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A Family Journal, devoted to Agriculture, Internal Improvements, Literature, Science, and General Intelligence.

## REMARKS

Of Mr. Brondeau (of Hamilton) on the articles which we should produce for exportation.

We continue the observations of the President of the Hamilton Board of Trade upon the important subject of our Agricultural productions. Mr. B. says, "that it does seem strange, that in a country where flax can be raised so easily and hemp grows spontaneously, we should import both our sail cloth and cordage." We differ, however, as to the reason given for the "strangeness." It may be, in accordance with a principle of political economy we have often alluded to, that we could import "sail cloth and cordage" cheaper than we can make it. We may add that it also seems strange, that after so much has been said on the superior quality of the oil which the Sunflower yields so abundantly, and the variety of uses to which both the seed and the plant can be applied, we hear of no attempt to raise it in quantity. And yet every one is aware that it also may be said to grow spontaneously! The way in which Mr. B. speaks of Rape cake might lead the reader to suppose it of no value, but while it brings from £5 to £6 per ton, as it does in England, it is not to be overlooked. It is probable, however, from the labour of transplanting, exposure to the fly, and precarious nature of the crop in general, that it will not be worth much attention in this country for some time. When sown as food for sheep, it is a valuable substitute for turnips on land too wet for the latter, and after being fed off, may be ploughed under with great advantage as a manure.

"When freights are reduced, it is probable that other grain beside wheat may become worthy of attention. Peas have been shipped for years past, but it has been difficult to get them of proper quality; they should be all white, and good boilers. Rich land, especially if manured with plaster, causes them to be the reverse. When split, most difficulties are got over; and as there is very good demand in England, it would be well if more attention were given to the subject. Peas should be shipped in barrels of four bushels.

Indian Corn was required last year to some extent, but it is of so perishable a nature, that it should always be kiln-dried, whether shipped as grain or made into meal. The greater part of that shipped to Britain last season, was more or less injured, which should act as a caution against similar errors.

Barley will probably be an article of export after the freights on shipping ports are reduced. To avoid heating, it should be always shipped in barrels. These might be made to hold a quarter or eight bushels, being lighter than wheat. Barley must not be kiln-dried, otherwise it will not malt.

Pot and Pearl Barley are much consumed in Britain, but have never been an article of export to any amount. It is only a year or two since they were imported. It is to be hoped they will have a fair trial. The more articles we have for export the better.

An extract of Malt and Hops is made in Britain, and sold so as to enable individuals to brew their own beer. Such could be made far more economically in Canada and would reduce the barley and hops in a very small bulk. It is worthy of attention, whether it might not be advantageously prepared.

Oats are too bulky for shipment, unless of the very finest kinds—such are not much raised in Canada. They require to

be put up in barrels, a quarter in each, as they are liable to heat. If at all damp, they must be kiln-dried like corn.

But, in the form of Oatmeal, there is every probability of a continuous demand. Great care should be taken to encourage this trade, by preparing the meal to suit the taste of the British consumer, and by raising the Potato Oat—the best kind for making meal. Oats are too often raised upon land unsuited for anything else. This is a great error; they repay manure and tillage as well as any crop, provided they are of a good kind.

White Beans have been too much neglected. The crop is as good as of wheat, the demand constant, and the price amply remunerating. They require only moderate soil—are in request in Lower Canada and generally over the country. They would pay to export to the Lower Ports and the West Indies, and even to Great Britain.

The Horse Bean only suits very heavy soil, but would have a good local demand if produced in quantity. These would answer also for shipment to Britain, being used there for horse food, and by Millers, in bad seasons, to give strength to inferior wheat, in manufacturing flour.

Rye is so little in request in Britain as not to be worthy of notice. It only serves for local use in distilling or for bread; it only answers for sandy soils, as good soils produce wheat in as great abundance, and at as little injury to the soil.

Millet is much used in Britain for puddings; it would be desirable to raise some in Canada for export, and for home use, instead of rice, for which it is a most excellent substitute.

Flax Seed is raised in Lower Canada to some extent, the fibre of the plant being employed in domestic manufacture. By the old processes of Water or Dew-rotting, the fibre of flax plants that had perfected their seeds, produced a very coarse thread; but, as by the new process, to be hereafter described, ripe plants give as good flax as green. The raising of seed may be carried on at the same time the fibre is saved. It has generally been supposed that the raising of flax or linseed, is scourging to the ground. If cattle are fed on oil cake, and their manure spread on the ground from which a crop of Linseed has been taken, it will be found that the land is enriched instead of impoverished! Be that, however, as it may, the greater part of the soil of Western Canada is well suited to flax and hemp, and these crops are not more scourging than wheat or corn.

To have, however, the full advantage, the oil should be pressed in the country, and the cake employed in feeding;—thus giving a fair price for the seed on the spot, and giving the farmer an opportunity to buy oil cake; not only giving fine manure, but rich manure.

Hempseed produces an excellent Oil for burning—also used in some parts of the world as food. The cake is not as valuable as linseed cake.

Rape seed gives a good burning oil, but the cake is worthless except for manure. Owing to the young plants being subject to be destroyed by the fly, this plant is difficult to raise.

Sunflowers give a large quantity of most excellent oil—equal to Salad for food—and for painting, very far superior to linseed, being colourless as spring water; thus, not giving, like linseed oil, a yellow shade to colours it is mixed with—growing darker by age—but, on the contrary, preserving the first clear tint for an indefinite period. The cake is more valuable

than that of linseed for feeding; and the quantity, both of seed and oil, is three times as great as linseed, with less injury to the succeeding crop.

Nearly all these remarks apply to the raising of poppies, the seed gives a considerable quantity of the finest oil, both for food and painting, also limpid and colourless; and the cake is very good for feeding cattle, the seed not possessing the slightest narcotic quality; on the other hand, being sweet and nutritious. Opium might be prepared from the growing plant, if labour could be got at a sufficiently low rate. Children answer for the purpose of gathering the gum of the plant; but the process is tedious.

These Oils, if produced in quantity, would answer for the purpose of export, both to the United States and to Great Britain.

The production of flax for the sake of the fibre, is now rendered comparatively easy, from the new process of preparation allowing the fibre of plants that have ripened their seed, to be used instead of the fibres of unripened plants. It consists in pulling and drying the flax, like preparing hay; then, when convenient, steeping it in vats kept to the temperature of 100 degrees of Fahrenheit's thermometer; a fermentation takes place, and in two or three days the fibre separates from the vegetable matter, leaving the latter fit for food for animals.

This plan is a modification of many others.

The first was water-rotting—putting the flax in cold water until the vegetable matter decayed; this was a nuisance to the senses, injurious to the health, destroyed the vegetable matter as food, produced a stain very difficult to be removed by bleaching, and if left too long, weakened the fibre. An attempt was then made to hackle the flax dry; then bleach it in soap and water. This broke the fibre too much, and was very laborious.

Dew rotting was then tried, and is still practised. This rots the fibre, from the impossibility of taking away the unprepared from the prepared; the one getting far too much rotting before the other portions are ready.

Steam was then tried, but this caused the fibre to be exceedingly weak.

The fermenting process is open to none of these objections; while its colour is unimpaired, and very moderate bleaching produces a perfectly white linen, if made from flax so prepared.

It need hardly be pointed out the great utility of flax. It furnishes an excellent material for domestic manufacture. There is no comparison between linen and cotton for most articles of clothing: it possesses far greater strength and durability, and is much more elegant in appearance.

The demand in Britain being very great, and daily increasing, flax would afford an excellent article for export, subject to few fluctuations in price; indeed, with the new modes, flax will come into competition with cotton, and its consumption will be extremely great.

Hemp can be prepared in just the same way—the same remarks apply precisely. It brings a smaller price, but the production is proportionably greater; the demand is considerable in Canada for manufacturing; and in Britain a market is open for hemp, to a value equal to a million pounds a year. It may here be noted that hemp, when properly prepared, makes a domestic shirting, as cheap as cotton, and more durable than linen itself.

It really does seem strange, that in a country where flax can be raised so easily,

and hemp grows spontaneously, that we should import both our sail cloth and cordage. In a year or two our Mines will provide our ships with Copper. Let the farmers be equally prepared to furnish the sails and rigging.

Were not the local demand so considerable, Wool would be one of the best articles for export the country could afford. The quality, however, must be improved; it should be either fine wool, or long combing wool, the one paying from the good price obtainable for it, the other from its abundant yield. The half way sheep answer neither end. The fleece, also, when sheared, should be so folded that the wool staplers may separate the back from the belly, and both from other coarser parts. For want of this system, the wool is valued as all coarse. It is to be hoped that very shortly the home demand will be supplied with merino and long combing wool, and a large surplus on hand for shipment.

Were labour sufficiently abundant, silk could be raised as easily as in France or Italy. The cold of winter being of not the least consequence, as no silk worms are raised there in winter.

## LAYING HENS.

To promote fecundity—To have eggs in cold weather—method adopted by the ancients—Reaumur's experiments—some hens lay more eggs than others

The question is often asked "why hens cannot be made to lay as well in the winter as in the summer?" They can, to a certain extent; but they require, as a condition, that they be well provided with warm and comfortable lodging, clean apartments, plenty of food, in all its variety, consisting of grain, vegetable and animal food, pure water, and gravel lime, and sand, to roll and bask in.

A writer in the Southern Agriculturist says: "To make hens lay in winter, they should be shut up in a warm place. Boiled potatoes, turnips, carrots, and parsnips, are cheap and good food," &c.

"The reason why hens do not lay in winter," observes a writer in the New England Farmer, "is because the earth is covered with snow so that they can find no ground or other calcareous matter to form the shells. If the bones of meat or poultry be pounded and given to them, either mixed with their food, or by itself, they will eat greedily, and lay eggs as well as in warm weather. When hens are fed on oats, they lay better than when fed on any other grain."

There seem naturally to be seasons of the year when hens lay; early in the spring, and afterwards in summer; indicating that if fowls were left to themselves, they would, like wild birds, produce two broods in the year.

Spring-hatched birds, if kept in a warm place and fed plentifully and attended to, will generally commence laying about Christmas, or even somewhat earlier. In cold and damp this is not to be expected, and much may, in different seasons, depend on the state of the weather and the condition of the bird.

It is a well known fact, that from November to February (the very time we are in want of eggs the most,) they are to many a bill of expense, without any profit. To promote fecundity and great laying in the hen, it is necessary that they be well fed on grain, boiled potatoes given to them warm, and occasionally animal food. In the summer, they get their supply of animal food, in the form of worms and insects, when suffered to run at large; unless their number is so great as to consume beyond the supply in their

roving distance. I find it quite advantageous, in the summer, to open my gates occasionally, and give my fowls a run in the garden and field adjoining their yard, for a few hours in the day, when grasshoppers and other insects are plenty. I had two objects in view; one to benefit the fowls, the other to destroy the insects. It will be found, that the fecundity of the hen will be increased or diminished according to the supply of animal food furnished.

Hens moult and cast their feathers once every year, which general commences in August, and lasts till late in November. It is the approach, the duration and consequences of this period, which put a stop to their laying. It is a critical time for all birds. All the period while its lasts, even to the time that the last feathers are replaced by new ones, till these are full grown, the wasting of the nutritive juices, prepared from the blood for the very purpose of promoting this growth, is considerable; and hence it is no wonder there should not remain enough in the body of the hen to cause her egg to grow.

Old hens cannot always be depended on for eggs in the winter, they scarcely being in full feather before the last of December; and then, probably, may not begin to lay till March or April, producing not more than twenty or thirty eggs; and this is probably the cause of the disappointment of those who have supplied themselves at the markets for their stock to commence with, and get but few or no eggs. As pullets do not moult the first year, they commence laying before the older hens, and by attending to the period of hatching, eggs may be procured during the year. An early brood of chickens, therefore, by being carefully sheltered from cold and wet, and fed once a day on boiled potatoes, warm, with plenty of grain, in the feeding hoppers, (which will be hereafter described), and occasionally a little animal food, will begin to lay in the fall, or early in the winter.

"When," says Bosc, "it is wished to have eggs during the cold season, even in the dead of winter, it is necessary to make the fowls roost over an oven, in a stable, or to erect a stove in the poultry-house on purpose. By such methods the farmers of Auge have chickens fit for the table in the month of April, a period when they are only beginning to be hatched on the farms around Paris, although farther to the south. It would be desirable to have stoves more common in poultry-houses near cities, where luxury grudges no expense for the convenience of having fresh eggs."

A writer in the Cultivator under the signature of B., says, "I never allow my cocks to run with my hens, except when I want to raise chickens." He recommends giving them fresh meat chopped fine, once a day; never allowing any eggs to remain in the nest, for nest eggs. "My hens," continues the writer, "always lay all winter, and from 75 to 100 eggs each, in succession. There being nothing to excite the animal passions, they never attempt to sit. I have for several years reduced my theory to practice, and proved its entire correctness.

It must be obvious that the presence of the male is not necessary for the production of eggs, as they are formed whether the male be present or not. Of course such eggs will not produce chickens."

In contradiction to the foregoing, Boswell says, "To promote fecundity and great laying in the hen, nothing more is necessary than the best corn and fair water; but malted or sprouted barley has a good effect, whilst the hens are kept on solid corn, but if continued too long they are apt to scour. It must be noted, that nothing is more necessary towards success in the particular of obtaining plenty of eggs than a good attendance of cocks, especially in the cold season; and it is also especially to be observed, that a cock whilst moulting is generally useless."

"Man," says Parmentier, "who thinks of nothing but his own interest, has attempted several means of rousing hens from their torpidity, when they cease at the natural period of the year to lay, in-

asmuch as it seems very hard to pass through the winter without the luxury of eating new laid eggs."

The method of the ancients was, rich and stimulant food, such as toasted bread soaked in ale or wine, barley half-sodden, tares and millet.

M. Reaumur made several experiments with a view to the object in question. A certain class of food, and of seeds, he says, are much extolled in many places, as tending to promote the laying of eggs, but nothing has yet been determined by our choice; for in this way, the sum of eggs laid by the hens of a poultry-yard, might be distributed in a far more equitable manner, over the several months of the year; and if, as is probable, each hen can only produce a certain number of eggs, we should be glad to have a portion of them yearly produced in winter. The necessity we are under of keeping great quantities of eggs in the season when they are laid, causes an uncommon quantity to be spoiled every year, from too long keeping or want of proper caution in preserving them; and hence the importance of the question—"Whether it may not be possible to make hens lay in winter?"

TO CORRESPONDENTS.

J. W., St. George, Nov. 22, rec'd. Port Robinson, 29th do., papers sent.

W. K., Paris, request attended to.

J. S. do. always mention the amount of money you enclose.

J. T. Otterville, received.

J. T. Selborne. One of your queries is answered on the 17th page. The other we can answer very shortly by saying that a Lawyer should make out his bill or the party may refuse to pay it. When made out the party may take it to the proper officer and get it taxed. A lawyer is not obliged to write to a debt, but may issue a writ at once. The items seem to be right enough if the amounts were so. We can't tell what the amount should be, not knowing exactly what was done. Not over £1, exclusive of Shff. fees. Every thing that is charged for must not only have been necessary or rather legal, but also proved to have been done or the taxing officer will not allow it. Yours of 2nd Dec., just received. You have our thanks for your efforts.

D. C., Nov. 23rd and Dec. 1st received. We are sorry for your misfortunes and have no objection to your doing as you propose.

CANADA FARMER.

December 4, 1847.

THE WIRE WORM.

Our correspondent, Mr. Stephens, assures us of the appearance of this enemy of the farmer in some of the Townships in the western part of this District; we have also heard it complained of in this neighbourhood. Its ravages occasionally destroy whole crops, or render them of so little value as not to be worth the trouble of harvesting. It is generally confined to a particular description of soil, and we have no apprehension that its appearance will be general. Unlike the weevil there are certain soils where it never makes its appearance. To prevent the partial ravages which it may make, every proved remedy should be made known. In addition to the plan mentioned by our correspondent, we will state some of the methods which are resorted to to effect its destruction. Mr. Tarrant, in the *British Farmers' Magazine*, recommends the cleansing of infested fields of all weeds, and drilling white mustard seed, by which, he says, all the wire-worms will be banished by the end of the season. This, however, is a very inconvenient remedy: the difficulty of ridding the land of the mustard proves to the farmer that he has only exchanged one evil for another. The use of a heavy roller, when the worm is near the surface, early in the morning, is sometimes tried with good effect. If it does not entirely eradicate the worm, it

destroys many of them, and prevents the development of those it does not kill, so as to render their power of mischief pretty nearly innocuous. We have occasionally known a solution of vitriol applied to lands infested with the wire-worm; but the costliness of this remedy renders it nearly or altogether impracticable. Lime, as a remedy, has been tried without success. In some instances paring and burning the land has been resorted to, in England, to destroy the worm. This, of course, is an effectual remedy, but quite impracticable in this country. Salt, at the rate of four to eight bushels an acre, has lately been tried in England with entire success. In desperate cases this is a remedy which might be necessary and advisable for our farmers to adopt: for, independent of its effect upon the wire-worm, salt, on certain soils, serves a valuable purpose as a manure and thus a double advantage is gained by its application.

FLAX CULTURE.

The following remarks on the subject of Flax, are by Mr. Skinner, the veteran Editor of the *Farmer's Library*, published at New York. We believe that having a due regard to all the wants, exigencies, and circumstances of our country, the culture and manufacture of Flax must engage a large share of the attention of our farmers in a very few years. Wheat, our chief export, is threatened with serious loss, and it becomes us to be prepared for contingencies that are very plainly foreshadowed. The remarks of this American writer are just as applicable to Canada as to his own country. Let us be on the alert; read, mark, learn, and inwardly digest:—

ON THE CULTIVATION AND MANAGEMENT OF FLAX.

Among other objects to which we apprehend the agriculturists of the United States might have recourse, to diversify their staples, and so, by diminishing the production, augment the profits of each, Flax is one that we are inclined to think would reward the labour applied to it, if that labour were enlightened by a knowledge of the most approved methods of cultivation, and preparation for market. Professing not to be ourselves by any means well versed in the details of this branch of industry, it is our intention to seek the best lights to be had; not only on this, but in regard, also, to Hemp and to all other articles, which, though of less importance in amount, serve yet to make up the aggregate of National wealth. May it not be assumed that the extension of the growth of flax is restrained not only by the substitution of cotton, as a cheaper article of clothing, by the dearness of labour in our country, but also by ignorance of the best kind of land, and mode of preparing it; and especially by an impression that its cultivation is attended with great exhaustion of the soil?

We have just received from England a work lately published there, which appears to go fully into all other views of the subject, besides "the improved mode of the cultivation and management of flax."

From much more that is said on the point of its being a great exhauster, and in contradiction of that impression, we have only room now for what follows in the next page.

We have on other occasions, intimated how much better it would be to form associations for the promotion of knowledge and the growth of particular branches of industry; than to attempt, vainly as we do, to achieve great improvements, by means of a single society to embrace a great number of objects. Aiming to do too much, we end by accomplishing next to nothing.

In Ireland, a society was lately formed, called the "Flax Improvement Society." Under its auspices behold the steady increase which has taken place! In the spring of 1844 the quantity of flax sown was 40,896 bags—heads of seven bushels each, while in 1843 it was 37,400. On the estimate that each bag-head would sow three acres, the quantity of land in 1843 was 112,200; and in 1844, 122,638—increase 10,438 acres. Suppose each acre, according to their estimate, to give an average produce of 600 of scutched flax, the entire produce of Irish flax, in 1843 was 36,465 tons, and in 1844 39,611, being an additional value of £141,507 or more than half a million of dollars. In three years, since the formation of the society, the increase in the value of flax was estimated at £675,000 or \$3,275,000, a sum, says the writer, which would formerly have been paid in bullion to foreigners, but is now circulated among the farmers and laborers of Ireland.

May we not bring about the same proportionate results for our country, with silk and

flux, wool and hemp, and grapes and wine, and other things? Help us, good readers, help us in these inquiries!

James McAdam, secretary to the Belfast Agricultural Society, says, "As a proof of the great demand for flax at present, I may mention that from this port alone, orders are now out for 300 tons of flax from Egypt, and for 2000 to 3000 tons, value £70,000 to £100,000 (\$500,000) from the Baltic; and this in spite of the largest home-grown crop for several years. There have lately been erected in this neighbourhood 60,000 additional spindles, which will be at full work, during the ensuing year, and which it is calculated will consume 3000 tons additional flax, of the value of half a million dollars yearly." There are in Leeds sixteen extensive firms engaged in spinning flax, who keep in constant employment at least 10,000 hands.

Why cannot America rival them in this, as it has done in the manufacture of cotton and wool? Are not all the mountain valleys, in the neighbourhood of our immeasurable but unused water power in the south and southwest exceedingly well adapted to the growth of flax? But us to the exhausting nature of the crop, says the writer in hand:

"The main point upon which we rest our assertion that flax is not necessarily an exhauster of the soil, as far as its composition is instructive on this point is this: Exhaustion of the soil, as the word implies, is the removal out of it of those elements of vegetable food which it contains, and in the abundance of which its fertility consists. Now plants derive all their mineral portions from the soil—all those portions, in fact, of which, when they are burnt, their ashes consist—and upon the quantity and quality of them their power of exhausting the soil depends.

"Taking the whole flax plant when harvested, Dr. Kane found it to contain 5 per cent. of ashes; which, compared with other plants, is a large proportion; but the whole of the plant need not be carried off the farm. The fact is, NOTHING BUT THE FLAX SHOULD BE CARRIED OFF THE FARM; the seed should be consumed upon it; the STEEPING WATER SHOULD BE USED AS LIQUID MANURE—and none better can be applied, the bone or stalk on which the fibre grew, when separated from the flax by the operation of breaking and scutching, SHOULD BE BURNED—as it will not rot for years as manure—and carried to the dung-heap. The fibre is the ONLY THING CARRIED TO MARKET; and the point to be ascertained by one who cultivates flax as he ought, in order to make up his mind as to the exhaustion of his farm consequent on its cultivation, is the mineral matter carried off in the fibre; and this, on Dr. Kane's authority, and for the satisfaction of all who wish to cultivate the crop, we proclaim to be most insignificant in quantity; in fact, you may take a bundle of flax fibre, and burn it, and it will leave SO ASHES.

"I shall conclude these remarks by adding, from the columns of the *Agricultural Gazette*, a report of the speech of Dr. Kane, on this subject, at Market-hall Agricultural Society. The chairman, W. Blacker, Esquire, said:—'Gentlemen, I beg now to request your particular attention to such observations as Dr. Kane may be kind enough to make.'

"Dr. Kane said that he felt great pleasure in according to Mr. Blacker's request that he should endeavour to explain to the farmers present the principles upon which the employment of the refuse of the flax crops, as manure, is proposed. It is really very simple; and he felt satisfied that, in that neighbourhood, where so much activity and intelligence were applied to the improvement of Agriculture, it only required that the reasonableness of any practice should be shown, in order that its adoption in practice might be secured. Every farmer present was aware that crops exhaust the soil; that the plants take out of the ground a number of materials, and that it was necessary to restore a similar material to the ground, in order to keep up its fertility; therefore, the manure which the farmer puts in with or before his seeds, in a degree, the raw material of which the grown crop is to be made. It is just as much a part of the plant as the seed itself. When the farmer sells and sends away his grown crop, to be used for food, as in the case of wheat, or oats, or potatoes, he hereby sends away and sells the essence of manure which he had put into the ground; and, as he thus gets paid for the manure, when it is exhausted, he must put in a much more for the next crop, which is to be dealt with in the same way. Now, in the case of flax, there is the important peculiarity that it is not eaten; and hence does not return to the land any manure in the ordinary way, while it takes out of the soil just the same material as oats or potatoes; so that it is really a very exhausting crop, if we only look to the growth of it. But the flax crop differs from other crops in this—that the value of oats or potatoes, and all food crops, depends on what they take out of the ground; while the valuable part of the flax is the fine fibre, or thread, which has taken out of the ground. If you burn away a bundle of flax-straw, it will leave behind a large quantity of white ashes, which consists of the different substances which the plant took out of the ground; but if you burn away a bundle of well-dressed flax, it will leave no ashes. Now, what has become of the ashes? They have evidently been carried off with the waste parts of the plant in the steeping and dressing. They are thrown away; and yet they are materials of which the plant had robbed the soil, and which should be

\* According to the census of 1846, there were in the United States but 1,622 persons employed in flax husbandry altogether, and the whole capital invested, is put down at \$200,067; eighteen States are put down—:

given back to the soil, in order to keep up its fertility. To the practical farmer it is, therefore, of the greatest importance to recollect this principle—that the fibre or valuable part of the flax is not formed by the exhaustion of the soil; but that the materials which the plant takes out of the soil are all found in the steep-water and the chaff; and that, if these be returned to the soil they will restore its fertility, and that thus the flax crop may be rendered one of the least injurious to the ground, and most remunerative to the farmer. I am aware that there are many persons here ready to speak of the practical use of flax steep-water as a manure. I should, therefore, rest satisfied with having stated the principle on which it rests. The flax crop can be rendered little or not at all exhausting, by a proper use of its residues as a manure; but it must be recollected that, unless these residues be thus economized, the flax crop is one of the most severe the land can have, and that the loss of substances to the soil is actually greater than with a corn or potato crop.

Since the meeting, Mr. Blaker has received the following letter from Dr. Kane, in reply to some queries of his, relating to the exhaustion of the soil by the ripening of the seed of the flax:—

"I am glad that you have noticed the subject of the ripening and collecting of the seed of flax, as it is important that farmers should not fall into the error of extending my views beyond their proper limit. As long as the flax is grown for its fibre, the ligneous tissue being formed from air and water, the exhaustion of the soil may be counteracted by restoring to the soil, by means of the flax-water, what had been taken away. But when flax is grown for food, or for seed—when this seed is separated by ripening, then it becomes like wheat, or any other food crop. The formation of the seed takes from the soil nitrogen and phosphates which are consumed in use, and cannot be returned to the soil. Hence the economy of the residual flax products as manure refers to the crop as grown for fibre, and does not extend to the growth for food or seed; these like wheat or potatoes, should pay independently for the good they take out of the land. The flax-chaff is certainly in itself very attractive, but not so much so as it looks. When stepped, all that is of any use is dissolved out; and the dry chaff, when worked up along with fermented stable-dung, will pass into a good mould. The chaff is, however, of little importance compared with the flax-water, which certainly holds dissolved nine-tenths of all that the plant derived from the ground.

—TO W. BLAKER, ESQ. ROBERT KANE."

#### WANT OF POST OFFICES—WIRE-WORM—WHEAT, BEEF, PORK, &c.

NORVAL, Nov. 27th, 1847.

DEAR SIRS.—Since I wrote you last, I have spent some time in the townships of Trafalgar and Chingoucoucy. You will of course be able to judge of my success, by the list of names that I enclose; but here in these townships, as well as in others, I met with frequent objections to subscribing, because the post-office is so remote. It is no doubt, difficult for the department to keep pace with the wants of a population like ours, that is so rapidly increasing; and perhaps impossible with any regard to prudence or economy, to place a post-office in every neighbourhood, where the inhabitants might desire it. But where we find a leading thoroughfare, running through a thickly settled country, we must agree with individuals in thinking it hard, that no mail-bag has ever been opened within less than from 8 to 12 miles of their residence; as is the case on the third line west, in the township of Chingoucoucy.

And although, they are not quite so badly off in any section of Trafalgar that I have been in; yet even there on the 7th line, from Oakville to Hornby, there is no post-office; a distance of 12 miles, although it is the great leading thoroughfare to the back townships. And here, a great improvement could be made without any additional expense; with the exception of the purchase of a mail-bag, by establishing a depot, when the road crosses Dundas Street, at Post's, or Appleby's corner. I was informed that frequent application had been made for this, but some influence was at work that prevented them from obtaining it.

In my communication published in the 20th number of the *Farmer*, I mentioned something in reference to the ravages of the wire-worm upon the wheat, in the township of Trafalgar. I have since learned some facts in reference to this subject, that are worth knowing. Mr. McCurdy, one of the oldest settlers in the New Survey, informed me that he was in the habit of leaving a great part of his land in clover lie, for 5 or 6 years without breaking it up; and he says, that the result was, that the wire-worm was bred in such quantities, that it almost destroyed the following crop; and he has on digging up the old clover, seen as many as a hundred worms in a single root; and he observed, that his neighbours who were in the habit of ploughing up their clover, the second or third year, had comparatively escaped injury from the worm. He also mentioned that he had in a former season, sown a field of oats very early in the spring, which had a most promising appearance until the blade was about as long as his finger, and then, the whole crop disappeared, being cut off by this "creeping thing": He

then waited until the season was far advanced, and sowed with oats again; and the result was the same. After this, he sowed his field in buckwheat, and followed the rest; and sowed fall wheat on the whole; and the result was, that what was sown on the buckwheat ground was uninjured, and what was sown on the fallow was destroyed. It would be well for those farmers who have suffered from this pest, to look back, and see how far their experience accords with the facts mentioned by Mr. McCurdy.

Since writing the above, I have been told by an old farmer of Chingoucoucy, to whom I mentioned the subject, that it had been discovered at the Forty (which I believe is in the Niagara District) that buckwheat preceding fall-wheat, secured the latter crop from the worm. It is generally too late to sow fall-wheat after the buckwheat crop has come off, but it might answer the same purpose to sow buckwheat on the fallows, and plough it down for manure, for which it answers a very good purpose.

I need make no apology for occupying so much space in reference to this subject, for us, agriculture is the most important of all earthly pursuits, so, what is the most important product of agriculture. And there is nothing that a Canada farmer will listen to, with more interest and attention, than something about wheat; for between sowing and growing, ripening and harvesting, and threshing and marketing, together with the rising and falling of prices; it occupies his hands or his thoughts, great part of the year. To say nothing of the milling and mixing, the yeasting and rising, and caking and baking, and cutting and eating—the family share of this indispensable production. And he always delights to associate in his mind, a bushel of wheat and a dollar, and an acre of wheat and at least 20 bushels. And whenever the wire-worm, or weevil, or falling prices, &c., &c., separate these pleasing associations, he feels very much in the dumps, especially if there is a large balance under his name, on the debtor side of the storekeeper's ledger.

After I left Dundas a few weeks ago, I overtook a drover behind 140 head of cattle, which he had purchased in the neighbourhood of London. This, with a similar drove that had been sent down some weeks before, are to be fattened this winter, at a Kingston distillery. On my return from the Hamilton exhibition, I saw a drove of about 200 that were on the road to the lower part of the State of New York: so that the tables are turned, when we are sending beef and flour to the American market.

From all I can learn from various sources, I have but little doubt that those who will have stall-fed beef for sale, during the latter part of the winter, will be well paid for their trouble in fattening it.

In some parts of the country, this year's pork is affected by last year's beechnuts. It appears to be the fact, that unless the fat of last winter's hogs has been starved off the pork still continues soft and oily.

And now to close this dissertation upon post-offices, wheat, beef, and pork, I remain,

Your obed't serv't,  
W. A. STEPHENS.

#### WARMING ROOMS WITH "HOT AIR" AND STOVES,

I conceive to be "one of the inventions of the devil for destroying human life." "What! stoves! the old curmudgeon! not allow us any stoves? we should freeze to death!" I hear a thousand tongues exclaim. All of which I don't believe a word of; for when I was once a little boy there were none of these abominable inventions in that part of Yankeedom where I was warmed into existence by one of these old-fashioned christian fire-places, with the "old settle" in one corner and oven in the other. And who ever heard of folks freezing in those days.

"But the stoves save so much fuel," Granted; but it is at the expense of human life! Rooms are made almost air tight, and then the atmosphere, or what little remains shut up, is roasted with a red hot stove, then breathed, then roasted again, and so on, without the least chance of renewal, until the occupants of such rooms become so enfeebled that they are in danger of freezing to death whenever they encounter such a blast as our ancestors would have considered a healthy breeze. As for cooking stoves in a well ventilated kitchen, I don't object to so much; although the steam and smoke from them, under the most favourable circumstances, is anything but comfortable or healthy.

In a room warmed by a fire-place, there is a constant current of pure fresh air kept up by the draft of the chimney. Besides, who can forget those healthy, happy hearths of *auld lang syne*, where we spent the long cheerful winter evenings of our youth, building "castles in the coals" of the great wood fire.

But I have done. I am aware that I am in a heathen land, where stoves are worshipped, and to avoid "burning my own fingers" I must bow my knees to the national idol. I remain your frozen friend,  
SOLON ROBINSON.

Our friend is pretty hard upon the "air tight." We have used one for 3 winters, and do not see that there is any need of suffering the evils pointed out. On the contrary, we are more in favor of tight stoves, and never intend to use any other as long as we can get them.

Still there is a liability to the evils of which Mr. R. speaks. And if the stove, placed in a small tight room, is to be kept fully charged, and the doors kept shut, however hot it becomes, the results are easy to be told. If any one is silly enough to manage in that way, we would commend him to the open fire places; and advise him that "caution is the parent of safety."

It is for their immense power and steadiness, that we prefer tight stoves. The room can be heated at once, and the door throws open fresh air; and thus the air of the room can be changed as often as desired. Then the stove can be closed, and a steady warmth maintained all day, and nearly all night. It is not necessary to keep the room any hotter with this stove than any other. Every room where one is used, should be supplied a thermometer—an implement costing from 75 cents to \$2, and which should be kept in every house—and when the mercury rises above about 75 degrees, open the door.

It cannot be denied, nevertheless, that ventilation must be more studied in the construction of houses. At present there is comparatively no attention paid to it. While the old fire-places were in use, there was no need of it—indeed, there was too much already. But a different mode of warming has been brought into use, while no mode has been studied of correcting its liabilities to evil.

It ought to be known that we cannot secure the greatest economy of heat, without sacrificing ventilation; nor can we ventilate perfectly without some expense of heat. What we need is to secure the benefits of both with the least loss.—*Prairie Farmer*.

#### TEMPERATURE OF CELLARS.

The question is often asked, how cold a cellar may be without injury to its contents. This, it is very true, will depend upon what the cellar has in it, but the temperature which the most important articles usually stored in such places will bear, is easily ascertained, and the knowledge of it will be often useful.

Water, as it is known, freezes at 32 degrees Fahrenheit; and as a guide from this point, it may be said that those fruits, roots or vegetables, which contain most of it, will freeze much sooner than those which contain less.

For the sake of experiment, we have kept thermometer in a cellar this winter. We found that pumpkins would freeze at precisely 30°; beets and carrots bore 28°, and even 26°, well enough for a few days; but gradually became frozen under it. They would probably endure 30 degrees for a long time. Potatoes in barrels did not undergo a temperature ranging from 25 to 20° for a fortnight together; but after that a few of the top ones showed that they had been killed. Apples paid no attention to the above named degree of cold, and undoubtedly keep better with the mercury standing from 26 to 28, than under any other temperature.

Beef brine or pickle of hams were not affected at all; but we did consider it safe to test them.

HOW THE PERUVIANS USE GUANO.—Much has recently been written on the employment and utility of guano; but

the manner in which it is applied as manure in Peru, seems to be but little known. The Peruvians use it chiefly in the cultivation of maize and potatoes. A few weeks after the seeds begin to shoot, a little hollow is dug round each root, and is filled up with guano, which is afterwards covered with a layer of earth; after the lapse of 12 or 15 hours, the whole field is laid under water, and is left in that state for some hours. Of the *Guano Blanco* a less quantity suffices, and the field must be more speedily and better watered, otherwise the roots will be destroyed. The effect of this manure is incredibly rapid. In a few days the growth of the plant is doubled. If the manure is repeated a second time, but in smaller quantity, a rich harvest is certain. At least, the produce will be threefold that which would have been obtained from the unmanured soil. The haciend of the valley of Chancay have, during the last fifty years, consumed annually from 33,000 to 36,000 bushels of guano brought from the islands of Chuncha, and Pasco. The price of a bushel of coloured guano is one dollar and a quarter, and the price of the white from two to three dollars. The price has recently undergone many fluctuations, in consequence of the great exports to Europe. The employment of this kind of manure is very ancient in Peru; and there is authentic evidence of its having been used in the times of the Incas. The white guano was then chiefly found on the Islands opposite to Chuncha; so that for upwards of 600 years the deposit has been progressively removed from those Islands without any apparent decrease of the accumulation. The uniformity of climate on a coast where there is not much rain must contribute to render the Peruvian guano a more arid manure than the African, as fewer of the saline particles of the former being in solution, they are consequently less subject to evaporation.

**TOMATOES FOR COWS.**—It is not generally known that this vegetable is a superior article of food for milch cows. We have tried it two summers and find it decidedly superior to any other food we have yet tried. They add as greatly to the quantity, as to the richness of the milk, and a rich golden colour to the cream, and butter, which is at least pleasant to the eye, even if the flavour was not improved. We do not know, however, that they impart any richer flavour to the butter.

We have known cows to refuse them when first offered, but soon became very fond of them; others, we believe, a large majority, eat them greedily from the first.

Thus far we have fed them only in a raw state, but if boiled with corn meal, say half and half, or two thirds tomatoes, it will doubtless be far better.

To one who has a dairy farm, the cultivation of an acre or two of tomatoes, would be repaid by a greater profit than any vegetable we know. From an acre not less than eight bushels might be gathered every day, from July until frost.

There is some trouble in picking them, but then nearly every farmer has children; his little boys—ay, and big boys too, who will not be the worse for a little work. We should be glad to see the experiment tried on a larger scale than ours, and to learn the result.

**MIST, OR MOWBURN,** in hay mows, may it is said, be prevented by placing a number of smooth poles, with the larger ends outward, at the bottom or mow on the stack before commencing it, and permitting the hay to settle a few days before hawling them out. The removal of the poles will leave air channels through which the air will circulate to the therrefaction of the mass and the expulsion of the gasses arising from fermentation. *The more of these there are, the better will it be for the hay.* Mow burnt fodder of any kind, is by no means palatable to cattle, and when badly injured, as is frequently the case when housed in a damp state, had better at once be thrown into the yard, or upon the dung heap.

## Civil and Social Department

## THE UNIVERSITY.

This subject has occupied the politicians and political journals of the country for some months back, and is at present a fruitful theme of discussion. We have an opinion on the subject as well as our contemporaries, and as it is in some respects different from the opinions of either of the two political parties, we see no reason why we should refrain from expressing it, merely because certain people have chosen to make the question a political one. As there is a great deal of humbug, dishonesty and falsehood abroad in reference to it, we are anxious that all our readers, whatever their political opinions may be, should understand the real nature and merits of the question, (which is not of necessity, and never ought to have been made a political one,) then they will be able to act when the time for action comes, for the good of their country and not for the purposes of faction.

In the first place, what is the foundation, the origin of all this talk and pothier? For we apprehend, that notwithstanding all the meetings, speeches, resolutions and newspaper discussions relating to this "University question" there are hundreds, aye thousands of people in every District of the Province who know nothing about it, and as many more who care nothing about it. The great mass of the people are indifferent as to what is done, because they never expect to derive any benefit from the University—it is beyond their reach, and they have therefore never felt any interest in the matter. But let us consider it for a moment. A large quantity of land was granted many years ago by the Crown, for the establishment and support of an institution for teaching the higher branches of learning to the youth of the Province. What remains unsold of this land, with some other property in which a portion of the proceeds was invested, forms the tangible and valuable subject of the present fierce contentions. This land is known through the country as the "College Lands," a good share of which has now become very valuable. Until recently, the Church of England body had the management of these lands and claimed the grant as having been made to them and for them exclusively. Great opposition was offered by the other religious denominations and parties in the country, against this claim as soon as it was set up, and all kinds of injustice, trickery & fraud were charged against the leaders of the body asserting this exclusive right to so large a share of the public domain. Into the truth or justice of these charges, and with this early aspect of the question we have nothing to do. The first claimants have, as it is now understood, abandoned their exclusive claim. They admit that the public have an interest and rights in the matter. Various alterations were made by Parliament in the original charter in order to meet the demands of the public and under this more popular form the College went into operation. Still it was objected that the whole affair remained in the hands and under the control of one religious body. They had one of their clergymen filling a Chair of Theology; the forms and ceremonies of their church were adopted, and various other peculiarities characterized the college which amounted to a practical exclusion from its halls, of all those who did not wish to submit their children to Church of England influences. The result has been that notwithstanding the low charges, and the acknowledged high literary character of many of the professors, very few but those of that one sect, and most of these, sons of the wealthy, have availed of its advantages. It has been stated, and no doubt correctly, that the professors' salaries and the expenses of keeping up the college since its commencement, exclusive of charges to students, would have more than paid the cost of sending these students to England or elsewhere and completing their Education! that is to say, the public have paid more for the education of

these young men at home, than it would have cost abroad.

In consequence of the opposition and clamour that has been kept up against the College as at present organized and managed, the Government have felt it necessary again to interfere, and settle the question on a more just and popular basis. But what is the plan proposed? It has been urged on every side that the University being supported out of the public funds, should be free and open to the public without distinction or restriction, that it should be in the hands of no one party or sect, but accessible to the members of all parties and sects, and to those belonging to no party or sect, in the same manner that any other public institution built up and sustained out of the public purse, is, and should be accessible. But can any one for a moment contend that splitting up the University endowment and giving it to four, out of the hundred and one religious denominations in the country, is opening the University to the public? That this is the way to build up a great National institution, to which all the youth of this young country may resort for instruction in the higher branches of learning without let, hindrance, or question, on account of the religious faith of their parents? The Church of England, the Presbyterians (Residuary), the (Wesleyan) Methodists, and the Roman Catholics, are to be the exclusive recipients of this public property! But why? answer that. Is there a shade of difference in the principle, or in the wrong, of taking what belongs equally to a hundred, from one who had seized it, and giving it to four?—What right has Mr. A. to enjoy the benefits of a University or College for his children, maintained at the public expense, because he calls himself a Churchman, while his neighbour Mr. B. is excluded from that benefit for his children, because he is a Baptist? We are aware it is said Mr. B. may send his children to Mr. A's college, they will not be "excluded." We answer, so can Mr. B. go to Mr. A's church, he may take his children to hear the sermons of Mr. A's clergyman, neither he nor they will be "excluded." But Mr. B. does not choose to do so. He conscientiously thinks that Mr. A's church is unscriptural, that it teaches erroneous, as well as sound doctrine, he prefers not to expose his children to the danger of imbibing its errors; and to compel him to do so by depriving his children of the advantage of education at a college, to the support of which he contributes, and in which he has just as great an interest and as undoubted a right as his neighbour, in case of refusal, is a glaring injustice, it is oppression of the most detestable kind. No man of honourable principles or feeling, should wish to place his neighbour in such a position, and certainly no Christian who has any respect for that golden rule, "Do unto others" &c. will listen to such a proposition for a moment. We answer further to the Methodist or Catholic, who tells his Lutheran or Free-Church neighbour that he may send his son to one of the four sectarian Universities, so you may send your sons to the one University now in operation, and with this advantage; that whereas the whole revenue of the Endowment is barely sufficient to maintain a suitable number of professors for one, when divided it cannot maintain enough for four Universities; you therefore have at present an Institution complete in all its departments, in other words a UNIVERSITY; if the plan you advocate be adopted, you will only have one fourth of a University, in other words only a high school. Canada instead of boasting the possession of a grand seat of learning, equal to any in Europe, can boast of four petty sectarian Colleges, labouring to propagate their several antagonistic dogmas, and nursing the elements of future religious strife, the most bitter, the most cruel, the most disastrous, in which any people can engage—unless all history be a lie. The argument that is used to quiet all other denominations in the country, and all that portion of the community not belonging to either of the four favoured bodies, who justly exclaim against

the contemplated robbery, may be urged with tenfold force against any meddling with the University as it now exists.

The facts of the case then are these; this important question is about to be made a political hinge, upon which one of the two great parties that divide our country, expects to swing into power. It is well known that the members of the present Government are not, as individuals, in favour of the partition scheme, but the exigencies of politics are stronger than their private opinion, and more to be regarded than the good of the country. Instead of making the University better, it is about to be made worse—to be in fact destroyed, as a University. The manifesto and resolutions of a Roman Catholic Bishop and twenty-six Priests just published, signifying their approval of the division scheme, which they have hitherto been considered opposed to, seems, in the opinion of many, to shut out the hope of a successful resistance to the present measure. What then is to be done? The following is our plan:—Let the Church of England retain the present university buildings, and the grounds attached thereto; let the remainder of the College Lands be placed under economical and responsible management and the income, which might be made to reach 10 or £12,000 per annum, applied to the support in each District of an Academy or High school, with say 50 acres of land attached, in which, experiments in agriculture may be tried, and in connection with the higher branches of learning, the elementary principles and the best practices of that science be taught, by a Teacher properly trained for the management of the department. Or, let the amount be added to the common School Fund, and let other lands be set apart so as to lay the foundation of a permanent Common School Fund for the education of the people, which in a few years will amount to a sufficient sum to render unnecessary the present unjust system of taxation, or indeed any system of taxation for such purposes.—The former disposition of the Endowment we should prefer before the plan proposed by Mr. Baldwin, the present scheme, or allowing the Income to be consumed as it is at present. For the following among others reasons. First, because it will yield "the greatest good to the greatest number" which we hold to be a principle at the bottom of all sound legislation among a free people.

Secondly, because in a new country like Canada, even one great school for teaching those branches of learning which are beyond the reach of a good grammar school, or well conducted academy, is not required, much less four. It is an absurd notion to think that we can reverse the order of nature. We must go through the trials, and fill up the periods of infancy, boyhood, youth, manhood, and old age. We can't jump from the first to the last. It is futile to attempt to transplant the old Institutions of an old country—which are the result of long and patient study, careful cultivation, and great expenditure of time and money—into the virgin soil of a new country like this. We must prepare the soil, and ameliorate the climate, or the exotic will soon wither and die. To change the figure, we can import the article cheaper and better than we can produce it. What effect will the teaching of Greek or German, to 15 or 20 young men every year, have upon "the balance of trade?" What share of the Western carrying trade shall we secure by instructing a few of our youth in "Conic sections" and the "Integral calculus"? Will the ability to detect a "false quantity" help us to find out the cause of the potato rot? Or shall we get rid of the Navigation Laws by studying Newton's "Principia"? Can any one point out signs of prosperity in the pauper emigrants that have been, and are yet to be sent us, from his knowledge of the Algebraic signs, plus and minus? or tell how many will die this winter, because he can deal with "unknown quantities"? And, to conclude this mode of illustration, will a man be able to prove the justice of giving the University Estate to four denominations, by means of a "Quadratic Equation"? These

things are desirable and useful enough in their place, but all that is essential in a state of society such as ours, can be taught in the District School, if it be properly organized and sufficiently endowed. When the demand for very learned men exceeds the supply, it will be time to think of setting up a manufactory of our own. We shall be none the poorer for having expended this 10 or £12,000 a-year in the way we propose: the capital will still be here, and the Legislature will be able to find funds to endow a suitable University.

Thirdly, because it is chiefly the rich who desire to educate their children so highly; their sons and theirs only, with but few exceptions, have enjoyed the benefits of the University so far, and it is from this class that students will be taken for years to come, should it even be popularized and kept entire. Those who are abundantly able to pay for the education of their children abroad, or to employ proper tutors for them at home, should be the last to ask the Government to assist them, out of the public purse.

Fourthly, because believing as we do, that it is of infinitely greater importance to have the masses well informed, to have a sound, practical education, embracing all the essentials, without the accomplishments, placed within the reach of the farmers and middle classes of this Agricultural and working country, than to have a few men of high education among the wealthy; and knowing that in the proposed scheme the promise of Grammar Schools and Model Farms to be supported out of the "remainder" after the whole income has been exhausted, is all "moonshine," and can never be fulfilled without creating a fund from other sources, we go for establishing these schools and model Farms first; for laying the foundation before we erect the superstructure, and when the latter is required, let these other sources be resorted to.

Fifthly, because we desire to see party feeling, and religious animosity die away, and more noble, generous and patriotic impulses in their stead, which can never take place while the public funds are appropriated to the plain, direct purpose of fanning and feeding the unholy flames.

Sixthly, because we are opposed to the principle of the State contributing to the support of any sects, as such, out of the public purse. The absurdity, inconsistency and injustice, of singling out three or four, each in hostile opposition to the other, is so glaring as to shut out all argument in its favor, and to require none against it.

Seventhly and lastly, because we see no other mode, in the difficulties that at present beset this question, by which it can be settled. To suppose that the plan proposed will benefit the country, or satisfy the public, or settle the question, is vain. It cannot remain as it is, and it appears impossible to meet the views of a majority and keep the University entire. We therefore recommend those whose views coincide with ours, to send men to Parliament who will carry them out. While those who expect a share of the spoil, are declaring that they will support only those candidates who will pledge themselves to their views, let us support those only who will pledge themselves to our views, and if the subject is properly understood, we doubt not we shall have an overwhelming majority.

It is possible that some interested parties may raise a cry that we are "meddling with politics." But when a question of such great importance as this, especially to the farmers of Canada, is understood to be lying before the people for their consideration, we have a right, and it is our duty as one of the guardians of their interests, to express freely our opinion. And we shall never show any squeamishness in doing so, let it affect political parties as it may.

GREAT WESTERN RAILROAD.—We are gratified to announce to the inhabitants of Hamilton and the surrounding country the intelligence, that it is the intention of the Directors to commence the work in this city, on Wednesday the 1st Dec., on which occasion the novelty of a Steam Pile Driver will be in operation, and it is expected that extensive wharves and other facilities will be in forward state by the Spring of the ensuing year.—[Hamilton Gazette.]

**APOSTROPHE TO THE IROQUOIS.**  
BY WM. H. C. HOSMER.

Tribes of the Solemn League! from ancient seats  
Swept by the white like Autumn leaves away,  
Faint are the records of heroic feats,  
And few the traces of your former sway;  
Loved woodland haunts, deep shadowy, and grey,  
No longer wave defiance to the roar  
And rush of whirlwinds 'mid their cool retreats;  
The wild beast harbors in their depths no more,  
And ploughmen turn the globe they darkly clothed  
of yore.

Tribes of the Mighty! dwindled to a few,  
Dejected, trampled children of despair;  
And only like your ancestors in hue,  
And the wild beauty of their flowing hair;  
With laughter rude inquisitors lay bare  
The ghastly secrets of your green old graves,  
To moulder, peaceable, in dis-solving air;  
Forgetful of past glory, when your braves,  
Surrounding nations made poor, weak, dependant  
slaves.

Where our young hoary Magi-wrinkled seers—  
Glad in their dread appareling, who made,  
Rude, rocky altars, stamned and nosed with year,  
And held terrific orgies in the shade?  
Where is the plant or of slender blade  
That urged the hurchen vessel on the stream?  
Long council halls with cedr bark or laird?  
Gone, like the shapes that populate a dream,  
Or twinkling dew, drank up by morn's effulgent  
beam:

And where those whooping legions, fierce & free,  
Who back the tide of French invasion bore,  
Defeating war-trained beyond the sea,  
And battling guarded Montreal in gore?  
Their day of power is ended, and no more  
Ring out their pennis louder than the sound  
Of booming waters on an iron shore,  
While captive hundreds, bleeding, faint, and  
bound,  
Expire in flame, or fall transpierced by many a  
wound.

Ye were wild Romans of this Western Land,  
When the far parent of our Inland Seas  
Beheld your bowmen print his barren strand,  
Flushed with a thousand woodland victories;  
And heard the war shout on his frosty breeze,  
While the red monarchs of the bleak domain  
Bowed to your fierce supremacy their knees;  
And when the sacred Neperceans of Maine  
Sought Hudson's bay to shut the captive  
chain.

Where are your thrilling orators, who caught  
Their eloquence from nature, and allied  
Wild powers of fancy to the glow of thought,  
And grace of gesture to ancestral pride?  
Their sylvan voices on the wind have died;  
And your last master of the honeyed tone,  
Commanding port and gesture dignified,  
No longer wails an empire overthrown,  
And near his couch of dust blue Erga makes  
moan. \* Red Jacket.

**Literary Department.**

**OREGON MISSIONS AND TRAVELS OVER THE  
ROCKY MOUNTAINS.**  
By Father P. J. De Smets.

This is the title of a book recently published at New York of a very interesting character. The author is a Jesuit, but has nevertheless shown himself a man of general learning, close observation and excellent powers of description. His attention has been directed to something beyond the business of his "mission"—the mere religious, to which the members of this far famed order are supposed to be so exclusively devoted, as to pay little regard to any thing which cannot be made subservient to the objects of the Propaganda. We have no such horror of Jesuits, in the present day, as to deter us from accepting at the hands of one of that body such valuable and entertaining contributions to our yet limited stock of knowledge respecting the real character and resources of this vast Continent, as are to be found in the eloquent pages of Father Smets.

There is a certain taste very prevalent among us which should be corrected. We are mightily pleased with descriptions of travels, scenes and wonders in "foreign lands" but whenever the locus in quo is within a reasonable distance of "home" our interest flags, and the subject is voted a bore.—We have at bottom, however unwiling we may be to confess it, a contemptible opinion of our own country, our abilities and every thing about us. How many hundreds for instance, have spent their lives within a day's journey of Niagara Falls, and yet never beheld that stupendous curiosity of nature? Thousands have crossed the Atlantic to visit this wonder of the new world, while thousands in Canada, not from inability but from mere lack of inclination to see it, could not say but Goldsmith's statement that "Indians in their canoes had ventured down the falls in safety" was reasonable and true! As Canadians we should take a pride in our country,

make ourselves acquainted with its history, topographical as well as political, study its peculiarities and resources and if possible; comprehend its destiny. As inhabitants of the NEW WORLD which the genius of Columbus opened up for us, we should feel an intense curiosity in all that relates to it, especially its varieties of soil, climate, and natural productions. We make these explanations of our views, not so much by way of preface to the following graphic extracts from Father Smets's book upon Oregon, as to account for the preference which we are always disposed to give, and shall give, in the columns of our Journal, to what belongs first to Canada, and next to America.

The territory of Oregon would seem from the statements of this learned author to be designed as the theatre of more civilized operations than those of the Hudson Bay Company's trappers. Brother Jonathan, who was so determined to have the "whole or none" evidently knew the value of the prize, though he has thought proper to turn his attention to quarters where such prizes could be appropriated at less cost. The following is a description of the "soil and climate of Oregon":—

**SOIL AND CLIMATE OF OREGON.**

"The immense valleys in Oregon Territory, covered with extensive and fertile prairies, follow the course of the mountains from north to south, and are crossed in directions by rivulets bordered with trees. They easily yield to the plough, and though the first crop is not very abundant, the second is generally sufficient to repay the labor of the tillage. The soil is for the most part fertile, particularly in the south. Every kind of grain is successfully cultivated near Cowlitz, Vancouver, in the Willamette Valley, and farther south. The same may be said of the neighbourhood of Fort Walla Walla, Colville; the mission of St. Mary's; the mission of the Sacred Heart, of St. Ignatius, and St. Francis Borgia, among the Pend-d'Oreilles; of St. Francis Regis, in the valley of Colville; of the Assumption and the Holy Heart of Mary, among the Skalsi. Other districts that are not tillable, afford an excellent pasture for cattle.

"As to the climate of Oregon, it is not so severe as might be supposed from its elevated latitude. The snow never falls to a greater depth than three or four inches in the lower portions of the territory, and seldom remains long on the ground. When the snows, after having accumulated on the mountains and their vicinity in consequence of extreme cold, begin to melt, and the heavy rains supervene, the plains around are covered with water, and sometimes considerable damage is caused by the inundation. The rains commence in October, and continue until March with little interruption."

The following passage will give some idea of Father De Smets's animation, and felicity of descriptive powers:—

**THE FOREST'S OF OREGON.**

"It is more especially in the forest that the grand, the picturesque, the sublime, and the beautiful, form the most singular and fantastic combinations. From the loftiest giants of the forest to the humblest shrubs, all excite the spectator's astonishment. The parasites form a characteristic feature of the woodlands. They cling to the tree, climb it to a certain height, and then, letting their tops fall to the earth, again take root—again shoot up—push from branch to branch—from tree to tree, in every direction—until tangled, twisted, and knotted in every possible form, they festoon the whole forest with drapery in which a ground-work of the richest verdure is diversified with garlands of the most varied and many-coloured flowers. In ascending the Columbia we meet, from time to time, with bays of considerable extent, interspersed with handsome little islands, which, thrown, as it were, like groups of flowers and verdure, present a charming spectacle. Here the painter should go to study his art—here would he find the loveliest scenery, the most varied and brilliant colouring. At every step the scene becomes more ravishing; the perspective more noble and majestic. In no other part of the world is nature so great a coquette as here."

The culinary productions of the regions watered by Columbia River, and its tributaries, are thus described:—

"These lakes and morasses, formed in the spring, are filled with fish; they remain there enclosed as in natural reservoirs, for the use of the inhabitants. The fish swarm in such abundance that the Indians have no other labour than to take them from the water and prepare them for the boiler. Such an exist-

ence is, ever, precarious; the savages, who are provided nature, are obliged to go in quest of roots, grain, berries and such as the thorny bush which bears sweet, pleasant blackberry; rose mountain cherry, cornier or vice berries, various sorts of gooseberries and currants, excellent flavour; raspberries, The hawtherry, the wappato (sagittu folia), a venishing, bulbous root; the bitter root, an appellation sufficiently denotes its peculiarity, is, however, very healthful; it is in light, dry, sandy soil, as also the onion, which is, however, very are of a thin, bluish form; the latter, though farinaceous and insipid, is a substitute for bread; it is a small white radish; the wotery potato, oval and greenish, is prepared like our ordinary potatoe, but greatly inferior to it; small onion; the sweet onion which bears lovely flower resembling the slip. Strawberries are common and delicious. To my catalogue I could add a number of detestable fruits and roots which serve as nutriment to the Indians, but at which civilized man would revolt and nauseate. I cannot pass over in silence the canna root, and peculiar manner in which it is prepared; it is abundant, and, I may say, is the queen of this clime. It is a tall, white, vine-like plant, when removed from the earth, but becomes black and sweet when prepared for food. The women arm themselves with long-poked sticks, to go in search of the canna. After having procured certain quantity of these roots, by dint of long and painful bur, they make an excavation in the earth 12 to 15 inches deep and of proportional diameter, to contain the roots. They cover the bottom with close cemented pavement which they make by means of a stone. After having carefully withdrawn all the roots, they cover the spaces with grass or weedy; then place a layer of canna, another of wet hay, a third with bark overlaid with mould, whereon is kept a glowing fire for forty, sixty, and sometimes seventy hours. The canna thus acquires a consistency equal to that of the yuca. It is sometimes made into loaves of various dimensions. It is excellent, especially when boiled with meat; if kept dry, it can be preserved for a long time."

We conclude our extracts with the following description of

**SCENERY AT THE SOURCE OF COLUMBIA RIVER.**

"I read of the Columbia, 9th September, 1845. The 4th of September, towards noon, I found myself at the source of the Columbia. I contemplated with admiration those rugged and gigantic mountains where the Great River escapes—majestic, but impetuous at its source, and in its vagrant course it is undoubtedly the most dangerous river on the western side of the American hemisphere. Two small lakes from four to six miles in length formed by a number of springs and streams, are the reservoirs of its first waters.

"I pitched my tent on the banks of the first lake that brings in its feeble tribute, which we behold rushing with impetuosity over the inaccessible rocks that present themselves on the left. What sublime rocks! How varied in shape and figure! The fantastic in every form, the attractive, the ludicrous, and the sublime, present themselves simultaneously to the view; and by borrowing ever so little the aid of the imagination, we behold rising before our astonished eyes, castles of hy-gie chivalry, with their many embattled towers—fortresses, surrounded by their walls and bulwarks—palaces with their domes, and, in fine, cathedrals with their lofty spires.

"On arriving at the two lakes, I saw them covered with swarms of aquatic birds—coots, ducks, water-fowl, cormorants, bustards, cranes, and swans; whilst beneath the tranquil water lay shoals of salmon in a state of exhaustion. At the entrance of the second lake, in a rather shallow and narrow place, I saw them pass in great numbers, cut and mutilated, after their long watery pilgrimage among the rapids, cataracts, valleys, and falls; they continue this uninterrupted procession during weeks and months.

"Perhaps I shall scarcely be believed when I affirm that the salmon fish are quarrelsome. I witnessed with surprise the sharp and vengeful bites they mutually inflicted. These two lakes form an immense tomb, for they there die in such numbers as frequently to infect the whole surrounding atmosphere.

"In the absence of man, the grey and black bear, the wolf, the eagle, the vulture, assemble in crowds, at this season of the year. They fish their prey on the banks of the river, and at the entrance of the lakes;—claws, teeth, and bills serving them instead of hooks and darts. From thence, when the snow begins to fall, the bears, plump and fat, resume the road back to their dens in the thick forest, and hollows of rocks, there to pass the four and wintry months in complete indo-

lence, with no other pastime or occupation, than that of sucking their four paws.

"If we may credit the Indians, each paw occupies the bear for one moon (a month), and the task accomplished, he turns on the other side, and begins to suck the second, and so on with the rest.

"I will here mention, en passant, all the hunters and Indians remark, that it is a very uncommon incident for a female bear to be killed when with young, and, notwithstanding, they are killed in all seasons of the year. Where they go—what becomes of them during the period they carry their young—is a problem yet to be solved by our mountain hunters.

"When emigration, accompanied by industry, the arts and sciences, shall have penetrated into the numberless valleys of the Rocky Mountains, the source of the Columbia will prove a very important point.—The climate is delightful; the extremes of heat and cold are seldom known. The snow disappears as fast as it falls; the laborious hand which tills these valleys, will be repaid a hundred fold. Innumerable herds could graze throughout the year in these meadows, where the sources and streams, nurture a perpetual freshness and abundance. The hullocks and declivities of the mountains are generally studded with inexhaustible forests, in which the larch tree, pine of different species, cedar and cypress abound.

"In the plain between the two lakes, near beautiful springs, whose waters have reunited and formed a massive rock of soft sandy stone, which has the appearance of an immense congealed and petrified cascade. Their waters are soft and pellucid; and of the same temperature as the milk just drawn from the cow. The description given by Chandler of the famous fountain of Pambook Kalesi, on the ancient Hieropols of Asia Minor, in the valley of Meander, and of which Malte Brun makes mention, might be literally applied to the warm springs at the source of the Columbia. The prospect unfolded to our view was so wonderful, that an attempt to give a faint idea of it, would savor of romance, without going beyond the limits of fact.

"The first lake of the Columbia is two miles and a half distant from the River des Ares-a-plats, and receives a portion of its waters during the great spring freshet. They are separated by a bottom land. The advantages Nature seems to have bestowed on the source of the Columbia, will render its geographical position very important at some future day. The magic hand of civilized man would transform it into a terrestrial paradise."

We will yet add one more quotation, every-way characteristic:—

"The Canadian! Into what part of the desert has he not penetrated? The monarch who rules at the source of the Columbia is an emigrant from St. Martin, in the district of Montreal, who had resided for 26 years in this desert. The skins of the rein and moose deer are the materials of which his portable palace is composed; and to use his own expression, he EMERGES on horseback wherever he pleases. Here, no one disputes his right, and Polk and Peel, who are now contending for the possession of his dominions, are as unknown to our carbiner, as the two greatest powers of the moon. His sceptre is a beaver trap—his law a carbine—the one on his back, the other on his arm, he reviews his numerous furry subjects—the beaver, otter, muskrat, marten, fox, bear, wolf, sheep, and white goat of the mountains, black-tailed roe-buck, as well as its red-tailed relative the stag, the rein and moose deer; some of which respect his sceptre—others submit to his law. He exacts and receives from them the tribute of flesh and skin. Encircled by so much grandeur, undisturbed proprietor of all sky-ward palaces, the strongholds, the very last refuge which Nature has retained to preserve liberty alive in the earth—solitary lord of these majestic mountains, that elevate their icy summits even to the clouds.—Morigeau (our Canadian) does not forget his duty as a Christian. Each day, morning and evening, he may be seen devoutly reciting his prayers, amidst his little family.

"Many years had Morigeau ardently desired to see a priest; and when he learned I was about to visit the source of the Columbia, he repaired thither in all haste to procure for his wife and children the signal grace of baptism. The feast of the Nativity of the Blessed Virgin, this favour was conferred on them, and also on the children of three Indian families, who accompany him in his migrations. This was a solemn day for the desert! The august sacrifice of Mass was offered; Morigeau devoutly approached the Holy Table; at the foot of the humble altar he received the nuptial benediction; and the mother, surrounded by her children and six little Indians, was regenerated in the holy waters of baptism. In memory of so many benefits, a large cross was erected in the plain, which, from that time, is called the Plain of the Nativity.







Prospectus of the 2nd Volume OF THE "Canada Farmer."

FAMILY JOURNAL OF AGRICULTURE, INTERNAL IMPROVEMENTS, EDUCATION, SCIENCE, AND GENERAL INTELLIGENCE.

The Farmer was established to supply a want that has long been felt in the periodical literature of Canada.

Although it is impossible to treat of public questions without, in some sense, writing politics, yet the "Farmer" has not included what parties have done here or there, as a political organ.

The 1st volume has met with unexpected favor from the public and the Press. The encomiums of the latter, so liberally bestowed, would have consoled the Editors with the belief that their labours were not unproductive.

The 2nd volume will be superior to the first in several points. More time will be given to it by the Editors, and a number of persons of the highest qualifications have promised their assistance as correspondents.

Advertising Department.

TENDERS FOR BEEF AND MUTTON.

Emigrant Hospitals. TENDERS will be received at this Office, until SATURDAY, the 4th December at Noon for supplying the Emigrant Fever and Convalescent Hospitals, of the City with BEEF and MUTTON, for the next Three Months.

Tenders to state the prices as follows, viz: for prime pieces of Beef and Mutton, (as may be required) per 100 pounds.

For Coarse, ditto, ditto, for Soup—per cwt.

GEORGE GURNETT, Chairman Board of Health.

JAMES MANNING, Land & General Agent, Conveyancer, Sec. &c., &c.

KING STREET EAST, TORONTO.

NOTICE is hereby given, that the Public, as House and Land Agents, and as Agents for the collection of the duties on the Importation of Goods, are invited to call on the undersigned, at his Office, at the corner of the King Street East and Bay Street, for the purpose of transacting business.

Orders, Notes, Bills, Wills, Bonds, and other instruments, drawn up and engrossed, witnessed, and deposited, and on moderate terms. How to proceed to the sale and purchase of real estate, and the collection of Rents, Dues, &c.

Land Scrup Bought and Sold, Petitions or Memorials prepared for the Government, and all business connected with the Crown Land, and Clergy Reserve Offices, attended to.

W. M. Mc DOUGLL, Attorney-at-Law, Conveyancer, &c., &c., Toronto, Canada W. (Office, North side of King Street, opposite Post Office Lane)

DISTRICT CONTACTS.

Fire-wood andread,

NOTICE IS HEREBY given, that Tenders will be received at the Office of the Clerk of the Peace, in the COURT HOUSE, until eleven o'clock A. M., MONDAY the 20th day of DECEMBER, for the supply of

FIRE-WOOD

for the use of the GAOL, and COURT HOUSE, of the HOME DISTRICT, the year commencing 1st JANUARY, and ending 31st DECEMBER, 1847. Such wood to be full four feet long, and to consist of good, soft hard maple, beech and birch, that portion for use of the COURT HOUSE to be all WET-SEASONED, and that for the use of the GAOL to consist of DRY and GREEN WOOD in equal proportions.

NOTICE is hereby given, that WOMEN, BOYS, and GIRLS as Servants and Apprentices, can be procured at the Widows' and Orphans' Asylum.

Application to be made at the Institution, corner of Bloor-street and King-street, West. Toronto, Nov. 23, 1847.

All papers in the City to copy three times, and send their accounts to the Widows' and Orphans' Asylum.

Toronto Hospital Trustees' Office. November 3, 1847.

ORDERED, that Students of Medicine be permitted to attend the lectures in the Hospital, for the period of Six Months, on Payment of the sum of \$2 1/2 per Annum, or for Twelve Months, on payment of \$20; subject to such rules and regulations as the Trustees may from time to time adopt.

GEORGE RYERSON, Secretary to the Trustees.

To Physicians and Surgeons.

THREE or FOUR Licensed Medical Practitioners are required immediately at the Toronto Emigrant Hospital.

Each Medical attendant—with the assistance of a Medical Student, as Clerical Clerk and Assistant Dispenser—will be required to take charge of 200 Patients; and will receive 25s. per Annum for his services.

Board of Health Office, Toronto, Oct. 25, 1847.

NOTICE.

ALL persons having in their custody or possession any MONIES, GOODS, CHATTELS, or EFFECTS, heretofore belonging to DECEASED Emigrants, or now belonging to SICK Emigrants, are hereby required, without loss of time, TO DELIVER THE SAME to the undersigned, who has, by order of His Excellency the Governor General in Council, acted the 25th day of October instant, been duly empowered to receive such Monies, Chattels, or Effects.

JOS. CARY, Deputy Inspector General Montreal, 26th Oct. 1847

Farm for Sale

A FARM of 200 Acres, situated in the township of Dumfries, being Lot No. 1 in the third concession on the main road to Iris, and about 1 mile from the thriving village of Saint George; will be sold upon reasonable terms, the owner being anxious to purchase a greater quantity of land to settle his sons.

Price considered unprecedentedly low. Application may be made to the Editors of the Canada Farmer, or to the subscriber on the premises.

LEVI WILLIAMS

CROWN LAND DEPARTMENT.

NOTICE is hereby given, by Order of His Excellency the Administrator of the Colonies, that in compliance with the provisions of the Act in that behalf made, the 1st January 1847, and also to purchase, or to let, the lands, whose locations were not published in the 1st of September 1846, and to purchase, or to let, the lands, whose locations were not published in the 1st of April 1847, but unless the claimants, or their legal representatives, establish their claims and take out the warrants within two years from this date, the land will be surveyed by the Government, to be disposed of by Sale.

JUST PUBLISHED, The Canadian Farmer. (SECOND EDITION.)

BEING a complete Directory for the choice and management of Cattle, whether Horses, Oxen, Cows, Calves, Sheep, Lambs, or Hogs.

To which is added, the Art of Measuring Cattle, to ascertain their weight while living. BREWER, McPHAIL, & Co. 46, King-street East, Toronto, June 8th, 1847

Notice to Agriculturists.

JOHN BELL, No. 7, VICTORIA STREET, TORONTO, CARRIAGE, SLEIGH, AND AGRICULTURAL IMPLEMENT MANUFACTURER, begs to acknowledge his sincere thanks to his numerous Friends and Customers, who, for a series of years, have so liberally patronised him in the above line.

He calls particular attention to his "Premium two Horse Reaper," which obtained the prize at the late Meeting of the Agricultural Society of this District, and was pronounced by the Judges to be superior to any Machine of the kind ever imported into the Country.

All orders punctually executed when accompanied with cash or approved references in the City

Workman Brothers & Co.,

No. 36, KING STREET,

OFFER FOR SALE:—

- 60 tons English Iron, 20 tons Best Iron, 20 tons Swedes Iron, 15 tons Hoop and Band Iron, 10 tons Sheet Iron, 3 tons Plough Shares, 2 tons Wagon Poles, 2 tons Cast Steel, 3 tons Blister Steel, 1 ton Spring Steel, 4 ton Eagle Steel, 2 tons Camp Ovens, 2 tons Belled Pots, 5 Blacksmith's Bellows, 60 Blacksmith's Vices, 15 "Hill's" warranted Anvils, 120 Sugar Kettles, 40 Patash Coolers, 10 boxes "Pouppool" Plates, 25 Box Stoves, 21 to 36 inches, 450 casks Cut Nails, 50 casks Wrought Nails, 20 casks Patent Pressed Nails, 35 casks Horse Nails, 40 casks Wrought Spikes, 40 casks Coil Chain, 200 boxes Windows Glass, 2 tons Putty, 20 dozen Common English Spades, 10 dozen Common English Shovels, 15 dozen Irish Spades, 2 dozen Scotch Spades, 60 dozen Steel Shovels, 8 dozen Steel Shovels, 10 dozen Grain Scoops, 40 Philadelphia Mill Saws, 40 "Fairbank's" Platform & Counter Scales.

JUST RECEIVED, ex ships Capricorn, Baron of Bramber and Rockshire, in addition to their present Stock of HARDWARE,

13 PACKAGES of SHEFFIELD & BIRMINGHAM Shelf Goods,

With an Assortment of American Hardware. Toronto, 25th March, 1847.

R. H. Brett, 161 KING STREET, TORONTO.

GENERAL MERCHANT—WHOLESALE.

IMPORTER OF HEAVY HARDWARE, Birmingham Sheffield and Wolverhampton STEEL GOODS, CUTLERY, and GLASSWARE, in CROCK and HOPS.

Importer and Dealer in Teas, Sugars, Tobacco, Fruits, Sweets, Oils, Paints, Dye Woods, Gunpowder, Shot, Window Glass, Cotton Yarn, Wax, and Candle Wick.

Together with a select Stock of STATIONERY, English, French & German Fancy Goods, Combs, Belts, &c. &c. &c. Toronto, Nov. 1846. J—5m.

Notice.

THE BOOK, STATIONERY, PAPER-HANGING, and BINDING BUSINESS hitherto conducted by B. BREWER will, from and after the 1st of April ensuing, be carried on by the undersigned Firm, under the Name of

Brewer, McPhail, & Co., At the present well-known Stand, No. 46 KING STREET EAST.

In connection with the above, the Subscribers will open, on the 1st of May next, in the same Premises, the

Drug & Medicine Business,

in all its Branches, Wholesale and Retail. This Department will be conducted by one of the Firm, Mr. JOHN BENTLEY, who possesses, from many years experience in several of the best houses in England and in this Country, a thorough and practical knowledge of the Profession.

RICHARD BREWER, EDWARD McPHAIL, ROBERT McPHAIL, JOHN BENTLEY. Toronto, 9th March, 1847.

Fairbank's Platform and Counter Scales.

THESE SCALES are constructed with great care by experienced workmen, under the supervision of the inventors. Effort is made to secure, not only perfect ACCURACY, but also the greatest STRENGTH and DURABILITY.

These Scales are adapted to every kind of business-transacted by weight; and from the extensive use, and the high repute they have attained, both in England and the United States, as well as in other countries, may now be regarded as the universal standard.

Scales for weighing Wheat, both portable and to be set in the floor, furnished with weights to weigh even bushels. For Sale by WORKMAN BROTHERS & Co. Toronto, 22nd March, 1847.

Boot and Shoe Store,

4, CITY BUILDINGS, TORONTO. SIGN OF THE GOLDEN BOOT.

THE Subscriber embraces the present opportunity of returning thanks to his numerous Customers, and the Public, for the liberal patronage he has received from them since his commencement in Business, (being about fourteen years,) and begs to inform them, that having recently added to his Premises, and greatly enlarged his Stock, he has now on hand a large Assortment of Ladies', Gentlemen's, and Children's BOOTS & SHOES, INDIA RUBBERS, &c., of all sizes and quality, which he is disposed to sell on the most moderate terms.

JAMES FOSTER. January 15, 1847. 1—

FOR Cheap Birmingham and Sheffield Goods, try the

NEW HARDWARE STORE,

No. 77 Yonge Street, a few doors North of King-st. J. Shepard Ryan,

Having a Partner in England, can purchase Goods AT AS LOW PRICES as any other House, and respectfully solicits a share of public patronage. CASH PURCHASERS will find it to their advantage to give us a call, as we calculate on clearing off our Old Stock every winter. Toronto, 1st January, 1847. 1—12m.

J. Ellis, Civil Engineer.

HORIZONTAL, Inclined, and Undulating Lanes of Railways Surveyed; Macadamized and Plank Roads, Canals, Docks, Harbours; every description of Drainage, Tunnels, and Bridges of Brick and Stone, Iron and Wood, both Pendant and In-sistent, with correct Specifications. Sections or Model Maps and Estimates showing the true cost of construction, founded upon Rules and Principles, strictly Mathematical, obtained through sixteen years experience and active practice, both as Engineer and Contractor. N. B. J. E. will give detailed Estimates, if required, to persons employing him, showing and proving that the Calculations are founded upon true principles, with Plans, Sections, or Model Maps, showing the true Cubic Measurements of Cuttings, Embankments, Grading, and Side Drains, so simplified that almost any person may keep a correct check as the work proceeds upon the quantity of work done. Peter street, Toronto, } January, 1847.

THE Canada Farmer,

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