notice from the Patent Office Department at Washington has been circulated throughout the Union:—"The tea plant in charge of this office will be ready for distribution in the course of a few weeks. Each plant, with the pot in which it is growing, will weigh about one and a half pounds, must be forwarded to its destination by express. It is supposed from the best information to be obtained, that the tea plant cannot be cultivated in the open air north of the northern boundaries of Tennessee and North of Carolina. Hence, they can only be raised in your State by being placed in heated conservatories, or greenhouses during the winter season. While, therefore, the larger portion of the plants will be sent to those States where it is believed they can be successfully cultivated in the open air, still a considerable number of them will be sent to other portions of the country, to be raised as matters of curiosity."

POISONED PARTRIDGES.—The Springfield *Republican* says:—"Partridges are beautiful and delicious birds, and may be eaten with safety as long as their fall food lasts; but, when the severity of the winter comes on, they are driven to feed on the young buds of the maple and birch trees and the leaves of the laurel. It is probable that at this season of the year, there cannot be a partridge killed which has not eaten large quantities of the laurel leaf. This leaf is a virulent poison to the human system, though the partridge eats it with impunity to itself."

WALNUT LUMBER.—The Hamilton *Advertiser* relates as an instance of what a good sleighing season does for the back country, that a gentleman from the rear of Wardsville, county of Middlesex, was in that city a day or two since, and sold in one lot $9,000 worth of black walnut lumber, which had been got this winter. He says that speculators from the United States have been through the West, buying up all the walnut timber they could get, at good prices. Other large contracts for lumber have been recently made in Western Canada, which are being effected with all possible dispatch.

A tenement house to accommodate 5,000 people, with ample room for each family, is about to be built in New York.

January 1st, the spirit thermometer in St. Paul, Min., was 50 degrees below zero, the mercury being congealed.

Editorial Notices, &c.

FOURTH ANNUAL REPORT OF THE MAINE BOARD OF AGRICULTURE, AUGUST, 1859.

We are indebted to S. L. Goodale, Esq., the able Secretary of the Board, for a copy of its Report for 1859. It is very neatly executed by the printers to the State, consisting of near 300 pages, with several illustrations on wood, and filled, as far as our yet limited opportunity of examining the volume goes, with much interesting and useful matter. Much of this is from the pen of the Secretary himself, and the volume consists of reports and correspondence, and tabular returns from the Agricultural Societies of the State. As Maine possesses a soil and climate analogous to large portions of the British Provinces, we shall look over this volume with care, and present our readers with the results.

TRANSACTIONS OF THE MASSACHUSETTS HORTICULTURAL SOCIETY FOR 1859. BOSTON, 1860.

The Corresponding Secretary of this old-established and useful Society, Eben Wright, Esq., will please accept our best thanks for his courtesy in sending us their Transactions. They consist mainly of reports of committees on ornamental gardening, flowers, fruits and vegetables, drawn up apparently with industry and care, from which no doubt we shall, on a more thorough perusal, find something to extract for the benefit of our horticultural readers. Massachusetts, as a wealthy, refined, and an old-settled State, has long taken the lead in the delightful pursuit of gardening in all its branches.

TRANSACTIONS OF THE CALIFORNIA STATE AGRICULTURAL SOCIETY FOR 1858. SACRAMENTO, 1859.

This is a neatly-executed volume of about 350 pages, embellished with several engravings of horses, cattle and sheep, and a large lithographed plan of the stock farm of Jerome C. Davis, Esq., of Yolo

county, which has attained to considerable celebrity. The volume is mainly made up of the proceedings and reports of the Society, with communications from individuals and sub-committees in different sections of the State; all which go to prove that the wealth of California does not wholly consist in its gold, and that the earlier impressions respecting the unsuitability of that interesting and important region for agricultural pursuits were altogether fallacious. The late progress of the State in raising stock, field and garden produce, has been amazingly great. The Corresponding Secretary, O. C. Wheeler, Esq., of Sacramento, will please accept our best thanks for his polite attention.

THE EDINBURGH REVIEW AND THE WESTMINSTER REVIEW, BOTH FOR JANUARY, 1860.

We have received, through Mr. Rowsell, of this city, from the American publishers, Leonard Scott & Co., of New York, the American reprint of these world-renowned Reviews. Among the principal contents of the Edinburgh are: Mortality in Trades and Professions, Rogers on the Coal Fields of North America and Great Britain, Lord Elgin's Mission to China and Japan, Alison's History of Europe, Acclimatization of Animals, Progress of Law Reform, British Taxation, Lord Macaulay; with two other articles of a high literary character. The Westminster contains elaborate articles on Government Contracts, the Realities of Paris, Ceylon, The Social Organism, Sicily as it Was and Is, Christian Revivals, Italy and the Designs of Napoleon; with extended criticisms on Contemporary Literature, a department of this Review of much general interest, and usually executed with impartiality and ability.

It may not be known to many of our readers in country places that Messrs. Scott, the enterprising American publishers, issue regularly reprints of the four leading British Quarterlies, with Blackwood's Magazine, from advanced sheets, and that consequently these rich depositories of literature appear on this continent only a week or two after they are issued in Britain. The Quarterly Review represents in politics the old Conservative party, and has always been distinguished for sound learning and high scholarly character. The Edinburgh Review is an old publication in the interest of the Whigs, and has always had some of the greatest statesmen and scholars in Britain among its staff of contributors. The Westminster Review has been in the field many years, but is much younger than the two preceding, and has from the commencement been identified with Radical views in politics, and with somewhat refined sceptical views in matters of religion. Its contributors, however, are men of great ability, and it always contains articles which no man of average intelligence and public spirit, in the present day, can well afford to let pass without perusing. The North British Review is more recent in respect to origin, and is considered to be the organ of the Free Church party; liberal in its politics, and earnest in advocating the truth and application of Divine Revelation, while it is not behind its older confreres in sound learning and ability. Blackwood's Magazine is too well known throughout the civilized world to need any description here, and has occupied for more than half a century the highest position in the world of letters.

The above four Quarterlies, with Blackwood's Monthly, can be had neatly reprinted for the annual charge of $10, or about one-fourth of the cost of importing the original editions! Among the Canadian agents are: Rowsell, Thompson & Co., Maclear & Co., Armour & Co., Toronto; Barnes & Co., Hamilton; Watson, Port Sarnia; Taylor & Wilson, London; W. E. Tunis, Clifton, Niagara Falls; Dawson & Son, Montreal; and P. Sinclair, Quebec.

OUR SUBSCRIPTION LIST.—Subscriptions for the current volume are coming in very satisfactorily, in small lots; but there is still plenty of room for exertion, in order to prevent good prizes falling to comparatively short lists. There is yet a whole month to the first of April, and we shall be glad if our friends make so good use of it as to take the whole of the edition with which we commenced the year off our hands.

BACK NUMBERS.—In reply to inquiries, we beg to state that we have still plenty of back numbers on hand from the commencement of the present year. When the supply is exhausted, we shall announce the fact, and make arrangements to suit the circumstances.

BACK VOLUMES.—We can also supply to those who desire them, some copies of the volumes of 1857, 1858 and 1859; the Journal and Transactions complete, for each year, at half a dollar per copy, unbound.

TO POSTMASTERS AND OTHERS INTERESTED.—It occasionally happens that copies of the *Agriculturist* are returned from the post-offices, marked as "Refused," under the impression, we presume, that the parties would be hereafter favored with a bill for the same. In order to correct this impression, we beg to state that we invariably commence the year with a blank book, and do not send a single copy till ordered, excepting only free copies to officers of Agricultural Societies, exchanges, &c. Perhaps half a dozen copies have been returned since the beginning of the year, and they have all, or nearly all, been copies which had been ordered and paid for by Treasurers of Societies and furnished to the parties as members of such Societies. They perhaps have not been aware that they were entitled to copies without further payment, and therefore returned them. We refer to the matter in order that postmasters may be fully aware, and be able to explain, that we do not send any papers till ordered, except only a few sent as free copies.

The Rev. Hannibal Mulkins' Lecture on Scientific Agriculture is concluded in the Transactions accompanying the present number, from No. 3.

Market Intelligence.

TORONTO, Feb. 29, 1860.

FALL WHEAT—The market for wheat has been buoyant throughout the week, although, perhaps, a shade easier towards the close. The competition between buyers has been keen, and full rates have been realized whenever a fair sample is presented. Prices on Tuesday ranged from $1 28 a $1 32 for prime and extra prime fall wheat; from $1 24 a $1 28 for good and prime, and $1 18 a $1 25 for other grades. The average price for the day was about $1 27 per bushel.

SPRING WHEAT—is steady at 97c a $1 for common to good, and $1 a $1 05c for good and prime; extra qualities of golden drop, fit to mix with fall, at $1 05 a $1 07 per bushel.

FLOUR—The transactions of the week are limited; quotations are as follows:—Double Extra, $5 75 a $6; Extra, $5 25 a $5 62½; Fancy, $4 80 a $4 90; Superfine, $4 40 a $4 55.

BARLEY—is not very active, and prices are steady at 65c per bushel. The supply was larger in the early part of the week, but has fallen off. A very fine sample might bring 70c per bushel.

OATS—Quotations vary each day with the extent of the supply. On Tuesday car loads were sold on the market at 32c. In smaller lots, 35c was the current rate.

PEAS—are in moderate supply, with a slightly easier market. For the best varieties, 60c is an outside figure, and 58c being the current rate for ordinary lots.

SEEDS—Clover, $5 a $5 25; Timothy scarce, and selling at all prices between $3 and $4, according to quality.

NEW YORK MARKETS.

NEW YORK, Feb. 29.

FLOUR—Receipts 86 bbls. The flour market to-day is firm and unchanged; sales of 7,000 barrels at $5 10 a $5 25 for superfine State; $5 30 a $5 50 for extra State; $5 10 a $5 25 for superfine Western; $5 30

a $5 50 for common to medium extra Western; $5 85 a $6 for inferior to good shipping brands extra round hoop Ohio. Canadian flour market a shade firmer; sales 209 barrels at $5 60 a $7 for extra. Rye flour steady at $3 70 a $4 40.

GRAIN—Wheat—Receipts none; market very firm and quiet, and unchanged in prices. Rye is quiet at 87c a 88c. Barley firmer; sales 1,000 bushels at 80c a 81c for State; 78c for No. 1 choice. Corn—Receipts 1,860 bushels; market without special change; sales 14,000 bushels at 75c a 80c for inferior to prime yellow Southern. Oats steady; sales at 44½c a 46½c for Canadian, Western and State.

PROVISIONS—Pork dull and heavy; sales 560 bbls at $17 50 for old mess; $18 37 for new mess; $12 62 for old prime, and $14 75 for new do. Beef is steady; sales 300 barrels. Lard steady and unchanged; sales 500 bbls at 11c a 11½c. Dressed hogs dull; sales of Western at 8c per lb.

BUFFALO MARKETS.

BUFFALO, Feb. 29.

FLOUR—The market is exceedingly quiet, the only sales reported being 110 bbls choice extra Wisconsin at $5 20 a $5 25.

WHEAT—remains quiet, the demand being for small milling lots; sales 1,500 bushels Canada club on private terms; 300 bushels fair white Michigan at $1 30; 300 bushels at $1 31, and 200 bushels white Michigan at $1 34.

CORN—entirely nominal.

OATS—continue in moderate demand; sales 1,000 bushels Canadian at 35c.

BARLEY—steady; sales 600 bushels Canadian at 70c.

PROVISIONS—Nothing doing, and no change to note in quotations. About 100 dressed hogs sold at 7c per lb.

Advertisements.

THE AGRICULTURIST.

ARRANGEMENTS FOR 1860.

THE "AGRICULTURIST, AND JOURNAL AND TRANSACTIONS OF THE BOARD OF AGRICULTURE OF UPPER CANADA" for 1860, will be published on an entirely new system.

It will appear twice a month, and will consequently be much more useful as a medium of intelligence on all subjects affecting Agricultural Societies, and farmers generally, than heretofore.

Each semi-monthly number will consist of 32 pages, and will be printed on fine white paper.

Notwithstanding the increase of size, and of times of publication, the price to single subscribers will be only half a dollar for one copy per annum.

Further, even at this low rate, a bonus will be given of one free copy for every 10 copies ordered and paid for in advance. That is to say, for $5 remitted, 11 copies will be mailed; for $10, 22 copies; for $15, 33 copies will be mailed, and so on.

The *Agriculturist* is Post Free.

It will consequently be the cheapest paper of its kind, and contain the largest amount of reading matter of any published on this continent.

In addition to the very low terms of subscription, as a further remuneration to those who exert themselves to obtain subscribers, the undermentioned money premiums will be paid to those who send in the largest lists accompanied with the amount, before or on the 1st day of April next. Subscriptions will be received at any time, and the amount of each list reckoned up on the 1st April. The money must be received, not merely mailed, on that day. The following are the prizes offered:—

To the officer of any Agricultural Society, member of a club, or other person who shall send in the largest list of subscribers, accompanied with the cash, on or before the 1st April next, a money prize will be paid of..... $20

To the person who shall send in the next largest list..... 19

To the person who shall send in the next largest list..... 18

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"AGRICULTURIST OFFICE,"
Toronto, November, 1859.

The Agriculturist,

OR JOURNAL AND TRANSACTIONS OF THE BOARD OF AGRICULTURE OF UPPER CANADA,

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