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General Editorial.

To the Farmers of Canada.

We find this journal has a much greater influence than we ever expected when it was first published. We do not profess infallibility. We most particularly request any of our subscribers that may hold different views to those we have published, or may yet publish, to send us their complaints or opinions. Condemn us as much as you please; show to the public any different plans or suggestions. There is plenty of room for you to find fault; we ask you to do so, and we will publish it. No one can complain that we have ever rejected a communication, though it was opposed to our opinions, provided it was of interest and utility to the farmers of the country.

A good discussion is of value to the country, and we only ask in such a case that the writer be a farmer, that he writes for the interests of agriculturists, and that he gives his name and address. If we have ever deceived any person in any way regarding seeds, stock, or implements: if we have made any untruthful remark about any person or institution: if we owe any body any thing, or if any one has been a loser by us in any way, we will devote the pages of our next issue to all such complaints, and, to the best of our abilities, we will render satisfaction. Should we fail to be as good as our word we ask you to expose us in either of the agricultural papers of Canada, published in the English language, and we also respectfully ask the editors of such papers to expose us in their following issues. We again respectfully solicit useful communications from any of you, and we also thank the numerous writers that have sent us valuable communications. It is useful information or useful suggestions on agricultural subjects that are appreciated.

Farmers' Politics.

We claim that the true foundation of the real and permanent prosperity of this Dominion must be derived from the land. We also claim that the produce of the land has to pay for all the expenditures that are made in or for the Dominion. It is on the credit of our land that all British capital has been introduced. The farmer pays for every cent of it, no matter in whatever way it may have been procured, or in whatever way it has been expended, excepting a small moiety that may have been derived from the fisheries. The timber should belong to the farmer; its proceeds should be credited to the land. We also claim that as soon as the farmers of a country become wealthy,

cities and towns will grow of necessity and as fast as they are required. The surplus capital of the country will flow to the cities, the large public salaries will be expended there, the citizens will have the command of more ready cash than the farmers, and greater facilities for obtaining information and combining to carry out any plans for their benefit; further, the citizens are more accustomed to hear public speaking and become orators than farmers; they also command the printing presses. Thus by their speaking and the power of the press, citizens become legislators and have the control of the financial affairs of the country. Many cities have borrowed large sums of the public money—some which are not likely to pay either interest or principal. Large sums of public money have been expended in cities under the guise of being expended for the good of the country; but, in reality, it has been more for the benefit of the cities to have large salaries paid and large sums expended in them. The expenditure for a Technological School and for Mechanics' Institutes might not have been out of place if the farmers' interests had first been looked after. We have had to pay for all these expenditures, and it is right that our interests should be fostered. We believe that we are fairly entitled to have assistance to establish agricultural clubs in each township; to have agricultural libraries; also, that we should have money loaned to us at low rates of interest to aid us in draining our farms or making plantations of timber, and that the cities and capitalists that have been enriched at our expense should now bear a portion of the tax to aid us in advancement. We have always been taxed for the benefit of cities and monopolists, and we only ask this as what we consider a fair and just demand. We hope that you farmers of the country will fan this spark into a flame, if you think we are right. On the other hand, if our city readers think we are wrong in this demand, we will allow them a space in our paper to confute our statements.

Sub-soiling.

There are but comparatively few of our Canadian farmers that really know what sub-soiling is, and but very few of those that know what it is have as yet put it into practice. One reason why so little is known about sub-soiling is because our lands have been but recently reclaimed from the forest, and timbered land remains porous for many years after the removal of the timber. Another reason is that many do not know the real advantages of sub-soiling. Another obstacle has been in the way, that is, the price of a sub-soiler and the amount of power re-

quired to use one. Some farmers consider they are sub-soiling their land when they attach a jointer to their plough and bury two inches of the surface soil by covering it with four inches of the soil below. That is not sub-soiling. Although this is a good practice in many instances, still it is ruinous to adopt such a mode on some soils. Real sub-soiling consists in loosening the earth below the depth that the plough runs. The soil becomes compressed by the friction of the plough, by the weight of turning the usual furrow, and also by the continued tramp of the horses the old pores that the decayed roots left become closed, and, instead of having a soil through which the water can filter and the roots penetrate, we get a regular hard pan below our furrow. This causes our lands to be longer in drying in the spring or after a rain, and also causes our crops to be more affected by drouth. The real sub-soiler penetrates the soil below the furrow and mellows it, making it a regular porous seed bed. We have heard some accounts of Messrs. Lamb & Warner's Sub-soiler that causes us to look on it as a valuable implement. We have not seen it yet, but expect to have them in our ware room ere another month passes. It is our intention to put it into operation before saying much about it. The accounts of its cheapness, efficiency, and the facility with which it can be attached to any plough, appear to commend it to us for general use, before the expensive implements now used for such a purpose. An account of this implement may be seen in the advertising columns of this paper. We look with anxiety to see it at work, and if we approve of it you shall hear about it.

Cash for Farmers.

At the present time the Government has a large surplus on hand, and farmers cannot procure money under 8, 10, 12, and even 20 per cent. But a few years ago we had 40 per cent demanded of us by a citizen on just as good security as we can now give. We are compelled to pay such rates and what do we get? The most miserable apologies of flimsy, rotten paper, that tumbles to pieces in our hands. We should be able to get such stuff at 5 per cent, and that would leave a profit. Why should we be compelled to pay the monopolists such an interest for nothing? If one million of the surplus was loaned to us in farmers' improvement—bills to circulate—the Government might keep the money on hand for any emergency. Our farms are good for security, and we should not want over one-fourth of the value of them. The whole profits of such bank bills, if in circulation, would fall into the farmers' hands, instead of into the hands of monopolists.

The Small Pox.

This terrible disease is now in our country. We do not wish to be alarmists, but we advise every one of you to take care that your families are vaccinated. Ho! ho! we hear some crusty old batchelors and some cranky old naysayers saying: "I have no family to take care of." But echo answers: "Get one, then!"

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Music for Farmers.

Perhaps some thousands of our readers may again condemn us for advocating things that are beyond their reach, or such things as will not return an immediate equivalent in cash to them, but if farming is to be made attractive to your sons and daughters, and you wish them to be attached to their home, you must give them attractions that will keep them there. After the necessities of life are secured, the comforts and luxuries of civilization must also be secured in the farm house, or the young will assuredly turn their minds and attention from the farm to where they can find amusement.

What is more endearing, charming, and amusing than music? Your toil may be such through the week that you have no time to devote to it during the seed or harvest season, except on Sunday, but the long winter evenings may be made more cheerful by the use of music. We by no means advise any of you that have but 50 or 100 acres of land in a remote situation, and that so badly managed or of such inferior quality that you cannot pay your debts, to buy an expensive instrument, but there should be a medium in all things. We know of farmers that own hundreds of acres of land, are wealthy as far as cash and property are concerned, but when one enters their gate, crosses their threshold, or converses with the family, they may or may not be found to be a shade above the animals in their out-buildings. No lawn, shrub or flower may be found about some such places.

Now, farmers, we speak as one of you. We have a family; we know that the labor exacted from them is often more, in proportion, than it is from any animal we keep. The pay they receive for their labor is inadequate. Why should we so strive to add wealth to our store to distribute to them in future? The greatest gift we can bestow on them is a refined and educated mind. Have not thousands of farmers now sons and daughters grown up that ought to be able to fill higher situations? Should not our young men be fit to enter the Legislative halls and control the agricultural affairs of the Dominion? But where are they?

To you farmers whom Providence has blessed with such wealth, we would say, instead of still hoarding it, and adding to your tracts of land, expend a little of your wealth on your descendants for their comfort, refinement and enlightenment, while you have the control. Do good with it in this your day. Perhaps you may be committing an actual sin in withholding that which is in your possession; you may be saving a rich feed for lawyers, or saving property to be yelped into a ditch or wasted at a gambling board. Have music in your homes, and flowers in your gardens, and your family will be more attached to you and to the farm, and less likely to seek the race course, bar rooms, and worse places.

While advocating expenditure in musical instruments, we would by all means caution you not to incur debt. Purchase and pay, or do without. There are comparatively very few who can afford a piano, but all may have a flute or concertina. But by far the greater majority of well-to-do farmers can afford a melodeon. While speaking of music, it brings to mind Messrs. Bell & Co's establishment, in Guelph. They have a large four-story stone building, 100 feet of front, and one wing 100 feet deep; the building is used exclusively for the construction of melodeons. We were much surprised on noticing the building when we were in Guelph at the time of the Agricultural Exhibition, and we believe it is by far the largest establishment of the kind in Canada. The instruments turned out by them are equal to any manufactured in Europe or the States. They stand at the head of the list as prize-takers in Canada; their reputation as reliable gentlemen is unsurpassed. We wish all such enterprises success. This magnificent building, and the thousands of instru-

ments they are sending all over the Dominion, speaks highly of the advances made in our country. On our first visit to Guelph we did not dream of such a progress, and we should judge this melodeon manufactory alone would be worth as much as all the buildings Guelph contained at that time. Perhaps we are wandering, but we will say briefly what we mean by this long rigmarole, as you may call it. Give the girls a musical instrument.

To the Hon. Archibald McKeellar, Minister of Agriculture.

SIR,—On behalf of the readers of the FARMER'S ADVOCATE, we have great pleasure in congratulating you on your appointment to the office you hold. We consider you well qualified to fill that position, and your appointment is looked on by us as the greatest encouragement we have ever had, as you are the only farmer that has ever attained to such an office in Canada. As you have from your youth up labored with us, you well know our requirements. You are the only member of Parliament that we have heard of who has put the Ditching Machine to work on his farm, and this is sufficient to show us that you go to the very foundation of successful and profitable farming. We have long regretted that the interests of agriculturists have been overlooked, and we are highly pleased at now having a farmer at the head of our agricultural affairs. We believe that you will guard, protect, and foster our interests to the best of your ability; that you will endeavor to remove oppressions that now exist, restrictions that are now enforced, and will regard the voice of farmers and act with justice to all. We hope and trust that your colleagues in power will aid you in carrying out your suggestions, and that the voice of the Agricultural Board will not be disregarded by you. At the same time we wish to return our thanks to the Prime Minister who has placed you in your position. We await patiently the maturing and working of the systems you may adopt. We shall be ready and willing to aid you in every good measure, and, as fault-finding is always easier than carrying out improvements, we trust you will not take it amiss should the farmers' journal differ from you on any measure you may adopt, that its managers may deem injurious to our interests, or notice any neglect on your part to guard and protect the farmers' interests. We look at your appointment in the Cabinet as a precursory step to the better protection of the interests of agriculturists.

We view the acts of the Legislature for many years past as extremely oppressive and unjust towards the cultivators of the soil. Their interests have been totally sacrificed for city and other interests. The first and the only permanent source of the real prosperity of our Dominion must be derived from our agricultural resources, and, as this is a new country, and the majority of our farmers have not the opportunity that citizens have of acquiring information, we trust you will not discourage the spread of agricultural knowledge among them. As this journal has been established solely for the farmer's interest, its editor hopes that you will in no way attempt to trammel the voice of the farmers, or enchain it to any political course, as we consider agricultural interests should in no way be entangled or baffled by political parties, but that both Conservatives and Reformers should unite on this platform and endeavor to build up the interests of the country on the surest foundation—agriculture. Yours respectfully,
THE FARMER'S EDITOR.

Humbugs.

We have cautioned you about heeding the very plausible tales of those smart-talking agents that would make you believe black is white. We still continue to hear about the hay fork, hay car, and

note swindles, and there are plenty of green-horns yet that will be swindled by these provlers while we are writing this article. Look out for Patent Churn and Washing Machine men; ninety-nine out of a hundred are mere delusions. Have nothing to do with those gift sales or lottery humbugs. We have been humbugged perhaps as much as any one we may be cautioning, but fortunately for some of you, we were not led away by the great humbug of Judson's Branching Corn, which was attempted to be palmed on us last year, and with which many farmers in Canada were humbugged, and for whom all the pity we have is that it served them right. We have not noticed any commendation of it in either of the Canadian agricultural papers. As far as we can hear, it has been the farmers who have not taken agricultural papers that have had their fingers burned with it. We do not say that editors of agricultural papers are infallible, as we are often deceived, despite the desire on our part to bring before the notice of our readers only such things as may be of use to them. We have often to reject advertisements and notices. We know every really good thing we introduce to our readers is of advantage to our reputation, and every bad thing or humbug that is introduced by our agency would do our reputation more harm than the introduction of ten good things would do us good. We have the eyes of all on us, and our business would be run into the ground if we attempted to introduce such implements, seeds, or plans as would tend to the injury of our patrons. We clip the following from the *Prairie Farmer*:—

"Last spring Judson operated largely in and about New York. Seeing his flaming notices, I sent to a friend to purchase for me a few packets of his Branching corn at the different seed stores where it was sold in the city. They came in due time; all of them the original thing in Judson's own packets. These I planted, took excellent care of, and there was not a stalk in the whole lot that had over two ears on, and that very inferior and poor, while the more common varieties, planted at the same time, produced well."

"I also know of a farmer here that planted the same, and he gives me the same story. "But our adverse testimony is not from this gentleman alone. At a late meeting of the New York Farmers' Club, the following letter from Albert Brewster, Esq., Stirling, Conn., was read:—"I don't know as you ever expose humbugs, but if you do I have something to say for the benefit of others. E. O. Judson, of Cuba, N. Y., advertised a new branching field corn, said to be the result of careful hybridization, each stalk averaging from three to five well-formed ears, some stalks bearing eight. I obtained two small papers of seed at a cost of fifty cents per package of a few kernels. I planted and tended it with care, and the result was that not one stalk in twenty had over one ear on it, and none but two. So I have put it down as a swindle, and I wish to warn all farmers and others against patronizing this E. O. Judson or his agents, unless they wish to be taken in."

"Mr. Curtis, a member of the club, remarked: 'I am glad of this statement. The whole country has been overrun by Judson's agents, who told their story with gusto, and made their employer rich by cheating the farmers. A few more such persons may teach the farmers that it is best to be cautious in touching new things.'"

"In the light of this testimony, we advise our readers to invest sparingly, if at all, in 'branching' corn at present."

We could mention some advertisers of stock and seeds in the States who are not just up to the mark.

Seeds.

We well know that many of our readers are anxiously looking for our account of spring seeds. We cannot furnish you with as full and complete an account of the cereals as we would wish. It is strange that in no city in which we have ever been, or in any ware-house that we know of either in Europe or America, the main cereals can be obtained in varieties or quantities. We believe the attempt has often been made, and the Agricultural Hall in Toronto was erected and finally leased at a low rent for the purpose of introducing good varieties of cereals, but

with cereals as with gold, it does not pay to have them long in hand. Heavy stocks have to be laid in, some at very high prices, and all may not be sold. A heavy loss ensues, not only on the stock left over, but in the waste and use of money.

Mr. Fleming, the lessee of the Agricultural Hall, and all other seedsmen have found it profitable to deal in flower seeds and small garden seeds, and have found cereals a heavy and dangerous article to handle; consequently, the cereal business, unless in cases of the introduction of new varieties, in which a much higher price can be maintained, is left entirely in the hands of the farmers themselves, or a few ware house men who may happen to purchase a few loads at market prices and such as they can readily sell at mill or feed prices. There is no business to be done in them with sufficient profit, or establishments would be found devoted to them. No one can doubt that there is a difference in the nature, quality, and productiveness of cereals; some are better adapted to one kind of soil than others. We, as farmers, are not sufficiently acquainted with the nature of the different kinds of cereals, and such, all who have any pretensions to education will readily admit. Still we will endeavor to give you a little information on some kinds that may be of use to some of you.

SPRING WHEAT.

We cannot say as much as we should wish on this important cereal. From reports received, the spring wheat was a much better crop last year than it has been for many years. The Midge did not commit as much depredation as it has for years past. Most of the common varieties are procurable in each section, and in some places are doing well. The only new variety we have is the McCarling Wheat, which we introduced last year to our readers. From the results on our own farm, we should have been inclined to condemn it, as our boys did not like it. It was sown late, and on account of its having been recently turned from a winter to a spring grain, it should be sown early to give it full time to mature. Some consider it not of much advantage, but, on the other hand, we have heard of about fifty that are highly pleased with it, and consider it the best spring wheat they know of. As it was disseminated last year in very small quantities, and sent over a very wide extent of country, we have a good many reports about it, and in a few instances, especially when sown late, the reports have not been favorable; but we have about five times as many reports showing that many are well satisfied with it, some of which we have given through the paper. The grain is large; it resembles the Rio Grande more than any other wheat. Where it has been sown early this grain has turned out satisfactory, so much so, that we can hardly procure any of it to send out this year. One farmer sold the last he had to spare at his barn for \$3 per bushel, and could not supply the demand. We should like to have had the lot. We shall only be able to supply it in very small quantities.

PEAS.

We suppose Crown Peas are now pretty well disseminated in many places; they can be procured as cheap as any other kind, but really clean, pure seed, free from bugs, is not very easily secured in some parts. The Dan O'Rourke's are gaining favor as a field pea in some parts. The Californian peas are not so well liked as some varieties on account of their being late in ripening.

The Excelsior Peas are admirably adapted to light soils, and to land that is somewhat reduced in strength. The pods have quite a hook to them, like a pruning knife, and they contain from 7 to 11 peas. They are long in the straw and yield a heavy crop. Try them if your land is not as fertile as it should be to raise Crown Peas.

BARLEY.

The Chevalier barley appears to give satisfaction to many growers; the great-

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est trouble about it is that it will not mix with the common barley. We do not know yet whether it will supersede the common barley or not.

OATS.

There has been greater excitement raised about oats this year than about any other cereal for some years past. The Surprise and Norway oats have both had a run, and as regards a change of seed, they have done some good, but for a permanent and long continued cultivation they are not destined to take the place of the Maine or Tartars. The New Brunswick oats offer to be in the greatest demand. The White Polands are also required for, and we must endeavor to supply the demand to the best of our ability. We are in want of some really good White Polands.

POTATOES.

Perhaps of all new varieties of seeds that have been introduced, none has done more good than the spread of the new varieties of potatoes. They appear to have undergone a wonderful improvement just at the time we needed it, as the old varieties began to fail. The excellent quality and productiveness of the new varieties quite astonished all those that procured them. The Rose and Goodrich varieties have done us a good turn; they have been the early varieties. The Peerless is a white and roundish potato, and is rapidly gaining favor; it is spoken of in the highest terms as regards quality, and we know they are productive enough. The Willard Seedlings are also in favor with some; they are of good quality, the skin red in color, and are a very hardy variety. The Climax is an early variety, and many speak highly of them. The Excelsior variety also has its votaries, but is a later potato. They are both of good quality. In some sections Calicoes are preferred; we find them a really good potato. The great \$50 potato, the Bresson's—King of the Earlies—we do not consider as valuable as many of the above varieties. They certainly attain a very quick and early growth, perhaps the quickest of any, but with us the quality of the potato has not been first-class, and the crop not large. Of course all of you have them, and know how they answer in your localities. You should have the above-named varieties if you have not yet procured them.

Thanks to Our Patrons and Supporters.

We thank you for the prompt manner in which you have renewed your subscriptions to your Advocate. We never felt such real and substantive encouragement before; your numerous approving and satisfactory letters prompt us to increased exertion in your behalf, and we hope and believe we shall be able to give you a better paper this year than you have yet had; we intend to advocate your interests as well as our abilities will permit, and hope, by the aid of our already numerous correspondence, to which we wish to add many more of your names, to make this paper not only profitable, useful, and amusing to all that take it, but an actual necessity to every thrifty farmer's house, and one that every farmer will look on as part and parcel of his property.

Farmers' Clubs.

There are very few in the country, in comparison to what there ought to be.—We give the following very practical addresses that were delivered at *The Darlington Farmer's Club*. We would request our subscribers to forward us clippings from any of the local papers, where any really good discussions are held that are of general interest. We receive hundreds of papers that we never open, so the mere sending a newspaper might not ensure our attention. Cut out the article, put one cent on it, and mark it "printer's copy." This will also pay for manuscript

that is for publication, if marked "printer's copy," but if a business letter should be sent with it it would all have to be paid at double the usual rates!—

DARLINGTON FARMER'S CLUB.

The club met on the 1st Dec. Mr. G. Start read the following essay on the management and care of Sheep:

Mr. President and Gentlemen,—I feel sorry that it has fallen to my lot to introduce a subject of so much importance, namely, the care and management of sheep—and as it is the first time that I ever attempted to bring any thing before the public, I shall only glance at a few points, and that briefly. In glancing back over some 26 or 27 years we cannot but notice the marked improvement in this department. A run at the straw stack, and a hole under the barn, were considered sufficient accommodation for the flocks during the long winter, and the results were as might be expected: in the ensuing fall, when the sheep were considered fit for the butcher, the ewe and lamb, or lambs as the case may be, would be driven to market and sold for about \$2 or \$2.50 for the lot. And then, sir, the boys and dogs of the village would be called together to drive the poor affrighted creatures into the slaughter house, and perhaps the instrument of death would be a rusty broadaxe, and at a stroke its head would be severed from its body. These, sir, were scenes not uncommon in the days not long ago. But we rejoice in the fact that to-day our flocks are better provided for, and the farmer has been well rewarded for his toil.

The first thing we shall consider is the shepherd's work in early autumn. A watchful eye should be kept over the flock during the months of October and November, and if any are unusually tender, we should say prepare them for the butcher; if any are weak from other causes, remove them into another apartment, and feed a few oats once or twice a day,—but find out the cause. It may be the pasture is getting dry; but all flocks are more or less subject to ticks; and where they are found in large numbers they will greatly impoverish the animal, and the sooner they are relieved of them the better. We have occasionally used tobacco water and soft soap, and found it to answer the purpose; but of late we have used Miller's Tick Destroyer, and would recommend it. It can be had at any drug store, with full directions how to use it.

The next thing we shall consider is, their winter quarters. And here, sir, by your permission, I will simply lay before you a plan of my own for a sheep house, which I think is somewhat convenient and not very expensive. Say we winter over 40 or 45 sheep, a building 28x50 will be sufficiently large to accommodate that number. We would use fourteen feet posts. Allow eight feet between the floors, and that will afford a good loft above. We will say for convenience the building runs east and west: in the west centre we have a door—here we enter the feed walk, three feet wide, which runs through the entire building, boarded up say three feet high. On either side we fix our racks for feeding. In the first place we would set down a few sound blocks, fourteen inches high, lay a plank on the top, bore the plank on the inside edge with 1½ inch augur, 4 inches apart from centre to centre; set in the bars; bore a strip 1½ inches by 3 inches for the top; this, with a few stays on the top, makes a very good rack. On the outside edge of the plank below nail a board, allowing it to come two inches above the upper edge; this forms a good manger for feeding turnips, grain or salt when required; it also receives the droppings from the rack, such as the leaf or the flower of the clover, which otherwise would be wasted.

We would say in this building there should be four apartments at least; a few hurdles will divide it at your pleasure.—We think the more we can divide up our flocks the better they will thrive. We would have an open yard at the east, extending around the south side and a part

of the west end. A few hurdles will divide it, so that a yard will be attached to each apartment, to which the flock should have access at all times except when stormy.

As to the quality of food, it can best be determined when we see the condition of our flock. But we would say at least, feed a little clover morning and evening, turnips at noon, and as much pea straw as you please through the day. We will find if we watch the flock when feeding, that all do not feed alike. Some are easily beaten back, and after being driven back a few times, fail to come to their feed.—These should be removed, with the weakest of the flock, to an apartment to themselves; this can readily be accomplished—by going through a small door at the end of the walk. They will require a little more care. Perhaps a few oats once a day will make them equal with the rest.

We would recommend in the spring, as soon as the ewes have their lambs, they should be removed to an apartment to themselves; where they, for a few days at least, should be fed often with a few turnips, a few oats, or a little bran, nicely moistened, with a little clover; this will increase and enrich the milk, and be a great benefit to the lambs as well as the ewes. Should we desire to bring the lambs on early for the butcher, just allow them a small corner where they can run in and out at their leisure, and feed them a little peas or commeal; they will soon find out what it means, and it will help them amazingly. Castration in some cases becomes necessary; this should be attended to when young, we should say when two weeks old. It can then be accomplished readily by the operator, and with less suffering to the animal. As to summer treatment, I leave that untouched for the present; and fearing lest I should become tedious, I will close my remarks.—And now, sirs, we are face to face; these are no borrowed ideas, but our own simple thoughts on the subject, therefore they will bear qualifying. We invite free discussion on these and other points, and hope they will be a benefit. Now, Mr. President, having in a few words faintly introduced this subject, by your permission, sir, I will take my seat.

The subject being thus opened for discussion, each speaker gave Mr. Start credit for the plain practical way in which he had placed the subject before them.—As the discussion went round several other important points were ventilated. Among others, the fact that great losses were often sustained by some farmers in the spring, from ewes having dead or inverted lambs. It was argued that cases of this kind generally arose from causes entirely under the shepherd's control; and where proper care was taken, cases of this kind were comparatively rare. Where sheep are allowed to run in the same yard with cattle, to be tossed about on their horns at will; where they go in and out at a door that is allowed to swing with the wind, so that they may get jammed and struck by it nearly every time they pass; or where attendants or children are permitted to frighten them till they will almost jump over any enclosure, trouble at lambing time may be confidently expected. The relative merits of the Cotswolds and Leicester breeds was thoroughly canvassed. It was generally conceded that although the Cotswold yielded more wool, and at present realized higher prices for breeding purposes, still the Leicester sheep attained their growth sooner, were easier kept therefore, and more profitable to the butcher. Some thought that by crossing the two breeds with each other, larger and better animals were obtained than from either of the pure breeds; while others said it answered well only for the first cross, citing instances where good flocks had been ruined by the introduction of cross bred rams. However, it was argued that no matter how correct it might be with cross bred rams, where pure bred males were used, good results would follow crossing. The necessity of washing sheep, arising from the impos-

sibility of selling unwashed wool to the Bowmanville buyers only at the ruinous reduction of one-half the weight, instead of one-third, as it should be, was strongly deprecated. The risk run in washing heavy fat sheep, on a warm day, in a cold stream, was considered too great, many valuable animals having been lost in that way.

The next meeting of the club was held on Friday, Dec. 29th, when the subject of the "Horse" was introduced by Mr. C. W. Smith:

Mr. President and Gentlemen,—I feel sorry that a subject of so much importance as the "Management and Care of Horses," was not placed in more able hands than mine; but, feeling the need of a Farmer's Club, I felt as a farmer, interested in trying to advance the Darlington Farmer's Club. I cannot lay down a rule of management that will suit all classes of horses, but will endeavour to confine myself to the course I think should be pursued by the Canadian farmer with farm horses.

The horse above all other animals, is the most valuable and useful to man; consequently should engage his most careful attention. We have all noticed, with much pleasure, the spirit of many of our enterprising farmers in importing thorough bred stock, from England to Canada, which has added very much to the improvement and value of our stock; and I can safely say that Canada bids fair to become one of the first stock countries in the world.

I will now try, very briefly, to consider the care of the horse. When a colt is young, the mare should not be worked so as to heat the milk, which is injurious to the colt; if the mare must be worked, she should be allowed to cool before the colt sucks. The colt should be weaned in September. If the mare must be worked, both will be better separated than allowed to run together at this season. The first winter the colt should have extra care, as the first start in growth often makes the best horse. Young horses, of any age should have a stable large enough to allow them to stand as they like, and not be tied. When breaking commences they should be handled with great care and quietness, and not be whipped or abused for any little fault, which often makes them more vicious and wild. They should be mated with a good steady horse, and laded light at first. As the horse is, in the front Townships, almost the only beast of toil, great care should be taken of them when worked. The driver should always try and drive his team so as to do his day's work as easily as possible for the team (not for himself, as is too often the case. We can speak when injured.)

We often see horses driven fast on the roads and heated, and then tied to a post, and allowed to stand and cool in the cold. Horses so used, seldom look well, and such treatment often lays the foundation of disease. When driving on the roads, allow your horse to walk some distance before stopping, and he will cool gradually. In winter they should be blanketed when they first come into the stable for a few hours. If the stable is good, I think they are better without blankets on through the night. When so used, they feel the good of a blanket when standing out in the cold. In endeavoring to find the best and cheapest way of wintering a horse, in the front Townships, where the farmer has got his farm well fenced, and all necessary buildings erected for his use, he has very little for his horses to do on the farm during winter, and as the horse is a very great consumer of feed, the farmer must endeavor to find out how he can winter his horses when not working as cheaply as possible and have them in good condition in the spring; feeding hay and oats is very expensive feed. Cutting machines are very little used, not so much as they should be. Cutting hay and oat sheaves is a very great saving in feeding. Good clean wheat chaff is very good to feed occasionally, say once per day, roots should be fed plentifully with it as it is very binding. A little bran mixed with the above named cut feed, and wet with water, makes very good feed for horses. I think farmers generally do not feed enough of bran and roots to their horses; they want more opening soft feed than they generally get. Dry hay and oats although considered good feed to work on, and generally used most, should be fed very carefully; hay especially; none but the best timothy hay should be used or they are almost sure to get the heaves if fed on bad hay; which renders them unfit for hard work.

But allow me here to say, that it is impossible for me to say exactly how every person

does not pay Heavy stocks at very high old. A heavy stock left over, money.

f the Agricultural seedsmen have a flower seeds and have found out a new article to cereal business, production of new higher price entirely in the selves, or a few appen to pur- et prices and sell at mill or business to be t profit, or es- and devoted to that there is a ality, and pro- me are better than others. sufficiently ac- f the different all who have on will readily vor to give you me kinds that you.

T. as we should cal. From re- wheat was a r than it has Midge did not on as it has for common varie- section, and in ill. The only the McCarling d last year to ults on our own en inclined to d not like it. It unt of its hav- om a winter to sown early to e. Some con- vantage, but, on heard of about ad with it, and ng wheat they asminated last es, and sent over try, we have a , and in a few sown late, the rable; but we many reports t satisfied with given through s large; it re- more than any has been sown d out satisfac- can hardly pro- this year. One d to spare at his d could not sup- uld like to have nly be able to antities.

s are now pretty y places; they o as any other seed, free from ckles are gain- ne parts. The so well liked as of their being

admirably ad- land that is ngth. The pods a, like a pruning om 7 to 11 peas. aw and yield a your laud is not to raise Crown

appears to give ers; the great-

should feed his horses. I must allow him to be his own judge, as a difference in work requires a difference in treatment in most cases. The horse when properly cared for is long lived, and will well repay for careful attendance. Coarse feed does not give strength to the muscles as grain does. A horse in high flesh, if he has no grain, may rapidly fall away when put to hard work. In preparing horses for spring work, say in March, you should begin to feed a little better than you have done the last three months; commencing to prepare them gradually for work. As they have done little hard work through the winter, and are consequently soft, they should not be worked hard at first. To take a horse on a bright warm morning, hitch him to a plough, and work him hard all day, is very cruel. Especially should young horses be put to light work, and accustomed to labor before being required to do a full day's work. Special care at this season should be taken of his shoulders; after the long rest of winter, his shoulders are tender, and will be easily galled at first. Be sure that the collar is in good repair, and fits properly; nothing looks more barbarous and cruel than a horse compelled to work with a galled shoulder. Great care in keeping them clean is very beneficial at any season of the year, and especially in the spring. After a hard day's work, a good currying or brushing, and a good bed of straw, are all necessary for his comfort, with a good stable well lighted and warm. Some have their stables made of stone, under the barn, which I think is very bad, as they are too damp for the horse. A frame stable is the best, with stalls not less than five feet wide in the clear, and back far enough to prevent them from kicking each other; the floor sloping so as to keep the stalls dry. A great difference of opinion exists among farmers as to which is the best way of making in the stable hay racks or mangers. I object to the rack, on account of the dust that falls in the horses' face and eyes when feeding. Stables with mangers can be made the warmest, on account of having all tight over head, preventing the cold coming from the loft on them. In conclusion, the best preventive of disease is, regular feed, moderate work, and good care.

After Mr. Smith concluded the reading of his essay, the subject was discussed at length by a number of those present. Many useful and practical observations were made upon almost every point pertaining to the question: the method of feeding colts at various stages of their growth, the care of the working horse is almost all the circumstances in which he is ever placed; the relative value of different substances as horse food; the very important item of how a horse should be shod; and other things of minor importance, were fully canvassed. The horse, in its relative to man as a motive power, was also spoken of. Unlike the other domestic animals, which are merely raised to serve as human food, the horse fills a different and a higher sphere in the economy of agriculture. He furnishes the force whereby the farmer is enabled to overcome physical obstacles and difficulties that could not be accomplished by human muscle; and in Canada where man's labor is dear and scarce, the extensive use of the horse is a necessity. At the close of the discussion it was moved by Mr. C. W. Smith, seconded by H. Elliott Jr., that whereas we have formed ourselves into an Association for the discussion and consideration of subjects connected with agriculture, and have taken the name of the Darlington Farmers' Club, and being deeply impressed with the importance of thorough and full discussion of prominent agricultural questions, and believing that occasional large meetings held throughout the year, where parties from all quarters of the township could be brought together, would be productive of much good; and further, that this end can be better attained under the auspices of the Township Agricultural Society than by our club. Be it resolved, to send a delegation to the next annual meeting of the Darlington Agricultural Society, for the purpose of introducing that body to hold two or three extra meetings per year, to consider and debate questions of general interest and importance to farmers. A committee was chosen for that purpose.

The subject for next meeting is a very important one, viz.: "The economization of manure." The meetings are held on the last Friday evening of each month. An impression seems to have got abroad that the clubs sit with closed doors, and none but members permitted to attend. Such an impression is quite wrong; for, on the contrary, we extend a cordial and hearty invitation to all, to our meetings without restriction; and further, hope that the public will accept the invitation.

An Airing Trip.

As we have been too closely confined to our office for a long time, we threw down our pen and left the talking, books and correspondence to be attended to by our assistant on Thursday, at 12 o'clock, noon, and went to the

ANNUAL MEETING OF THE EAST MIDDLESEX AGRICULTURAL SOCIETY, which was held in this city. The attendance was somewhat larger than formerly, though not half as large as it should be. There were more changes in the officers than usual, Mr. John Nixon being elected President of the Society, and Mr. Tooley, M. P. P., and the late member, Mr. L. E. Shipley, were nominated as members of the Provincial Board of Agriculture. An objection was raised against Mr. Tooley on account of his being a member of Parliament; it was shown that the business of the two sometimes clashed so as to prevent their attendance at the meetings of the Board. A challenge was thrown out for any one to mention any act that Mr. Shipley had done or any inattention to business that would show he was not fit to hold his office, and no response was made. A vote being taken, Mr. Tooley had the majority. There was a direct charge made by one of the late office-bearers, that politics had been dragged into the Board, but no attempt was made to confute the assertion; it was allowed to go unchallenged. The meeting was soon over, and each went his way without being much better posted on agricultural affairs, all being ready for dinner. The question suggested itself to us: cannot such meetings be made more useful, more cheerful, more profitable, and attractive? We think it would be more beneficial if the time prescribed for holding the meeting was changed. It is now held at 12 o'clock, and we think it would be an improvement if it were to be held at half-past one, as farmers generally dine about 12 o'clock. There are some English farmers in Canada, and it is said that hunger makes a native Englishman both cross and uneasy. They are not then in a good plight to sit and hear remarks, or give much information; they want to get away as soon as possible. Perhaps there may be some others in the same way. If the hour should be changed, we think the afternoon might very profitably be spent in holding discussions on agricultural subjects. It would be well to induce as many to make remarks as possible, and to have no address over 10 or 15 minutes in length. We took the G. T. R. and went to

ST. MARY'S,

a pretty little town in the county of Perth, situated on the river Thames. This place is celebrated for its building material, and is the furthest point west that we are aware of, where good building stone can be procured in quantity. This place is a marked contrast to all other towns, villages and cities of the west, as its buildings are of stone. They have most substantial bridges both on the railway line and over the river, far surpassing any of our Western bridges, being constructed apparently as if they would last forever; they are handsome structures. We would suggest to the inhabitants of St. Mary's to encourage the planting of evergreens and shade trees to their utmost extent.

We went on the ice to see a game of Curling that was in progress. It was the first time we ever witnessed the "Roarin' Game," and we saw but little of it then, but to notice the intense anxiety of one grey-headed old gentleman, with broom in hand, was enough to make us at once attached to the game. The expressions were novel to us. One person cries out: "You're a hog!" the "hog" being a stone not sent over the line in front of the T. Then, "scoop him up, scoop him!" as another stone comes lazily along, taking its place, the ice being swept where the player wanted it. Then, the order, "side wipe this," and "fall into the T," when up comes another, missing its mark, going past and out of the grand circle. The

game is one of the most exhilarating and healthful that can be engaged in, which is manifest from the hilarity displayed on both sides while the game is going on; and from the ruddy and healthy appearance of the players, we should judge that they cannot fail to sit down to their beef and greens with lively spirits and sharp appetites.

The Annual Meeting of the S. Perth Agricultural Soc'y was held the same day. This Society has made it a custom for many years to have an agricultural dinner after the meeting, and having previously received an invitation from the Secretary to partake of their hospitality, we did so. The dinner took place at about half-past six. There were nearly a hundred present, consisting of the officers of the Society and leading farmers from the surrounding country, some of whom came a long distance in order to be present. The most famishing appetites and fastidious palates having been satisfied, the cloth was removed. The Punch Bowl was then placed on the table, and all who wished partook of the contents as often or as seldom as they pleased. A succession of toasts were proposed, and different gentlemen were called upon to respond. The health of the Queen being the first, it was responded to by every one joining in singing "God Save the Queen." Then followed the Prince of Wales, the Governor General, Our Legislators, the Board of Agriculture, the South Perth Agricultural Society, the Sister Societies, the Agriculture of the Dominion, the Dairymen, the Manufacturers, the Medical and Legal Professions, the Volunteers, and many others, but we took no jottings at the time, and it might occupy too much time and space to report every speech. We must say it was one of the greatest treats we ever had, and a more pleasant meeting we never attended. The responses to the above toasts were made in such a manner as to give either instruction, information, or amusement, and songs were interspersed to enliven the evening. There were farmers present that are destined to advance beyond the mere drudgery of the farm; the lawyers and doctors' toasts were most ably and courteously handled. Nothing more could have been done than was done by the inhabitants of the town of St. Mary's to make the meeting agreeable and beneficial to farmers. We find, on enquiry, that these gentlemen are the principal supporters of this annual custom of having a dinner after the meeting. The officers are real active men, and we wish them and their Society every prosperity. Some may condemn the Punch Bowl as an entertainment of this kind, but there was no injury done by it there. Excesses were not indulged in, and no remark was to be heard unfit for the drawing-room. We hope yet to see the day when our wives and daughters will attend our agricultural meetings and give us their accounts of dairying, the cultivation of flowers, and their management of poultry, etc. There is one thing to be regretted; it is that after the officers of the Society have taken the pains to have a social gathering, and after the towns-people so nobly responding to the calls made upon them for agricultural purposes, that so few of the farmers attend. It is an excellent farming section, and the farmers are wealthy. They would gain more enlightening, elevating and real useful information at such a gathering than they would gain in many years, in fact never gain, by staying away. We venture to say that no farmer that attended this meeting but would say that he was greatly benefited by it and that to a far greater extent than the mere loss of time or money. Such meetings are the places where our requirements are made known, where improvements are suggested. If only one good idea is brought forward it will drop into some ear that will appreciate it, and if the seed is sown the fruit will follow. We say to each of you: endeavor to have an agricultural gathering of some kind during the year, and induce as many to speak as possible.

We left St. Mary's the following morning, intending to stop at Guelph, but a slight incident at Stratford caused us to proceed direct to

TORONTO.

Desiring to see the Minister of Agriculture, we went to the Parliament Buildings. The House was not to meet until 3 o'clock; the Minister of Agriculture was absent at the time. We returned to the buildings before the appointed time, but we were not fortunate enough to obtain a few moments' conversation with him. The Speaker took the Chair at 3 o'clock. The Scott (of Ottawa) accusation was the subject of discussion. The House adjourned at six, when we proceeded to the floor and had a few moments' conversation with the Hon. A. McKellar, Minister of Agriculture. We were treated with respect, but did not receive any remark of encouragement or disparagement. We learned from him and other members that it was the intention of the Government to carry on the Mimico Farm. The College buildings had been contracted for by the former Government at \$45000, but this does not include the outbuildings. We were not certain, from hints thrown out, whether this establishment would at present be abandoned or not.

The House re-assembled at half-past 7. M. C. Cameron, the leader of the Opposition, continued a vigorous onslaught on the members of the present Ministry. The results of course you will all know from the political papers, which will be published two weeks before you get this article we are now writing.

The following morning, Saturday, we visited the seed and implement warehouses and the printing establishments, to obtain information that might be of service to our readers. We should distinguish you if we gave too many of our ideas in one paper. We took the noon train and stayed a few hours in

HAMILTON.

The Agricultural Society had held their annual meeting just before our arrival, but we saw many of the members. We had a little conversation with Mr. Thos. Stock, one of the leading agriculturists of Canada. He is the farmer that prevented the Provincial Exhibition from going to Ottawa at a time when it would have been against the interests and wishes of the inhabitants of Ontario. We conversed with him on the future prospects of our agricultural affairs. He palliated the great Mimico undertaking, but is not entirely satisfied with it; would let the Provincial Exhibition pass as one of the things to be; would strengthen and support our divisional Exhibitions; let the Township Exhibitions die out, and have one great Exhibition once in 4 or 5 years, to continue for 2 or 3 months. We do not agree with him in all his ideas. We know that the cities have the power; that might is too often considered right; that nearly every farmer within a radius of 15 miles of a city or main centre of holding these Exhibitions would support the views of Mr. Stock, in endeavoring to centre the interest in these different localities. The leading men of the country live within such a distance of some place that is or will be one of these centres. But by far the majority of farmers do not come within this radius, and for them we still uphold the township exhibitions. This representation of agricultural interests by population is not right. The inhabitants of the cities are numerous, and know or care very little about the plodding farmer. They are in a centre; they can vote and carry measures that are injurious to the agricultural interests of the distant parts of the country, and of advantage to the cities principally. To prevent the false representation that now exists, we would suggest that no person who is not an occupier and cultivator of at least 25 acres of land, and has not obtained his support from the cultivation of the soil, should be allowed to vote on our agricultural affairs. The country should be represented as well as the city. The coun-

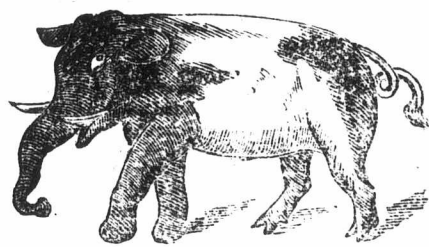
try pays the money is to up cities a Technical the Agricultural the farmer speak, and was established purpose talk that mere gild it is not p to the farm probably than the trample dare deny What f Technical Farm and late min House or like to kr Sand-field it was or our ideas n the foll

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Sir, tone of desire mers, years that f other same but li It is a farmer a larg throu tion. agric one l that there breac Prov these same duty the salt trad wou the woo war even tect can imp The of wit wh

try pays the heaviest taxes by far, and the money is too often expended in building up cities at the country's expense. This Technical School and the great Elephant—the Agricultural College, Test and Experimental Farm—etc., were never got up for the farmer. We know too well what we speak, and bid defiance to confutation. It was established for city interests and political purposes, and all the fine agricultural talk that may be dinned into your ears is a mere gilded delusion. We do not say that it is not possible to make it of some value to the farmers, but we say the injury most probably will be a hundred times greater than the benefit. It was established to trample down private enterprise. Who dare deny this assertion?

What farmer ever asked for either the Technical College, or the Experimental Farm and College? Which member of the late ministry carried this through the House or suggested it? We would just like to know if it was John A's., or John Sandfield's, or Carling's scheme, or where it was originated and what for. We have our ideas about it, and we represent them in the following out. More anon!



The absurd idea of trampling out agricultural information by a double tax on agricultural papers, and a quadruple rate on the carriage of seeds, must show to every farmer how the cat jumped. If 26 members of parliament residing in Toronto want to keep that little animal for the profit and amusement of themselves, they are welcome to do so; but do not attempt to charge the farmers with the keep of the beast, and say it is for their 600 acres of poor, worn out scrub land, filled with Canada thistles, no water, \$75 per acre, off a branch of railway—a bright commencement. "That's the way the money goes, pop goes the weasel!"

Back at our office at 10 on Saturday night. At work again! So much for our airing trip!

Canadian Politics.

SIR.—I am pleased with the general tone of your paper, and am persuaded your desire is to promote the welfare of the farmers, when you state: "We have for years asked of our present Government that farmers may have equal rights with other classes of the community." At the same time it is said that a man who asks but little of a Government gets nothing. It is quite possible that a community of farmers would share the same fate, unless a large influence could be brought to bear through an organization, or by representation. It is perfectly understood that the agricultural class in Canada is the only one left unprotected for. It is well known that at the time of the Confederation there was an attempt to levy a duty on bread, flour and pork, but the Eastern Provinces would not submit to a tax on these articles, and it was repealed. The same result followed with coal, and the duty on salt is of very little benefit to the manufacturers so long as Liverpool salt is admitted free. And then a free trade in coal oil and salt with the States would benefit these industries more than the duty possibly can. Manufacturers of wool, cotton, leather, harness, cabinet ware, agricultural implements, and almost every interest but the farmers' is protected now. It is well known that we cannot put a tariff in our favor against imports; we are sellers and not buyers. The farming class represent 80 per cent. of the population, and they must compete with all importers for the benefit of those who are unwilling to advocate any policy

that can be of service to us. We notice that a Mr. Robert Wilkes, of Toronto, advocates in the session of the Board of Trade, sitting in Ottawa, a special land tax for the Dominion Government. "Can it be possible that any good thing can come out of Toronto?" is a question which has been decided in the negative long ago, but why Mr. Wilkes wishes to add a new burden without an equivalent benefit is yet to be decided. But Mr. Wilkes and his stamp will bear a most industrious watching.

I regret that your paper is limited to a monthly; we get rusty in four weeks. There is great need of a *live farmers' paper* and we wish you may step in when the waters are troubled.

Yours, M. W. BROWN.
Paris, Jan., 1872.

We are highly pleased that our remarks are finding responses, and we consider the above one of the most valuable of them. It should awaken every farmer of the country to a sense of duty to his calling, and every farmer should endeavor to throw off the chain of city oppression. We have just rights to maintain, and we are not true to our position unless we use every legitimate means to obtain and maintain them, and which we never shall have unless we exert ourselves to obtain them. Are we men, or do we belong to either of the subjects shown in the Darwin Theory, in another part of this paper? If we are men let us be up and doing. You will have another election before long, and let every farmer cast his vote for an agriculturist. There are too many city representatives in the Legislative halls now. Your rights must be maintained by sending agriculturists to counterbalance the weight that the city influences bring to bear. Never mind about party; vote for the real, plain farmer, that gets his living from the soil. Of course, flowing, studied, prepared speeches, filled with anecdotes and repartees, which are often the productions of close application and a systematic training, are apt to catch the farmers and draw the wool over their eyes. The plain farmer has but little chance with the practised elocutionist. Send more farmers to both houses of Parliament.

To the Hon. A. McKellar, Minister of Agriculture.

We farmers are pronounced a grumbling lot of ignorant beings, nevertheless, we believe we have a just right to complain about many things. Of course we do not expect to receive all we may ask for, nor do we ever expect to cease complaining. However, it is our intention to let our voice be heard as long as we can, in every instance where the farming interest is at stake, until some changes are made.

As you now have considerable influence and power in Ontario, we believe your voice will be heard by those who have control of the affairs of the Dominion. We have long suffered under a most unjust law which tends to our injury. We mean the postage on agricultural papers, and on agricultural seeds and plants.

We humbly request that you will use your influence to have the postage on agricultural papers reduced from 1 cent each to 1/2 a cent each, and that the postage may be prepaid either by the publisher or receiver of the paper. We wish it to be distinctly understood that we do not ask that agricultural papers be allowed to pass free of postage, as such an act would be made a handle of at elections by saying, "What had been done for the farmers?" We are able and willing to pay our expenses, and we only ask for what is fair, just and honest. We do not think it right that a political paper should be allowed to pass through the post office at half the rate charged an agricultural publication, and the former not even prepaid.

We also ask that seeds may be sent by post at 4 cts. per pound, that being the rate now charged for other mail matter. As it is at present, seeds have to be pre-

paid at the rate of 16 cts. per pound, just four times more than they should be.

Your early attention to the above will be looked upon as a favor by the farmers of Canada.

Yours respectfully,
THE FARMER'S ADVOCATE.

Breeders' Column.

We purpose keeping a column in our paper for the exclusive interest of breeders of thorough-bred stock of all kinds, and we shall be happy to receive any communications of thorough-bred stock bought or sold, together with any particulars as to their breeding, &c.; in fact, anything that will interest other breeders. It is our belief that there are among our subscribers a sufficient number of those interested in breeding pure bred stock, to render our breeders' column a success, especially considering the wonderful advance there has been in the value of pure bred cattle the last year or two. Our earnest hope is that the breeders will keep it filled by sending in useful items and accounts that will be of interest and profit to all.

The 19th volume of the English Short Horn Herd Book is issued, containing the pedigrees of 2500 bulls and 2900 cows; and to show the interest which the educated and highest ranks of society in the old country take in Short Horns, we note that there are no less than 41 Dukes and Lords among the English breeders, while the Queen herself heads the list with an entry of 40 animals from her Windsor farm. How many of the "Upper Ten" are there in Canada who follow such a good example? we fear they are too busy trying to euchre one another in railways and politics to care about the agricultural prosperity of the country. But, to return to the Herd Book—American bred cattle appear to be highly esteemed. There are portraits of "8th Duke of Geneva" and "11th Duchess of Geneva," bred by Mr. Sheldon and exported to England. Bates' blood is the most fashionable, to judge by the fact that of the 13 portraits of celebrated animals in the volume, 10 of them are of the Duchess and Oxford tribes, and we read that at the sale of some of the Duke of Devonshire's herd last fall, 8 animals of the "Oxford" tribe sold for an average of \$3000 each, this being the highest record of any auction sale, while 2 of the bulls sold for \$5000 each.

THOROUGH BREEDING.

Professor Agassiz lately stated a fact which breeders of all stock should never forget nor undervalue, when he said that "no offspring is simply the offspring of its father or mother, it is also, at the same time, the offspring of its grandfather and grandmother on both sides;" and we would impress upon our breeders that this principle of the liability to reproduce ancestral characteristics extends much beyond the grandsire and granddam. Our old breeders must have frequently noticed a peculiarity of some ancestor brought out in the offspring, and it is found by experience in breeding that the good or bad points of the ancestors of the sire or dam are almost as likely to appear again in the offspring as those of the immediate parents, in whom they lie dormant, and are produced in the offspring by the accidental circumstance of one parent happening to be in a very vigorous condition at the time of impregnation, or the strain of blood in the sire happening to nick with the same strain in the progenitors of the dam; hence the maxim that like produces like, or the *likeness of some ancestor.*

The law of Nature in breeding is supposed to be: "the dam gives the whole of the nutritive organs," and "the sire gives the whole of the locomotive organs." Thus a cow that has a disposition to fatten easily will produce calves of similar tendency, and a bull which displays much spirit and temper will be likely to produce calves of the same character. And again, the hereditary powers will generally be found best calculated to do that which the parents through successive generations

have done; "generally," it is said—not "always"—for often the other parent will have a strong counteracting tendency, and this accounts for some cows breeding such good calves to one bull and inferior calves to a better looking sire.

The result of the foregoing experiences in breeding appears to authorize the rule that in choosing a bull it is better, if possible, to choose one whose stock you have seen, and can judge if he has strength of character and blood sufficient to stamp his likeness on his calves, instead of taking the risk of an untried animal; also, in choosing a bull you should study his pedigree and ancestors, for a poor looking bull who comes of first-class ancestors on both sides, will be far more likely to get good calves than a prize bull whose ancestors were nothing above the average. This explains the disappointment which sometimes happens when breeding from prize animals, who, though very good in themselves, have no remarkable ancestors in their pedigree to concentrate in them the capability of transmitting their own good qualities to their calves.

We hear that George Millar's Sale was a good one, prices ruling higher than usual. Short Horns sold for \$150 to \$1500; we believe Mr. Thompson, of Whitby, was an extensive purchaser. It is reported that Geo. Brown has purchased Major Gregg's herd of Durhams.

That noted Breeder, Mr. Snell, of Edmonton, has sold his prize Bull, "Louden Duke," to go to Virginia; we have no doubt but that he will head many a prize ring there.

Even the Japanese are at last going into Short Horns! The government of Japan have bought from Mr. Pickrell of Illinois, a bull and 3 cows at very high prices, for shipment to Japan. They have also bought South Down Sheep and Berkshire Pigs.

We beg to call attention to the advertisement, in another column, of the splendid stock-getter, "Bell Duke of Oxford," noted for getting prize stock. Colonel Taylor informs us he would not part with the bull, but that he has lately bought a pure bred Bates bull to breed with his Bates cows; we hear he paid a very high price for his new bull, which is the only one of the breed in Canada.

Send us brief accounts for this column.

American Postage

We are highly pleased to see the Country Gentleman taking up this most absurd and unjust regulation that exists between the United States and Canada. We have continually complained to our ruling authorities, but to no purpose. The case is this: We find it necessary to transact business with the Americans. The Americans do not know the absurd restrictions. They may place a 3-cent stamp on their letters to Canada, but the Canadians have to pay 10 cents on receiving it. We are continually in receipt of letters on which 6 cents have been paid, yet we have to pay 20 cents. On pamphlets and circulars it is even worse; for instance, to-day we receive per parcel post one pound weight of circulars of Dedrick's Hay Press; 8 cents has been prepaid, still we have to pay 15 cents more. This unreasonable law costs us about \$5 per month more than it should do if fair play could be obtained. Who gets the credit of all those obliterated stamps that are not accepted as payment for postage? The government of either country will destroy them for future use, and yet give no credit for them. We hope this affair will be looked into, and the cause of complaint removed. No one can deny that intercourse is beneficial to both. There is no necessity for this unreasonable, senseless, and injurious obstruction.

TO OUR CORRESPONDENTS IN THE STATES.—In sending letters to Canada the postage should be prepaid in full. If only one stamp is placed on a letter, we have to pay ten cents in gold and the stamp is lost; sometimes we have to pay 20 cts.

TO E. C. SPINNER, Esq., Sec'y M. S. P. A.—Your communication was received but it was too late for this issue, or it would have been inserted.

SEEDS.

SEED REPORT.

Sir.—The New Brunswick Oats did not do so well as I expected from the reports I had seen of them. The seed you sent me was not pure; it was mixed with another variety. From half a bushel sown, they yielded 17 bush. The White Polands were pure, but the seed had been damaged. Not more than half of it grew. From one peck sown, they yielded 6½ bushels. They are a superior quality.

The potatoes you sent me did very well. King of Earlies—yield from 3 oz., 10 lbs.; weight of largest, ¾ lb. Bresee's Prolific—yield from 4 oz., 30 lbs.; weight of largest, 1 lb. Peerless—yield from 4 oz., 18 lbs.; weight of largest, 1 lb. Excelsior—yield from 4 oz., 53 lbs.; weight of largest, 1 lb. They were planted in a patch along with my other potatoes, and had the same care. They are all good table varieties. The Excelsiors were the most productive, and are, I think, the best table variety. You may publish the result of my experiment with the seeds I received from you if you choose. W. T. S. Belgrave, Jan'y 13th, 1872.

We think it right to give reports, even when against us. There is a difference in sections and soils, and modes of cultivation differ. We publish this letter because we think it the worst report we have yet had in regard to the Oats. The Polands, most probably, were from our imported stock. If you have any to spare, send us a sample, stating quantity and price. We want more White Polands. The report of the Excelsior potatoes is the best we have yet seen, and, in comparison with the others, they are undoubtedly very prolific. When our readers see all the reports from different parts of the country they can judge for themselves.

FARMING AROUND OTTAWA.

Sir.—It's a great pleasure in forwarding you \$1 for the Advocate, as I would not want it for ten times the price. I am very fond of agricultural papers; I take several and always find something new in each. I regret very much that I cannot induce my neighbors to subscribe for your very worthy paper, as I prize it above all others. I will give you a small sketch of our farming operations in this part of Ontario for 1871, as near as I can find out by threshers and travelling myself. In the township of Nepean, Carleton Co., the average is as follows:

Black Sea Wheat.....	22½ bushels.
Scotch Wheat.....	22 " "
Fall Wheat.....	23 " "
Barley.....	30 " "
Oats.....	35 " "
Peas.....	22 " "
Different kinds of Potatoes.....	250 " "
Turnips.....	750 " "
Carrots, white.....	750 " "

All other crops accordingly. This is as near as I can find out throughout our farming community. I have proved the above figures, with the exception of fall wheat and barley, on my farm of 150 acres of heavy swamp land. I can run the Buckeye combined over the whole of it.

As I live within 4 miles of Ottawa, on the Rideau Canal, I find it very difficult to get enough of farm laborers, as our lumber merchants are doing such a smashing business and giving from \$22 to \$30 per month with board; the laborers also have better times than they generally get on farms. Although prices are high for produce here, it seems to me that we will require cheaper labor or better crops to make a living. Yours, etc., JNO. NELSON. Nepean, Jan'y, 1872.

M'CARLING WHEAT.

Sir.—As regards the McCarling Wheat, I had a poor return in quantity, but the quality was good, the sample being much better than I got from you. I put it on what I thought was a good, clean piece of land, where I had been the year before, but the year being so dry it came up with fox-tail, which destroyed the crop. But I will try it again. The grubs destroyed the cabbage. ROBERT BULMER. Forester's Falls, Jan'y 4th, 1872.

SEEDS.

Sir.—The McCarling wheat I received from you last spring had an equal chance with my Scotch wheat and another kind, and it was much better than either of them. Some call it barley wheat. I got five pounds from the four ounces. I have tried some of the new kinds of potatoes, and can say they are far ahead of the old kinds. ALFRED A. ALLISON. Shipley, Dec, 20, 1871.

SEEDS.

Sir.—The seed grain and roots I received from you have done well this year. From ten pounds of the Harrison variety we dug ten bushels of beautiful potatoes, and from three

pounds of Emporium oats, we got thirty-four pounds, weighing at the rate of 46 pounds to the bushel. The Crown Peas have done well, but we have not threshed them yet. The Early Goodrich potatoes don't promise so well, but we will give them another trial. As for the barley, it has failed. EDWARD VAUGHAN. Goulburn, Dec'r 30, 1871.

SEED WHEAT.

Sir.—I will give you a statement of the success of the varieties of wheat I have sown. I received from 14½ lbs. of Weeks' Wheat, five bushels and ten pounds, and from 17½ lbs. of the French Red Cross Wheat, five bushels and forty-five lbs. Both kinds have been somewhat injured by the June frosts. J. K. BECHTEL. Blair, Dec'r 26th, 1871.

NON-SECTARIAN.

Sir.—My daughter has succeeded in getting up a club for your paper, which I now send with the money. I like your paper better than any other as you do not interfere with religious questions. I am a Catholic. M. A. REDMOND. London Tp., Jan'y, 1872.

We do not wish to interfere with your creeds or politics. This paper has been established for agricultural purposes, and our desire is to maintain the farmers' interests as a class, and leave party and sect to other teachers.

SEEDS.

Sir.—I got three kinds of seed oats from you last spring, the Norway, New Brunswick, and Emporium, and they all did very well considering the dry season. The Norways were a mixture of three kinds. The Emporium oats yielded the best, and are by far the finest oats in my estimation. The McCarling Wheat did well; I sowed it on the tenth of May, but owing to the dry weather setting in, a good deal of the seed did not come up. It was, nevertheless, the finest spring wheat I have seen this season, and yielded four bushels. You sent me three potatoes, the Climax, Willard Seedling, and King of Earlies. The frost killed them entirely, and I did not even save one for seed. JOHN HARBOTTLE. Grey, Jan'y 1st, 1872.

M'CARLING WHEAT, ETC.

Sir.—In compliance with your request, I now report on the McCarling Wheat, &c. I received from you last spring; they yielded as follows: From the two pecks of McCarling Wheat sown, I have 13½ bushels of good wheat ready for seed. This is over double the yield of the Scotch wheat, sown side by side with it in the same field. As regards the four packages of potatoes you sent with the wheat, I planted them and numbered the seeds of each kind, intending to give the weight of yield, but when about half grown a neighbor's hogs broke into the patch and destroyed every potato, so that I have not one left. The flower seeds you sent Mrs. S. last spring were thankfully received, but on account of sickness she did not get them planted; she has them laid by to plant next spring, however. H. G. S. Gorrie, Jan'y, 1872.

GOOD WORDS.

SUBSCRIBING FOR THE ADVOCATE.

Sir.—Your agent called on me about a year ago wishing me to subscribe for the Advocate. I told him that I had taken the Genesee Farmer and the Canada Farmer, and had received but little or no benefit from them, therefore I had concluded not to take any more agricultural papers. He did finally send me a few of your papers. I now send you \$1.50 for the past and coming years. If that is not satisfactory, please inform me, and I will do what is right. I am well satisfied with the Advocate, and I think that it is one of the best agricultural papers I ever read. I wish you all the success possible, and with much respect, I remain yours truly, S. W. KEYS. Woodstock, Dec'r 22nd, 1871.

COMPLIMENTARY.

Sir.—I wish you a "Happy New Year," and as in the past, I trust in the future you will be able to uphold the Advocate of every agricultural reform and expositor of the farmers' rights. R. G. Thamesford, Jan'y, 1872.

SUBSCRIPTIONS.

Sir.—I send you two dollars to pay for the Advocate for this and the ensuing year. I am well pleased with it. THOMAS BUNN. Lancaster, Dec'r 21st, 1871.

Sir.—Enclosed you will find one dollar for the Advocate. I have received four numbers of it, and consider it fully worth the money. GEO. SAGE, SR. Brantford, Dec'r 23rd, 1871.

STRAIGHTFORWARD.

Sir.—We are very much pleased in this section with the straightforward conduct of the Advocate. Much speed to you, and may your shadow never grow less. C. F. MCINTOSH. Hullett, Dec'r 23rd, 1871.

GOOD WISHES.

Sir.—Accept my sincere good wishes for increased success in your undertaking, and that the ensuing year may be a very happy one to you and yours. SAM'L ECCLES. St. Thomas, Dec'r 30th, 1871.

HORTICULTURE.

PLANT TREES.

Plant trees of maple, spruce and pine, Plant trees around and in a line; Plant trees around the homestead dear, Plant trees oftentimes, from year to year; Plant trees for beauty and for shade, Plant trees of cedar straight and tall, Plant trees of oak both great and small; Plant trees in groves upon the farm, Plant trees to keep the cattle warm; Plant trees for shade to milk the cows, Plant trees to shade the beated brows; Plant trees around about the barn, Plant trees for shade to spin the yarn; Plant trees for fancy and for good, Plant trees for beauty and for wood; Plant trees around the orchard fence, Plant trees for good and no expense; Plant trees along the gravel walk, Plant trees to have a pleasant talk; Plant trees of willow, rich and rare, Plant trees of ash with time and care; Plant trees of hemlock, pine and spruce, Plant trees for all that trees are used. SAM'L WHERRY, JR. Newry, January, 1872.

HOW TO PRUNE GRAPE VINES.

Sir.—Having resided in Canada, my adopted country, for 10 years, and having been engaged in the cultivation and propagation of the vine for more than 20 years, I consider it very desirable to express my firm conviction that if the cultivation of the grape and the manufacture of wine was more largely engaged in, it would be attended with good results and prove of immeasurable benefit in a commercial point to this country of ours. I am persuaded that the success of vine culture depends altogether on the perfect knowledge of the art of pruning. I am sure that if the Minister of Agriculture were to appoint earnest, honest, and practical vinerians to go to each municipality and give practical information through the four seasons of pruning, it would prove of great benefit to the people and a source of great wealth to the country at large; and I think the government would be found wanting in its duty to the people if it refused to encourage such commercial and local prosperity.

A few hints regarding the cultivation of the vine may prove acceptable. The vine, if allowed to run wild, will expend itself in wood and branches; or, if kept too low and short, it will produce the same effects. I do not believe in ringing or pinching vines, as is so commonly practiced. The only means of getting healthy vines and plenty of fruit from vines that will be always improving, is to prune as follows:—Every grape vine requires four prunings every year; 1st, to shorten all leaders back to one joint above the last bunch of fruit; leave a leaf on it and one at every joint on the leader where there is space, and train some of the longest leaders. There are three kinds of leaders on all grape vines after they are three years old; everything that comes from the old wood is a leader. The fruitful ones must be shortened as above, but not until they have made 5 or 6 leaves beyond the fruit; the two strongest fruitless leaders to be trained in to fill space or extend the vine; the three inferior leaders must be rubbed off. No grape vine should be allowed to extend by laterals; this should be done about the middle of June. The second pruning is to shorten back the laterals to one joint from the leader, leaving a leaf on it. This is the first spur, but the laterals must not be touched till they have made 6 or 7 leaves from the leader. This is done about the middle of July. The third pruning is to shorten all second laterals back to one joint from the first spur; this is the second or double spur. Leave a leaf on it, and one at every joint. The second lateral must not be cut until it has made 6 or 7 leaves from the first spur. This is done about the middle of August. The fourth or winter pruning is to shorten all leaders back to a strong bud and take off spurs, tendrils, dead wood and old bark. This is done from November to March. The tendrils should never be taken off until the fall after the vine has been winter-pruned. There are only six on it, of which there are two kinds, the annual, which is the fruitful, and the per-annual, which is fruitless. C. BAKER. Westminster, Jan'y, 1872.

We do not coincide with our Westminster correspondent in all his remarks, especially in regard to his vine-culture policy, or with his instructions as to the mode of pruning. We leave it to others to condemn or approve. We wish to encourage all correspondents that give any information, and as our paper is read by G. Leslie and other nurserymen of importance in Canada, we hope they may correct anything they see amiss in the above, or any other remarks in this paper.

THE FARM.

"WHAT I KNOW ABOUT FARMING."

Sir.—You call for farmers to write for your paper. Now, I am bound to make a spoon or spoil a horn. Perhaps you would like to know a little about your correspondent; it is not much to know at any rate. Ten years ago my brother and I commenced to farm, I being 16 years of age, and my brother 5 years older. We had not a cent to call our own, but our mother, who kept house for us, had some stock and implements. It was a hard farm; we have just sold it—110 acres for \$2600. After ten years of hard work we made a good many improvements. We borrowed \$600 from our eldest brother when we commenced, and had \$1800 to pay on the place besides some other debts. The most of our neighbors laughed at us boys, and old men said we would soon be sold out. It was not very good encouragement, but we worked and took some papers, among the rest, the old Genesee Farmer, from whose pages we received good, sound advice; we read and planned to see how we could meet all demands, a very easy thing to do when you have plenty to work on. How careful of every little thing we had to be to turn it to account. I tell you us boys had not such dress and finery as some boys have now, but we conquered and paid all after ten long years of tight management and hard work, with \$500 in hand. We wished to purchase a better farm, as the one we had was very hard and rocky. We sold it as above stated and purchased a good farm for \$5000, paying \$3000 down, and having ten years to pay the remaining \$2000 at 6 per cent interest. We have now two teams of horses, a yoke of oxen and other stock, besides other things in proportion.

If you like to print this you can; it may do some other boys good. If not, don't print it. I will give you my name so you will know who this is from, but will use another name to my articles.

Suggested Items, No. 1.—New Year's is the time for the farmer to look over his accounts and see what he has done during the past year. I take it for granted he keeps an account of all he does and what it costs him, as well as what returns this or that brings in. It is impossible for the farmer to know what is profitable and what is not profitable, without his account books, but not with the returns set down and the costs left out. Set down your costs the same as your wages, and when all is done see how each stands. You know how much one acre of potatoes costs, to prepare the land and seed, weeding, hoeing, &c., and what you get for the potatoes. Keep some for home use at market price; see what your crop amounts to, and you will soon see how much you made or lost by it. But surely no farmer would work his potatoes so poorly as to lose, unless something over which he has no control destroys his crop. Now is the time for the farmer to lay plans for the summer's campaign. Get rails for fencing; your fence will want straightening, and when you are fencing, make your field square, as you will save land by having square fields and straight fences, and besides, how much better they are to look at. Get up your summer supply of fire-wood, and split and pile it up in the woodshed. If you have no woodshed it is time you had one; your wife will bless you for it. It costs something to build one, but not as much as your tobacco. It need not be an expensive house; culled lumber from any of the mills will be better than none, and a piece of an old roof leaned against the kitchen with one length of wood built up at one end will keep the snow out.

We are cutting saw logs now, and the ground being hard with no snow, we can move easily through the bush. I don't know what sort of a man the late owner of this farm was, but he has left a great quantity of cut down and fallen timber going to waste. We have cut over 100 logs of good sound timber, and have besides at least 500 cords of pine wood to cut, worth \$2.50 per cord in Dundas, 8½ miles distant. Supposing it cost 50c. per cord to cut and split, that would be \$250; then, hauling at \$1 per cord, \$500, amounting to \$750, and still leaving \$500. All this was going to waste without having a hand put to it. But instead of paying \$1 per cord in cash for hauling, we intend hauling it with two teams of our own in winter, and it will not take much more to feed the teams going 8½ miles with 2½ cords of dry pine wood, than standing in the stable. We will clear at least \$1.75 per cord on timber that was going to waste. 100 logs, 300 feet per log; 30,000 ft. of lumber worth \$10 per 1000 ft.; \$3000 to cut.

Sir.—La Peerless Potatoes on old, sandy soil on a light d. I dug 42 bush. potatoes plus some quality used. The whole piece the quantity planted on bushels. I alongside to seed and cut gave the w only dug 3 are the be only yield had some t bushel and potatoes, a times and I think by the see McCarling be this ye Dec. 18

THE C Sir.—I better lay myself for amendment ever, I w my ideas reply. I sult, I p more in farmer. In tra be seen that of g ing is ne for roots idea of a good thing. good gr for ever new bu farms a nient s these a have fo for I ne that g while s

It is letter the ol building Canada's genera of con We mo-t g main f of the its cor. Amou and s again the st with T. E for m stock move barn, show sents

B clos catt con gre

Correspondence.

POTATO REPORT.

SIR,—Last spring I planted 14 bushels of Peerless Potatoes; 5 pecks of which I planted on old, sandy land. I planted in drill. I put on a light dressing of manure before ploughing. I dug 42 bushels from this; I had Goderich potatoes planted alongside. The land was the same quality, and the same amount of manure used. The cultivation was the same on the whole piece. The Goderich yielded but half the quantity. The other peck of Peerless I planted on new land. From this I dug 10 bushels. I planted the common blue potato alongside these, and put on five times as much seed and cultivated five times as much land; gave the whole the same cultivation, but I only dug 34 bushels from them. The Peerless are the best potatoes I ever ate; they not only yield largely but grow to a large size. I had some that weighed 2 lbs. each. From the bushel and a half first procured I cooked three potatoes, and in the fall I cooked them several times and found them excellent at each trial. I think you are doing a great deal of good by the seeds you are sending out. How is the McCaring wheat doing, and what price will it be this year?
Dec. 1871.

JACOB MORSE,
Elgin Co.

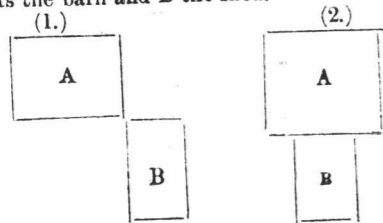
THE CONVERSION OF FARM BUILDINGS.

SIR,—After writing my last I thought I had better lay up my pen for a while and prepare myself for a thorough discussion on the management of agricultural exhibitions. However, I was disappointed, since no one opposed my ideas even after a cordial invitation for a reply. Leaving the exhibitions for the present, I pass to another subject which is of more importance to the purely practical farmer.

In travelling through Canada it can readily be seen that the tendency of farming is from that of grain growing to stock raising. Now, to keep stock as it should be kept, good stabling is necessary, together with a good cellar for roots, although some farmers ridicule the idea of raising roots for stock. But to put up a good stable and cellar is a pretty expensive thing. Moreover, most farmers have tolerably good grain buildings which are large enough for everything on the farm without putting up new buildings. But the trouble is, the old farms are in a wrong position to make convenient stock buildings. I verily believe that these are the grand reasons many farmers have for not raising more stock and less grain, for I never saw a farmer yet but would admit that grain growing impoverished the land, while stock raising enriched it.

It is my intention to give in the present letter some ideas and plans for converting the old grain barns into convenient stock buildings, at an expense within reach of most Canadian farmers. Of course my plans can be general, as it would be impossible to give plans of conversion for every grain barn in Canada.

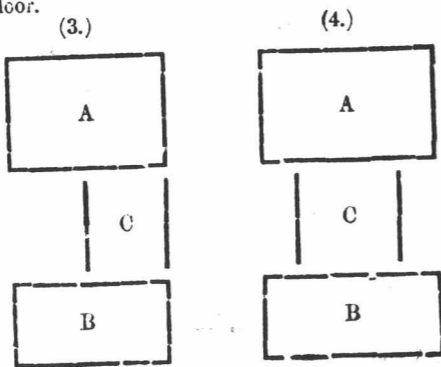
We first notice amongst grain barns that the most general arrangement is that in which the main farm is either on the north or west side of the yard, and an open shed joining one of its corners so as to form a break to the wind. Amongst stock buildings various plans present themselves. Some are bank barns with cellar and stables all under one building. Others again have the cellar under the barn, whilst the stables are in another building connecting with the barn and cellar in the form of a letter T. Both plans have their advantages; but for my part I prefer the latter arrangement. Now, to convert the above grain-barns into stock buildings, all we have to do is simply to move the shed straight along in front of the barn, and we gain the desired position, as shown in diagrams 1 and 2, where A represents the barn and B the shed.



By putting a cellar under the barn floor, enclosing the shed, flooring it and dividing it into convenient stalls, we have room for all the cattle we want. The order of the stalls for convenience in feeding, in the converted shed, greatly depends upon the width of the build-

ing. What we want is a row of cattle on each side, and, if possible, to have their heads facing. If the building is 28 or 26 ft. wide this is easily done; but if only 20 ft. in width it is impossible. This arises from the fact that when the heads of the cattle face each other, we must have a feeding alley, and also a passage behind each row of cattle. In a building 20 ft. in width, the cattle must be arranged so that the droppings of both rows will fall into one gutter. Then, by making a very narrow feeding alley for each row, we have a very fair arrangement.

The above is the simplest and least expensive mode of conversion we can have, but it is not in every way the best. By going to the expense of putting up another building, under which is the cellar, and arranging the whole on a different plan, we can get more room and a better yard. The proposed arrangement is shown in diagram 3, where A represents the old barn, B the shed, and C the new building. This plan may be varied to suit the notions of most men. For instance, the new building might be placed immediately in front of the barn doors, as in diagram 4. This latter arrangement is the most convenient if the barn sits on a suitable knoll, so that by digging out the side of the hill, the top of the cellar can be on a level with the barn floor, and the bottom of the cellar on the same level as the stable floor.



Supposing the buildings are all on the same level, and we use the plan shown by diagram 3, which, in my mind, would be the best in that case, the cellar must be entirely above ground, and there must also be a drive way through it in order to have a convenient way of unloading the roots. If the buildings are arranged according to diagram 4, the roots may be very easily unloaded by driving through the barn over the cellar, and dropping them through trap-doors.

By adopting either of the two last modes of conversion we are enabled to make some very important advancements toward a higher system of farming. A description of these improvements I shall reserve for another letter.

Yours truly,
B. J. P.
New Durham, Ont.

SIR,—I send you a report of the yield of the different varieties of potatoes which I received from you last spring. They were planted 26th May. Yielded as follows:—Bresse's Prolific, 1 peck planted, yielded 19 bushels. Bresse's Peerless, 4 oz. planted, yielded 63 1/2 lbs. Willard's Seedling, 4 oz. planted, yielded 38 1/2 lbs.

Yours truly,
JACOB E. SHIBLEY,

DEAR SIR,—Herewith enclosed please find \$1 to continue your paper for another year. I had thought of stopping when my year was out, not being in agricultural pursuits; but have come to the conclusion that the paper is worth the money to any man, no matter what occupation he is in, if he only had land enough to till to raise 200 head of cabbage.

Respectfully yours,
THOMAS STILES.

SIMPSON'S CATTLE SPICE.

SIR,—I have made a trial of Simpson's Cattle Spice, obtained from you, on pigs, and consider it an excellent article for forcing feeding at a saving. I would say, of 25 per cent. I have no hesitation in recommending others to give it a trial.
J. B. JUSTIN.
Coldstream, Dec. 23, 1871.

FARMERS' CLUB.

SIR,—I am very much pleased with the last number of your paper, and I think it is greatly improved this month; indeed I see marked improvement in the last six or eight numbers. I have not all the papers by me at present, as I have lent some of them to my neighbors to see how they liked them.

In our school section we have been trying to get up a Farmers' Club, and at first found it rather difficult, but have at last succeeded, the first meeting to be held this week. I wish you would give me some hints as to our mode of proceeding and subjects of discussion, through your paper, which may also help other communities as well as ours.

I think you lack a little in one or two subjects in your paper. First, in not advocating the raising of root crops and feeding them on the farm, and also in not advocating certain kinds of farm stables and barns for cattle. I know the latter is a difficult subject to deal with, as nearly every person has some plan of his own which it is nearly impossible to get him to alter, but there are a number of people intending to build that a few hints would help a good deal. I would simply suggest that the stock farm be of a sufficient size and built with a good cellar for roots, and stabling for cattle. The front of the barn or stable facing the south-east, if possible, as most of our cold winds, and in fact, three-quarters of the wind comes from the west and south-west. By facing the barn to the south-east you generally have a fair wind while threshing, and, in winter, you rarely have the wind blowing in your doors, when they are open, causing the stock to shiver and shake while they are getting fed. We live in a part of the country that is now seeing the benefit of feeding up, and, indeed, increasing the fertility of our farms. Nearly all the old barns are without underground stabling, but the new ones show the advantage of them.

I see you are a little elated about the downfall of the old Ministry, and I don't blame you a bit. Did you take notice what Hon. J. S. Macdonald said about the farmers when talking about immigration of farm laborers? He said, "The country should not expend the public money in providing farm labor for farmers—men who had no taxes to pay, except on tavern and marriage licenses—men who were well able to take care of themselves." Now, if we pay no taxes, I should like to know who does; in fact, the farmers pay all the taxes of the country in one way or the other, and if we are able to take care of ourselves, we need not thank the Government for it at all events. I do hope the present Ministry will look after the farming interest a little.

Yours truly,
A FARMER.
Brantford, Jan'y, 1872.

We wish you every success in your undertaking to establish a Club. The object should be to gain and give information, to unite in carrying out good and beneficial plans for the interest of the Club and farmers generally. Fit subjects for your discussion would be such as the following:—Which is most beneficial to the farmer, raising grain or raising stock? Does dairying pay better than stock-raising? Will butter factories pay as well as cheese factories? Will sorghum be more profitable than corn for soiling or winter feed? What is the difference in value between an acre of drained land and an acre of undrained land? What would it cost to subsoil an acre, and what would be the probable result? Can agricultural implements be obtained at a less cost than farmers now pay? Would agricultural libraries be of advantage, and would they be worth the cost? What are the merits of the different kinds of grain and roots? What profit is derived from feeding Simpson's or other spices to stock?

You also have a right to discuss any remarks made by our Legislatures, such as you quoted above, or anything affecting the agricultural interest. Should American hogs be allowed to be imported free of duty, slaughtered and sent out as Canadian pork? What effect will it have on our future markets? And a thousand other questions of great importance may be taken up. Send us accounts of your proceedings and discussions on different subjects, and we will find space for the most important and useful of them. We will treat again on this subject.

THE CULTIVATION OF FRUIT TREES.

SIR,—I think I can write something about the cultivation of fruit trees which may be useful to farmers, as it has been the study of my life, and I am nearly fourscore years. In the year 1806 I read *Forrythe on Fruit Trees*, and was so much interested in his views and opinions that my own observation and practical experience was drawn to the subject.

In my early life there was a generally received opinion that to plant an orchard the land must be well cultivated before the trees are set, and be continually ploughed yearly. What I know about fruit trees is from observation, with ten years practical experience. I

find that when trees are planted from the seed or transplanted from the nursery for an orchard, the most important point is the selection of the ground. This must be the virgin soil, that is, ground never cultivated—if possible, quite new—where the grass has not yet taken root, and where the surface of the ground has never been burned. This ground must on no account ever be turned over by the plow. Let the orchard be well surrounded by a fence or hedge; keep all grass three or four feet from the trees once or twice in the season; keep the trees closely pruned for a few years, which, if properly done, you will not in after years require the amputating saw. Now, the virgin soil is light and porous as a honey-comb, and will forever remain so until turned over with the plow or spade. All the operations of modern science can not operate to bring the tree to such a healthy, luxuriant growth as the virgin soil that has never known the plow. Any person can prove the correctness of this theory by going into a native wild bush and digging a hole 12 inches square and as deep as the soil extends; carefully gather in a box all that is taken out; then add a bucket of water to it and stir it well; then turn it back, and it will only fill the place half full. The soil never regains its light, porous nature after once plowing.

In passing through Canada, we seldom find an old orchard of apple trees in a healthy state, which has been from the first planting annually cultivated. Some trees are dead or dying, others with dead limbs which brings into requisition the amputating saw. Wherever we see luxuriant, healthy trees, they are trees which have ever been beyond the reach of the plow. In the year 1804, in the State of New York, a farmer in beginning, when poor, selected a very steep side hill, cut down all the trees, left them all lying as they fell, burned the brush, and as he had no young trees or money to buy any, he planted about an acre with apple seeds in hills, like corn, sticking a cedar stick at each hill; they were planted very irregular, from 10 to 20 feet, some even much nearer, and at two years old he grafted the best stock in each hill. This was my first practice in grafting. All the remaining young trees were transplanted or destroyed, the timber decayed on the ground, a secure fence was placed round it so that no cattle could enter, and black heavy bushes grew up thickly, but were every year kept clear from the young trees, which, after grafting, grew most luxuriantly, many from two to three feet in the season. I do not know how they were pruned, or if they were ever pruned, but I know that they were well guarded from cattle and that the ground has to the present time never been plowed. I made a special visit to it in the year 1849, and I have seen nothing in the State of New York superior to it, being in a perfect, healthy state without one dead limb.

In the year 1806 I was at an Indian town in Oneida County, where there was a great many apple trees from 4 to 8 inches in diameter, growing without any order on open common. I also took special notice of some trees upon a bank which was too steep for the plow. I visited the place again in 1849, but it had gone into the hands of whites. The land had been cultivated many years and was still annually cultivated. But few trees were remaining and such as were remaining had many dead branches, but little fruit, and that of an inferior kind, while those on the bank side were in full healthy vigor, with no dead limbs.

I would not say that an orchard cannot be planted on old cultivated ground, and with success, but the virgin soil with due care will far surpass the plowed lands with all the combined operations of modern science.
J. H. Gananoque, Jan'y, 1872.

We thank you for your valuable contribution, and hope we may have more from your pen.

WRITING FOR THE PAPER.

SIR,—You say any one that can use a pen can write for the paper, but I think you are a little wrong, for I can use a pen in a middling sort of a way, but writing for the paper is another thing altogether. But if you will promise to correct all my mistakes, I will endeavor to write for your paper, and tell you what I know about farming, which is not much, though I have been at it about seventeen years, but have not half learned it yet. I have read the *Farmers' Advocate* for nearly two years, and I consider it a *Farmers' Advocate* all over, and one well adapted to the farmers' wants in every respect. I am going to try to get up a club for your paper, for I want to see it flourish and grow; I want to see it become a weekly, and a visitor to every house. More next time.
Yours, &c.,
S. W., JR.

Newry P. O., January 8th, 1872.

We shall be most happy to receive communications from you. The only mistake we find to speak about is that you have not written enough.

(Continued from page 22.)

and haul to the saw mill, one mile; after other expenses are reckoned, the cost of the lumber would amount to \$120, leaving \$174 of clear profit. Thus, the timber going to waste would clear a nice little sum for a common farmer. Now this is no uncommon case, for thousands of our Ontario farmers are letting their fallen timber go to waste. Brother farmers, look around and cut up your fallen timber.
Rockton, Jan'y, 1872. H.C. BACR.

John Snell & Sons, Edmonton, Ont., have sold the famous premium Bull, "Louden Duke," to John T. Sayers, of Wythe Co., Virginia. This bull was bred in Kentucky and imported by Mr. Snell in 1866, when but a calf. He has made the best record, both as a show bull and a breeder (as the journals of the Provincial Exhibition will show), that any bull has ever made in Canada. He won four first prizes at Provincial Fairs. At London, in 1869, he won the sweep-stakes for best bull of any age, and stood at the head of the herd that won the Prince of Wales' prize. At Kingston, 1871, he and his calves again won the Prince of Wales' prize for the best bull and five of his calves. His removal from this country may well be regarded as a national loss.—[Communicated.]

As I see a simple remedy for lice on cattle in your last issue, namely, feeding onions to the cattle, I will give my preventative: to take a little of it on the manglers and posts, and spread a little of it on the mangers and posts wherever the cattle rub their necks in the winter. I also put about one pound of sulphur to half a bushel of salt, which I keep in the barn-yard for the cattle to lick as they choose. Since I have tried the above preventatives, I have never been troubled with lice on cattle or calves. One oz. of ointment is sufficient for 25 head of cattle, and will keep them free from lice if applied about three times during the winter. H.G.S.
Gorrie, Jan'y, 1872.

THE DAN. O'ROURKE PEA.

SIR—I received your card, asking for information respecting the Dan. O'Rourke peas.—To commence:—In the Spring of 1869, I saw an advertisement of a Mr. Fletcher, of Belleville, having Dan. O'Rourke peas for sale, at \$3 per bushel. I immediately ordered three bushels; and when I received them I felt somewhat disappointed, as they did not look very nice for the price, and there was considerable of the thistle seed amongst them, which I picked out by hand. I sowed the peas (not the thistles) on the 22nd of May, some ten days after sowing the Golden Vine and the Crown peas. The season proved to be a very wet one, and the land was rather low and unfavorable for them; notwithstanding this, they were ready for harvesting by the middle of August; so was the Crown pea, but the Golden Vine kept blooming on till the middle of September, and consequently was not ready for harvesting until the latter part of September—about the general time for harvesting peas that year in this section. With reference to the yield, I kept no correct account; but the following year I sowed thirty acres of peas—ten acres Dan. O'Rourke, ten of Crown, and ten of Golden Vine. They all made a fair promise for a good crop, and when the wheat was harvested the Dan. O'Rourke's were ready: the Crown and Golden Vine were some ten or twelve days later, and were badly dried; all were in the same field and on high, dry land, with the same cultivation; and when they were threshed I had more peas from the ten acres of Dan. O'Rourke's than from the twenty acres of Crown and Golden Vine. That was two years' experience, and I then came to the conclusion that they were the pea for farmers to raise; and last Spring I sowed all of that kind—a field of twenty acres, which was considered by every one who saw it the best field of peas of this season. As for the yield, I am as yet unable to state the amount. As there are quite a number of gentlemen who have asked for seed, I am having them threshed with the flail, so that they will make good seed; and to thresh twenty acres of peas with the flail is quite a winter's work. I had almost forgotten to mention one thing that makes them very much of a favorite with me—that is, the short time they take to come to maturity, which is a very important thing with me, as I am not a very swift farmer; and when it happens, like this year, that my neighbours have their peas sowed a week before me, and I can have mine ripe and harvested two weeks before them, it is quite an object in preparing the land for fall wheat to have two weeks of a start at that season of the year; and farther, the straw grows to a nice length, not as long as the Golden Vine, yet longer than the Crown.
—Yours respectfully, L. B. D. LAFIERRE.
Paris, Jan. 22nd, 1872.



PRIZE.

Flower Seeds.

In another part of this paper we have shown that no establishments for the express purpose of dealing in the main staple cereals for seed are to be found. On the other hand, every little town has one or more persons who are making a living profit on small seeds and plants for the garden, the window and the lawn; and in each city large establishments are profitably supported by the lovers of beauty.—Our government erected a Seed Ware-room and Agricultural Hall for Farmers, but it has descended from what it was intended for.

Perhaps the largest Seed establishment in the world is James Vick's of Rochester. He has, by dint of energy and perseverance, pushed his business over the whole of this continent, and even into foreign countries. His seeds, so far as our experience with them goes, have been found choice and reliable. It may appear incredible to many of our readers, that his expenses for advertising alone cost between \$100,000 and \$200,000 per annum. This expense is paid by the lovers of the beautiful; by those who are endeavoring to turn this earth from a vale of briars, thorns and tears, to a terrestrial paradise. We consider he is doing a vast amount of good—far more good than some thousands of would-be preachers or teachers of the gospel. His sermons are to be seen all over



the continent, in or about every comfortable home, and are daily and hourly seen. There is a greater and more forcible sermon to be impressed upon the mind by the close observation of one flower, in all its stages, than from the best sermon you ever heard. Have you ever looked in one, and read that sermon to yourself? Do so, and it will do you much good.

Mr. Vick sends out between 100,000 and 200,000 Catalogues, most extensively and beautifully illustrated. He gives them to his customers, and sells them to others at 10 cents—about a fourth of its cost. We offered them to our Subscribers at 12½ cts., but find that we have to pay 9 cents postage if we get them from the States by mail; so we get them by express and pay

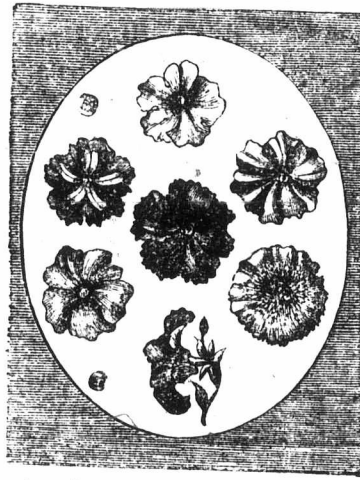


PRIZE.

duty; then we have to put 6 cents on them, to pay postage to our subscribers that wish for them; therefore we must have 20 cents for them in future. We recommend each of our lady readers to send for one. We guarantee that you will be well satisfied with the beautiful and handsomely illustrated Catalogue. We only do this to accommodate our subscribers, as we shall not make one cent on them.

Mr. Vick has had some beautiful chromo-lithograph pictures made, which he supplies at cost. They are really beautiful, and fit ornaments for any of your parlors. The majority of you have never seen such handsome pictures, and you should by all means embrace this opportunity to secure such beautiful and pleasing ornaments. These very handsome pictures appear to us to be fully equal to many of those that you would have to pay from \$3 to \$5 each for.

We here give you a few small cuts showing what pictures he has had made. The expense of getting up one of these pictures would cost a good Canadian farm.—We make the selection of the two marked for prizes, as we consider them the best. They make a handsome pair, and all the improvements in art of the present day has been displayed in producing them.—They are matched in size, being 19 x 24 inches each, which makes a large, handsome picture. We will either give them as prizes for getting up Clubs, or will sell



them to subscribers. As we have to pay duty, express charges and postage, we will supply the pair at the very low price of \$2.50, or a single one at \$1.25.

We recommend these pictures to any of our readers who can afford \$2.50 to ornament your bed-room or living room with something that will always be pleasing.—By all means procure one or both. We guarantee that you will be satisfied; and further we say, if when you have seen these pictures you are not satisfied, return them to us at once, and we will refund the money. Take our advice, and see if we are false or true. Procure the pictures; they are cheering, pleasant and less expensive than the flowers themselves, and more durable. You will not regret sending for them. Get up a club of five and have one

if you cannot get both. The two we have selected are the best made, and remember only \$1 for 5 subscribers. These pictures are guaranteed to give you satisfaction; for only 5 new subscribers to the Advocate, at \$1 each. The picture alone is worth the money in any house. The names of the flowers are sent and an index given.

AT WHO'S RISK?

SIR,—Will you please mention in the Advocate if there is any danger of the money letters going astray, and if so at who's risk?
Yours truly,
Carlisle, P. O., Jan. 9. D. McDONALD.

[Money is at our risk if sent in registered letters. Large sums should be sent by P. O. order or through the Bank.]—ED.

SIMPSON'S CATTLE SPICE.

SIR,—I have tried the Cattle Spice I procured from you. I had previously used Darley's and Harcell's, but Simpson's Cattle Spice I find by far the best. It improved one of my horses in two weeks to such an extent that I could have sold him for \$50 more than I could previously to using it. I recommend it as a real first class article.

JOHN STEWART,
Thorndale.

SIR,—As you requested me to give an account of the product of the seeds I procured from you last, I will now do so. The King of Earlies, 4 oz. (4 tubers, one of which did not grow), made 9 hills, yield, 34 lbs.; Climax, 4 oz. seed, 12 hills, yield, 30 lbs.; Bree's Prolific, 4 oz. seed, 7 hills, yield, 24 lbs.; Willard's Seedling, 5 oz. seed (half rotted before planting), yield, 12 lbs. from 6 hills. I discovered among my Early Goderich potatoes when planting last spring one red tuber with all the marks of a Goderich except color, the Goderich grew alongside of Worcester's, and I think it might be a cross or hybrid from them. I planted the red tuber and grew 19 lbs. with about half a dozen white tubers mixed with them. The red tubers resemble the Willard's Seedling very much, so that it would be difficult to separate them if mixed. I also found a few white tubers among the Willard's Seedling. I am well pleased with the seed received from you. The Early Rose done the best here last season. I sold \$150 worth at \$1 per bushel, and can sell all I have this year at the same price.
Minden, Jan. 8. FRANCIS PEER.

P. S.—I will send you a sample of those potatoes, they are the Willard's Seedling.

THE DAN. O'ROURKE PEA.

SIR,—A year ago last spring, there being considerable talk about the Dan. O'Rourke Pea, I purchased a few for seed, just to satisfy myself whether they were really the article represented or not, and if they were, to improve the opportunity. When I harvested them, I found the vines were literally covered with pods, and on threshing, my most sanguine expectations were realized, the Dan. O'Rourke far surpassing in yield all the other varieties I have raised. The yield was about double that of the Multiplier pea, of which kind my crop was chiefly composed, both being on equally good soil, and having the same care and cultivation.

Indeed, so well pleased was I with the result of the trial I had given them that last season I sowed this kind exclusively, and my good opinion of the pea has been fully sustained. No objections, either, can be raised against them on account of the straw as it grows to a good length; in fact, quite long enough, and is also of as bright a color as the generality of varieties.

South Dumfries, Co. Brant, } JOHN SMOKE.
Jan. 22nd, 1872.

AN INJUSTICE.

As you appear to take an interest in our prosperity, perhaps you would insert the following conversation on the 12th of July:—I went to the London market to sell a load of Chevalier Barley of good quality. The purchaser said they did not want them except to chop for feed, as it would not malt with the other barley. He could only give me 5 cents per bushel less than the price for other barley. I took it to the ware-room according to instructions and emptied it on the top of a lot of common barley of good quality. One of my neighbors came to London with me, he had a load of common barley he sold to the

same person; his top of my Chevalier practice should have been sold to him, and injure our

SIR,—Having gave me entire satisfaction, I can find person me the first year know a better farmer should potatoes, and it

CANADIAN

The fifth annual Dairymen's Assn. Town Hall, on Thursday, the 7th. The executive announcing that by which the one of the most men that has cation. X. A. V. N.Y., will deliver, hold, Esq., of sented to favor prepared articles microscopic images changes in milk following will be 1st—Lauded improvement in delivered at the previous years, to secure fourth 2nd—Deteriorated can early cheese ing flavor, and year suggest as 3rd—Butter Making.—Can their with profiting the cream injuring the quality 4th—Food of has soiling because of winter feeding 5th—Has the past year foreign market sufficient, and want to remedy those 6th—How few years war to the exclusion

We advise meeting, as will be obtained

Canadian fa In spring, s To the De If they do

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Mrs. A. J. sends us th mode of dri "Fill the r repeat it a sec them in such very seldom r We thank tribution, at more useful have a few and willing and practices tended to a farmers' wit the farmers.

His reason were out visi year-old pres if he would r "What is th "I'm too li you; papa k permitted to "The pris ance." "Y brought in.

same person; his barley was emptied on the top of my Chevalier Barley. I think such practice should be made known as such practice must injure the reputation of our grain, and injure our market.

A FARMER.

POTATO DIGGER.

Sir,—Having used the potato digger, it gave me entire satisfaction. I can take out just as many potatoes with a span of horses as I can find persons to pick up. It fully repaid me the first year in the labor saved. I do not know a better labor-saving implement. Every farmer should have one that raises an acre of potatoes, and it will pay them.

W. S. Williams,
St. Catharines.

CANADIAN DAIRYMEN'S ASSOCIATION.

The fifth annual convention of the Canadian Dairymen's Association will be held in the Town Hall, Ingersoll, on Wednesday and Thursday, the 7th and 8th of February, 1872. The executive have the satisfaction of announcing that arrangements have been made by which the coming annual meeting will be one of the most important and useful to dairymen that has ever been held by the Association. X. A. Willard, Esq., of Little Falls, N.Y., will deliver the annual address. L. Arnold, Esq., of Ithica, N.Y., has kindly consented to favor the convention with a carefully prepared article on "Poisonous Cheese," with microscopic illustrations, showing the various changes in milk. Among other subjects, the following will be discussed:—

- 1st.—Tainted Milk.—Has there been any improvement in the condition of the milk delivered at the factories, as compared with the previous years, and what means should be used to secure further improvement?
- 2nd.—Deterioration of Cheese.—How long can early cheese be held with safety before losing flavor, and what does the experience of the year suggest as to early sales?
- 3rd.—Butter in Connection with Cheese Making.—Can the two be manufactured together with profit, and to what extent, if any, can the cream be taken from the milk without injuring the quality of the cheese?
- 4th.—Food of Dairy Stock.—To what extent has soiling been practiced, and the best system of winter feeding?
- 5th.—Has the quality of our cheese during the past year met the requirements of the foreign market; if not, in what has it been deficient, and what steps are necessary to take to remedy those deficiencies?
- 6th.—How does the experience of the past few years warrant making dairying a speciality to the exclusion of grain raising?

JAMES NOXON, President.
R. A. JAMES, Secretary.

We advise our subscribers to attend this meeting, as much valuable information will be obtained there.

PAY FOR YOUR PAPER.

Canadian farmers who your paper read, in spring, summer, autumn, winter, 'To the De'il will surely go, If they do not pay the printer.

G. S. Y., Bramley, Ont.

TO DRIVE RATS AWAY.

Mrs. A. J. Hartley, of Chinguacousy, sends us the following account of her mode of driving rats away:—

"Fill the rat-holes with new-slacked lime; repeat it a second time if necessary. It affects them in such a manner that they soon leave, very seldom requiring a repetition of the dose."

We thank Mrs. H. for her valuable contribution, and we hope to receive some more useful hints from her. Surely we have a few more lady friends that are able and willing to furnish us with some useful and practicable hints. This paper is intended to advocate the interests of the farmers' wives and children, as well as of the farmers.

His reason.—The other day some ladies were out visiting. There being a little two-year-old present, one of the ladies asked him if he would not kiss her. He answered "No." "What is the reason you will not kiss me?" "I'm too little to kiss you; papa will kiss you; papa kisses all the big girls." He was permitted to play with his Christmas tree. "The prisoner has a very smooth countenance." "Yes he was ironed before he was brought in. That accounts for it."

Seasonable.

HINTS FOR THE MONTH.

COLTS.—When there is a foot of snow on the ground, the time is particularly favorable to training and breaking colts to saddle and harness. Gentleness, firmness and sugar are the specifics, with the common sense use of which, we warrant it easy to break any colt not made vicious by bad boys or men.

SHEEP should be kept so assorted in flocks that all can get the proper allowance of feed. Provide a warm shed, feed straw and hay in racks, and grain in troughs; of course, feed some roots, or hemlock boughs, or both.—House ewes near weaning time, where they will have room, warmth and comfort. Visit all the stock personally the last thing at night and the first thing in the morning. Give salt frequently, and let them stand several hours in the yards every day if fair.

CROPS are to be cut on mild days, and kept in sawdust or moss until wanted. Earth or sand will keep them as well, but they are less pleasant to use than when kept in moss or sawdust.

MANURE may be hauled out to the distant fields when there is good sleighing; but it should only be such as is well composted, and which will neither wash nor deteriorate essentially by exposure. It may easily be put in this condition by the use of muck, but very little that is hauled to the field in the winter time is so protected from the action of the weather, and half to two-thirds is wasted. Attend to the manufacture of manure early and late in summer and winter. Your success in husbandry depends mainly upon this article. It pays even upon good lands by making them better, and securing larger and more economical crops. Be avaricious of fertilizers. It is often convenient to draw muck and peat from the banks of ditches that have been dug in summer. Some swamps are accessible at this time that cannot be approached in summer. A farmer can never have too much muck on hand, if he has an acre of meadow that does not produce three tons of hay.

BUILDINGS.—Timber may be prepared for any repairs, or for new buildings which may be desired. Pine, Spruce and Hemlock, may be cut at this season. Stables and cellars should be opened and aired on warm dry days. A little salt sprinkled around posts, which form the foundations of corn cribs and similar structures, will prevent their being harmed by the frost. This is true of gate posts.

ORCHARD.—Mice like to work under cover, and if dead weeds or other litter lie close to the trees, they will be very apt to bark them. Clear away all rubbish, and after a snow-fall, go around and press the snow firmly around the trunks. Surrounding the base of the trunk with a cylinder of tin or sheet iron, may be practised where there are not many trees. A solid, smooth mound of earth, about a foot high, will protect them; but when snow covers this, the mice will work under it if it is not trampled hard.

GRAPE VINES, if yet unpruned, may be attended to on mild days. Even the hardest do all the better if laid down and covered with earth. Make cuttings and bury them. Pruning trees may be done, provided no large wounds are made. Better now than not.

POULTRY is one of the most attractive features of the barn-yard, and when well cared for, nothing pays better. In fattening geese and ducks, give them a pen for two weeks before killing. Hens and turkeys we have thought fattened quite as well at large. But they should be fed frequently with a variety of food, and have all they can eat. Arrange to have eggs in winter. A room on the south side of a hill, with plenty of glass, is almost indispensable. The birds must have animal food in some form, broken shells and dust to roll in. Eggs in winter always bring a high price in city markets. Select for layers the early pullets of last spring.

A lawyer recently defended a man who had stolen a chicken from a farm yard. He said his client was insane. "I do not see in this theft anything that would account for the insanity of the prisoner," remarked the judge. "I beg your pardon," replied the lawyer, "this poor fellow is certainly insane. He stole a poor skinny chicken, when he might have taken a nice fat pig."

Why do draughtsmen like cold weather? Because they can draw round the fire.

KNOWLEDGE REQUIRED IN FARMING.

There are many who look upon farming as rather a small business, who think that its successful prosecution requires only a little common sense—just enough to prompt the hardy worker to seek shelter in a rain storm, and a very little knowledge, just sufficient to count a flock of sheep or read a political newspaper. The opinion was once more general than now, for the world is growing wiser, yet at the present time it is entertained by many. It is an old and true saying, that "honor and shame from no condition rise, that honor is only acquired by a-fine well our part in whatever situation we may be placed. A man of ability and knowledge who devotes all his energies to his business will make it honorable and profitable no matter how insignificant that business may at first seem.

There is no business requiring such requirements, so much knowledge, so much good judgment and commercial ability combined, as is necessary for the thoroughly accomplished farmer. He stands first among the manufacturers of the land, he makes the wheat and corn, the beef and mutton and pork, the wool and flax; and manufactures from the earth, the air, the water, nearly all that we eat and wear; and this is not only done by farmers as a class, but almost every one produces many if not all of these articles.

The manufacturer usually confines his labors to the production of one article, but the farmer is by necessity compelled to make many. If he would make grain he must also make beef or butter and cheese, or mutton and wool. Hence the necessity of extensive knowledge. It is an easy matter for the manufacturer to ascertain how much wool will make a yard of cloth of a certain description, and what it will cost; but it is not so easy for the farmer to ascertain how much grass or hay or grain will make a pound of wool. The manufacturer can test a new machine and ascertain by a few simple trials, whether it will manufacture the desired article cheaper or better than the old one; but to ascertain how a pound of beef can be made the cheapest, what machine will convert hay into rich cheese in the cheapest and best manner, is a matter requiring a good deal mere care and skill.

Among his varied acquirements, the farmer should possess a knowledge of animal physiology, so as to be enabled to keep his stock in health and administer proper remedies in case of sickness. Vegetable physiology, too, must not be overlooked. Every day during the growing season, the farmer performs work for the growth of his crops founded on the known laws which govern vegetable life. Entomology is a science which the farmer is compelled to study to some extent, and often much more perhaps than he desires, but the mere he does so the better he is fitted to wage a successful war against thousands of destructive foes.

In addition to all this the farmer must be a merchant, for he must sell as well as manufacture. He must in some measure take advantage of the rise and fall of prices, select the best time for selling and the best market, or after his toil and anxiety he may find a poor return.

When we contemplate this subject at which we have merely glanced in all its bearings we are led to exclaim, Who is competent to do this work! Heartily do we pity those who think that farming furnishes no scope for the exercise of knowledge or ability. If this opinion were entertained only by those engaged in other pursuits, it would be of no serious consequence; but we judge that many farmers have themselves imbibed such unfounded and unjust opinions in regard to their calling, and where this is the case there is an end to all improvement and all desire for improvement. A man must have a good opinion of his calling, a proper appreciation of its importance, and the means and information necessary for its successful prosecution, or he cannot hope to succeed.

Setting him right.—"I stand," said a Western stump orator, "on the broad platform of the principles of '68, and paised be mine arm if I forsake 'em!" "You stand on nothing of the kind!" interrupted a little shoemaker in the crowd; "you stand in my boots that you never paid me for, and I want the money."

Why do women spend so much on dress?—To worry other women.

Who was the first convict?—Adam; he was condemned to hard labor for life.

Notice

We much regret to inform you that our highly esteemed and most honorable and useful clerk, John F. Simpson, Esq., is about to leave us. He has been with us a long time, and has attended to our correspondence, kept the books, and looked after business generally in the most satisfactory manner. He is a Scotchman, and a baker by trade, and had been an extensive grain dealer and miller in Leith, but reverses caused him to come to Canada. He now sees clearly that he can make more money in one year by following his old trade (baking) in this city, than your editor has made in 7 years. Therefore he wisely concludes to "paddle his own canoe" in his own channel, and we doubt not but that he will command a share of the trade of this city. He takes from this office our utmost respect for him, and our best wishes for his prosperity. We shall now require two assistants—one to attend the seed and implement department, and the other for our office. We would prefer the former to have a knowledge of the seed business, and the latter to know something of farming operations, both to understand book-keeping.

We should also prefer those who might be well connected, as they will have the control of some cash!

We anticipate having other establishments in connection with the main Emporium as soon as we get it in proper order. It is now in a more prosperous condition than it has ever been. We have now made a position, and we intend to keep it increasing.

Preference might be given to such as have at any time sent us in a good, sound article on an agricultural subject, as they might be required to act as assistant editor, perhaps, if they shewed themselves fit for the position.

We wish for and ought to have more out-of-door air than we have had for the past seven years.

A BIT OF POETICAL PROSE FOR LEAF YEAR.

Tell us not in idle jingle "marriage is an idle dream," for the girl is dead that's single, and things are not what they seem. Life is real, life is earnest, single blessedness a fib; "Man thou art to man returneth," has been spoken of the rib. Not enjoyment and not sorrow, is our destined end or way, but to act that each to-morrow finds us nearer marriage-day. Life is long, and youth is fleeting; and our hearts though light and gay, still like pleasant drums are beating wedding marches all the day. In the world's broad fields of battle, in the bivouac of life, be not like dumb driven cattle, be a heroine—a wife! Trust no future, however pleasant; let the dead past bury its dead; act—act in the living present, heart within and hope ahead. Lives of married folks remind us we can live our lives as well, and departing leave behind us such examples as shall tell—such examples that another, wasting time in idle sport, a forlorn unmarried brother, seeing, shall take heart and court. Let us then be up and doing with a heart on triumph set; still contriving, still pursuing, and each one a husband get.

A cleanly shaved gentleman inquired of a fair demoiselle the other day, "whether or no she admired moustaches." "Oh!" replied the charmer, with an arch look: "I invariably set my face against them." Very shortly afterwards his upper lip betrayed symptoms of careful cultivation.

A bit of contention.—Quilp and his wife had a bit of contention the other day. "I own that you have more brilliancy than I," said the woman, "but I have the better judgment." "Yes," said Quilp, "your choice in marrying shows that!" Quilp was promptly informed that he was a brute.

Why is a doctor better taken care of than his patients? Because when he goes to bed he is sure to have somebody to wrap him up.

Why is the fashionable lady a prudent one? Because she tries to make her waists as small as possible.

When is a ship like a scarf pin? When it's on the bosom of a heavy swell.

A man in Boston is said to be so short that when he is ill, he doesn't know whether he has headache or corns.

When is an ox not an ox? When it is turned into a meadow.

Miscellaneous.

Srs.—I send these few lines to you for the Advocate. You can print them if you like, and if they do not suit you, you know where to put them. Yours, A. ADAMS.

P. S.—I am trying to get some subscribers for the Advocate. A. A.

A PLEASANT VOCATION.

I wish I was an Editor,
I really do, indeed;
It seems to me that Editors
Get everything they need.
They get the biggest and the best
Of everything that grows,
And get in free to circuses
And other kinds of shows.
When a mammoth cheese is cut,
They always get a slice,
For saying Mrs. Smith knows how
To make it very nice.
The largest pumpkin, the longest, best,
And other garden stuff,
Is blown into the sanctum by
An Editorial puff.
The biggest bug will speak to them,
No matter how they dress;
A shabby coat is nothing if
You own a printing press.
At ladies' fairs they are almost hugged
By pretty girls who know
That they will crack up everything
The ladies have to show.
And thus they get a blow-out free
At every party feed;
The reason is because they write,
And other people read.

Bury's Green, Jan'y 8th, 1872.

Selected for the Advocate by "A. A.," of Bury's Green. Yes, to be sure, we have room for good selections and are pleased to find some that are willing to make up the paper. Send on plenty of good matter and we will find room—extracts or writing, if only furnishing valuable information.

THE NORTH-WEST TERRITORY—COST OF LIVING IN FORT GARRY.

Rents in Winnipeg are very high, much higher than in London. Wood sells at \$7 to \$8 a cord and soft poplar wood at that. Hay is very scarce and dear, large quantities having been burnt by the prairie fires, which were exceedingly numerous and destructive. There being no market, it is hard to state accurately the prices of produce and stock, and any person wishing to buy has to make a tour of the settlements in order to get such articles, and then often meets with disappointment and exorbitant rates. Prices of produce, etc., are about as follows: Wheat (spring), \$1 to \$1.25 per bushel. No fall wheat grown in the country. Barley same price as wheat. Oats none to be had. Peas, ditto. Butter, 40 to 50 cents. Eggs, none. Fowls, none for sale; turkeys, geese and ducks, none in the country—tame ones, I mean. At certain seasons of the year there are immense numbers of wild ducks on the lakes and rivers, but wild geese are very rarely seen in this section. Beef by the quarter, 9 to 10 cents; retail, 14 to 20 cents. Flour, \$3.75 to \$4.25 per cwt. (I have not seen any first class flour since my arrival here last spring.) Millers take every sixth bushel for grinding. Fresh pork, 13 to 15 cents per lb.; mess pork, 25 cents per lb.; smoked hams, 25 cents per lb. Cows scarce at about \$60. Oxen about \$150 to \$225 per yoke. Horses about double your price in Ontario, but Canadian horses do not thrive well here, and many have died this season from the effects of bad water, etc. Candles 37½ cents. Golden syrup, \$2.50 cents per gallon. A common white cup and saucer, 25 cents; a plate, 25 cents. Coffee, 50 cents. In fact, nearly all articles of household use and wear are just about double Ontario prices.

The thermometer has never raised above zero since the 21st November, except on the 1st December. It was two degrees above zero a short time. The days have usually been bright sunshine, and clear moonlight nights, with very little or no wind. On one or two days, however, there was considerable wind, and when the thermometer rose to zero we felt it comparatively comfortable; but frost 35 degrees below zero cannot be described—it must be felt to be realized; and I am informed that it goes 10 or 15 degrees lower than that; but frost at 35 is not so bad as 16 or 18 degrees below, with a wind; then it is almost impossible to go out doors. The snow is so hard and sharp that it fairly cuts the face, and exposed parts freeze almost instantaneously. It is well that the volunteers arrived ere this

frost set in, or very many of them would inevitably have been badly frozen, and as it was some of them suffer from frost bites.—Advertiser.

FROZEN APPLES.

It is not an unusual thing for apples to be frozen after they are gathered, especially when they are for a time kept in an out-building, as is the custom of many before storing them in the cellar; but it is not generally known that apples are not much injured from being frozen, provided they are kept in a dark place and will thaw out gradually. Frozen apples lying in heaps in out-buildings should be deeply covered to confine the air and perfectly exclude the light, until the frost is out of them; besides this, when it can be done, the room should be darkened, or what would be better, remove them to a dark cellar in which the temperature is six or more degrees below freezing. We say six degrees, because sound apples not yet mature will thaw out at a temperature less than this. But wherever they are kept the frost should not be extracted too suddenly, nor must the light be allowed to strike them while they are thawing, because a frozen apple, from some cause not yet well understood, if thawed out in the dark will remain plump and sound, while if thawed out in the light, even though the sun should not shine on them, they will afterward be soft and spoiled.

Again, it often occurs that apples get frozen in barrels on the way to market; keep such barrels headed up, and if holes have been bored in them, close them up to confine the air and exclude light. The best place for these apples would be a cold cellar, because in such a place the frost could be more gradually drawn out; but it will answer without removing them from the barrels to store them in an out-building or shed, covering deeply with straw. So protected, they may be kept frozen all winter if desired, and will when they come to thaw out be fresh and sound. We have known apples headed up in barrels and kept deeply covered with straw, but not so deep but they were several times frozen and thawed during the winter, and yet the following spring they were sound and in quality equal to some variety kept in cellar.

Frozen apples, however, must always be handled with great care; for when hard frozen they are unyielding, and rattled together they will be covered with shallow bruises, which on being thawed, first turn brown, and soon afterwards decay.

USING FRESH MUCK.

We are often told even by those whom we regard as high authority, that muck should never be used until it has been exposed to the weather a year, or after being composted with manure. I have had some experience with muck, and I do not agree with these writers. My first trial was made on a gravelly knoll, where I put a one horse load fresh from the muck-bed. Sowed the piece to buckwheat. Where the muck was it grew very rank; lodged and rotted before the rest of the piece was ripe.

Since then I have tried it as a top dressing on grass land, and was satisfied that it doubled the crop the first year, but not so much benefit the second year as manure generally is. I have doubled the hay crop on my farm, and claim that I have done it by using muck, and have used very little that has been out of the bed a year. I dug a ditch through the muck-bed, and since then when I have wanted to draw out a few loads, I have taken it from the side of the ditch and spread it on the grass land. I do not say it is better used in this way, but I think it pays and saves some labor.

The best top dressing I ever used was made by slacking lime with brine and mixing it with muck shoveled up in June, and spread late in the fall. It showed the effect for six years. I think that if farmers knew the value of lime, salt, and muck, phosphate would be a drug in the market.—Cor. Vermont Farmer.

POTATOES.

We all observed the great deterioration in our potato crop during the past ten or twenty years; and what is the cause of this alarming decrease of tubers? Can science, can chemistry, point out the reason or aid in remedying the difficulty? We think it can, and in order to place the matter in a clear light, we will point out the kind and amount of food which the potato demands. We had a field of potatoes upon the farm which yielded 300 bushels to the acre; this may be regarded as an old-fashioned crop. This crop removed from the soil in tubers and tops at least 400 pounds of potash; also it removed 150 pounds of phos-

phoric acid. Now these amounts are very large, and serve to show that the potato plant is a greater consumer of the two substances, and in order to restore our potato fields to their former productive condition, we must supply phosphatic compounds and substances holding potash in large quantities. For six or eight generations in New England, our fathers have been exhausting the soil, by removing these agents in the potato and other crops, and we have reached a time when the vegetable is starving in our fields for want of its proper food. Our fathers have found that new land gives the best crops and this is due to the fact that such fields afford the most potash. But so long as we crop our pastures so unreasonably, we cannot resort to new land, as land is not new that has had its potash and phosphatic elements removed by grazing animals. Remember that a potato-field which gives but 100 bushels to the acre requires at least 160 pounds of potash; but by allowing the tops to decay upon the field, 60 pounds of this is restored to the soil again, as that amount is contained in them; a medium crop of potatoes requires twice as much phosphoric acid as a medium crop of wheat, so that in two years with wheat the land is deprived of no more of the agent than it loses in one year with potatoes.—Boston Journal of Chemistry.

SONG OF THE OLD DIRAGOON.

Och! it's here I'm entirely contented,
In the wild woods of sweet Mericay;
God's blessings on him that invented
Big ships for crossing the say.

Here praties grow bigger nor turnips,
And though cruel hard is the work;
In Ireland we've nothing but praties,
But here we have praties and pork.

I live on the banks of a meadow;
Now see that my mairing you take,
It bates all the boys of old Ireland,
For six months in the year its a lake.

Bad luck to the beavers that dammed it,
I wish them all kilt for their pains;
For sure, though the creatures are clever,
Th'sartan they've drowned my domains.

I've built a log hut of the timber
That grows on my charming estate,
And an elegant root-house erected,
Just facing the front of my gate.

And I've made me an illigant pig-stye,
Well littered with straw and wild hay,
And it's there, free from the noise of the
childher,
I sleep in the heat of the day.

It's there I'm entirely at ease, sir,
And enjoy all the comforts of home;
I stretch out my legs as I please, sir,
And dirame of the pleasures to come.

Sure 'tis pleasant to hear the frogs croakin',
When the sun's going down in the sky;
And my Judy sits quietly smokin',
While the praties are bilt till they're dry.

Och! then if you love independence,
And have money your passage to pay,
You must quit the old country entirely,
And get here the beginning of May.

TRANSPORTATION OF CATTLE BY RAILWAY.

It has not infrequently been alleged by parties concerned in the cattle trade, and by railway officials, that cattle will not eat or drink in cars. Experience proves the falsehood of this notion, which might well have been set aside as ridiculous even without being put to the proof. Animals will eat and drink whilst the train is in motion, at least if the motion is tolerably equable; but even if they would not do so, they might easily be fed and watered whilst the train stops at stations or is detained in sidings, as is often the case with cattle trains.

Troughs at railroad stations are, under any circumstances, a mere absurdity, and the only trough of any real use would be one or two in each car itself, to be filled by a hose as the engine is supplied with water.

Nor can it be said that there is any impossibility in this; for a trough of this kind, capable of adaptation to the ordinary cattle cars, has already been contrived by a Mr. Reid, near Edinburgh, Scotland, who received, in 1865, a medal for his invention from the Highland and Agricultural Society of Scotland. This plan, which is simple, could, without doubt, be modified or improved, so as to be applied to the cattle cars of this country at a very small cost. By its use the cruelty inflicted on ani-

mals would be greatly diminished, although other things are also requisite to make a mode of railroad transportation such as considerations of humanity require.

The exposure of cattle to cold winds and kinds of weather in the ordinary cattle cars is very injurious. Animals which have been accustomed to the shelter of feeding-stalls or farm-yards, are placed in cars, into which cold and wind may beat during their long transit. The effect of this is naturally bad. Not only are the frequent concussion of the trains, when railway trains are unprovided with buffers, or springs, or when cattle cars in trains containing others loaded with minerals or other heavy goods. To convey cattle by railway without any precaution against what must be a very serious shock to the animal system, is both a cruelty and a serious injury to the health of the animal, and consequently an injury to the healthfulness of the beef from animals slaughtered under such conditions.

It is evident that the whole system of transportation of cattle by railway needs reform. The old way of driving cattle along the road is no longer to be thought of. But the method must be brought into accordance not only with the interests of railway companies and with facilities which railways afford, but with the condition required for the animals themselves; and so must serve for the general benefit of the public, to whom their healthful transport is in one point of view an easy matter of dollars and cents, whilst in another it is a question of humanity, and demands the attention of every one who detests cruelty to animals, and particularly when perpetrated on a large scale.—Episcopalian.

Autumn is the time to work the land, and spring the time to drain it. Winter is the time to draw the tiles, to make manure, and to do anything that will facilitate the work of the spring and summer. In the spring, when the ground is wet and loose from the effects of the frost, an underdrain can be dug with one third less expense than in the fall. When the plow are all laid and the tiles on hand, a good deal of draining may be done in the five or six weeks in spring before we need to plow in corn. Some one writes that Harris has underdraining on the brain. In reply, Mr. Harris says:—If I have, and the disease is contagious, I should like to communicate the disease to half a dozen of the most intelligent farmers in every town and post-office what my writings abound. Underdraining will be the great farm work for the next quarter of a century. Wherever draining is needed—I have never yet happened to see a farm where some portions of it did not need draining—no real or permanent improvement can be effected until this work is done. I recommend no extravagant expenditure of money. Those who have the capital to drain the land completely at once, would find it to their interest to devote a year or two principally to this work. But there are few such men. Most of us must drain a few acres each year, as we can afford the time and money. Our commence and do the work thoroughly as far as you go, and there is scarcely a man who will stop until his whole farm is drained wherever needed. If I could induce every reader to make up his mind never to let a year go past without making a few rods of ditch, I should feel that I had accomplished something worth living for.

Put in stone drains if you can not get tiles; but the latter, where they can be obtained at any reasonable price, are far cheaper and better. I have some stone drains that work very well; and two or three brush drains that do more or less good, but I have one stone drain that is stopped up, and several brush drains that are useless, but I have not a single tile drain that does not do good service. I have some that are not deep enough, but I was bothered to get a good outlet. Some of my neighbors have not "underdraining on the brain," and it is not always easy to persuade them into cutting ditches deep enough to carry off the water. The only cure for this is, more light, more agricultural papers, and more neighborhood Farmer's Clubs.—American Agriculturist.

PAINT FOR FARM IMPLEMENTS.
A coat of good petroleum will make a good foundation to commence with. To cover this boiled linseed oil should be used, mixed with a portion of litharge, or patent dryer—about a pound to the pint of oil. For color, use red lead, lamp-black, Paris green, Prussian blue, or red or brown oxides of iron (commonly called fire-proof mineral paint.) The green and blue are costly colors.

This being would call the the "Stevens" and storing Health for D

For one fa each way, by ground, three feet high, on the ice shall dig out the clay down twice in a pile space of eight the boards will some thick board roof, lo on for vent the north side can be located a small stre through the wa whole mass could thus l last from one

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ICE HOUSES.

This being the season for storing ice, we would call the attention to what is known as the "Stevens plan" for erecting a cheap house and storing ice, from Hall's Journal of Health for December:--

For one family, make a house twelve feet each way, by setting twelve posts in the ground, three on a side; board it up, eight feet high, on the inside, so that the weight of the ice shall not press the boards outward; dig out the dirt inside, six inches deep, and lay down twelve inches of saw-dust; pack the ice in a pile nine feet each way, filling the space of eighteen inches between the ice and the boards with sawdust or tan bark, with the same thickness on top; make an old fashioned board roof, leaving the space above the ice open for ventilation. Have a small entrance on the north side of the roof. If the ice-house can be located on the north side of a hill, and a small stream of water introduced slowly through the roof, on a very cold day, so as to make its way between the pieces of ice, the whole mass will freeze solid; or a pile of snow could thus be made into solid ice, and would last from one winter to another.

RECIPES FOR CURING BEEF AND HAM.

We give the following selected recipes, thinking some of our readers may be beginners in this work, or, it may be, have forgotten their formulas.

For every 100 pounds of beef, 7 lbs. salt, 2 oz saltpeter 1 1/2 lbs brown sugar, 4 galls. water. Boil and skim, and pour over the meat when cold. If properly packed, that amount of water will cover the meat. For pork, pack the hams and shoulders together. To every 100 lbs. take 8 lbs. salt, 4 oz saltpeter, 1 1/2 lbs sugar, 4 galls water. The hams and beef for drying may be taken out after four weeks. To keep the meat after warm weather, the pickle will have to be boiled. The following proportions are for one thousand pounds of meat: Mix 2 1/2 lbs. saltpeter, finely powdered, 1/2 bushel fine salt, 3 lbs. brown sugar, 4 galls. molasses. Rub the meat with the mixture; pack with skin down. Turn over once a week and add a little salt. After being down three or four weeks, take out, wash, and hang up two or three weeks, until it is dry. Then smoke with hickory wood three or four weeks, then bag, or pack away in a cool place—not a cellar—in chaff or hay.

Another way of curing hams, said to be very good, is first to take out all but the straight bone, then lay in a cellar to cool for a day or two. Heat the salt used in a pan on the stove until you can just handle it, and rub the hams well with this and return to the cellar. Repeat the operation three or four times with intervals of three or four days between each, and the curing is complete. In summer put the hams in a brine to keep.

ECONOMY IN HORSE-SHOEING.—A writer in the Western Rural, alluding to the frequent necessity of shoeing teams that are much driven in winter, says the best way to make the calks of the shoes to have them last, is to take steel from the worn-out sections of your reapers, which are always at hand, unless they have been carelessly thrown away, split the calks, and insert a small piece therein, weld it well, and sharpen so that the steel is even with the sharpened calk. In use, the iron being much softer than the steel, wears away much faster, and the steel being thin and strong will keep an edge or point as it may be, for a long time. True, blacksmiths do not like to do this, because of the business and profit in shoeing; but if one will not, another will; and you will find one shoeing thus, generally, will last all winter and save trouble and expense.

FARM HOUSE CELLARS.—These are too often sources of disease or death. Farmer's families ought to be the most exempt of any from sickness which arises from unclean surroundings. Sometimes, oftentimes, in fact, a farmer's family is thinned fearfully by malarious diseases, even after frost is supposed to have rendered malaria innocuous from the sources whence it is ordinarily supposed to emanate. Too often the cause of these maladies lies in the cellar. Fruits and vegetables are stored therein and it must be warm and close to keep out the frost. Decay takes place, and gasses are evolved, which find their way to the upper rooms and poison the occupants. Children and weakly people are especially susceptible to their effects, and fevers, throat disease and colds prevail. The cellar should be used as little as possible as a store-house for vegetable matter, which may decay or change, and it should be well ventilated.

FARM IMPLEMENTS.—Petroleum will make a good preservative with. To cover this should be used, mixed with a little turpentine, or patent dryer—about a quart of oil. For color, use red, Paris green, Prussian blue, or oxides of iron (commonly mineral paint.) The green colors,

SORGHUM FOR FODDER.

At a late meeting of the Farmer's Club, the subject of sowing being under consideration, Mr. Ottis said he once planted an acre of Sorghum, which made a great growth, averaging ten feet in height. The stalks at the butts were nearly as big as his wrists. It was cured and fed to the cattle, and the animals ate it all up clean. They would leave any other fodder for the sorghum, and chew the bits until they were all gone. He advised planting it like corn in rows and hills, and leaving it in shocks in the field until wanted for feeding.—American Rural Home.

If any of our readers have sown sorghum seed by the side of the corn when sown for fodder, we should be pleased to hear the results. Our opinion is that it may be profitable. [Ed.]

THE CLOVERS.

The clovers form the basis of much of the best husbandry of the country. It is cultivated for four distinct purposes; for hay, for pasture, for seed, and for manure.

There are two varieties of red clover, a medium height, and a very tall or sapling clover. The medium is the variety most generally cultivated at the North for hay and for pasture, and the tall, or sapling is cultivated where manuring the land is the primary object. White clover is a pasture grass very much prized in the best dairy regions. The Alsike clover has been recently introduced, and is a medium between white and red clover.

Red clover is very fine, both for pasture and hay, and on good land yields from one to two tons per acre. White clover is not useful only for pasture for cattle and for bees, as it is of small growth. Honey made from white clover is prized above that made from any thing else except Alsike clover, which is probably equal if not superior to white clover for this purpose, and is valuable for pasture, and will do very well for hay, but makes a light crop. If either is sown for bee-pasture, the Alsike is to be preferred, as it yields more honey, and is more valuable for cattle, on account of quantity.

The usual mode of sowing clover is to mix from four to eight quarts each clover and timothy seed together and sow on one acre, in the spring of the year, on ground sown with winter wheat, before the spring rains have passed. It is greatly benefited by using gypsum or lime on the ground after the seed is sown, as clover is emphatically a lime plant.

If the object in cultivating clover is to make hay it should be cut when it is in full bloom, and cured in the cock, by letting it stand for several days, opening it once or twice before drawing in. It is greatly injured for hay by standing until the blossoms have become dried up. In stacking or putting in the barn, care should be used so as not to put a great quantity together until it is fully dry.

In cultivating clover to manure the land, it should be sown one year and then plowed in the next for wheat, or other crops, when it is in full growth. Light sandy soils without any organic matter in them will not produce clover or anything else; but such as contain a small per cent of organic substances, either vegetable or animal, or both, will produce clover and other grasses and grain, though in an imperfect degree. If clover seed should be sown on light sandy soil, without animal manures, it should be accompanied with gypsum or lime, or superphosphate of lime, which will add very much to its growth by furnishing sulphur to the plant. Gypsum is composed of sulphuric acid and lime, and all plants require these for growth.

In an attempt to cultivate clover on light sandy soil much patience and perseverance are essential to success, because the progress will be slow, yet if it grows but imperfectly at first and is buried in the soil and seed sown again the organic matter will be very much increased, and perseverance may terminate in satisfactory results. Clover, on account of its long tap-roots, is better adapted to improve the soil than any other vegetable, because the roots bring up from the sub-soil various salts which are essential constituents of plant growth.

CURE FOR CURB.

Curb can be cured if not of long standing, by using fomentations of hot water for twenty minutes, followed by a blistering ointment of biniodide of mercury and lard. Continue daily until a good blister is formed. As this is a very poisonous substance, the great caution in using it is necessary.

TO TAN SHEEP-SKINS FOR WHIP LASHES.

Soak them in weak lime-water, to remove the wool, and then rubbing them with oil or grease with a pressure of a roller thicker in the centre than at the ends. They will absorb a large quantity of grease. Finish with chalk or whiting.

Pen makers are a bad lot. They make the people steel pens, and then say they do write.

Youths' Department.

ANSWERS TO PUZZLES IN LAST ISSUE.

"A FARMER," Brantford, says he has found out the puzzles in our last, and sends the answers to them. 1st, the riddle is "a chair;" 2nd, entitled "often true," is "a fool and his money are soon parted;" 3rd, caution, is "be above making trouble in a family;" 4th, Geographical puzzle, is "Turkey in Europe;" 5th, illustrated rebus, "think before you speak;" 6th, "where is the enemy?" is a white fox; 7th, is "good advice—waste not, want not."

ACROSTIC.

Farmers they plough, and they sow, and they reap, And grow corn for the poor and corn to keep; Reaping, and mowing, and saving the hay, Making a fortune for some rainy day. Early and late the poor farmer he digs, Rearing his cattle, his sheep, and his pigs, S. WHEBRY, JR., Newry, Ont.

CROSS-WORD ENIGMA.

My first is in snow, but not found in rain, My second in soul, but not in the brain, My third is in knowledge, but not seen in lore, My fourth not in the house, but is in the door, My fifth in a whale, but not in a piece, My sixth in uncle and also in niece; My whole a nice city rising fastly to fame, When you make out the parts, you will then know its name.

RAISING YOUNG PIGS BY HAND.



We all know there are improvements going on in agricultural affairs as well as in mechanical—improved plans of management, patent inventions, &c. We have often lost valuable little pigs, despite warm wrappings, a place by our fire-side, and the efforts of wife and family to save them with a spoon and milk and sugar. We have seen the celebrated breeder, F. W. Stone, Esq., of Moreton Lodge, Guelph, take a little half-dead, half-frozen new arrival of the pig tribe, and, by what he termed "his mesmerism," start the little grunter off on a run. His process was to lay the pig down on the ground and give it such a rubbing as it never had, which put us in mind of a black barber shampooing one of his patients. The plan above illustrated may be novel to many; it certainly is a very elevating and sensitive mode, and will cause a pig to open its mouth (not an easy matter if you want to physic one.) We are not aware that there is any patent of this process, so all that choose may avail themselves of it. We think no further commendation on our part will be needed.

MARY'S SMALL VITE LAMB.

Mary had a small vite lamb, Mit fur so fine like silk, Und efery dime dot lamb vood shgwel, She'd give id bints of milk. He vas a nice und poody lamb, He's frond name dot vas Pede, Und ven dere vas some milk around He vas bully on der ead. Dot lamb he used to play mit her, Und frisk, und jump, und run, Und chase her all around der place By Golly, dot vas fun! She keebed a awful vile dot lamb, Und he growed, und growed, und growed Dill bymehy den he vas a ram, Und his leedle horns dem showed. Den Mary used to gave him grass, Und oads, und beans, und corns, Und ven he vas full ub mit dot, He'd bunk her mit he's horns. Bud Mary she don'd like him den, He vas do shdrong und shldoud, Und she voodn't had him in der house— She said, "Dot vas blayed out." Von day dem vent to take a walk, Und he beginned to shgwel, So she selled him too a butcher's boy To cud up into veal. Der boy he shatched him by der shnoud, Und says:—"Your fate vas booked," Den shicked a knife by he's lefd ear, Und now he's goose is cooked!

Great Western Railway.

Trains leave London as follows:— GOING WEST.—12.50 p. m.: 5.25 p. m.: 2.45 a. m.: and 5.45 a. m. GOING EAST.—6.00 a. m.: 8.40 a. m.: 12.35 p. m.: 3.55 p. m.: and 11.25 p. m.

Grand Trunk Railway.

Mail Train for Toronto, &c., 7.30 a. m.; Day Express for Sarnia, Detroit and Toronto, 11.25 a. m.; Accommodation for St. Mary's, 2.45 p. m.

The Farmer's Advocate.

Published in London, Ontario, Canada, W. Weld, Editor and Proprietor. Terms, \$1 per annum in advance. Subscriptions commence at any time. The paper is continued to subscribers after the expiration of the year. Any person not wishing to continue the paper, must refuse or return it after their term of subscription has expired. 1 1/4 cts. will be charged if three months are allowed to run in arrears, and 25 per cent. will be added if allowed to run one year on credit.

TERMS OF ADVERTISEMENTS.—10 cents per line, Agate space. Display, 15 cents per line. Specials, 20 cents per line. Editorials 50 cts. per line.

To Secretaries of Agricultural Societies and others.

"Anglo Saxon" may be engaged for the coming season to travel in any County in Canada, where the best inducements are held forth. His stock gained the 1st and 2nd prizes at the last Provincial Exhibition, as they always have done for years past. He has already traveled in Middlesex, Elgin, Oxford, and Northumberland. He is too well known to require further remarks. Address—"Agricultural Emporium," London.

Burlington.

Leaving the East and arriving at Chicago or Indianapolis, how shall we reach the West? The best line is acknowledged to be the C., B. & Q., joined together with the B. & M. Railroad by the Iron Bridge at Burlington, and called the Burlington Route.

The main line of the Route running to Omaha, connects with the great Pacific roads, and forms to-day the leading route to California. The Middle Branch, entering Nebraska at Plattsmouth, passes through Lincoln, the State Capital, and will this year be finished to Fort Kearney, forming the shortest route across the Continent by over 100 miles.

Another branch of the B. M. diverging at Red Oak, falls into a line running down the Missouri through St. Joe and Kansas City, and all Kansas. Passengers by this route to Kansas see Illinois, Southern Iowa, and Missouri, and, by a slight divergence, can see Nebraska also.

Lovers of fine views should remember the Burlington Route, for its towns "high-gleaming from afar"—its tree-fringed streams—its rough bluffs and quarries—its corn-oceans stretching over the prairies further than eye can reach.

Land-buyers will be sure to remember it, for they have friends among the two thousand who have already bought farms from Geo. S. Harris, the Land Commissioner of the B. & M. R. at Burlington, Iowa, or among the four thousand home-steaders and pre-emptors who last year filed claims in the Lincoln land office, where "Uncle Sam is rich enough to give us all a farm."

HAVE YOU A COLD? HAVE YOU A COUGH? HAVE YOU BRONCHITIS? HAVE YOU THE ASTHMA? HAVE YOU ANY LUNG DIFFICULTY OR WEAKNESS IN YOUR THROAT?

READ THE FOLLOWING:—

Mrs. Amy Kennedy, of Painsville, Ohio, says:—I have suffered with Asthma 24 years, and have been doctored by many physicians; as soon as I took the Balsam it relieved me; I cannot express the gratitude I feel for the benefit your Allen's Lung Balsam has been to me.

Dr. Harris, of Middlebury, Vt., says:—"I had been troubled with Bronchitis for two years, so affecting the organs of speech that I could not speak aloud for six weeks. I had with it a severe cough and cold night sweats; I took two bottles of Allen's Lung Balsam, and am entirely cured."

Capt. Foster, of Port Burwell, Ont., says:—"I have been troubled with a cough, at times very severe, for years past; I have found Allen's Lung Balsam to relieve my cough more readily than any other cough medicine I have ever tried. My wife also used it with the most satisfactory results."

The Balsam is sold by all Druggists. Price \$1 per bottle.

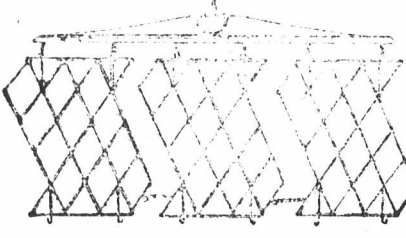
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J. H. WILSON,
VETERINARY SURGEON,
 Graduate of the Toronto Veterinary College.
 Office—New Arcade, between Dundas street and Market Square. Residence—Richmond street, opposite the old Nunery.
 References—Prof. A. Smith, V. S.; Dr. Varley V. S.; Dr. Laing, V. S.; Dr. Bovel, M. D.; Dr. Thorburn, M. D.; Dr. Rowel, M. D., and Dr. Nichol all of Toronto. Dr. McKenzie, M. D., and J. Dalmage, of London. 4-17

EVERY FARMER
 Should have a
Horse-Power Sawing Machine
 And Jack combined, or separate power suitable for 2 or 3 Horses. Sawing Machines will cut 20 to 50 cords per day. Jack suitable for driving all kinds of Machinery usually used. Price \$95.
 D. DARVILL.
 London, Jan., 1871. 2

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 Of every description, at
BEECHER BROS.,
SMITH'S BLOCK, NO. 179 DUNDAS STREET.
 CALL AND SEE their SPLENDID ASSORTMENT OF
Cook, Box, Parlor & Hall Stoves
 For both Wood and Coal, equal to any in this part of the Dominion.
 All kinds of Tin-Ware, Lamps, Chimneys, Wicks, Best Coal Oil, &c.
 London, Oct., 1871. 10-12

LONDON SADDLE, HARNESS & TRUNK FACTORY.
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SADDLES, TRUNKS, HARNESS, Ladies' and Gents' Valises, COLORED WOOL MATS
Whips, Carrycombs, Brushes.
 And everything connected with a first-class Harness business—all of the best material and workmanship, which will be sold at the lowest cash prices. All work warranted.
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 London, May, 1871. 71-57


HOWARD'S IMPROVED IRON HARROW.
 THIS Harrow is superior to all others, because it is the most complete. It covers 14 feet of land. It leaves the ground level, works freer, and adapts itself to uneven land. It does not bend, and chokes less than any other Harrow. It is so constructed as to draw either end. The teeth being so set as to tear the ground up to a good depth, or to pass lightly over the surface, as the teeth are beveled on one side. It can be worked with a span or three horses, or it may be trisected and worked with one or two horses, in one, two or three sections.
 They are giving entire satisfaction.
 Price of Harrow complete, with three sections, treble-tree, and two coupling-trees, \$35.
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 Samples may be seen and orderstaken at the Agricultural Emporium. 71-4

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WAGON and Sleigh Factory, Ridout Street, London, Ont. Their machinery is more perfect and complete than ever, in consequence of which they are able to turn out work, both in quantity, quality and cheapness sufficient to surprise every one not posted up in the improvements of the age. A general improvement of Hubs, Spokes and Bent Stuff, and any kind of wood work for Wagons, Sleighs, Horse Rakes, &c., always on hand. m.c

MOLSONS BANK.
 Paid-up Capital, \$1,000,000
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Issues Drafts on London, England New York, U.S., St. John, N.B., And all the principal Cities and Towns in Ontario and Quebec.
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 Affords opportunity for safe and remunerative investments of accumulative savings.
JOSEPH JEFFERY, Manager.
 London, Sept 14, 1870. 10

THE Agricultural Mutual ASSURANCE ASSOCIATION OF CANADA.
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\$231,242 25.
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THIS COMPANY continues to grow in the public confidence. On 1st January, 1871, it had in force **34,528 POLICIES,**
 Having, during the year 1870, issued the immense number of 12,319 Policies.
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 1st—That this is the only Fire Mutual in Canada that has shown its ability to comply with the law of the Dominion, and deposit a portion of its surplus funds for the security of its members,—\$25,000 having been so deposited.
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 3rd—That nothing more hazardous than farm property and isolated dwelling houses are insured by this Company, and that it has no Branch for the insurance of more dangerous property, nor has it any connection with any other company whatsoever.
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 6th—That nearly four hundred thousand dollars have been distributed by this Company in satisfaction of losses to the farmers of Canada during the last ten years.
 7th—That the "Agricultural" has never made a second call on their members for payments on their premium notes.
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 Address the Secretary, London, Ont., or apply to any of the Agents 12-7

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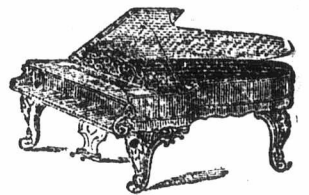
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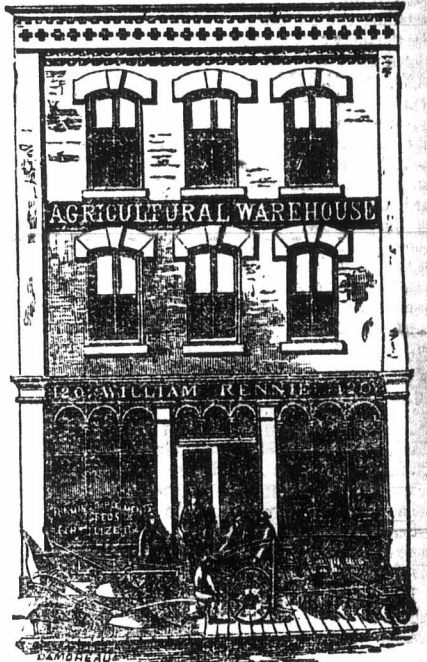
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 In design, the Singer, but the is entirely differ as nearly noise Sewing Machine

The UPPER dises between tached by a stut is flat and plac its upper end so ed by a thumb

The SHUTTLE the shuttle-car nated as a "1 prongs of a for the shuttle-arr steel, and secur which in a hea along the face radial moveme the best moven the centrifugal firm to the fac

The FEED DE cam" placed of ing transmittin feed lever und is made of st length, thereb ment. To the a screw, whic to the feed th heavy goods. to the bed; it durable.

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It will be of any kind, and from the same shuttle and fe

The TREAD "centres" in treadle-bar, g any noise or l give any requi the treadle, b motion.

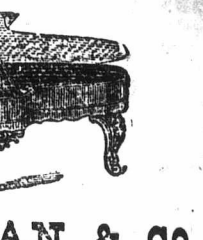
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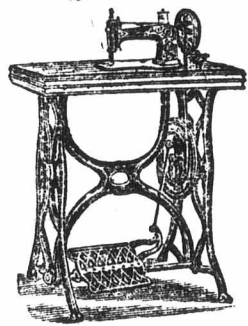
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READ THE FOLLOWING DESCRIPTION.

In design, the machine resembles the Family
Singer; but the principle of the working parts
is entirely different, having no gear, and being
as nearly noiseless as it is possible to make a
Sewing Machine.

The UPPER tension is on the face-plate. The
discs between which the thread passes are at-
tached by a stud to the tension spring, which
is flat and placed on the inside of the face-plate,
its upper end secured to the arm, and irregularly
by a thumbscrew in the face-plate.

The SHUTTLE MOVEMENT is obtained from the
shuttle-cam on the shaft, which is designat-
ed as a "ball cam," working between the
prongs of a fork which is pinned to the shaft of
the shuttle-arm. This shaft is also made of
steel, and is secured to the shuttle arm,
which is in a basket at the end carries the shuttle
along the face of the shuttle-race, describing a
radial movement which is conceded by all to be
the best movement to prevent skipping stitches,
the centrifugal force always keeping the shuttle
firm to the face of the race.

The FEED derives its motion from the "feed
cam" placed on the same shaft, the motion being
transmitted through the eccentric rod and
feed lever under the machine to the feed, which
is made of steel, having a bearing its whole
length, thereby preventing any twisting move-
ment. To the end of the feed lever is attached
a screw, which serves to give any required lift
to the feed that may be necessary for light or
heavy goods. The feed spring is also attached
to the bed; it is flat, made of steel, and very
durable.

The DURABILITY OF THE MACHINE cannot be
questioned; the movements being all hardened,
are not likely to get out of repair. The whole
of the works are enclosed in the arm, which is
finely secured to the bed-plate, and set upon a
walnut top or enclosed in half or full cabinet
case, as may be ordered.

It will be observed that there is no gear of
any kind, and that all the motions are derived
from the same shaft,—all the usual complicated
shuttle and feed movements being avoided.

The TREADLE is adjustable, working upon
"centres" in brackets which are fastened to the
treadle-bar, giving a light easy motion without
any noise or looseness, and can be adjusted to
give any required "dip" to either toe or heel of
the treadle, besides taking up the wear or loose
motion.

The WHEEL BEARING. The wheel runs upon
a tapered stud or bearing fastened to the side
of the stand by a nut with the bearing end
turned to a centre; the wheel is bored tapering
to fit the stud; upon the front side of the wheel
a steel plate is fastened by two screws, which
bear against the centre of the stud; the plate
is adjustable, and screws to draw the wheel
upon the tapered stud, taking up the wear and
yet running easy.

The GARDNER PATENT is fitted with all the
latest and most improved attachments, com-
prising the following, which are furnished
without extra charge:—

One silver-plated Sewing Gauge, with thumb-
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One silver-plated Hemmer, which will hem to
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Braider. One Screw Driver. One Oil Can.
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Cloth or Leather Needles. Six Bobbins. Ex-
tra Spring for leather work. Printed Directions.

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The King of Sewing Machines

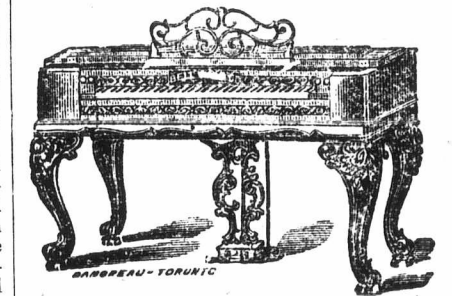


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LOCK STITCH
Sewing Machine

Has now been tested beyond all question, and the
verdict of the public is that to-day it stands with-
out a rival. It is the most substantially built, has
the fewest working parts, and is beautiful in design
and finish. Has the best design of a shuttle, and
by far the largest bobbins. It is capable of per-
forming a range of work hitherto thought impos-
sible for Sewing Machines. It is sold at about one-half the
price of other Machines doing the like work, and is
equally at home on leather as on fine goods. A per-
fect machine guaranteed or no sale. It is the best
made, simplest, more durable and reliable than any
other single thread Machine. Larger and works
with greater ease. Will do all kinds of domestic
Sewing in a perfectly satisfactory manner. Has
taken first prize wherever exhibited.

Agents wanted everywhere. Splendid Inducements.

GUELPH SEWING MACHINE CO.,
Guelph, Canada
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Middlesex. 71-2



W. BELL & CO.,
Organ & Melodeon Manufacturers,
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RECEIVED AT KINGSTON,
A Silver Medal, and all the
First Prizes.

At Western Fair, London. Diploma and First
Prize for best Melodeon and Cabinet Organ of any
kind.
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MR. WM. WEBB manufactures and keeps con-
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HARVESTER AND HAY RAKE, a complete im-
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Extract from Certificate:—
We, the undersigned, take great pleasure in re-
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For Machines address WM. WEBB, London, or
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London, May 1, 1870. 64u

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An omnibus to all trains. First-class Sample
Rooms attached.

T. CLAXTON,
Dealer in first class Violins, English, German and
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Promptly attended to.
Good Second-hand Brass Instruments Bought, Sold,
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Sets up its own work, knits a pair of Stockings in
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The Stock embraces Trees, Plants and Flow-
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It fattens Cattle, Sheep, Hogs and all animals.
It gives a relish to the coarsest Food.
It fattens Cattle in half the usual time, and at a
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For sale by the principal Chemists and Merchants
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THE COMMON DASH CHURN, when made to
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Butter Makers, and this attachment is certainly an
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rod, the power of the spring can be changed to suit
the quantity of cream. It is the most simple, dur-
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Agents wanted to sell Township and County
Rights in the Dominion on reasonable terms.

THOMAS FORFAR,
MANUFACTURER OF
Clothes Wringers & Churns
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The above articles carried off the First Prize at the
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PRICE LIST.
First Prize Wringer, \$7.50. Pride of the Dairy, 1st
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Agents Wanted. Territories for Sale.

The above Wringer and Churn may be seen and
procured at the Agricultural Emporium 12

PULMONARY BALSAM
USED AND RECOM-
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EMINENT PHYSICIANS
IN NEW ENGLAND FOR
THE LAST 45 YEARS.
"NOTHING BETTER."
CUTLER BROS. & CO.,
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TIME AND LABOR SAVED
THE OSCILLATING
WASHING MACHINE

Patented on the 18th of July, 1870, by
WILLIAM MATHEWSON,
OF BROOKLIN, ONT.

THE Patentee challenges any other Washing
Machine now in use to compete against his, for
any sum they may name. The Machine has been
thoroughly tested, and used by nearly all the prin-
cipal hotels and leading farmers in the County, who
pronounce it the best now in use. It will wash from
a muslin pocket-handkerchief to a bed-quilt. A
trial will satisfy any person as to its merits.

County Rights and Machines for sale
Apply to WM. MATHEWSON,
Brooklin, Ont.
This Machine can be seen and procured at the
Agricultural Emporium Wareroom, London.
Brooklin, March, 1871. 3-17

CHARLES THAIN,
MANUFACTURER of Ploughs, Harrows, Culti-
vators, Thain's Double Mould Plough & Turn-
nip Sowers, Horse Rakes, Turnip Cutters, Churns, &c.

First Prize Double Mould Plough at Provincial
Show, Hamilton, 1868, at the Provincial Show, Lon-
don, 1869, and at Toronto Provincial Show, 1870.
First Prize Two Row Turnip, Carrot and Mangold
Drill, at the Provincial Show, Toronto, 1870.
Second Prize Two Horse Cultivator at the Provin-
cial Show, Toronto, 1870.
Third Prize One Horse Cultivator, Toronto, 1870.
All Orders promptly attended to by addressing
CHAS. THAIN, Eramosa Bridge, Guelph, Ont.

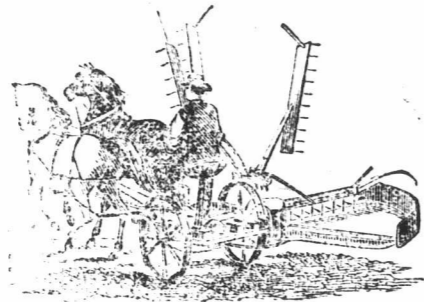
PORT PERRY HOUSE,
PORT PERRY, ONT.

JAS. THOMPSON, - Proprietor.
THE Subscriber wishes to inform the community
that his premises are now open to the public
where he is prepared to furnish as good accommo-
dation as any in the County, 71-6-y

THE JOSEPH HALL MACHINE WORKS

OSHAWA, - - - ONTARIO,

ESTABLISHED 1851.



The Joseph Hall Manufacturing Company,
PROPRIETORS.



WE DESIRE TO CALL ATTENTION TO OUR
**Number One and Two Buckeye Combined
REAPER AND MOWER,**

WITH JOHNSON'S SELF RAKE IMPROVED FOR 1871.

We believe this Machine, as we now build it, to be the most perfect Reaper and Mower ever yet offered to the public of Canada.

Among its many advantages we call attention to the following:—

It has no Gears on the Driving Wheels,

Enabling it to pass over marshy or sandy ground without clogging up the gearing, thereby rendering it less liable to breakage. It is furnished with

Four Knives, Two for Mowing and Two for Reaping, one of which has a sickle edge for cutting ripe, clean grain, the other a smooth edge for cutting grain in which there is grass or seed clover.

It has malleable guards both on the Mower Bar and Reaper Table, with best cast steel Ledger Plates. It is also furnished with our

New Patent Tilting Table for Picking up Lodged Grain.

This is the only really valuable Tilting Table offered on any combined Reaper and Mower.

The Table can be very easily raised or lowered by the Driver in his Seat without stopping his Team.

This is one of the most important improvements effected in any Machine during the past two years.

Any one or all of the Arms of the Reel

Can be made to act as Rakes at the option of the Driver, by a Lever readily operated by his foot. The Cutting apparatus is in front of the Machine, and therefore whether Reaping or Mowing, the entire work of the Machine is under the eye of the Driver while guiding his team. This Table is so constructed as to

Gather the Grain into a Bundle before it leaves the Table, and deposit it in a more compact form than any other Reel Rake.

The Table is attached to the Machine both in front and rear of the Driving Wheel, which enables it to pass over rough ground with much greater ease and less injury to the Table. The Grain Wheel Axis is on a line with the axle of the Drive Wheel, which enables it to turn the corners readily.

The Rakes are driven by Gearing instead of Chains, and therefore have a steady uniform motion.

Making them much less liable to breakage on uneven ground, and more regular in removing the grain. The Gearing is very simple, strong and durable. The Boxes are all lined with

BABBIT METAL.

The parts are all numbered, so that the Repairs can be ordered by telegraph or otherwise, by simply giving the number of the part wanted.

There is no side Draught in either reaping or mowing, and the Machine is so perfectly balanced that there is no pressure on the horses' necks either when reaping or mowing. All our malleable castings, where they are subject to much strain, have been

Twice annealed, thereby rendering them both tough and strong.

OUR JOHNSON RAKE

Is so constructed as to raise the cam so far above the Grain Table that the Grain does not interfere with the machinery of the Rakes or Reels.

We make the above Machine in two sizes:

No. One, large size, for Farmers who have a large amount to reap.

No. Two medium size, for Farmers having more use for a Mower than for a Reaper.

With the exception of difference in size, these Machines are similar in every respect. Our No. 2 Machine supplies a want heretofore unfilled, viz:—A medium between the Jun. Mower and large combined Machine, both in size and price. We shall distribute our sample machines in March among our Agents, that intending purchasers may have an early opportunity of examining their merits.

And we guarantee that all Machines shipped this season shall be equal in quality and finish to the samples exhibited by our Agents.

We invite the public to withhold giving their orders until they have had an opportunity of inspecting our Machines, as we believe that they are unsurpassed by any other Machines ever yet offered on this continent.

We also offer among our other Machines:

Johnson's Self-Raking Reaper, improved for 1871, with two knives, smooth and sickle edge, and malleable guards.

Wood's Patent Self-Raking Reaper.

Buckeye Reaper No. 1, with Johnson's Self Rake.

Buckeye Reaper No. 2, with Johnson's Self-Rake.

Ohio Combined Hand Raking Reaper and Mower.

Cayuga Chief, Jr., Mower.

Buckeye Mower No. 1.

Buckeye Mower No. 2.

Ball's Ohio Mower, No. 1.

Ohio, Jr., Mower.

Taylor's Sulky Horse Rake.

Farmer's Favorite Grain Drill.

Champion Hay Tedder.

AND OUR CELEBRATED

HALL THRESHER AND SEPARATOR

Greatly improved for 1871, with either Pitt's, Pelt on, Planet, Woodbury, or Hall's 8 or 10 Horse Power. We shall also offer for the Fall trade a

NEW CLOVER THRESHER AND HULLER,

Very much superior to any other heretofore introduced.

A new and complete Illustrated Catalogue of all our Machines is being published, and will be ready for early distribution, free to all applicants.

All our Machines are warranted to give satisfaction, and purchasers will have an opportunity of testing them both in Mowing and Reaping before they will be required to finally conclude the purchase.

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PRESIDENT,

OSHAWA, ONTARIO.

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