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No. 11.

PLAN FOR ORGANIZATION OF A MODEL FARM AT LA TORTUE. SUBMITTED BY M. OSSAYE, DIRECTOR, TO THE COMMITTEE OF MANAGEMENT.

Gentlemen,—The 3d article of agreement between the Lower Canada Agricultural Society and the director of the model farm is in these terms:—

“The choice of an assistant is left without reserve to the director; as to the management of the soil, and the mode of cultivation, these will be submitted in a plan by the director to the committee, where it will be discussed and, the plan once fixed upon will then be considered the rule by which the director is to be guided, without being interfered with at all, as to the means he may consider fittest for its execution.

This article has no need of comment on my part. In adopting it, I, as well as yourselves, have been impressed with the idea that the plan for the general organization

of the farm ought to be submitted for revision to the Committee of management, but that the means of its execution, and all details should be left entirely to the discretion of the person to whom you have confided its management.

To merit your confidence, and gain that of the public, so necessary to the success of our establishment, I believed it my duty to submit to you to-day more than a plan for the organization of the farm. I have, in fact, to make you, if I may so express myself, my profession of agricultural faith; for it is of much importance to you, and still more so to the agriculturists,—in whose behalf, you have given me situation I now hold, to know the principles upon which the organization of the farm shall be based, its system of cultivation, and the teaching of the college, or, in other words, the good or evil genius which shall preside over the institution.

In thus developing to you the plan

which I have formed, I will enter into those considerations of rural economy which will reveal my most intimate convictions—which will decide my course of action, and, if properly based the, success of the institution, or, if erroneous, its ruin; in the latter case you will do justly in condemning the false theories advanced; on the contrary, however, if they prove to be founded on truth, the public will then know that the prospectus of my labours has received the formal approbation of the most distinguished agriculturists of the country, which would be a sufficient guarantee for all the confidence which might be placed upon it.

In the organization of a farm, two things are chiefly to be regarded, viz., the general system of improvement and the plan of cultivation; but, before commencing operations, it is indispensably necessary to examine whether the soil which is to be cultivated be capable of rendering, without previous improvements, the seed and expense of cultivation required to be expended upon it.

From thence three questions arise.—

1st The improvements to be made upon the farm of la Tortue.

2nd The choice of a system of improvement.

3rd The adoption of a system of cultivation.

IMPROVEMENTS.

Of improvements to be made upon land there are two kinds; thorough improvements, properly so called, or those which improve the soil for a great number of years, such are for example pulverising the land, the admixture of lime, and other mineral substances, in large quantities, trenching, ditching, thorough draining, cleaning the land, &c.; and those improvements in cultivation which are simply the result of the care and intelligence of the farmer, and which are but of short duration, such as enriching the soil by a wise rotation of fertilising crops, the application of lime or other minerals in small quanti-

ties, irrigation, &c, and, in a word, all the improvements resulting from good cultivation, and which are in the power of all—the poor as well as the rich.

As to these last mentioned improvements, it is understood that the model farm should give the example; and, for this purpose, we shall seek to draw information from every available source that may apply to our operation, this it must be confessed will be a general benefit. The old world, and England in particular, will furnish us with good models; and we shall strive to profit by them, and introduce into our plans those improvements which are more the effect of talent than of capital.

But, for thorough improvements, properly so called, which require considerable capital, shall we carry them out, without, at first, considering the means at our disposal, and the consequences likely to result from such undertaking? And here the question naturally arises, should we lead the farmers of Canada to expect that we may realise similar results in our agriculture to those which are to be found in England, France, or Belgium? I think this would be unreasonable. To be convinced of the truth of this, it will be only necessary to examine a statement of the comparative results, to be met with, in the old and new worlds.

England, France, Germany, Lombardy, and generally all those countries where good cultivation prevails, have employed ages, hundreds of generations, and an incalculable amount of capital, in raising their agriculture to the point at which it is to be found to day. The agriculturists of our time profit by the labours of the generations who have gone before; and the improvements which they undertake seldom wear out, because the ground has for many years before been prepared to receive them.

It is however far otherwise in Canada. Hardly two centuries have elapsed since cultivation was first introduced; and, even to our day, what kind of cultivation has in general prevailed? The first colonists found

a soil of surpassing fertility, yielding enormous returns, without much labour or expense in cultivation; they have drawn from this generous soil all that it could render, without care, and without manuring. The generations following have treated it as recklessly, and have left it to us, if not sterile, at least greatly impoverished; invaded by parasitical plants, undrained, exhausted, and without shelter of any kind, the soil is now reduced to a most deplorable state. Now, let us compare our heritage with that of our contemporaries of Europe;—there, all is done; all that remains is but to perfect the work; here, all is yet to be done, everything is to be begun.

There capital is abundant; and the Governments, to encourage thorough improvements, hesitate not to lend considerable sums to the agriculturists; here, capital is wanting; the Government itself is in want of resources, it is new as the country, and has done all within its power.

In Europe, land is classed according to quality; each quality has its intrinsic value determined, which rarely varies. This assigned value to the land has been, for many years past, calculated on the net proceeds of the rental. In consequence, when a proprietor undertakes an improvement, it is because he knows that by so doing his land will be raised from an inferior class to a superior, and thus increase his revenue, that is to say, the rent of his farm. It is merely an investment of his funds.

And besides, in well cultivated countries, all the available land is cultivated; and often, as in England and Belgium, it is far from sufficing for the wants of the immense population which covers it. The holders of land finding from thence an assured outlet for their productions they strive to produce the greatest amount possible, and as they cannot extend the limits of the arable land, they seek in improvement what they cannot obtain by extension. From this arises those harvests, almost pheno-

menal, which we see every day registered in the records of European agriculture.

Now, let us turn our eyes towards Canada, what is the price of your land? who is able to assign them an intrinsic value, positive and fixed? does it not often happen that the *accessories*, that is to say, the buildings and dependencies, constitute three fourths of the whole value? and how often have I heard it said, that the harvests of newly cleared land were of more value than the land itself.

Whilst, at scarcely 30 miles from Montreal, even in the heart of the country, there is to be found virgin soil of incredible fertility, ready to be given to the first settler for a trifling consideration, could those improvements be considered reasonable which would cost enormous sums, and which would not raise to an equal state of fertility the miserable soil upon which they would be executed

I have just remarked, that England contains more inhabitants than her soil is able to sustain; on the contrary, it is well known that the Canadian farmer possesses twice as much land as he is able to cultivate, that the population of the whole province of Lower Canada is inferior to that of London, although her territory surpasses in extent that of Great Britain.

I shall not terminate these parallels without observing that, in several European States, and in England particularly, by a course of legislation, and the excessive price of land, the great bulk of the property is to be found almost exclusively in the hands of a privileged class, who do not themselves cultivate, but in whom the innate taste for agriculture, and their immense capital second powerfully the efforts of the farmers who act for them. The farmers themselves, though not rich enough to become proprietors, possess, nevertheless, sufficient capital for working their farms, and guaranteeing their rents to the proprietors. The landowners have, therefore, every interest in improvements, whilst they are certain of finding able far-

mers, giving ample security for the payment of their revenues.

Suppose a Canadian proprietor, in the hope of raising his revenue, make improvements to a considerable extent, at his own expense, will he not in this respect be disappointed in his hopes. Let us see what is passing around us. What security do the greater part of the farmers, who cultivate in this province offer? I fear not to affirm that they present none. They are in general men who have no other resources than their arms—who are without instruction, and who take no thought for the interests of the proprietor, because they are not pecuniarily responsible. But can it be affirmed that, after improving land, and placing it on a footing with that of England, able and solvent farmers may be found? To this I reply, no. A man intelligent and solvent, that is to say, able morally and pecuniarily to account for your rents and improvements will not become your farmer; he will buy land for himself, and derive solely the benefit resulting from his industry and capital.

I conclude then, that as respects thorough improvements to be executed upon our farm, we ought not to undertake but what shall be strictly necessary for the cultivation of the soil. We ought to give to the Canadian farmers that example of prudence, which, moreover, the state of our funds make us a duty to practise.

Of thorough improvements, those which the farm at la Tortue demands are trenching and draining.

Draining is the first condition necessary to successful cultivation. Our farm more than any other, perhaps, stands in need of undergoing a complete system of draining on account of its subsoil being impenetrable, and of the little depth of its vegetable bed. The committee may easily convince themselves by personal observation as to the correctness of this assertion that all as yet remains to be done in this respect.

The little depth of arable soil will

hinder, in many places, the cultivation of pivot-rooted plants unless it be previously trenched sufficiently; but this sort of labor is very tedious and expensive. I only mention this because I conceive these operations ought not to be undertaken without much consideration.

I shall only at this moment single out these two points of improvement. It would be very easy for me to point out many others; the field for improvement is immense, but our pecuniary resources are not in keeping with the wants of our farm.

In fact, our farm is composed of 480 acres of land, of which 200 are in a bad state of fertility. We have in cash for cultivating this vast extent £150 only, our budget for improvements raised to £50—amounting together to £200. I believe it would be almost impossible to find ourselves in a worse condition for credit. If we should succeed, we need not fear that our success may be attributed to our large capital. Our position ought to inspire with confidence those agriculturists who think that it is impossible to cultivate successfully without much money, and who despair because they have not thousands of pounds to expend upon the soil.

Our financial position being that of many agriculturists, the happiest result that we may be able to attain by our Model Farm is to show to the country what can be done with feeble resources prudently and economically administered. Although we should have sufficient capital for effecting great improvements, we ought not to undertake them for the reasons already mentioned, and also, because, in so doing, we would place ourselves at a point from whence we would no longer be observed by the common class of agriculturists in the country. When the poor cottager constructs his cabin, he pays but little attention to the sumptuous edifices of the rich.

At a later period, when the great centres of population shall be multiplied, when

the waste land shall be cultivated, or shall have its limits considerably diminished; when numerous works shall cover your superb water powers, and will demand from the soil products to be manufactured, when at length the land shall acquire a fixed value, which will respond to the capital expended in its improvement, the generations of this period will execute labors that we are not able to undertake. Nevertheless we ought not to lose sight of the end which we have in view—which is to instruct the rising generation, who perhaps will yet see this state of advancement, and consequently we ought to execute under their observation, all sorts of improvements, but upon a very small scale.

UPON THE CHOICE OF SYSTEM OF CULTIVATION.

I mean by a system of cultivation, the combination of means employed for drawing from the soil the productions that are wanted. It is necessary to fix upon some system intended to be followed before determining upon this or that mode of cultivation; because each system requires particular means to be employed, which apply solely to that system.

In Europe, a prudent agriculturer, who undertakes some agricultural enterprise, never neglects to conform to the system of cultivation established in the locality which he is to inhabit. At a later period should he introduce some modification into his plans, it is rarely that he thinks of altering the general system, but confines himself to some change in the mode of cultivation and its details. In truth, I ought to say that each locality has its particular system uniformly established, the weightiest reasons have imposed and maintain this state of things. Thus, the agriculturists of one country devote themselves exclusively to the fattening of horned cattle, those of another attend particularly but to the breeding of young cattle; in some vale, the principal object to which industry is di-

rected, is fibrous plants; the different races of animals have their respective countries, and are often the principal object of industry of the canton which they inhabit.

In these localities, the cultivator has much less difficulty to surmount than in Canada; from his infancy, all his intellectual faculties and powers of observation are directed towards one single object—the system of industry in his canton; he has to aid him, the experience and tradition of his ancestors; so that if he does not do well, he at least manages so as to make money.

But here, in this contry, things are very different: no precedents, no established system, no markets, no statistics to direct production, a heterogenous disunited population, laboring without method, and following different inspirations. The Canadian agriculturist knows not to what kind of industry to devote his attention, to what method to have recourse, he sees nothing fixed, he is directed by nothing. Deprived of instruction, he is unable to account for many effects the causes of which escape him, and he is thus unable to profit by them for the future. If he should not succeed well, he is excusable, because he does not know which system to adopt.

It remains for us to attempt that which until now has not been undertaken. The Model Farm ought to show to the Canadian agriculturist a road already explored, sure and easily followed, to show them to what end all ought uniformly to tend, and the rule that each ought to follow according to the circumstances in which he may find himself placed.

But, to enlighten others, we ought ourselves to acquire certain information which we stand in need of. In order that we may fix upon a system of cultivation, and be convinced of its superiority to every other, we ought to look into the wants of the country, that is to say, of the importance of the internal consumption, and the wants of strangers, or the commerce of exportation. The agriculturist has not only

to produce, but he must also find a market for his production. Now what means have we of acquiring this knowledge? For myself, it is very uncertain; I have waded through all that has been written upon the agriculture of this country, and I have not yet arrived at it—neither statistics, nor newspapers, nor customhouse reports are able to give the desired information, *positively and exactly*. All that I am able to say upon the subject can easily be ascertained by the least clear sighted. The population of Lower Canada is not numerous and out of proportion to the extent of the cultivated soil, it is besides widely spread and almost entirely agricultural. Of the twelve or thirteen hundred thousand inhabitants of which it is composed, one tenth is hardly found to form the three only important cities in the country, viz: Montreal, Quebec and Three Rivers.

There are not here, as in Europe, those great centres of manufacturing population, who consume but do not produce agricultural products. We do not see here those numerous manufactories, who employ thousands of operatives, all great consumers; these manufactories, immense gulfs, in which agricultural products are swallowed up to reappear and be dispersed abroad under other forms. Hence the number of consumers not being in keeping with that of the producers, there happens to be every year an excess of manufactured articles, which have to be disposed of. So, in resuming, I would say that, after having examined into the wants of the inhabitants of this country, we ought to investigate next the condition of other countries, to see what we may be able to supply them with to advantage.

After all these considerations, it would appear to me very imprudent to determine irrevocably to-day upon choosing this or that system in preference to any other. The object of our establishment, which is instruction, and the want of certain information regarding the advantages and disadvantages arising from the different

systems of agricultural industry, make it my duty to attempt to draw those comparisons which, at a later period, will be able to throw great light upon the question now in hand. By means of a very clear and exact account kept, I would be able at the end of each operation, to have a certain fixed data for the value and the price of the different products which I shall have produced. Then only ought we to advise, and adopt for ourselves, that system of operation which experience would point out as the best.

My object is then to conduct at the same-time different kinds of agricultural labor—the one upon a very limited scale, the others as the foundation of my operation, the last mentioned not because they are more productive than the first, but because it is prudent not to change at the commencement all that previously existed upon the farm.

Thus I found a well established dairy upon the farm, I will preserve it. From 58 milk cows of which it is composed, I have made choice of 46, which, by the production of butter, will easily cover their own expenses; it will remain for me to employ usefully the surplus of the milk.

Each year, the dairy will produce animals of an improved kind, which will give me the means of experimenting upon their fattening. I will be very circumspect in this matter, because, as I have said before, the population consuming not being in keeping with that producing, the flesh market requires but few animals, and pays badly for those she requires; on the other hand, we have to contend against the natural prairies of the United States, and we will never be able to do this with advantage on account of the artificial management which the climate imposes upon us yearly during seven months. Finally, the uselessness in Canada of oxen as beasts of draught, convinces me that the fattening of cattle will not be profitable, except in the case of those animals which are perfectly adapted for this

purpose, and which may be sent to the butcher when two years old.

We have also in our cow house 14 heifers of two and a half years old, and 22 of a year and a half old; from among these I shall be able in spring to make a fine enough selection of cows, which I will devote to rearing.

Our pig sty is but thinly peopled; one boar and sow constitute its importance; but they are of a good kind—pure enough English Hampshire.

By means of the price of twelve cows, which I have disposed of, and two bullocks, I propose to buy some colts of the finest breed, which, in three years, would be the foundation of a little stud.

The length of the winters, and in consequence, the time lost for working the horses, during six months of the year, has given me the idea of replacing the geldings which I have found on the establishment by young mares of a fine species.

We have no sheep, and I think it would not be prudent to undertake this kind of enterprise until we have our affairs placed upon a firmer basis.

Impressed with the idea that the Canadian agriculturists ought all to labor in concert to promote exportation, I will strive to introduce the cultivation of fibrous and oleaginous plants, and every other kind of product that is in request for exportation. The farm will be able at a later period to furnish to farmers some good seeds, and thus do away with the fraud that is sometimes practised upon farmers by seedsmen to the serious loss of agriculturists.

I shall now summarily state what I think ought to be cultivated upon our farm, for the purpose of attaining the two objects which we have proposed to ourselves.

ON THE MODE OF CULTIVATION OR THE MANAGEMENT OF THE FARM.

The management of the soil which I adopt, is in consequence of the mixed system which I propose to follow.

Of the 480 acres which compose the superficial extent of the farm, I would allot 230 acres for pasturage, and I would divide the 250 acres remaining in five lots, upon which I would establish the following rotations:

1st Year weeded and manured fallow, the products of which will serve, partly for stall feeding in summer, and partly for winter fodder.

2nd Year—Wheat.

3rd Year—Fields mowed for winter food.

4th Year—Fields mowed for winter food.

5th Year—One half in mowed fields, and one half in grain crops, hay, peas, &c.

I shall now proceed to explain the motives which have induced me to adopt this system of rotation.

You are aware that our farm, in spite of the recent improvements which it owes to its proprietor, is still found in a state of fertility which leaves much to be desired. From that you will not be astonished at the large part which I have allotted, in the distribution of the land, for the cattle. If in 480 acres nearly 380 are allotted for forage, it is because I am persuaded, that the cattle is the principal part of agriculture, and that nowhere, the produce of a given extent of land is proportioned to any other thing, than to the quantity of cattle there maintained.

In point of fact, there is but one great question in the matter of the disposition of the soil;—it is to know in what proportion the land of a farm should be divided between the cultivation which produces manure, and that which consumes it, between the plants for the use of cattle and those for the use of man.

Now I am convinced, that under the circumstances in which our farm is to be found, it is not too much to devote four fifths to forage, to bring into the best possible state of fertility the fifth which I wish to devote to crops, or to plants of commerce.

I ought, at first, to do all I can to manure the land, because at the end of the last period of rotation, if the land has been richly manured, another course might be adopted with profit, without however injuring the soil.

After having decided, that I should keep upon the farm the largest possible quantity of cattle, I have now to consider as to their maintenance. In this matter it is impossible to be too cautious, and especially in Canada, where the rigour of the winter requires fodder to be provided for six or seven months. In winter the animals require as much provender as in summer; the expense of this provender is always largely compensated by the quality and quantity of manure, the growth of the young cattle, the beauty of the calves born in spring, the abundance of milk, &c. I have then thought it right to divide the ground allotted for forage in such a manner as to furnish for the animals nutriment equally abundant during the whole course of the year. The 230 acres of pasturage and the plants for forage cultivated upon a part of the former soil will suffice for provender in summer; the roots cultivated upon another part of this soil, the hay cut upon the 3rd, 4th, and the 5th divisions, and some grain, will form my provisions for the winter. The quantity this provender is estimated by me to be, as compared with the summer pasture, in the proportion of the duration of the winter season to that of the fine days viz., as 7 to 5.

You will doubtless observe that I have reserved a very small space for the culture of wheat. I have done so intentionally; for this crop is too expensive and too uncertain in Canada for me to cultivate upon a grand scale. I may add, if there is a time in agriculture when one should do but little and that little well, it is in raising grain crops. With much fodder, I shall have much manure, with a great deal of manure spread over a little space, I shall have plenty of grain without any

great expense; whilst on the other hand, if I were to reduce my pasture land to make room for wheat, I should have less manure and more land to manure, thus more labor and less profit. Unfortunately, few agriculturists are impressed with this great truth, though so palpably evident when we turn our eyes upon France and England. Whilst the English agriculturist was striving to produce fodder, to improve and multiply the races of his animals, in France, the meadows were laid waste, the pastures cut up, the cattle neglected, to give all the land, all the care to the culture of crops. From thence arises the superiority so marked which distinguishes to-day the English agriculture.

I have now to speak of the manner in which I shall account for the different operations of my cultivation, it will form the subject of the title following.

ACCOUNTABILITY.

Without order and without economy no agricultural enterprise can ever be able to prosper.

By order, I do not merely understand the attention that the agriculturist ought to give that in his farm everything should be in its place, but much more he ought to observe the regularity of the different operations, the faithful and exact account of his receipts and expenses, the attributing of these receipts and expenses to the different objects of industry to which they refer, and in a word the accordance of all the branches of his enterprise.

It would also be a great mistake to suppose that economy consists in a nig-gardly retrenchment of the legitimate expenses of a large establishment. There is another kind of economy of which the effects are much more directly felt in the balance of the receipts of the farm, I refer to the economy of hand labor, of the filling up industriously the whole time of days, of hours, and mi-

minutes, of personal labor and of that sagacity which induces the agriculturist to abstain from all changes and experiments which are not absolutely necessary.

Order and economy almost invariably go in company; and this is the well known sign of a farm wisely directed. In such a farm, you will indubitably find its head reflecting and calculating before-hand the import of all his orders and his actions. All that passes in his establishment is made the subject of calculation, very clear and exact; and in this mirror of his management shines ordinarily his success.

At the thoughtless agriculturer's house, on the contrary, you will see the most profound disorder; there, no account is kept, the operations are ill organised, prodigality is at its height; in consequences, the expenses without end are multiplied, and absorb in advance the revenue of the soil; presently the capital is invaded, and the unfortunate agriculturer ends in ruin and misery.

It is very often by an ill regulated reckoning, or, rather, by the entire absence of all reckoning to which we must attribute the ruin of the greater part of the agriculturists who fail. Not being able to render every day an exact account of their position, they do not perceive their errors till it is too late to remedy them. In consequence, it would be of the greatest utility if a system of reckoning, clear, exact, and, above all, intelligible, might be found. To this day, many modes of keeping agricultural account books have been taught. One hundred formulas have been invented, all very complicated, long and difficult, so much so that the small number of agriculturists who, by these means, seek to give some account of their operations, are not always able to do so, and commit ordinarily such blunders as are very prejudicial.

But should you remark that many illiterate agriculturists, however, succeed in their undertakings though they keep no books. To this I reply that these agriculturists only operate upon a very small ex-

tent of land, and do not act by what might be called an improved system of agriculture so that their reckonings may all be lodged in their heads. On the other hand the success of an undertaking is very often attributed to any cause but the true one. These agriculturists are to be found without doubt in exceptionable positions, near some town, for instance, where they dispose of their rough products, which simplifies considerably the operations of the farm, or aided by a numerous family, and thus dispense with keeping, at great expense, a large number of hands, or, at length, as a great number of European agriculturists do, simply follow servily the system of cultivation established in the locality where they live and to which they have been initiated from their infancy. But I may affirm that for one who is found in these exceptionable positions, who cultivates to a large extent, and who, above all, wishes to make some improvements or changes from the local routine, success is impossible unless each experiment be worked out, each expense carefully registered, and devoted to the industry which necessitates it.

Impressed with this idea, that a reckoning carefully kept is indispensable to the success of an undertaking, even of small importance, I have sought for a plan of formula, simple, easy to be understood, and applicable to all kinds of agricultural operations, and I hasten to communicate the result of my researches.

I have said, that an account regularly kept ought to represent the farm; how shall it come to pass then that an agricultural enterprise may be reflected in a manner so palpable and so evident in these formularies.

In an agricultural undertaking such as now occupies us, three different kinds of industry are involved, which I will fictitiously separate to render my account more intelligent. The first has for its object the animal productions, as milk, fattening, calves, wool, &c., the second regards vege-

tables, that is to say the cultivation of fodder, of grain crops, of plants of commerce, &c., and the third holds in its hands the moving power if I may so express it, or in other words the labor of men and cattle, to which the two others necessarily have recourse to be put in action.

In consequence, I devote to each of these a separate book, in which a separate account is opened for each operations; these accounts are collected from the journal book, in which is inserted the occurrences of the day as they occur, in all four books, which I have the honor to submit to you. By a simple inspection of these books it will be easier for you to decide upon the mechanism of my reckoning than after all the explanations which I should be able to give upon the subject.

ESSAYE.

(To be continued.)

FARMING EXAMPLES.—SIR JOHN CONROY'S

THE lessons a well-cultivated farm offers to practical farmers are most valuable: they speak at once to every understanding and carry conviction, for there is no questioning of what one sees. It is for this reason, after years of discussion on thick and thin seeding, wide and narrow drilling, horse-hoeing, deep and shallow draining, shed-feeding of stock, trenching as a means of permanently improving shallow land, &c., I would bring it to the notice it deserves, the farming of Sir John Conroy, at Aborfield, near Reading for here the practice of thin seeding, wide drilling, deep draining, trenching, room-feeding, open-field culture, &c., upon a farm of 326 acres, may at once be seen to have conducted to a fertility far surpassing what is usually found from land naturally greatly superior. I have been fortunate in seeing this farm at two different seasons—in the winter, when I witnessed the process of fattening and amount of stock which has realized £4000 in six months, and in the summer when the growing crops present a promise of an amount of corn equally singular from so small a breadth of land; and I have no hesitation in saying that the systems by which so much stock is kept and so much corn is grown, are most deserving the attention of farmers; and they must not be prevented from benefiting by the practice they may here witness from a feeling that Sir John is a rich man, and may be doing all this without reference to cost and return. Something of this impression

I confess to having had before I entered his farm, from what I heard he had been doing, as related by farmers who had not seen his farm; but this had long vanished ere I left it. I saw nothing that appeared to me to present the appearance of an expenditure without a return: nothing that I could bring myself to believe had not thoroughly answered as an outlay to make a profit, but quite the contrary. Sir John is part owner and part tenant of the land he occupies; for the part he rents he pays 42s. an acre. It would be difficult to find land in cultivation naturally of so poor a quality as has been producing a considerable portion of that which is included in the returns I allude to; and although they are so great, they could only have been gained by the very judicious and spirited means which were at first taken to bring this inferior soil into high fertility. The first operations have been to give this shallow land depth, and remove from it the water which has kept its vegetation weak and back ward. It has been drained four feet deep, and trenched with the spade two feet, where ever the impenetrability of the subsoil rendered these necessary; and the next care was to provide buildings, to turn to best account the materials it affording for enriching it. Sir John has carefully studied to make his farm a factory of manure, at least cost and with least waste, to bring the land into the highest fertility. He has enclosed two yards with cattle buildings, and covered them in from the inclemency of the weather, with raised sheds. In one of these he fattens his sheep, and in the other his hogs; these have floors, with open planks, so that the urine and manure all fall through into the yards underneath. The urine, after passing through the manure, collects into tanks, from which it is either discharged again on to dry matter, or is taken away. He has a steam-engine by which the corn is threshed, the straw cut into chaff or short lengths, and the cattle food ground.

He has the most improved implements to facilitate the cultivation, and to lessen manual labour, and to turn his produce to best account, so that I was struck with the small amount of labour and the general appearance of economy, as compared with the greatness of the returns. The farm comprises 256 acres of arable, and 70 acres of grass land. The cultivated land all lies open and principally in one large field, without an interior hedge, or an over-shadowing tree. The stock fattened off this land between the 1st January and the 1st July this year, amounts to 30 oxen, 800 sheep and lambs, 350 bacon hogs; and these have been kept in addition to a considerable dairy of cows. The cows are all kept in loose boxes, their food is all brought to them; at no season of the year are they allowed to graze.

The crops are drilled in rows, none higher than 13 inches, and the quantity of seed corn, wheat, oats, and barley, sown, is from 2 to 3 pecks per acre. I cannot speak of the returns per acre; for although I could tell by the stacks and the stands that they must have been very large, I did not obtain the exact yield; but this I can say, that the growing corn, when I inspected it in June, presented an appearance I have on no land seen more promising; and the gross sales of stock and corn off this little farm must be over £6000 a year. It is impossible to convey the impression which a sight of this farm creates of the skill and judgment of the individual who at a late period of life, and without any pretence as a farmer has entered into agriculture, and has arranged, and superintends, and regulates the whole with so much science and success. I came away greatly impressed with the conviction I had been seeing profitable farming—a conviction those who know me will say, I am generally slow in coming to, upon what is called gentlemen's farming.

This farm also presents a lesson of considerable value to landowners, for they may learn from its present state the condition into which a farm must be laid out for a tenant to make the most of it, with reference to draining, removal of hedgerows and timber, the supply of cattle-sheds and conveniences, and their most economical arrangement, which are matters it is a landlord's business to attend to; and Sir John will also tell them, although a game-preserved, that he cannot afford to have his corn cropped by hares and rabbits. This account would be imperfect if I did not further observe that Sir John has had two advantages which seldom fall to the tenant farmer's lot; he has been uncontrolled in laying out his land by any landlord restrictions, and he has had the necessary capital and spirit to avail himself of every improvement to advance his profits; and I must confess, had he not been so situated in both these respects, Aborfield must have continued but little distinguished from its adjoining farms.—*Hewitt Davis, 3, Frederick's-place, Old Jewry, 20th July.*

DRUMMOND'S PATENT CHURN

They also exhibited Drummond's patent churn, of several sizes, up to one which was fitted for horse power.

COMPARATIVE ADVANTAGES OF THIS CHURN.—In addition to its rapid and complete action—light motive power—and simplicity of form, the advantages of this churn, in comparison with others, may be succinctly described as under, while butter made in it is not liable to rancidity, as in the other churns now in use, from the following cir-

cumstances:—First, because there is no metal whatever in contact with the cream, whereas in the box or barrel churn there is not only the galvanic influence of interior metal, but likewise the pernicious effects of iron working in iron, and often still worse, iron working in brass, producing and impregnating the cream with the same obnoxious refuse we see daily falling from the greased journals of machinery in motion. Second, in the box or barrel churn now in use, there is no means used to supply fresh air, the same rancid matter and injurious gases being driven every turn through the cream; whereas in this, pure vital air is injected from the outside to the bottom of the churn at the rate of 200 strokes per minute, as stated before, discharging itself up through the whole, and forcing entirely out of the churn the fetid matter existing in all cream that has been 24 hours off the milk. Thirdly, in the churns commonly in use no adaptation of producing means can be made; the same ground has to be travelled over to obtain 1 as to obtain 20 lbs. of butter; some of them will only work when exactly half full, and are useless beyond 10 lbs.; whereas in this any quantity from $\frac{1}{4}$ lb. to 2 cwt. can be made, and the same churn which makes 50 lbs. can in an instant be adjusted by any one to make 1 lb. without any waste of power. It may also be safely driven either with or without the lids, and every change that takes place during the process of churning can thus be seen at once. Fourthly, another very important advantage connected with this churn exists in the facility with which the whole driving apparatus can be removed, and in the despatch with which the butter is gathered by means of the staff and plunger, without the necessity of using the hands.

CAPABILITIES OF THIS CHURN.—The following is the result of three trials made in the same churn at the Right Honourable the Earl of Mansfield's Kenwood, Middlesex, towards the end of June;—First trial—8 quarts stale cream produced full average quantity of butter in 4 minutes and 20 seconds. Second trial—2½ quarts new cream produced full average quantity in 6 minutes and 45 seconds. Third trial—5 quarts produced 5lbs. of butter in 3 minutes! The above experiments were made in the presence of several parties. The cream was of natural temperature, and the quality of the butter very superior.

The following is the result of a series of experiments with Scotch cream, made at Perth and neighborhood during the present season:—

Comparative trial made at Maderty, the end of February, produced butter from cream in 5½ minutes, with temperature at 50°. Quality very superior, and color rich. Another portion from the same quantity of cream,

and churned at the same time, in the ordinary plunge churn, produced butter in 1 hour and 50 minutes. Quality not nearly equal, and in color quite bleached. Trials made at Perth in the middle of June:—First trial—2 gallons cream produced 7½ lbs. of butter in 4 minutes exactly. Second trial—2 gallons cream produced 7½ lbs. butter in 6 minutes and 40 seconds. Third trial—2 gallons cream produced 7 lbs. 3oz butter in 5 minutes. Fourth trial—2 gallons cream produced 7½ lbs. butter in 5 minutes and 30 seconds.

The above experiments were made from the same cream, but each was at a different temperature, varying from 64 to 69 degrees, and the quality of the butter was admitted by the best judges to be infinitely superior to any in the market tried in comparison on the same day. Of course all dairies in the kingdom will not produce alike in respect to quantity, that being in each case regulated by circumstances.

This churn being now in the neighborhood, attracted much attention; and the first prize of a gold medal was awarded to the exhibitors. We understand Messrs. F. and J. Dickson, Chester, have been appointed agents for the sale of this implement for Cheshire and North Wales.

REPORT ON AGRICULTURAL SCHOOLS.

By DOCTOR KIRKPATRICK.

APPENDIX 5 contains an extract from "Gleanings in the West of Ireland," by the Aon. and Rev. S. Godolphin Osborne, with extracts from the visitors' book, in approval of the management of the model farm.

APPENDIX 6.

Model Farm, Glasnevin, April, 1851.

SIR—In conformity with your instructions, I beg to forward you the following report in relation to this establishment. In dowing so, it strikes me, that, as no document of the kind has heretofore been furnished, you will not consider it altogether out of place, should I extend my remarks to a period somewhat antecedent to that of the past year.

This establishment has been under my superintendance since 1st November 1847. At that time the farm in connection with it contained an area of fifty-two statute acres, and the number of pupils and teachers in training amounted to twenty-two. In the spring season of 1849, the farm was increased in extent to 128 statute acres, and the class in training to fifty. There are at present on the rolls forty-eight; and, were it not that a deficiency of accommodation exists, which is now about to be remedied, twice this number would be receiving the benefits of the institution. As it is, however, great good must be resulting from its operations, as the following statement of the number of persons who have left it, since

my appointment in November, 1847, very clearly testifies:—

Agricultural teachers, agriculturists, land-stewards, practical instructors, all of whom have received appointments	40
Agricultural teachers appointed to literary schools for a time, till agricultural schools be forthcoming	8
Conducting their own or their father's farm	4
Occupation unknown; but most or all of whom may have received appointments	10
Emigrated	6
Dismissed	7
Removed by order of Commissioners	1
Left on consequence of bad health	3
Total	79

You will readily perceive, from the foregoing analysis, that no less than fifty-two well-qualified agriculturists, embracing agricultural teachers, have been appointed to situations from this institutions during the period referred to; and who are, it may be presumed, all at present actively engaged in disseminating throughout the different localities of Ireland, both the principles and practice of the best system of husbandry of the day; that ten additional individuals, of whom no certain data, as regards their present occupation, are known, may be, and very probably are, engaged in the same good work; that six have emigrated to foreign parts, where the agricultural training received here may be turned to good account; that three have been obliged, from constitutional debility or accidental injury, to abandon, at least for a time, their profession; and that eight have been dismissed.

The young men referred to above were all trained at the farm; but in addition to these, the literary teachers, who were trained at the model schools in the sessions of 1848, 1849, and 1850, amounting to 559, have all had the advantage of attending a course of my lectures on agricultural subjects, and of visiting the model farm once each week during the period of every session. Most of these paid the strictest attention to, and evinced the greatest possible interest in, the course of agricultural instruction thus afforded them; and many of them, I am confident, from the manner in which they answered upon the various subjects, are well qualified for conducting ordinary agricultural schools, and will, I have every reason to believe, use their best efforts in diffusing the knowledge they have thus acquired in their respective neighbourhoods.

These details are dry; but, I respectfully submit, they are not the less interesting to those who have the well-being of our country at heart, in as much as they at once clearly point out that, if the bettering of the condition of those engaged in the cultivation of the soil is to be depended upon the adoption of an improved system of cropping and management, this mode of procedure, amongst a class of persons notorious for their prejudices, in the surest and best way to attain that object. The more attention I

have given to this subject, the more am I convinced of what I believe to be the fact, that no other machinero whatever at present exists in Ireland capable of so successfully improving the agriculture of the country, as that of which this establishment is the "motive power."

It is not my intention to enter upon the subject of agricultural education; still I cannot refrain from giving one extract, in reference to it, from a book which has recently come into my hands, entitled, "Annual Report of the Commissioner of Patents for the year 1817," to the "House of Representatives," United State, in which, amongst other important matters, agricultural education forms a principal article. At page 325 the author says. "The Government Councillor Albrecht, of the Grand Duchy of Nassau, at one of the meetings of German agriculturists, when the question of instructing children in public schools was discussed, observed that.

"Since 1817, there had existed, in Nassau, and institution for schools-teachers, where all the branches of natural history and agriculture are taught, not with the view so educate the teachers as practical farmers, but to give those men who are destined to live among the farmers, and charged with the education of children who will inherit the same occupation, a theoretical knowledge of agriculture so that correct views, on matters of agriculture, might be diffused in common schools," 'I, myself,' said he, 'have been for seventeen years in succession professor of agriculture; and my friend, the medical councillor, lectured on natural history about as long as I did in the same institution. We both can give the assurance, that those young men, whom we educate for teaching, were mostly sons of farmers, who had obtained no other instruction than that of the village schools; that they listened to our lectures with undivided attention, and with great advantage; that they proved this when they obtained situations as teachers; for they disseminated correct views, and awakened a love of agricultural knowledge among the children. To this may be ascribed the fact, that the greatest number of pupils at the agricultural school at Idstein, from 1818 to 1843, and at Wiesbaden, from 1834 to 1843, came from those schools where our pupils laid the germs of that knowledge; and it grows vigorously.

"These comprehended the more scientific branches of natural history and agricultural with much more readiness, and in their practical career applied them with more judgment and advantage, than the sons of proprietors of large estates, and better education. We found, by experience, that young men who have not enjoyed a scientific education are, nevertheless, capable of under-

standing a scientific lecture, and able to follow the road pointed out to them.

"This I mention, in order to show that young men from the country, with a limited education, are, without a scientific or collegiate training, capable of a higher degree of culture in the art of husbandry."

Now, not only do I coincide with the views above expressed, but from an experience of nearly ten years in affording agricultural instruction, in a somewhat similar way, I beg to say, that I have found it perfectly practicable to combine agriculture with literary education, and that, too, without in any way retarding the progress of the pupils in their ordinary school studies.

I shall only further remark on this subject that, in forming an estimate of the system of agricultural education which has been committed to your management, and which, by means of your unremitting energy, is now becoming gradually more and more developed and in all quarters better appreciated, it should not be forgotten, that in addition to the powerful influence which the young men who leave this establishment must exercise on the progress of agricultural improvement, they will also promote in an eminent degree both the moral and social condition of those amongst whom it may be their lot to be located, by the inculcation of those principles of moral rectitude, and the exemplification of those habits of healthful industry, which they have imbibed at the parent institution.

I shall now proceed to notice a few of the more prominent points connected with the farm management.

The original model farm is divided into four distinct sections. The first of these is separated into five fields, upon which a five-crop rotation is exemplified; the second into four fields, upon which a four-crop rotation is followed; the third into three small plots, upon which a three-crop rotation is carried out; and the fourth is cultivated as a vegetable garden. This is the plan of cropping pursued at present on this farm, and it is evident that it is in agreeability with the original arrangement contemplated in reference to it. But, without intending to cast any reflection upon the party concerned in its former management, I feel myself called upon, in justice to myself, to say, that when I commenced my duties here, this plan had either been abandoned or it had never been properly established. A period of two years elapsed before I got this important end accomplished. What also tended to cramp my efforts very materially, in the first year, arose from the two following circumstances:—First, no preparation of that portion of the land intended for root crops in the ensuing year had been made, in the proper season—autumn, and, consequently, this work had to be executed afterwards; and, second, as neither horses nor proper farming imple-

ments were upon the premises at the commencement of my duties, I was necessarily obliged to submit to the delay consequent upon purchasing both. Thus it was, that although I strained every nerve to bring forward the work, and get the crops into the land at the proper time, these and other causes, to which it is unnecessary to advert, thwarted my plans to a very considerable extent, and prevented me altogether from effecting any permanent improvements in my first year's management. In the second year, however, the work proceeded more steadily and systematically—many of the obstacles which operated as a drag in the first year having been overcome; and I was thus able, in addition to the general work of the farm, to accomplish the thorough-drainage of about nine statute acres, by means of the pupils and teachers in training only. The drains over the one half of this area were made at twenty-one, and over the other at distances which varied from twenty-four to thirty feet asunder, and the average depth of the paralled drains was four, and of the main drains five feet. The materials used in the construction of the drains were tiles of a semicircular form, refuse slates, and small stones. The slates were laid in the bottom of the drains as soles, the tiles were placed immediately above them, with their open sides down, the small stones were then emptied along the line of the tiles, to a depth of four or five inches, and the entire was covered with firm sods. This is an expensive mode of draining, but from practical experience of its efficacy I can recommend it with confidence.

(To be continued).

DRYING MALT BY STEAM AND GAS.—Letters patent have been taken out by Mr. Hallewell, of this town, for an improved method of drying malt, which, in our apprehension, possesses very great advantages over the old mode, and must, we think, supersede it. The interference of Excise regulations with processes of manufactures in an old familiar subject of complaint, as being a pretentive to improvements. This was felt to be the case with glass manufacture, and one chief recommendation of Sir Robert Peel's repeal of the glass duties was that it would release the manufacture from the trammels of the Excise laws, and leave ingenuity and enterprise free to exercise their full powers of invention and discovery. The result already has justified these expectations, and the removal of the actual pecuniary burdens bears but a small proportion to the advantages gained in the production of articles in glass by the freedom given to its processes. In the art of making malt, the rigid rule of the Excise has often been complained of for its repression of improvement; but the process of drying the malt, luckily, is out of the

ganger's province, and to this department of the manufacture it is that the improvement to which we draw attention is applied. The existing mode of drying malt is by heat generated with coke and coal, which precludes the adoption of more than one drying floor in the same building, and thus limits the extent of the operation to the superficial measure of the site occupied. By Mr. Hallewell's process the heating apparatus is such as to permit its application to each of several floors one above another in the same building, by which room is greatly economized. The floor of perforated iron plates is the same as in the old mode, but the heating apparatus, placed beneath, consists of a coiled steam pipe, and immediately below it a similarly coiled gas pipe with burners at short intervals along its whole length. The use of the steam pipe seems to be to contribute a portion of the heat required without emitting any vapour, so that the gas flames and their emission of vapour be proportionally moderated, and the needful temperature is obtained with the least possible production of noxious exhalation. A graduated index is fixed to the gas tap, so the proper regulation of the heat is perfectly under observation and immediate control. Thus the danger of over heating by carelessness or mismanagement in keeping up the fire in the old mode, and the consequent discolouring of the malt and superficial drying while the inside of the grain remains moist, are obviated. The absence, too, of sulphureous vapour, which in a greater or less degree impregnates the malt from the ordinary fire, and which, if excessive, is both injurious to the flavour and inimical to the fermentation of the liquor, appears to us to form a very valuable condition of the patent process. Where more than one floor in the same building is used, a large aperture is made in the upper one for the passage of the moist vapour from the malt drying on the lower floor, and this ventilator is furnished with a funnel-shaped mouth below to collect the ascending vapour, and to keep the heat of the gas and steam pipe under the upper floor from escaping through the ventilator. A similar protection surrounds the aperture on the upper side, to direct the ascending vapour from the lower floor towards the ventilator in the roof, and to prevent its settling down upon the malt lying to dry on the upper floor. This description will, we think, sufficiently explain to practical men the principle of the new plan, and they will be better able than we are to judge of its merits. But as it seems to us to possess very great advantages, we think it desirable, by thus drawing public attention to it, to give it all the opportunity it may on examination be found to deserve of being adopted.

Communication to the Editor.

PROFESSOR SKILLING'S REPORT ON THE GREAT AMERICAN REAPING-MACHINE.

THE following valuable report is from the pen of Thomas Skilling, Esq., Professor of Agriculture, Queen's College, Galway; and we recommend its attentive perusal by our readers before they embark in any speculation with the reaping machine referred to:—

SIR—I presume you, and the readers of the GAZETTE—the landowners, gentry, and farmers of Ireland—will be anxious to hear something of the great American reaping-machine that has lately been ushered into England under such favourable auspices, and has produced such a sensation among all classes, and which occupied the attention of the leading members of the influential press in no slight degree. According to their views, this implement is to produce an entire revolution, not alone in this country, but in ours also. The British farmers is henceforth to be altogether independent of the Irish reaper, the periodical visits of whom could be readily dispensed with, were a good substitute provided; but this machine is also to be a substitute for protection, and a panacea for free trade. You are, I suppose, aware that the Royal Commissioners of the Great Exhibition, appointed judges to examine and report upon its merits, among whom were two leading members of the Royal Agricultural Society, one of them Mr. Pusey, so well known as a distinguished agriculturist and writer. These gentlemen, after trial, appear to have considered it very efficient, awarded the owner the great medal, and Mr. Pusey has since given a most favourable account of it in the Journal of the Royal Agricultural Society, No. xxii., page 160. It appears to have acted altogether to the satisfaction of the fore-named parties; but there were certain others in England perhaps equally acute. The landowners and farmers of the north, were determined to see and judge for themselves. The East Cumberland Agricultural Society held their annual cattle and stock show at Carlisle, on the 18th instant: they hired and brought down the machine to a field in the neighbourhood, and had it tried on that, and the succeeding day, on the 19th I, with others, attended, and shall briefly detail what I saw.

The field had a moderate declivity; the crop, wheat, an average of the neighbourhood, what we would consider light, but all standing up; the ground unfavourable, being in narrow ridges, with moderately deep furrow; the plot selected was nearly square, a portion on each side, with the end ridges, having been reaped and cleared off; the machine commenced at one side, and reaped full round, was drawn by two strong horses,

which were on their mettle and distressed; up the hill, in the centre of the ridge it cut well; across the hill and ridges *badly*, and down the hill *far worse*; in fact, in the latter case, it dragged off the heads, leaving a great portion of the straw cut at various lengths; and as a gentleman, a looker on, observed, "It was like a man half shaved with a bad razor." I reckoned twenty-two persons attending it, men and women; all appeared to be very busy collecting and binding up the grain in *bundles*, not shaves, the heads and roots being somewhat equal; this is its greatest fault, delivering the grain after being cut, strewing the heads all over the ground; the persons attending could have cut the grain, at least as quickly, immensely better, and without one-fourth the loss. After it had cut once round the field, it was obvious to the most casual observer, that it was from home—out of its element—a decided failure; all present agreed in this. On the next day, the 20th, we had another fair trial, under other circumstances, and in another part of the country. The Earl of Lonsdale, for his own information, and that of his tenants and neighbours, hired, and had it brought down to Westmoreland, where it appeared before a large party of the nobility, gentry, farmers, &c., on the farm of Mr. Beanstead, near Lowther, and commenced work about eleven o'clock. This field was laid out favorably, in broad, well-formed ridges, with very shallow furrows, and was much more favourable in that respect than the one at Carlisle except being rather hilly, steep, and a much better crop, which, I could easily perceive, was against it. It cuts moderately light grain better than heavy; here it was a good, standing crop, such as a reaper would choose for a first-rate day's work; it was drawn by two very strong horses, but it would have required four. They were much distressed, and during the four hours it worked, were twice changed. As on the former day, it cut cleanly up the hill, but very badly across the ridges, particularly at the foot, where the grain was strong; and they did not *attempt to cut down the slope at all*; it would have been abortive. After two rounds of bad work, they give up cutting across also, and confined the operation to cutting up hill, going down empty. The work was continued four hours, cutting in all 9,760 square yards, or a little over two statute acres. As on former days, a great number of persons were attending, binding up, &c., in fact, a quantity that could have reaped more ground in the same time, and immensely cleaner and better. Its great fault—delivering the grain from the platform—on which it falls after being cut; this falls on the former cut ground in great disorder, strewing it over with loss heads. A trial was made to bind up some of the heaps into shaves orderly, straightening the

grain tops and butts, as after reapers, but this was found quite impracticable: a man could have reaped and tied a sheaf much sooner and better than he could have settled the heaps as they left the machine. A very important experiment was made in the field by some gentlemen, to ascertain the loss sustained by loose heads, gleanings, &c., left on the ground after the grain had been bound up. An averages square yard was measured, the loose heads collected upon it, the grain and straw separated and weighed. Of grain there was $\frac{3}{4}$ of an ounce, being at the rate of 226 $\frac{3}{4}$ lbs. per acre; of straw, 1 $\frac{1}{4}$ ounce, or 378 lbs. per ditto—a quantity the value of which would have reaped, bound, and carried it to the stack-yard. After witnessing these trials, the facts are incontrovertible, that this implement is not, at present, calculated to meet circumstances. All circumstances must suit it; the ground must be perfectly level, without ridge or furrow; the grain must be a moderately light crop, and all standing. Even taking these matters into consideration, the crop can be much cheaper and better reaped by the scythe or sickle. On this head there were not two opinions in the field that day, nor have I heard any other since; the implement was acknowledged on all hands to be a decided failure. I am not prepared to say that it may not be much improved; in this country I should think it will. But there are serious difficulties in the way, in making a machine to do the work correctly and cheaply, in various localities, under different circumstances, and with different crops. My own impression is, it will be a long time ere it can come in competition with the scythe and the sharpening sickle.

On this head I may mention, that a very important experiment was made in this neighbourhood a few days ago, by the members of the Penrith Agricultural Society, to test the merits of the scythe and sickle in reaping grain. An English mower and an Irish reaper contested for a prize, and our countryman won easy. From this we may infer that there are still hopes for Ireland.—Yours, &c., THOMAS SKILLING, *Louthier Costle, Sept. 22, 1851.*

THE CLAUSSEN FLAX PROCESS.

The *Belfast Mercury* states, on authority, that Dr. Hoeges, Professor of Agriculture, Queen's College, Belfast; Dr. Blythe, Professor of Chemistry; and Mr. Murphy, Professor of Agriculture, Queen's College, Cork, have been appointed as a commission to investigate the merits of the process of preparing flax patented by the Chevalier Claussen. The experiments are being conducted at the flax-steeping establishment of Mr. Dargan, the eminent railway contractor, about 17 miles from the city of Cork.

Agricultural Journal

AND
TRANSACTIONS
OF THE
LOWER CANADA AGRICULTURAL SOCIETY.

MONTREAL, NOVEMBER, 1851.

PROVINCIAL PLOUGHING MATCH NEAR QUEBEC.

In conformity to previous advertisement, this Ploughing Match came off on Wednesday the 15th of October, upon the farm of Mr. Bell, about 3 miles from Quebec, on the bank of the River St. Charles. The day was fine, and the land in good condition, but the attendance was not so numerous as might have been expected from the number and amount of prizes offered by the Directors of the Lower Canada Agricultural Society. The number of ploughs upon the ground was 26, of which, we believe, there was an equal number of European and Canadian ploughmen, but one of the Canadians gave up soon after he commenced. The County of Quebec Agricultural Society, under whose management the Ploughing Match was conducted, made every necessary arrangements, as to the measurement and making out of the lots previous to the day for ploughing, and the President, Vice-president, Secretary, and several members of the Committee, were present to see that all went on regularly, and it was impossible the management could be better in every respect. It happened unfortunately, that the County of Montreal, the County of St. Hyacinthe, and that of Three Rivers, had their Ploughing Matches upon the same or the following day, and hence, prevented many from going to the Quebec Ploughing Match. The worthy Secretary of the County of Quebec Agricultural Society, J. B. Trudelle, Esq., requested us to procure some gentlemen to act as judges at Quebec, but the only person who consented to go was Mr. Hardy of

Longueuil, who very generously went at his own expense, thus showing a rare example of disinterestedness for the interest of agricultural. The whole of the ploughmen had finished their work considerably within the time allowed, (namely, at the rate of an arpent in eight hours, and in proportion for any less quantity,) thus proving that the time was not too short for executing the work. Some of the work was very well done, and in fact, there was not any of it that might not be considered fair ploughing. We were sorry that the size of the furrow slice was not one of the conditions of the Ploughing Match. If a scale had been adopted, ploughmen would have been more particular to cut the furrow slices nearer to the proper proportion.

It could not be an arbitrary or unnecessary "condition" to fix the size and proportion of the furrow slice. Grass land is generally selected for Ploughing Matches, and there cannot be any doubt that the best size for the furrow slice in ploughing such land, would be 5 inches deep by 8 inches wide or 6 inches deep by 9 inches wide. Each slice leaning upon, or covering the one previously turned, one-third of its width, and thus the ridges would be ribbed into regular drills having that appearance—which will be found to harrow and cover the seed better, than if ploughed in any other way—indeed it is the best mode of ploughing grass land, however it may be cultivated subsequently, whether the object be to rot the surface or cover the seed. If the furrow slice is cut too narrow or too wide in proportion to its depth, in grass land, the work will not look well, nor will it be executed in the best manner for the farmer. This is an established fact with all who understand what constitutes good ploughing, and the want of due attention to this point is the greatest defect in Canadian ploughmen, who appear in too great a hurry in order that they may turn over a large quantity of land in a day. We endeavoured to explain the nature and

objects of "Conditions" established for the "Ploughing Matches" and also why it was necessary that the furrow slice should be cut in due proportion. It will not be productive of much good to tell men that their work is not executed in a proper manner unless you can convince them of the fact, and demonstrate to them clearly, that the mode you propose is a better one. If this was always done by parties proposing or desiring improvements, Canadian or any other farmers would not reject or refuse to adopt improvements that would be manifestly for their advantage. The usefulness of Ploughing Matches is very questionable if prizes are awarded for any work that is not executed in a proper manner, and hence the necessity of establishing regular "Rules" as to what constitutes good ploughing. At all Exhibitions held for promotory agricultural or other improvement, prizes should be withheld where there was not sufficient merit. If this rule is not strictly observed, the awarding of prizes is calculated to do more harm than good, as it has a decided tendency to lead into error.

We were much disappointed that only swing ploughs of iron or wood appeared at the Ploughing Match when we know that nine-tenths of the ploughs in use with Canadian farmers are wheel ploughs. The Conditions of the Ploughing Match invited every description of plough to be brought forward, in order that their merits or defects might be made manifest. It is a great mistake to suppose that the Directors of the Lower Canada Agricultural Society would wish to discourage the use of any plough which farmers could make good work with. It would appear from the circumstance of not having any of the ploughs in common use in the country, brought to the Ploughing Match, that the farmers were apprehensive that they could not gain a prize with them in competition with ploughs of other construction. If this be the fact, the continued use of such implements is an injury. If, on the contrary,

they are capable of executing good work, they ought to be brought to the Ploughing Matches, draughted by oxen, or by horses and oxen, as they are upon the farm in general. The principal good of Ploughing Matches is to test the merits of ploughs as well as of ploughmen and to show the difference between good ploughing and bad. It is therefore of the greatest consequence that Canadian farmers should bring their ploughs as they work them upon their farms, and it is also necessary that there should be different qualities of soil selected. It is generally the soil that is the least difficult to plough that is chosen for Ploughing Matches, and to this plan we conceive there is a great objection. The land should be a sample of the heavy clay, as well as the light loam or sandy soils of the country, in order that it might be satisfactorily proved whether more than two horses are required to plough some lands. We constantly see four, five, or six oxen, and horses, to ploughs, but we should not condemn this plan unless it is proved that they are not necessary. We would never object to the use of oxen for the plough, because they are less expensive than horses, at a distance from cities and towns, but of course we do not advocate that a greater number of either oxen or horses should be employed than would be actually required.

The following was the award of the prizes, which were paid on the spot by us, as Secretary and Treasurer of the Lower Canada Agricultural Society, who went down for the purpose of seeing the Ploughing Match and reporting it. We give an extract of Mr. Trudells' Report:—

The various lots were measured by a surveyor; one hour 50 minutes were allowed for each lot, to the Canadians; and three hours and 36 minutes for each lot to be ploughed by the Europeans. The first task finished by a Canadian, was accomplished in 1 hour 15m., the last in 1 hour 33m. The European ploughmen finished their tasks in 2 hours 12m. to 3 hours 18m. The followin are the names of the successful competitors:—

CANADIAN PLOUGHMEN.

Jacques Dion, Ancienne Lorette...	1st prize	\$16
Thomas Hamel, St. Foy.....	2nd "	14
Is, Flamondos, Ancienne Lorette...	3rd "	12

Pierre Dorion, jun., Charlesburg..	4th	"	10
Edouard Bedard, Do.....	5th	"	9
Charles, Dorion, Do.....	6th	"	8
Louis Lortie, Canadière.....	7th	"	7
Antoine Lortie, Do.....	8th	"	6
Joseph Delège, Charlesbourg.....	9th	"	5
Hector Routier, St. Foy.....	10th	"	4

EUROPEAN PLOUGHMEN.

George Plaine, Ancienne Lorette...	1st prize	\$16
Charles Wilson, St. Foy.....	2nd "	14
George West, Do.....	3rd "	12
Anthony Scullion, Do.....	4th "	19
Richard Downey.....	5th "	0
George Eglington, Stoneham.....	6th "	8
James West, St. Foy.....	7th "	7
John West, Do'.....	8th "	6
Joseph Sleep, Little River.....	9th "	5
John Hyne, Do.....	10th "	4

PROVINCIAL PLOUGHING MATCH AT VARENNES.

This Ploughing Match took place on Wednesday, the 22nd day of October, on the Farm of David Laurent, Esq. The day was as favorable as could be desired, and the land in excellent condition. The Steamer Longueuil left the Longueuil Steam Ferry Wharf at the foot of the current St. Mary, at about half past seven o'clock in the morning, crowded almost in every part with passengers, horses, ploughs and carts, and on her passage called at Longueuil and Boucherville, where several more passengers, horses and ploughs were taken on board. The Steamer arrived at Varennes between nine and ten o'clock, when all the passengers teams and ploughs proceeded at once to the field of action, on the Farm of Mr. Laurent, situated close to the Parish Church. The land was marked out in lots, and numbered, but from the previous divisions, it was not possible to make the lots of equal size, but they were as nearly as circumstances would admit, one third of an arpent each. In consequence of an objection raised by several of the ploughmen, that the time allowed by the "Conditions" for the Ploughing Match was too short for executing the work in such strong land as that chosen, the Members of the Committee for conducting the Ploughing Match, who were present, consented to extend the time, particularly as the lots were not all of equal size, nor the

quality of the soil equal for ploughing. There were eight ploughmen from Quebec, (five English and three Canadians) the former of whom objected to any alteration being made in the time allowed for ploughing, and in consequence, refused to start with the other ploughs. The ploughmen having drawn lots for the divisions of land that were to be ploughed, proceeded to their work at twenty minutes before eleven o'clock. The Quebec ploughmen belonging to the English class, consented subsequently to plough a small lot each, and commenced about twelve o'clock.

There were about fifty ploughs, (all swing ploughs of wood or iron,) of which an equal number were entered in the English and Canadian classes.

The spectators at the Ploughing Match were very numerous, and as might be expected, were chiefly agriculturists. No doubt the attendance would have been much more numerous, if a steamer had started from Montreal at a later hour the day, and returned from Varennes at four o'clock. We have not, however, witnessed in America a Ploughing Match so well attended, or where there were so many ploughs, and men able to manage them. The scene, altogether, was most delightful and animating, and farmers might, indeed, be proud of it. Although the ploughing was generally good, it was not all equally so, and this difference afforded an opportunity of seeing the superior excellence of what is considered perfect ploughing compared with that which is not so. Many of the ploughmen who competed at Varennes may challenge all America for good ploughing. We were much gratified to see the interest excited amongst Canadian farmers who were present at the Ploughing Match. They appeared to be quite convinced of the advantage of straight furrows and good ploughing, and we have no doubt the meeting at Varennes will have a most salutary influence. Several of the Directors of the Lower Canada Agricultural Society were present:

Major Campbell and John Yule, Esqs., Members of the Executive Committee; Alfred Turgeon and P. L. LeTourneau, Esqs., Vice-Presidents of the Society; J. Hurteau, David Laurent, and F. Armand, Esqs., Directors, and Wm. Evans, Secretary and Treasurer. All these gentlemen were actively occupied in superintending the business of the day. There were several Clergymen of the neighboring Parishes on the spot. We were glad to see three M. P. P's. present, George Cartier, Esq., M. P. P., for the County of Verchères, Dr. Davignon, M. P. P., County of Rouville, and P. Lacoste, M. P. P., for the County of Chambly. It would occupy too much space to name all the respectable parties who were present at Varennes. We therefore only mention those who may be considered official personages, and amongst these we should have named A. Montreuil, Esq., Secretary of the County of Montreal Agricultural Society. At half past one o'clock dinner was prepared at Madame Girard's, when a large portion of those who were only spectators retired from the field to partake of a most sumptuous dinner, served in the greatest profusion, roastbeef, turkeys, geese, ducks, fowls, hams, &c., literally covered the tables. It is only in the country, and at an agricultural dinner that such abundant and excellent fare would be provided, and it was done ample justice to by a numerous company. The after courses were as abundant and in greater variety than the first. Although the company were very temperate in the use of wine, beer, and spirits, these good things were to be had by any party who desired it, and all of the very best quality, including Champagne. They were not such filthy trash as are frequently brought forward at large meetings. We have been at several agricultural gatherings, but have never seen a better or more abundant table provided for farmers. We have had experience of high prizes and very poor fare, at many of these places, (we do not refer to Ploughing

Matches) but the case was exactly the reverse at Varennes. Free tickets were handed to all the Directors of the Society who were present, to the judges, and we believe to many others; the ploughmen and some parties who accompanied them had also free tickets at a later hour of the day when the work was finished. Mr. Laurent, who we suppose had the management of these matters, deserves the greatest praise for his liberal conduct, and for his generous example, an example, we fear, that will not be followed by many in public or private. Several toasts were given, but as they were those usually proposed at public dinners, we need only say, they included Her Majesty the Queen, His Excellency the Governor General and Lady Elgin, and all were received with hearty cheering. To the latter George Cartier, Esq., M. P. P., for the County of Verchères, responded. Several other healths were given, and Mr. Laurent very properly was not forgotten, all received the usual honors, but we must leave this part of the proceedings to other reporters. After dinner the company again went to the field to see how the ploughmen contending for prizes were completing their work. The time of finishing was very irregular as well in consequence of the unequal quality of the soil, as the unequal size of the lots, and therefore it was determined by the Members of the Ploughing Match Committee that it would be inexpedient, if not unjust, to disqualify any ploughman on account of time, and the judges were instructed to award the premiums according to merit in the actual execution of the work. The judges named previous to the Ploughing Match did not all attend, and in consequence the Committee had to choose some gentlemen on the ground. Alph. Kempton, John Drummond, and Peter Fisher, Esqs., were appointed as judges for the Canadian Class, and — Allard, Hugh Brodie, and Joseph Lannoitte, Esqs., for the English Class. It was a matter of considerable difficulty

to determine the premiums in their proper order, and the time for doing so was shorter than was desirable. The judges, however, made their award to the Secretary of the Society before it was dark, and after the Numbers were called, the following were declared the successful competitors.

English Class.—Thos. Hodge, St. Laurent, first prize £4, Matthew Hutchison, do., second do. £3 10s., J. McEwan, ploughman to Mr. John Drummond, Petite Côte, third do. £3, R. Lockhead, ploughman to John Morris, Esq., Ste. Thérèse, fourth do. £2 10s., Thos. Scott, St. Michel, fifth do. £2 5s., James Holdsworth, Petite Côte, sixth do. £2, Alex. Millar, Ste. Thérèse, seventh do. £1 15s., J. Fletcher, ploughman to J. Dodds, Esq., Petite Côte, eighth do. £1 10s., James Drummond, Petite Côte, ninth do. £1 5s., Hugh Campbell, do., tenth do. £1.

Class for Canadians only.—Louis Prud'homme, Côte St. Luc, first prize £4, Eustache Prud'homme, do., second do. £3 10s., Joseph Lafond, Visitation, third do. £3, Alex. Desmarchais, Côte des Neiges, fourth do. £2 10s., Amable Bourguignon, Côte St. Pierre, fifth do. £2 5s., Hypolite Valiquette, Point Clair, sixth do. £2, Felix Joran, St. Laurent, seventh do. £1 15s., Joseph Ouimet, Ste. Rose, eighth do. £1 10s., Ben. Cormier, Long Point, ninth do. £1 5s., Hector Boutier, Quebec, tenth do. £1.

We do not think it necessary to give the names of all the unsuccessful competitors, as we hope next year to have the pleasure of naming them and paying them as the successful competitors. The prizes were all paid upon the spot by the Secretary and Treasurer of the Society in presence of the Directors, amounting to £45 10s. Some dissatisfaction was expressed by those awarded prizes in the English Class, that they were not placed so high on the list as their great merit entitled them, but if men were to estimate their own work, they would probably be all first prizes, and none second. The days work being concluded, those

who had to return to Montreal, and the intermediate places went on board the Steamer Longueuil, between six and seven o'clock, and after considerable delay she proceeded on her course, certainly at the slowest rate of any Steamer that we were ever on board of, and we hope we shall never be a passenger in the same Steamer under similar circumstances. The return trip was anything but pleasant, with a very crowded boat and a cold night. We however arrived safe in Montreal between ten and eleven o'clock. On leaving Varennes three cheers were given to Mr. Laurent, which he richly deserved for his politeness and attention throughout the day.

We must not forget the very superior state of Mr. Laurent's farm. It is well drained, and all the banks of the drains carted away, and the whole of the farm is in excellent condition. During the afternoon there was a meeting at the Church, which we were unable to attend, and George Cartier, Esq., M. P. P., delivered an address on the subject of agriculture. The address which we have read was excellent and we shall copy it in our next number. The Ploughing Match, altogether was very satisfactory, and will be productive of much good. It was the first exhibition (except the Ploughing Match at Quebec,) by the Lower Canada Agricultural Society, and although circumstances occurred which they did not anticipate, and which they will be prepared to guard against on a future occasion, they have every reason to be perfectly satisfied with the competition for the prizes, and the very numerous attendance of interested spectators. For our own part, the only cause of regret we had was the absence of the majority of the Directors of the Lower Canada Agricultural Society, a circumstance we could not account for. If there is any Agricultural Exhibition unobjectionable, it is Ploughing Matches. It is only at such Matches that practical laborers, for themselves, or for hire, receive remarks for their superior skill.

Farmers who can estimate the value of good ploughing, and of a good ploughman must see the importance of Ploughing Matches. Any man who is able to purchase good stock and good implements, can obtain prizes for them at Cattle-Shows, but it is the working man, and the hired laborer who may obtain prizes at Ploughing Matches, and a good ploughman is one of the most essential requisites upon a farm. It may be useful to submit a few remarks in conclusion. From the manner in which the ploughs had to be placed extending over a very long field, it was not possible for the gentlemen composing the Ploughing Match Committee who were present, to see that all the "Conditions" were complied with, but we hope that at the next Ploughing Match, all these matters will be cared for, by a more general attendance of the Directors of the Lower Canada Agricultural Society, who will be able to give attention to the Ploughing, the whole time it is in progress. The "Conditions" adopted were considered necessary, although they were not enforced this time. And there is yet another condition required, that is, the size and proportion of the furrow slice. We also think it would be quite necessary to have at least two different qualities of soil to operate upon, as in England, and that the time allowed for ploughing the light should be shorter than that allowed for the heavy clay. It is all very absurd for ploughmen coming to compete at Ploughing Matches, to pretend that they should have double the time allowed for ploughing a given quantity of land, that is generally occupied upon their own farm for a like quantity. It is ridiculous to see ploughmen contending for prizes moving at such a creeping pace, that they could not plough three quarters of an acre in a day. Let it be only satisfactorily ascertained, what time is actually required to plough an arpent of the land, selected for a Ploughing Match, and we maintain that the time should be very little more in proportion that should be allowed for ploughing the

same quantity of land at a Ploughing Match. We have seen good ploughmen standing up to their work, and moving at a good pace, do excellent work. We conceive that competitors at Ploughing Matches should proceed as nearly as possible in the ordinary way that they are accustomed to work upon the farm. It is of very little advantage to those who plough at Ploughing Matches, or to the County generally, to have half an arpent ploughed at those places in the most perfect manner, at the loss of considerable time, if on their own farms, or those of their employers, the general execution of the same work is far from like perfection. If we cannot afford to occupy 12 or 15 hours in ploughing an arpent of land on our own farms, (which we are certain we cannot,) what advantage is there in doing so at a Ploughing Match? Those matches are intended for example, and they should be so in every respect, and we contend that the ploughman who shall do the best work in the shortest, or in a given time, should be awarded the prize. What we mean by the best work is that which shall be executed in an unexceptionable manner for a crop, and according to the scale laid down in the Conditions, for the size and proportion of the furrow slice. If competitors coming to Ploughing Matches will not consent to conform to the "Conditions and Regulations" they should be excluded without hesitation. The "Conditions and Regulations" should first be well considered and the grounds upon which they are adopted proved to be reasonable and possible, by actual experiment, but after this no change should be allowed on any pretence. Different qualities of soil, light and heavy, should always be selected, the time allowed for ploughing be in proportion to the ease or difficulty of executing the work; and then let ploughmen chose for themselves, to enter for either. We also conceive it to be expedient that there should be a separate class of prizes for the Canadian Wheel Plough draughted by oxen or by horses

and oxen, in the ordinary way, and that these ploughs should work in the heavy soil. Canadian Farmers will not bring these ploughs to Ploughing Matches, unless there is a separate class for them, and therefore there cannot be any question of the expediency of encouraging them to show their work in fair competition with ploughs of a different construction. As the operation of sub-soil ploughing is very imperfectly understood generally, we would suggest that the Directors of the Society should employ a plough at the Ploughing Match, that would be followed by a sub-soil plough of the most approved construction, to show the farmers present what the work really is. The Lower Canada Agricultural Society should extend their attention to every thing that would have any influence in retarding or promoting agricultural improvement. This will be expected from them, because they have more power of extensive usefulness, than local Agricultural Societies. We respectfully suggest that gentlemen who undertake the duty of Directors, should endeavour to be present at all the Quarterly and Special Meetings of the Directors, if not prevented by some urgent business. The Society represented by the Directors, have much in their power to do for the good of their country; and now, (that undoubtedly, there is a very general interest excited in favor of our agriculture,) is the time for action, and for doing every thing that is possible to keep up this interest, that is calculated to advance the prosperity of the country more than any thing else. Canals and Railroads are desirable because they must be beneficial to agriculture, and it was for this cause we always advocated them. Model Farms we have humbly recommended with Agricultural Schools attached to them, but without which we would consider them to be of little value. These Institutions, if established upon a proper principal, and under competent superintendence would be productive of much good to the country. Youth might be

regularly trained in all the practical art of agriculture, as well as in the sciences connected with it, and their general education might at the same time be attended to for a few hours every day. In case an Agricultural School was connected with the Model Farm, the instruction of youth would compensate in some degree, for any loss that might be incurred by the farm—but if there is a loss without the school, there will not be anything to compensate for it. We have extended this report to a great length, but we feel it our duty to refer to every circumstance that may occur to us connected with the progress of agricultural improvement that our readers may take them into consideration and act upon such suggestions as they may approve of.

COUNTY OF MONTREAL PLOUGHING MATCH.

We had not an opportunity of witnessing this Ploughing Match, as we were at Quebec at the time, but we visited the field a few days after with John Dodds, Esq., the President of the County of Montreal Agricultural Society, and were delighted to see that the work was exceedingly well executed, with very few exceptions. The ploughing done by Canadians, of whom there was only five competitors, was nearly, if not altogether, as well executed, as the ploughing done by Europeans, for the production of a crop; the furrow slice was well cut, and the ridges well formed. The ploughmen of the County of Montreal might safely compete in any ploughing match we have ever seen in America, and we hope the number of good ploughmen in that county, will go on increasing, until we shall not have an ill-ploughed field to be seen on the Island.

The immediate neighborhood of the City of Quebec has undoubtedly been most tastefully improved by gentlemen residing there, and we have nothing in the neighborhood of Montreal to compare to it.

Near Quebec, the gentlemen's places have a neatness and park-like appearance, that quite surpasses any thing we have near Montreal. We have some fine houses and gardens certainly near Montreal, but they are nothing more than houses and gardens. There are not any beautifully improved parks attached to them, stocked with fine animals, as near Quebec. There are many delightful rides about Quebec, and the beauty and grandeur of the surrounding scenery cannot be surpassed, we believe, on this continent. We are not surprised that tourists should be anxious to visit Quebec, we only wonder at the short stay they generally make there. They arrive in the steamer in the morning,—go off in double quick time to see the Falls of Montmorency, get a ticket of admission to view the Cital, and return to Montreal in the evening. We can tell such visitors that they leave unseen many things that would be worth seeing, and can only form a very imperfect idea of the beauties of the country about Quebec. We are in the habit of thinking highly of Montreal, but unquestionably, with one exception, the approaches to the city are by no means creditable to us. Some of the lands that are situated even within the city bounds, are in a most wretched state of waste, and over run with weeds. Visitors to Montreal must suppose we do not set much value on land even in the city, and within a mile or two of it. How different it is in Quebec! The proprietors of land near Quebec can teach us many things that would be useful for us to know and imitate, and which would greatly improve the approaches to Montreal. We conceive that the building of fine houses does very little towards beautifying a country, compared with the improvement and planting of the land in a tasteful manner. We visited, on two occasions, the residence of Thomas Gibb, Esq., near Quebec, and we saw greatly delighted with every thing we seen there. His garden was stocked with a most beautiful variety of flowers and rare

plants, his green houses with grapes and other fruits, in fact the roads, walks, fences, every thing was kept in the very best order. The farm is large, we believe about 300 arpents; it is all well fenced, well stocked, and under good cultivation. The stables, barns, and other out buildings, are all of the best description, painted in oil, (white,) in the best stile. The whole establishment is highly creditable to the owner, but we regret that farmers can not adopt it as a model. There was one circumstance connected with the establishment of Mr. Gibb, which we beg he will pardon us for alluding to. We conceive that it would have been a great improvement if the outward walls of the stables and barns had been constructed of stone or brick instead of wood. We do not think they would have cost more, including the painting of the wood, and the necessity of constantly renewing it. Stone or brick would be warm, more lasting than wood, and would look better. If farm buildings of wood painted white, in oil, as those of Mr. Gibb's are, do not be constantly kept in the same order that they are kept at present, they will not look well. Mr. Gibb's establishment is in the very best possible condition at present, and we wish him long life to keep it so. We believe there is not in Canada an establishment better kept, or that can compare with it, including every thing upon the farm at the present moments.

Professor Johnston, in his "notes on North America," says in reference to New Brunswick. "In the Province itself, it struck me as very remarkable, that while among their republican neighbors, all the geese were swans, the provincials were constantly maintaining their own swans to be only geese. Every thing was wrong in the eyes of many I met, and every thing among themselves inferior, although, in almost every particular, when a close examination was made, their own superiority was manifest. They present one of

the few examples a traveller over the world meets with, of people to whom the remarks of Sir John Mandeville, which I have prefixed as a motto to this book, do not strictly apply." As our readers may not have seen the motto, we copy it as nearly as we can to the original. "In fro what partie of the earth that man dwecell, outhur aboven or benethen, it seemeth nlways to hem that dwellith there that they gon more right than any other folk." Professor Johnston met with many "*dwelling*" in New Brunswick and in Canada, who did not entertain the opinion expressed in this motto.

There is not any just cause for dissatisfaction with our condition in Canada. We may not be so advanced in some things as we might wish, but we undoubtedly possess many things, which any country in the world might be proud of. Our canals, for instance, affords us the most splendid inland water communication that is to be found on earth. The wharfs in Montreal is another work that is unequaled on this continent. They afford the most convenient accomodation for a large fleet of shipping, and every thing about them is done in the best, and most solid, truly English stile. If all our geese are not swans in Canada, we certainly can boast that we have made a good proportion of our geese into swans, and when our proposed rail-roads are completed from Halifax to Lake Superior, who will be able to say that our country has made as great progress in improvements as any in North America. We cannot more effectually check improvement, than by railing against our country, and endeavoring to prove our institutions to be inferior to those of other countries. We maintain that our position in every respect is favorable, and it will be altogether our own fault if Canada does not become one of the most prosperous countries in the world. We give another extract from Professor Johnston, which deserves serious consideration. "Taking rich and poor

together, it is a very moderate assumption that the emigrants, on an average, carry out £10 a head, which, for the 200,000 who land in New York alone, makes the sum £2,000,000, sterling, added at once to the money capital of the Districts through which they pass, and in which they settle. Then, a single year's labour of this 200,000, in agricultural operations upon new lands, must add at least £5 a head, or another £1,000,000, sterling, to the capital of the new States, while the increased consumption of imported articles, by the added population, augments the Federal revenue which is derived from the duties levied upon imports.

It is Europe, not America, therefore, that is the cause of the rapid growth of the United States. European capital, European canals, and European energy. If all the native born Americans, not being the sons or grand sons of Europeans, were to sit down and fold their hands and go to sleep, the progress of the country would scarcely be a whit less rapid, so long as peace between America and Europe is maintained.

It is thoughtless in travellers to contract the towns of Buffalo, Rochester and Oswego, on the New York side of the Lakes, with Colburn, at the mouth of the Welland Canal, on the Canadian side of Lake Erie, or with Toronto or Kingston, on the opposite coasts of Lake Ontario, and to draw comparisons unfavorable to Canadian energy and enterprise, from the relative prosperity of these several places. There is quite as much energy in the blood of Upper Canada as there is in the British and German blood of New York, but the local position of those towns of Upper Canada, and the condition of the inner country, forbids their becoming, for many years, equal in size or in wealth, to the towns I have named. Suppose Colburn, like Buffalo, being at the end of canal navigation, had as large and growing a population behind it, and as extensive and valuable Western territories before it, and

that the highway from Europe lay through it instead of through Buffalo, then Colburn would have rivalled, or exceeded Buffalo, even at this early period of their several histories. But this slow town of Colburn, as many have thought and called it, has nevertheless, a great future before it. The natural outlet of this western region is by the St. Lawrence. The Erie Canal is already unable to accommodate its traffic, and as this increases with the growth of the North-western States, more and more of it must proceed by the Canadian canals and waters, and drop its fertilizing contribution as it passed through the country. With the settlement of the interior, also, and the increase of means of interest communication, Toronto, as the natural course of the cross country traffic from Lake Huron? And Kingston, from its situation at the head of the St. Lawrence, will both become seats of commercial wealth, and towns of political importance. I am sure that if my Canadian fellow subjects will be content to wait patiently for the natural course of events, which no Government or energy can precipitate, but which domestic disturbances will much retard—most seriously, perhaps, by their effect upon European opinion as to the desirableness of the Canadas as a place of settlement; they will soon see every reasonable expectation fulfilled. Even now, instead of granting that they are justified in looking, either with envy or discontent at the growth of other places, I can only see reason to wonder that, in their geographical position, and with their political fretfulness, they have of late years increased so wonderfully fast."

This work of Professor Johnston, is worthy the perusal of any one who is desirous of knowing the comparative advantages of British America, and the United States, as the home of the emigrant from the British Isles. We know that the book has been very severely "Reviewed" by writers in the United States, but although there may be some mistakes,

which it is impossible for any author to avoid, we consider the work as a most interesting and useful publication, well calculated to give a correct idea of British America, and to silence those who would write and talk of signs of "ruin and decay" in Canada.

AGRICULTURAL REPORT FOR OCTOBER.

The month was not unfavorable for farming operations, and there were several fine days for taking up the root crops. We had not any severe frost before the night of the 27th, although we had some snow on the night of the 24th, and the ground was covered with snow on the 26th, which, however, partly disappeared on the afternoon of the 27th. Several farmers, we believe, had not taken up all their root crops previous to this fall of snow, and the frost of the 27th must have injured them more or less. During our residence in Canada, we have seen, on three several occasions, ploughing stopped by frost from the 1st day of November and two years in succession, on the 28th and 27th of October. From these circumstances it may be dangerous to have any crop out that is susceptible of injury by frost after the 21st day of October. Mangold wurtzel, carrots, parsnips and turnips, will certainly increase in size to the end of November if the weather is open, as we have often seen it during all that time, but still there is a risk, that perhaps should not be incurred for the chance of a larger crop. Mangolds or turnips are very much injured by exposure to hard frost for any time, and so are all vegetables containing as they do, a large proportion of water in their composition. If the winter should set in early this year, a very considerable part of the ploughing will not be done. The soil in many places was difficult to plough until the heavy fall of rain about the 20th of October. There is not much to report at this moment, except as to the result of the crops. We have been told that the average produce of wheat is

generally very deficient, to what might have been anticipated from its luxuriant growth in summer. It is also discouraging that the demand and price is not very remunerative, and we cannot see any chance of improvement this year. We shall have to raise up customers of our own by giving encouragement to home manufactures. It is perfectly certain we cannot import goods for farmers, unless the farmers can sell their products for a fair price, to enable them to buy. The United States, we believe, will be our best customers, and of course we cannot expect this custom from favor, but because that country wants what we can give them, and at a cheaper rate than they can obtain them elsewhere, in consequence of our relative position, and the easy means of communication. Barley and oats can be produced in more abundance here, and of better quality, than in the United States, and they will want all we can spare. We can also grow beef for the neighboring States. There may be difficulty about Reciprocity, but without this equitable and advantageous law that ought to exist between all nations, the United States will be *forced* to take our productions, and glad to obtain them so conveniently. From the present exceedingly low price of wheat and flour in Britain, which will probably continue, unless some change is made in the existing laws, or in case of a failure of the wheat crops, it is not likely we can sell much of our wheat for exportation to that country. We may supply ourselves and our home consumption, but nothing more under present circumstances, and therefore it is of the greatest consequence to Canada farmers, that our home consumption should be extended as much as possible, by encouraging manufacturers. We have no fair chance in competition with countries situated within a short distance of Britain. We might do something in the cultivation of flax and hemp that would assist farmers, but we regret to say that we have not yet any flax mills in the

country, although we expect it will not be long so. Farmers will not cultivate these plants unless there is a sure market for the produce when raised and dried in the field. We hear from good authority, that at Albany, 8 to 10 dollars is paid for the flax straw without the seed, per ton, when it is pulled, dried and stacked in the field. This would pay much better than wheat. Mr. Clausen's plan is now being fully tested in Ireland by the Royal Flax Society there, and we shall give the report when published. But independent of this gentleman's plan, flax and hemp should be good crops to cultivate here, if we had only mills to prepare the produce. Hay sells in Montreal at a low price, from 20s. to 25s. per 1600 lbs. Butter and cheese are in abundance this year, and a large proportion of good quality. The latter article, in particular, is much improved in quality, and is of Canadian manufacture. The prices are moderate, but in this time of general low prices, this cannot be complained of. The market is well supplied with butchers' meat, and some of the first quality. It is astonishing the improvement that has taken place in the quality of butchers' meat generally in this market, particularly in mutton. We certainly are making some progress in improvement in agriculture, and this will be manifest to any one making a tour through the country. Where no clover or green crops were sown a few years ago, you will see them sown now in every direction through the country. Not so extensively as would be desirable perhaps, but there is not any doubt of their extended cultivation, when the farmers discover their usefulness. We would recommend those who raise root crops to be careful of storing them dry, and not to place to great a quantity together, but to leave divisions between them, and to give them ample ventilation. An arpent of land well cultivated, produces a vast quantity of mangold wurzel or carrots, and it is a pity not to preserve them after they are grown, so that they will keep sound until

feed to animals. One or two arpents of these roots would be a great assistance to a farmer for his stock during winter. The carrot is excellent for horses, or for any stock, and mangolds for cattle and sheep. The population of our cities and towns in Lower Canada, although they are not much over 100,000 souls, will require a large quantity of butchers meat in a year, beside the supply of the country population. We have also the chance of a demand for fat cattle in the neighboring States to supply them with fresh meat. The demand for horses is another favorable circumstance for farmers, and there does not appear to be any limit to this demand. Wheat was once the staple produce of Canada, but under present circumstances, we must not depend altogether upon it. United Canada has now a population little short of 2,000,000 of people, and in a few years hence she may double that number. The prospects for the country therefore are not discouraging, notwithstanding, there may be a little depression at present, in consequence of low prices. Canada must become a great and flourishing country, if her inhabitants only do their duty.

Côte St. Paul, 30th Nov. 1851.

A few white carrots have been sent to our office by Joseph Laporte, Esq., Longpoint, the largest we have seen in Canada. They weigh between seven and eight pounds each. This is a proof what a Canadian farmer can do.

LITERARY NOTICES.

We have received by the hands of L. A. A. Latour, Esq., of this city, the 5th number of the Journal of Agriculture, published in Boston, for which we beg to exchange the Agricultural Journal of the Lower Canada Agricultural Society. We have perused the Journal of Agriculture with attention, and think very favorably of it, and will very glad to exchange with its publisher. There are many excellent articles, but the drawing of the short-horned bull "Tempest," is certainly a very ex-

traordinary one, if it be an exact picture of the original. A bull of that form, we would reject, whatever might be his pedigree, and successful competition at Cattle Shows.

We have to acknowledge the receipt of the "Boston Cultivator," an excellent Agricultural paper, published weekly, for which we beg to return thanks, and to send a copy of this Journal in exchange. We have only seen one number of the Cultivator, and we observe that it is not altogether confined to agricultural subjects. This will, no doubt, make it more acceptable to subscribers generally, particularly farmers, many of whom may not subscribe to any other newspaper.

We give in the present number a translation of Mr. Ossaye's plan for conducting the Model Farm at La Turtue, of which he is superintendent. We shall not at present offer any remarks, but shall leave it to the careful consideration of our readers, and would be glad to hear from subscribers on the subject, if they would take the trouble to give their opinion and suggestions.

We beg to refer our readers to the letter of Captain Rhodes, which appears in this number. We can assure him we publish it with much satisfaction. We agree with him in every particular respecting agricultural exhibitions. Our great objection to these exhibitions was, the irregular manner in which they were managed, without order or without giving a chance to the judges to award the prizes according to merit. We should be glad to see agricultural exhibitions, provided they were conducted as in England. The animals all placed in their proper classes, so as to allow the judges to award the premiums correctly. No person should be allowed to exhibit any animal unless it was brought to the show ground properly secured and under full controul, so that the owner might place it in the class in which it was

entered for exhibition and secure it there. We have a plan of the Showground of the Royal English Agricultural Societies Exhibition at Windsor in July last, that will show at once the English mode of managing these matters. We approve of Captain Rhodes' suggestion to appoint judges coming from a distance, who would have no connection with the competitors, but we are sorry to say that the managing committees of agricultural societies are generally averse to this arrangement, and appear disposed to appoint judges from their own immediate locality. As Captain Rhodes has become a life member of the Lower Canada Agricultural Society, we hope he will interest himself on behalf of this Journal, and favor us with his views on agricultural subjects.

To the Editor of the Agricultural Journal.

Sir.—I have seen a good many Agricultural Exhibitions in Lower Canada, and though some may be properly managed, yet the greater number are the reverse, I have therefore much pleasure in recording a visit a paid to the County Society at Drummondville, where the regulations with regard to the Show are good, and well calculated to give satisfaction to exhibitors.

The President of the Society, the Honorable W. Shepherd, and the Members of the Committee are gentlemen who not only understand the details of Exhibitions, but who have weight and stanking in the County to make their Rules and Regulations respected and obeyed, and as I was a judge on the occasion, I hope Mr. Shepherd and the Committee will pardon me if I bear any testimony to the extreme propriety of conduct exhibited by these gentlemen during my intercourse with them, an example which appeared to be admirably followed by the farmers attending, I have alluded to this delicate subject, Mr. Editor, because I have seen Committee men on such occasions make quite an exhibition of themselves, in fact, become greater brutes than any of the dumb animals present.

Amongst the Rules and Customs of this Society, I will state several, as far as I could gather them from observation:—

Each animal was provided with a cord, and was properly ticketed and numbered.

No person whatever was allowed to address the judge, or to make any remarks in his hearing, relative to the competing animals.

The animals to be awarded, premiums were arranged in their respective classes, for instance, in judging mares and foals, they were all brought out and ranged in one line, with their thickets numbered, and a boy or man holding each animal.

The judge in awarding prizes was provided with tickets, bearing the words first prize, second prize, &c., these thickets were immediately placed on the bridle of the successful animal as soon as they were passed, and I would suggest in a future year, that a small ribbon be attached to the prize ticket, to make the award more conspicuous, and as a means of turning these exhibitions into a source of instruction to the young farmers, whose judgement might be in want of cultivation.

The attendance at the Show was numerous, and the prizes were well selected, many of the animals were very superior, but the prizes did not appear to attract many sires, of which there were but few on the ground, and those not of the best quality.

I am afraid, Mr. Editor, I have already transgressed on your columns too largely, but I know it is a source of gratification to you to hear of agricultural improvement, so I will make no further apology.

I am, sir,
Your obedient servant.
W. RHODES.

Quebec, October 18th, 1851.

N. B.—The Drummondville Society always selects their judge from a distance, last year from Montreal, this year from Quebec.

W. R.

St. Johns, 25th October, 1851.

SIR,—I have for some time had a strong desire to express to you my thanks, and to assure you that, as an Agriculturist, I feel grateful, for the information and instructions conveyed to us, farmers, through your Journal, as well as for the disposition you have always evinced to forward and improve so useful a calling on this disposition, on your part, has induced me to offer you a few more remarks and observations, which you may insert in your Journal, if deemed worthy of a place.

Do not be surprised if I premise my remarks by observing that an Agriculturist by theory only, may often be led into such errors as would end in his ruin; and that, therefore, the best and the most "valuable" information will be that which will be derived from practical men. The practical man is the man from whom you will at all times obtain the most useful information, because

his information is founded on practice and experience, therefore known to be feasible.

Neither will you find it a just criterion to judge of farming by the pompous and swelled up reports of the gentleman farmer, who is a farmer for recreation only; he lays out for cost and show, not for profit, and always thinks himself amply repaid by the pleasure it affords him to show off. It is therefore from the man whose plans and views are for profit, and to whom a failure would prove injurious, that we may derive good and useful information.

Many European gentlemen have been disappointed in their Agricultural pursuits in this country—nay, many have been ruined by farming, because they were farmers by theory only. It is not at all surprising that many of these gentlemen should find themselves disappointed; they most generally come out with their heads full of English theory, part of which cannot be put in practice in a profitable way in this country; their outgoings are dictated by this theory, which, generally speaking, is more expensive than the country will admit of, and therefore the end is a failure.

Do not suppose from this that I am an enemy to innovation; I am, on the contrary, for improvements and new plans; but I say that these plans should not be altogether taken from another country, and applied to this without judgment. The system of farming in England, no doubt, is very good, but may not answer in every particular in this country; our plans of improvements ought, therefore, to be formed by men, who, from their long residence in the country, have a thorough knowledge of the practical part of farming in the country, a knowledge of the soil, and of the climate, such men with judgment enough to deduce from the theory and practice of other countries such parts as might be applicable to this, may improve our system; but, recollect they must be practical and experienced farmers, and not farmers by theory only.

It is, however, a happy thing for the country to see so many persons taking an interest in Agriculture, if even the rage for improvements should prove unprofitable to some. We cannot help being highly pleased with that spirit of emulation which seems at present to lead every class in Canada to the study of Agriculture; for we cannot certainly be too attentive, nor can we devote too much of our time to so useful an occupation. It is within my recollection when men of moderate talents in Canada, except the uneducated farmer, thought it beneath their dignity to put their hand to a plough—how different in the States—on a certain festival, if I am well informed, the president himself puts his hand to the

plough; if so, it is a laudable custom. It revives the spirit of the farmer, it gives him a degree of consequence in the scale of society, which he supports by additional industry, he looks on his calling as respectable; therefore he works cheerfully. There is, however, now a change in Canada—every one high and low, thinks it an honor to cultivate the land; this certainly is a convincing proof that Canada grows wiser as it grows older.

What can be more absurd, from the lowest to the highest, to disdain or despise a calling, the only support of every living creature?

Your humble Servant,

GAB. MARCHAND.

William Evans, Esq.,
Secretary to the
Agricultural Society.

With the greatest pleasure we give insertion to the above letter of Gabriel Marchand, Esq., of St. John's, who comes boldly forward in this proper name, in support of the cause of Agriculture, and does not, like many parties, shelter himself behind a fictitious signature, least it should be known that he would advocate a cause that has been too long despised in Canada. We cannot but feel much obliged to him for his favourable sentiments towards us for our humble endeavours in promoting Agricultural improvement. We can assure him that the whole of our study and attention is devoted to the cause of Agriculture, and if we should occasionally fall into errors, it is from not knowing better, and we hope our friends will pardon us. Agricultural knowledge acquired from practice in the British Isles, may be very useful here, provided we accommodate this knowledge to the climate, soil, and circumstances of Canada. This, all men of sense will do. But if emigrants to this country will not act in this common sense way, but introduce English practice without any modification in a country whose climate and other circumstances are so dissimilar, we must not be surprised at failure and disappointment. We have undoubtedly learned most of what we know of Agriculture before we come to this country, because from our boyhood we were extensively engaged in it until we come here.

A farmer under such circumstances, must have a better opportunity of acquiring a general knowledge of Agriculture than he could have in Canada, and this was the case with us. On coming to this country we observed at once that the system of husbandry must be very different here from that of the country we come from; but notwithstanding this circumstance, our previous practice and experience was of the greatest use to us, more particularly since we commenced publishing on the subject, and in our capacity of Editor of this, and of former Agricultural Journals. Extensive experience in the practice of Agriculture, enables an Editor, if he cannot write good articles himself, to select good articles from other publications. If we had occasionally such correspondents as Mr. Marchand, it would give us a greater degree of courage and confidence in writing for this Journal, but we certainly cannot boast much of the support or assistance we have received from farmers—they very seldom indeed encourage or assist us by their correspondence. We have constantly invited correspondents, and we know there are many Agriculturists in the country who might greatly improve this Journal if they would take the trouble to write an article or letter occasionally for it; but we regret to say, that some of the best qualified farmers in the country would not give us the benefit of a single line. Mr. Marchand is able to write, and we beg he will often favour us.

To the Editor of the Agricultural Journal.

SIR—I felt much gratified in reading the Report of the Judges of the County of Montreal Society in your October N^o. Reports of this kind must be of great benefit to every county. It shows at a glance where improvements are judiciously carried on and where merit is due. I cannot see the reason why the same system is not carried out by every county Agricultural Society, receiving grants of public money. I shall explain briefly a few of the abuses under the present system of giving prizes for such small quantities of grain as a bushel or two bushels at most. Such a plan is no encouragement to Agriculture; it is only

calculated to encourage *Roguerie*, which I shall prove. The honest and industrious farmers have no chance of competing under such regulations. I have seen at several of these grain exhibitions great numbers of the prizes carried off by farmers whose farms were under the most wretched system of cultivation. The plan usually resorted to by these *prize catchers* is handpicking, rubbing, tramping, keeping grain from one year to another, buying, and borrowing, and many other malpractices. The same may be said of green crops, a person may cultivate a small piece of turnips and reserve a few of them for a show and cut out a farmer who has probably 10 acres. The same may be said of the potato crop. I wish it to be understood I have no objections to cattle shows conducted in a proper maner. The way in which I have seen cattle at several of the County Exhibitions, it was impossible for Judges, to form a correct opinion of these several merits. I have witnessed cattle of every age breed and size, brought and mixed up together. Such a state of things should not be suffered to exist. Unless cattle are brought to these places in a proper manner they had better not be there at all.

I cannot conclude without congratulating the commettee of management of the county of Montreal Agricultural Society on the judicious measures they have adopted for the advancement of Agriculture. By this system of inspection it is seen were improvement is carried on from year to year. In this country improvement in farming is not to be arrived at by cattle shows altogether, as we see attempted in several counties.

Mr. Editor I humbely submit the above to your consideration, in the hope that all county Societies will follow the excellent example set by the County of Montreal Agricultural Society, in having a yearly inspection of the farms and crops and the Report published.

I remains yours,

MATTHEW DAVIDSON.

St Foy's, District of Quebec, 21st October, 1851,

We give insertion to the letter of Mr. Davidson, and agree with him that the annual inspection of crops, farms, and stock, reporting the result, and publishing it, is an excellent means of promoting improvement. We have for a long time deprecated the system of giving premiums for grain in small samples, aware that great frauds may be practice by this plan. By seeing the crops growing in the fields, the management of the farm will be best understood, and it is only where merit is due

that farmers will have the credit of being awarded premiums. There cannot be any deception practised when the farm is seen.

The communication of our friends Dr. Smallwood and Mrs. Boa in our next.

AGRICULTURAL SOCIETY.

Office of the Society, at No. 25, Notre Dame Street, Montreal, opposite the CITY HALL, and over the SEED STORE of Mr. George Shepherd, Seedsman of the Society, where the Secretary of the Society, WM. EVANS, Esq., is in attendance daily, from 10 to 1 o'clock.

All communications intended for publication in the Agricultural Journal to be addressed, (post paid) to the Editor, Wm. Evans, Esq., Secretary of the Lower Canada Agricultural Society.

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*Extract from Notarial agreement entered
 into between the Lower Canada Agri-
 cultural Society and R. W. Lay.*

NINTHLY. It is also further covenanted and
 agreed by and between the said parties hereto,
 that the said party of the second part (R. W. Lay)
 is by virtue of these presents constituted, the
 attorney of the said parties of the first part pend-
 ing the present contract, and not further, for the
 express purpose and with full power and authority
 to collect all arrears for subscriptions due by sub-
 scribers to said Journal while published hereto-
 fore by the said parties of the first part.

(Signed,) **ALFRED PINSONEAULT, President-**
WM. EVANS, Secretary.

THE AGRICULTURAL JOURNAL AND
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As Publisher of the JOURNAL, I have wished
 to visit Agents and Subscribers to the Work, in
 the different parishes in Canada, to ascertain the
 interest felt in its prosperity, and awaken, if pos-
 sible, a fresh zeal in the cause of Agricultural
 improvement. This I have done to some extent;
 but I regret that business here, obliges me to
 defer for the present many of my proposed visits.
 I have, therefore, conceived the idea of address-
 ing a Circular to the Clergé and Agents, con-

fidant that they will feel deeply interested in the
 wide dissemination of the Work, and cheerfully
 distribute the Circulars in an advantageous
 manner.

Anxious to avail myself of every facility to
 secure an extensive circulation to the JOURNAL,
 I have made successful application to the Hon.
 Mr. Morris, Post-Master-General, to send the
 French Journal and Circulars to all parts of the
 Province free of postage, for six months. At the
 end of that time it is hoped that free postage for
 papers and periodicals will become a permanent
 thing.

I have not sent the JOURNAL in every case
 where there were sub-scribers before, for these
 reasons.—I had no means of knowing who would
 continue it; and I thought it better to wait, being
 assured that all who wished to obtain the Work
 would give me notice. I trust this may be a
 satisfactory explanation, and that I shall receive
 orders from every quarter fully proportioned to
 its importance.

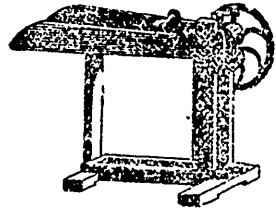
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103, St. Paul Street.

Montreal, 1st April, 1851.