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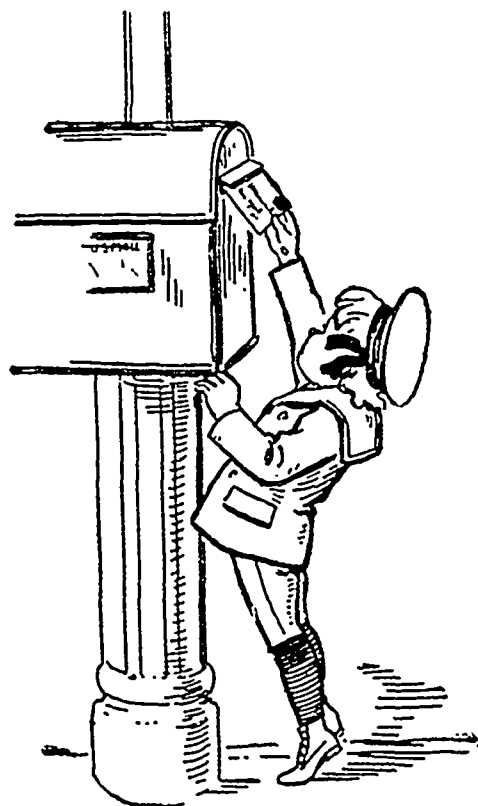
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SIMPSON'S

Directors: H. H. FUDGER, J. W. FLAVELLE, A. E. AMES

Shopping by Correspondence



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Twenty good ram lambs, shearing and two-bearing, at farmers' prices. Some excellent shearing ewes, bred to our best studs.

Berkshire Sows ready to breed. Boars fit for service. Twenty Plymouth Rock Cockerels, choice.

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Have an aged imported ram, and first-class ram and ewe lambs for sale.

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Champion flock at World's Fair. Awarded 20 prizes—10 firsts.

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Shorthorn Heifers by Statesman, and Berkshires by Baron Lee. Eight weeks old. Also one Baron Lee boar, ten months old.

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Large English Berkshires.

Good choice service and show boar. Sows all ages, some in farrow. Young pigs.

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By buying a pair of our Large English Berkshires. We have three choice Sows and two Boars of October farrow and Pigs of February 1898. We are now booking orders for spring Pigs; pairs not akin. This stock is bred for use from the best foundation.

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My herd won 300 prizes, 11 diplomas, and 5 medals since 1888. Choice stock of all ages for sale.

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except a few imported yearling ewes.

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Large English Berkshires

I have a share of some of the best. I keep them for breeding more than for show.

Prices according to Quality. Also S. L. Wyandottes, S. G. Dorkings, P. Cochins, B. Minorcas, S. Hamburgs. Eggs in season, \$1 per setting.

Geo. Thomson, Bright, Ont.
Sunnyside Farm, 3 miles from Bright Station, G.T.R.

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I am prepared to book orders for Pigs and can ship at any time. Prices right.

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D. A. GRAHAM, Parkhill, Ont.

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ONLY ONE BREED KEPT
A splendid opportunity to secure choice stock at moderate prices. One hundred young pigs to select from.
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Brood sows for sale. Boars ready for service. Young sows ready to breed. Lots of pigs two to three months old; good long pigs with heavy bone. Mention FARMING.

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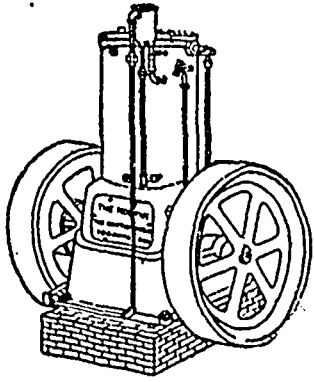
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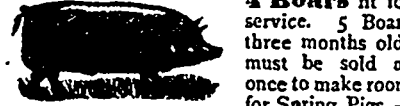
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Ayrshire Cattle. Berkshire and Tamworth Pigs.

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I have on hand the best young Clydesdale Horses and Mares on this continent. Bred from the well-known sires, Prince of Wales, Darnley, Macgregor, Energy, Lord Montrose, The Ruler, Carrachan Stamp, Knight Errant, and other celebrities.



SHROPSHIRE. Orders can now be booked for Shearling Rams, Ram Lambs and Ewes, sired by the celebrated prize-winning English ram, Bar Nooe. Also rams and ewes of this year's importation.

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My stock in the above lines were very successful at all the large shows last year. Call and examine stock before purchasing elsewhere. Terms reasonable.

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Stock for Sale of all ages and both sexes

EGGS FOR HATCHING from L. Brahmas, Buff Cochins, Partridge Cochins, P. Rocks, S. G. Dorkings, Black Minorcas, S. White and Brown Leghorns, Rose Comb White Leghorns, B. B. Games, and Cornish Indian Games at \$1 for 13. Mixed eggs if desired; also Aylesbury, Rouen, and Pekin Ducks' eggs at \$1 for 9. A few grand cocks for sale of White and Brown Leghorns, Cornish Indian Game, Pyle Game and B. B. Game stock.

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FARMING

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No. 35.

FARMING

AN ILLUSTRATED WEEKLY JOURNAL DEVOTED TO FARMING AND THE FARMER'S INTERESTS.

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TOPICS FOR THE WEEK

"Farming" Better Than Ever.

That FARMING as a weekly is day by day growing in favor among the practical and leading farmers cannot be doubted. The following is only one of the many letters which come to us commending our weekly edition. It should be a weekly visitor in every farm home. Its weekly market reports and up-to-date matter is just what every farmer needs:

DEAR EDITOR,—Enclosed please find express order for \$2.50 for one year's subscription for FARMING and also for *The Canadian Magazine*, according to your clubbing list. I am much pleased with FARMING as a weekly paper, especially with the different breeders' associations' lists of names and stocks and prices, also with the market reports and forecasts. I have been a subscriber through all the stages since it was started in Hamilton about seventeen years ago. Long may it continue its course of usefulness is the wish of its friend.
MAJOR J. VARCOE.
Carlow, April 18, 1898

Agricultural News and Comments.

The Ohio Experimental Station recommends farmers to mix their own fertilizers. It is claimed that this can be done quite readily and will save the farmer considerable outlay in purchasing fertilizers. The mixed fertilizers sold in Ohio are known to contain practically three materials, tankage, acid phosphate, and muriate of potash. The station claims that these materials can be purchased separately, and mixed by the farmers themselves and would lessen the cost at least one-sixth as compared with the cost of commercial fertilizers.

A great International Horse Show will take place at the Crystal Palace, London, England on May the 28th, 30th, and 31st. Since the outbreak of hostilities there has been some apprehension on the part of many American horse fanciers as to shipping horses. The show authorities wish to point out that there will be no danger whatever in making shipments under the British flag. The international character of this show will furnish an opportunity to breeders on this side to show off the good qualities of their horses before the purchasers of fine horses in Great Britain.

The western pork packers for the year ending March 1st last, slaughtered 20,201,260 hogs, an increase of 3,372,282 over the previous year and of 2,448,186 over the greatest year on record. The packers paid for their raw material—the hogs—\$174,382,000, which is \$38,926,000 more than for

the preceding year, and the largest amount ever paid in a single year. The average cost of hogs last year was \$3.70 for the summer, \$3.53 for the winter, and \$3.63 for the year, against an average of \$3.30 for the previous year; with the exception of 1896-1897 the average cost was less than for any year since 1880. The average weight of the hogs packed during the winter season was 235.35 pounds, against 244.80 and 240.71 pounds, respectively, the two preceding years.

According to the Wisconsin Experimental Station the average milk yield from mature sows ranges from 4.1 pounds to 5.8 pounds daily. From experiments made with four sows the highest yield of milk in any one day was 8.7 pounds, and the lowest 1.2 pounds. Nine samples of sows' milk gave the following average composition: Water, 80.35 per cent.; fat, 8.24 per cent.; solids, not fat, 11.41 per cent. It is about twice as rich as the milk of average cows. Microscopic examination shows that the fat globules of sow's milk are of very minute size, on an average only about one-quarter that of averaged sized fat globules in cow's milk. A sow will yield about one-third of a pound of fat per day.

A few years ago it was not thought possible to ship eggs from far-off Australia to England and have them in a fresh condition. To-day, eggs arrive from Australia in such first-class condition that they pass as new-laid. This has been rendered possible by the universal employment of refrigerating apparatus on ship board. The eggs, while perfectly fresh, are forwarded by the Australian farmers to the cold storage, and are shipped to England at the time when eggs are scarce and consequently at their dearest. Many thousands of dozens, packed in boxes with cardboard divisions filled up with dry pea-husks, are now forwarded to England from November to January. In a recent consignment the local price of eggs in Australia was fivepence-halfpenny per dozen, the freight and packing cost about threepence per dozen, and they realized one shilling and sixpence per dozen retail on arrival in England. Why cannot Canadians follow the same plan?

During the three months ending March 31st the imports of live animals for food, into England, amounted in value to £2,634,215 as compared with £2,319,300 in the corresponding period of 1897. The number of oxen imported was 139,526, against 122,249. Of these 110,789, against 100,958 last year came from the United States; 23,358, against 16,756, from the Argentine Republic; 288, against 369 last year, from Canada, and 5,091, against 4,166 from other countries. There were 182,069 sheep imported against 137,826 for the same period last year, of which 59,901, against 53,051, came from the United States; 116,338, against 82,189, from the Argentine Republic; 3,511, against 2,586, from Canada; and 2,319 from other countries. The number of pigs imported during the quarter was 188, none having arrived last year.

Mr. W. T. Crandall, commercial agent of the Dominion Government in Great Britain, in his evidence before the Agricultural Committee in reference to the export apple trade, pointed out that much injury has been done to Canadian reputation abroad by the dishonesty of shippers, who have been putting good apples at the ends of the barrels and culls in the centre. He suggested that only the best fruit should be sent to Great Britain, and that second grades should be evaporated for domestic use. Professor Robertson said

that he did not find more than 2 or 3 per cent. of the total Canadian shipments dishonestly packed. More than these were landed in poor condition, owing to the methods of packing and shipping. Buyers in Great Britain were prone to magnify the bad points of Canadian shipments and overlook the good points. The results of last year's shipments of fruits were most encouraging.

The number of horses imported into Great Britain during the three months ending March 31st last was 13,470, against 11,517 last year. Of these 10,970, against 8,407, came from the United States, 274, against 807, from Canada, and 2,226, against 2,303, from other countries. The value of the horses imported was £370,812, against £294,980 last year. This is an average of nearly £28 each, against less than £26 for the corresponding period last year. The number of horses exported from Great Britain for the same period was 9,616, against 7,662 last year, and of these 6,033 went to Belgium, 1,649 to Holland, 1,301 to France, and 627 to other countries. The value of the horses exported was £212,757, against £155,349 in the corresponding period last year.

Our British Letter.

(From Our Special Correspondent.)

London, Eng., April 13, '98.

Canadian Cheese in Favor: Canadian Apples to the Front.

Your readers will remember my saying in a recent letter that Canadian cheese is improving in popular favor here, and that it was becoming considered by shop-keepers as better than "American," (American is the term used in Great Britain for anything coming from the United States, and it is in that sense I employ it now). An ounce of practice is better than a ton of theory; and ocular demonstration is superior to any amount of mere statement. I wish, therefore, to quote in support of the latter contention from a circular now before me, and which has been issued within the last few days to all the residents in a London suburban district of some 40,000 to 50,000 souls. The circular is issued by an important retail trader and is some eighteen inches long by twelve inches broad. It is boldly printed in red and black. What does it say? After quoting Brittany and Australian butter it goes on to state the prices of the cheeses sold at the retailer's establishment, and as to these, it offers "Finest American cheeses" at "6d. per lb.," then comes "Canadian Cheddar, very mild, 8d. per lb."

This I think amply proves that Canadian cheese is holding its own very well against "American," and this in spite of the statements in the last report of the United States Secretary for Agriculture against United States cheeses.

My wife, a farmer's daughter, considers she knows a bit of English Cheddar when she tastes it, but she has, I am bound to confess, been mistaken more than once, and has purchased Canadian in mistake for our own Cheddar. Good English Cheddar is mild, flaky, and possesses the whole of the cream of the milk. Canadian Cheddar seems to possess, generally speaking, the first and last of these, but lacks the flakiness. This may be accounted for by the selling of the cheese in a less ripe or less old state than that common to our best British Cheddar. Of course, Canadian farmers may say that to dispose of their cheese early is more profitable than to keep it till old, and if that is so, then I need perhaps say nothing further on the subject. Anyway, 8d. a lb. is not an ideal price in my opinion for the Canadian commodity whilst the British article placed on a slab side by side with it realizes 10d. and 11d.

No doubt many British farmers also go in for an early ripening cheese, in which case, whilst they gain the "nimble nine-pence" (as we say) and have their dairies clear, they don't make quite so good a price as they have usually made by keeping it till a later period. It would be interesting to us to learn whether Professor Robertson and other Dominion agriculturists favor the early-ripening system for Canadian farmers in preference to keeping the cheese till it is fully ripened. It is a highly important matter for your cheese-making and cheese exporting readers.

I am glad to state that Canadian apples have been of excellent quality of late, and have been realizing pretty fair prices; indeed they have been most readily bought up where the fruit was sound. It is desirable that in sending fruit (as of other articles) that good samples only should be sent, and that the packing should be carefully attended to. I am aware these points have often been enforced by others; but I can assure my readers the lesson is still very necessary, and amply repays him who thoroughly learns it. Where a salesman on our markets secures a reputation amongst retailers for having good stuff, he is not only well patronized by the retailers in question, but he is able to secure better prices for the growers. It is, however, as anyone can see, entirely within the province of the growers that the salesman's reputation lies in this matter. There are honest salesmen, of course, and dishonest ones; but in this world of competition the best way, in my experience, to circumvent the fraternity is to supply regularly tip-top stuff. If this is done it tells its own tale. With a fair amount of looking after on this side by your government authorities, it must meet with the reception it deserves. No salesman can forever go on selling good stuff at the price of bad; and directly his wares are known to be reliable and worth the buying, he is, as a rule, only too pleased to be reasonably minded towards the growers, on whom, after all, his livelihood depends.

"Illustration Stations" for Farmers.

On another page we publish a complete summary of the proposed scheme for local "illustration" stations recently presented to the House of Commons Committee on Agriculture by Professor Robertson, under the direction of the Hon. S. A. Fisher, Minister of Agriculture. The proposal is one of the most important made by the Dominion Department of Agriculture for many years. It concerns every farmer in the Dominion, and if carried into effect should increase the agricultural wealth of the country by many millions of dollars. There is no doubt whatever that the methods of farming followed by the great mass of our farmers are not the very best that could be adopted and do not enable them to get the most out of the land and to make the very best out of the resources at their disposal. Too many of our farmers, either from ignorance, inability, or from lack of confidence in more up-to-date methods, still cling to the old ways. If the establishment of small experimental or illustration stations in every county or district will induce the farmers in those sections, by showing them what can be done by better methods of cultivation, etc., and by teaching them how to put these methods into operation, to practise a system of farming that will enable them to make the very most out of their farms, the money appropriated for this special purpose would be one of the best investments the Government could make.

In the interest and enthusiasm aroused by such an elaborate project it will not do, however, to overlook the Government agencies that are at present at work and have been for years useful in educating our farmers to adopt better methods of cultivation of the soil and more profitable methods of farming. The Experimental Farms, with the branch farms in the various provinces and territories, have been useful factors in this respect. The Ontario Agricultural College, and associated

with it the Experimental Union, the Farmers' Institutes, the various live stock and dairy associations, have been of untold benefit to Ontario farmers, and have been the agencies by which many of them have been induced to adopt better methods of farming. It is true, however, that these agencies have, to a great extent, been hampered in their work by being unable to reach directly the great mass of the people and to show by actual illustration what can and ought to be done. Nevertheless, though slowly yet surely, the influence of these agencies is gradually permeating every agricultural district, and is making for higher agriculture and more profitable methods of farming.

This new scheme is, no doubt, a more direct and quicker method of reaching the same end. It should not, however, be looked upon as in anyway taking the place of any of the agencies mentioned above. In fact we are of the opinion that unless it has the active co-operation of the staffs of the Experimental Farms, the Agricultural College and the institutions in the various provinces that are directly interested in promoting better methods of farming, the greatest possible success for this new proposal cannot be realized. We presume, however, that the Department of Agriculture has fully considered this feature of the situation. It would be rather more injurious than otherwise if this new proposal were to clash with the operations of the agencies now at work for the development of our agricultural resources, and especially would this be so as far as the Provincial institutions are concerned. The utmost harmony should prevail between the Dominion and Provincial Departments of Agriculture as to the particular line of work to be carried on by each one in furthering the interests of agriculture. There should be no overlapping of work. In fact we are strongly of the opinion, and have been for some time, that there should be a clear and definite understanding as to the various lines of work which the Dominion and Provincial Departments of Agriculture should undertake. If we were asked to make a division of the work we would say that the educational side of agriculture should be left as far as possible to the Provinces, and that the transportation and market side of it should be looked after by the Dominion. Of course where nothing is being done by the provinces to further the interests of agriculture, it would be within the province of the Dominion Government to take up the educational side also.

In taking this view of the whole situation, we do not wish in any way to be considered as not approving of the proposal for "Illustration Stations for Farmers." We have only endeavored to point out wherein a difficulty might arise in carrying the scheme to a successful issue and wherein the Provincial or Dominion interests might clash in so doing. There is not so much danger of their doing so in the provinces outside of Ontario, where comparatively little is being done by the Provincial authorities towards educating the farmers in better methods of agriculture. In Ontario, however, the situation is quite different, and for years the Provincial authorities have been expending large sums of money for agricultural purposes. Though the Provincial Government is at present carrying on no line of work exactly identical with the scheme proposed by Professor Robertson, yet, through the Experimental Union, in connection with the Agricultural College at Guelph, it is doing work somewhat similar. The Union, through its members, carries on experiments in the cultivation of the soil, and in growing different varieties of grain in nearly every section of the Province. The Dominion Department of Agriculture might, however, by co-operating with the Union, and by utilizing its members to operate the proposed "Illustration Stations," make the work of both more effective, and prevent any overlapping of interests.

However that may be, the new scheme is deserving of the fullest consideration on the part of every one interested in the welfare of Canadian agriculture, and we trust it will receive, as the Department desires, the freest discussion.

The Canadian Export Horse Trade.

Our Manitoba correspondent whose article on "Our Horse Market" appears on another page gives some valuable pointers for horse-breeders. It is only too true that, as a country, we are very much behind in the breeding and rearing of horses suitable for the British market. There are several reasons for this unsatisfactory state of affairs. In the first place the average farmer who breeds horses has not given the subject sufficient attention, and has been careless as to the character of the sires used and also as to the types of mares kept for breeding purposes. In too many instances the farmer has only considered it necessary to have a good sire in order to produce a good horse. True, a sire with strong prepotent qualities will to a large extent transmit its peculiar characteristics to the offspring, but even so, it is not possible for it to counteract the inferior qualities transmitted by the dam. Several years ago in Ontario there was a demand for a heavier class of horses, and many farmers considered that to procure them it was only necessary to use large sires. Many medium types and very often small breeding mares were served by large sires with the result that though a larger type of horse was secured than the breeding mares, it was not a large horse and consequently was neither one thing nor the other. The horse produced, though well suited in many cases for work on Canadian farms, was not at all suited for the export trade. There are too many of this type of horses in the country to-day, and this to a large extent is the chief reason why Canadians are not able to take advantage of the present increased demand for good, clean, heavy draught horses. "Like begets like" is a principle that applies in the breeding of horses as well as in anything else. If the highest types of horses are not used for breeding purposes, the highest type of animal should not be looked for in the offspring. If a dairyman wants a good cow he does not expect to find it in the offspring of a cow of the beef strain. He must look for it among the dairy breeds. So in horse breeding we must not look for a high stepping, fast roadster in the heavy draught classes or *vice versa*.

Then, again, as our correspondent points out, a great deal depends upon the care, feed, and attention a horse gets during its growing period. This is something the average Canadian farmer is more lacking in, perhaps, than following the right principles in horse-breeding. How often, in travelling through the country in the winter, do we see young colts of all ages trying to eke out a living on the pickings of the barnyard, or by delving into the strawstack. They manage to pull through the winter, and, when summer comes, instead of being in a position to take on the growth they should, the extra feed obtained, to a large extent, goes to make up for the lack of nourishment which the strawstack afforded. The same thing is gone through with the following winter, and until the colt is old enough to be put to work no particular care or attention is given it. It may be said the prices for horses during the past five years would not warrant any other treatment. It is true that the prices have been low, but even then it would pay to raise the young colt well or not at all. In fact, when the price is low the more need there is of raising the finest horse that can be produced in order to obtain the top price. A poor kind of horse will stand a better chance on a high market than a low one, and, whether the market is high or low, a poor horse is of no use for the export trade.

The question, then, of developing an export trade in Canadian horses resolves itself into this, that, unless our farmers breed the highest types of horses, and when they secure a colt of a suitable type feed and care for it properly, we might as well direct our efforts in some other direction. In the British markets we come into competition with the finest horse-producing countries in the world, and, unless our horses compare favorably with theirs, the English buyer is not yet imbued with such a love for Canada that he will buy them in

preference to the others. We have to compete with countries where horse-breeding is made a science, and where its principles are thoroughly understood and practised, and in addition to this we have to compete with countries where an effort is made to develop the young horse by proper nourishment and treatment. We speak advisedly when we state that very few of our farmers, at present, practise a system of feeding and rearing young horses that will enable them to compete successfully in the markets of Europe. There is a large field there for heavy draught horses for heavy teaming and cavalry purposes, and also for light active horses of good appearance. The Americans are making strenuous efforts to get a share of this market, and, as our conditions are just as favorable for producing good horses as theirs, there is no valid reason why Canada should not also get a large share of this trade.

Good Roads.

The following is the wording of a circular containing instructions to pathmasters issued by the township council of Lancaster, in Eastern Ontario, and is worthy of imitation by other municipalities :

We Want Good Roads.

GENTLEMEN,—This demand is so pithily put and comes to us from the public with such persistence, that we as servants of the public must respect it.

Under our present system of statute labor we must acknowledge that this demand on us cannot be fully met ; however, if we make the best possible use of the means at our disposal, we will feel that we have performed our duty, and as a means to this end we respectfully offer the following instructions :

1. That you will regard it as your first duty to carefully examine all culverts and bridges in your section, and the necessary repairs be made as far as possible by statute labor, but when this is not sufficient avoid all responsibility by at once notifying the road superintendent of such district. It has come to our notice that when cedar was not convenient in some cases culverts have been neglected. To meet this you will find cedar with the following parties. With the reeve and the road superintendent for the use of pathmasters only, with the clerk for pathmasters and jobbers. This cedar will be delivered on your order, stating definitely the number of pieces you require. Should you have any left over, the council or superintendent must be notified of the fact, whose duty it will be to see that all such cedar is put to proper use.

2. That you will have all drains properly cleaned, and, where possible, have gravel procured for the road-bed. It may happen that a gravel pit can be secured jointly for two or more sections. Where this can be done the deal will be considered a good one.

3. That you are pathmaster until your successor receives formal notice of his appointment from the clerk, which is generally not later than the 1st of February.

4. That you will have all parties on your road-list duly notified, and that every man does his duty, not grudgingly, but cheerfully.

In behalf of smooth rolling, we are,
Yours faithfully,
D. J. BATHURST, Reeve.
J. F. CATTANACH, Clerk.

Though the instructions given in this circular are not as specific and as useful as they might be in directing pathmasters how to secure good roads, the principle of controlling and directing the pathmaster's work is along the right line. One of the chief faults to be found with the statute labor system is the "topsy-turvy" and "hit and miss" way in which the statute labor work is performed. Unlike the pathmaster in the township of Lancaster, the rule is for the pathmaster, when he is given his commission, to be given *carte blanche* to perform the work as he pleases ; and more frequently than not it is his wish to repair the road in front of his own gateway or to clean out the ditch that is preventing the tile drains on his own farm from doing their work properly. In this way there is not the least uniformity in the manner of carrying on the work nor any definite approved plan followed in making or repairing the road. Not only is this so as between one township and another, but, unless specific instructions are given as above, there is no uniformity of procedure as between the pathmasters in any single township.

Thus it is that our statute labor system has proven a failure, and thus it is that year after year we have gone on spending thousands of dollars in road improvement without being very much nearer

the goal of "good roads" than when the original road surveys were made. There cannot be anything accomplished in the way of securing good roads until a more uniform method of working is adopted, and until those who perform the statute labor in this province work after some definite plan, and under the direction of someone who understands how good roads ought to be made. It is surely possible to have uniformity of work in a single township, and if township councils would secure from Provincial Road Instructor Campbell specific information as to how good roads can be secured, and embody this in instructions to pathmasters, better results would be obtained from the statute labor system. If each township did this, we would have every pathmaster working along the same line, and in a few years would have accomplished something in the way of good roads.

Then, to quote Mr. Campbell's own words, "Cease all work of a temporary character right away. Expend as little money as possible on the repairing of roads, and devote all you can to the construction of roads that will need no repair or very little repair." This is sound advice. With the present methods of operating the system and the condition of many of the roads, it hardly seems possible to do anything else but temporary work in performing statute labor. But if an improvement in the methods of doing the work were made, and a beginning made towards securing a permanent roadway, necessary work of a temporary character such as repairing culverts, cleaning out drains, etc., would gradually grow less. It may be said that to begin making a permanent and durable roadway with the amount of labor at the disposal of township councils from the statute labor system would be a very slow process indeed. To be sure it would if every person who performs statute labor aimed at getting his share done as easily as possible. But if everyone were made to do a reasonable and lawful day's work, and if the labor were wisely and intelligently directed, the amount of work that could be accomplished would surprise even the most pessimistic. Then the work would be considerably hastened if every township would invest in some road-making machinery that could be utilized by the pathmasters in getting the statute labor performed. For instance, a road-grader and a stone-crusher would save a lot of labor that could be expended in other directions. The question of good roads is an important one, and township councils should do all in their power to have the statute labor performed in a manner that will help to secure them.

Pointers For Cheese Makers.

According to the report of some shippers who have recently returned from England, many Old Country dealers are loud in their complaints of the quality of last season's Canadian cheese. In too many instances the goods were too stiff and hard-textured and did not show sufficient meat and were not up to the usual quality of Canadian cheese. Some of the English dealers stated that they were compelled in some instances to take United States cheese in order to get the quality required.

Whether this last statement can be fully relied upon or not is hard to say, but it is nevertheless too true, that there have been good grounds for complaint as to the character of some of last season's goods, because of this stiff and hard-textured quality. It is of the utmost importance that cheese-makers should guard against this the present season. The fault may lie with the maker and then again it may not. If it does, he has it within his power to remedy the difficulty and so turn out the kind of goods the British market demands, viz. : a well-cured, fine-flavored, meaty and close-cutting cheese. To get this the maker must have a good quality of milk, and if the milk is all right, and other conditions are favorable, there is no reason whatever why he should not turn out the kind of goods the British market requires.

One of the drawbacks to the making of really fancy cheese is the lack of proper curing-rooms in

connection with many of our cheese factories. In many of them it is almost impossible to cure the cheese properly after it is made. This is something that to a large extent is beyond the maker's control ; though, if he exerted his influence a little and refused to be responsible for the cheese unless proper curing facilities were provided, there would soon be an improvement in this regard. A great many owners of factories and patrons who are largely the owners, do not fully realize the importance of good curing-rooms, and with the tendency of late to keep expenses down to the lowest possible notch, it is difficult to get them to improve matters even where they see the necessity of it. It is a "penny wise and pound foolish" policy to go on year after year making a fine quality of cheese, only to have it injured when placed in the curing-room. A day of reckoning is near at hand, however, and factories which have not the proper facilities for curing cheese will have to be content with a lower price for their cheese.

Another evil that is complained of and which is claimed to be the chief cause of the hard, dry cheese referred to above is the practice that too many factorymen have of shipping their cheese too green. This is, indeed, a serious mistake, and often results in otherwise good cheese being permanently injured by being taken out of the curing-room before it is sufficiently cured. A firm, close-cutting cheese, unless sufficiently cured before leaving the factory, will take on that stiff and hard-textured quality complained of. The buyers, factorymen and makers should co-operate in this matter and refuse either to buy, sell or allow cheese to leave the curing-room till it is properly cured. The factorymen and makers, by shipping early, may save a little in weight, but such a practice will eventually bring its reward and injure the factory's reputation far more than can be compensated for by the extra gain in weight.

The Decline in Butter.

Many dairymen who were induced not to make cheese till the cows were on the grass and to make butter instead are feeling somewhat disheartened at the way the butter market has gone. Viewing the situation in its entirety there is no room for discouragement. The creamery men have had exceptionally good prices for their butter during the past two months and must expect a decline in prices with the opening up of spring and its accompanying increased supply. True, values have declined four or five cents per pound especially on the Montreal market, but even at this reduction there should be money in making butter if the value of the bye products is taken into consideration. The skim-milk is especially valuable at this season of the year for feeding calves, and at any time for young pigs. In fact if many of these complaining dairymen were making cheese instead of butter they would find their young stock suffering from the want of some such food as sweet skim-milk which the creameries provide. Even if, as we have frequently pointed out, there were no profit in making butter, it would pay the patrons of cheese factories to do so rather than make a lot of inferior fodder cheese that would certainly have an injurious effect upon the market for the full grass goods. Therefore, we think the advice we have given from time to time is still sound, and that our dairymen will reap the fruits of following it later on in the season. The present lower values may enable dealers to do more in an exporting way than they were able to do under the higher rate. This will help to introduce our fine butter in Great Britain and lessen supplies on this side.

Our Clubbing List.

	Regular price.	With FARMING.
Canadian Magazine.....	\$2.50	\$2.50
Toronto Weekly Globe.....	1.00	1.50
Toronto Weekly Mail and Empire.....	1.00	1.40
Farm and Fireside.....	1.00	1.40
Montreal Daily Witness.....	3.00	3.00
Toronto Morning World.....	3.00	3.00
Montreal Weekly Witness.....	1.00	1.60
Family Herald and Weekly Star.....	1.00	1.75
London Weekly Free Press.....	1.00	1.75
London Weekly Advertiser.....	1.00	1.40
Ottawa Semi-Weekly Free Press.....	1.00	1.60
Hoard's Dairyman.....	1.00	1.75
Rural New Yorker.....	1.00	1.85

OUR HORSE MARKET.

By MARGARET B. C. Manitoba.

Uncle Sam has lately been making an effort to work up a market for his horses in Europe by sending over a commissioner to work along that line. It might be well if our own government did something of the same kind, for while so much has been done to improve our dairy and other products, little has been accomplished in improving the quality of our surplus horses. Dairy associations, government pamphlets, agricultural periodicals and farmers' institutes, together with Professor Robertson's work, both at home and in England, have placed our cheese in the forefront of the world's markets, and our butter and bacon are fast getting into the same enviable position. This has been accomplished by educating the farmers as to what the market required and how to produce it. Were this done in the same way as regards the breeding of horses in Canada this branch of the farm might be made very profitable and a great source of wealth to the country. It may be said that we already have a market for our surplus horses in the Old Country, and it is true that a large number of our horses go to England and are well liked there, but the trouble is that they are a class of horses that bring but a comparatively small figure, and by the time the shipper's profit, freight and other expenses come out of it, there is but a very small profit, if any, for the man who raised the horse. The Canadian horses that have been exported are used as 'bus horses, for vans and such vehicles as require horses that can go faster than a walk and still have a certain amount of weight. The lighter animals become cab horses. Quite a number are also used on the street railways. The horses used for these purposes may be said to be a cheap nondescript lot, so that our horses nearly all going for these purposes does not say much for them, although they are found to be good horses for these purposes. Now what the Canadian farmer wants to breed is not a cheap horse, but one that will bring a good big price, and to do this he must breed with something definite in view, and also feed accordingly.

The horses that command good prices in the Old Country may be divided into two classes, light and heavy horses; the horse of medium size being the cheap class. As far as size is concerned some of the light horses might well be classed as medium, for their weight would warrant it, but their clean legs and quality bring them under the head of "light horses." This medium horse, if he may be so called, is a horse which shows cart blood without being a draught horse. The light horses, for which there is a demand in England, must either not have any cart blood in them, or if they have, they must not show it.

The raising of draught horses in Canada for export would be profitable, but to be so they must be big fellows. It is size that counts for the city dray work, and horses large enough to suit the Englishman will always find a ready sale at highly profitable figures. The trouble in Canada seems to be to raise them successfully. It is said by some authorities that it cannot be done, that the climate will not allow it. This,



Group of Prize-winning Ayrshires.

Bred and owned by J. Terrill, Wexler, Ont. Five-year-old Frankie - 2108 - and her four daughters. Frankie stands to the right. She was calved Jan. 3rd, 1892; sired by Leo of Norval - 314; dam, Lady of Park Hill - 1580-. The next is Primrose - 2487-, calved April 4th, 1894; sired by Prince of Byron - 583-; dam, Frankie. Pearl - 2833-, calved March 14th, 1895; sired by Norman of Robertland - 1901-; dam, Frankie. Ida May - 2982-, calved Feb. 21st, 1896; sired by Norman of Robertland - 1901-; dam, Frankie. Susanna - 3285-, calved April 14th, 1897; sired by Dominion Lad - 1802-; dam, Frankie. This photo was taken about the 2nd of June, 1897. Frankie dropped another very fine heifer calf on the 4th of March, 1898. Its name is Germania. Germania was sired by Dominion Lad - 1802-.

however, is scarcely the case. Do we take the pains that the Englishman does in feeding our colts? Do we see — no matter how busy we are — that our colts never miss a feed and are always cared for to the best of our knowledge, never being stinted in plenty of nourishing food? In fact, is their growth pushed from start to finish, to say nothing of the care exercised in breeding compared with that on the other side of the Atlantic? That horses big enough for the Old Country market can be raised is proved by the fact that it is occasionally done. An instance of this is given by Mr. Leslie Smith, manager for W. P. Clark, St. Cloud, Minnesota, where such a large stud of Clydesdales are kept. Mr. Smith says that they are there raising colts just as big as their imported animals. Certainly Minnesota is not Canada, but the climate is severe enough there to make this case applicable to Canada, and it is referred to, as Mr. Smith is an authority who can be relied upon. It is not a case of can we raise draught horses big enough for the British market? We can do so, and if we do so they will bring from £30 upwards in Liverpool.

As to light horses, there is always a demand for good ones of the right type, both in England and the States, saddle horses, including hunters, selling well, and when really good, bringing very high figures. High steppers of the Hackney type are at present very much in demand, and tall and showy carriage horses will be found very profitable when raised. Speaking of saddle horses, there is a market for them which it would be well for the Canadian farmer to always keep in view, namely, remounts for the army. Horses suitable for this purpose will always bring a price that will make it remunerative to raise them; but if farmers would raise this class of animal they must breed very differently from what they have been doing in the past. The aim should be in breeding a cavalry horse to get an animal with a good middle and shoulders, long muscular quarters, a clean neck, with

breedy and intelligent head and face, short cannon bones and large bony knees and hocks. This can only be accomplished by the use of the thoroughbred sire, and where the progeny got by him fail to suit for the purpose bred they will be found fit to work on the farm, and though smaller than most of the farm horses now are, they will not be found small when it comes to hard work. The constant demand for horses for army purposes might be made of considerable profit to us in Canada, but in order to do so the farmers must first be educated as to the class of horses wanted and how to breed them.

"ILLUSTRATION STATIONS" FOR FARMERS.

The following is a summary of the scheme for local agricultural stations presented to the Agricultural Committee of the House of Commons on April 22nd last by Professor J. W. Robertson, Agricultural and Dairy Commissioner:

The most important direct aids to agriculture given by the Dominion Government are:

- (1) The establishment and maintenance of Dominion dairy stations, whereby the making of butter in creameries during the winter has been introduced into all parts of Canada, and by means of which co-operative dairying has been established in districts where it was unknown.
- (2) The cold storage service for the carriage of perishable food products.
- (3) The imparting of information on the needs and preferences of markets which can be supplied with Canadian products, and the making of trial shipments of the same.
- (4) The maintenance of experimental farms.
- (5) Encouragements to agricultural societies, chiefly in the North-west Territories; and
- (6) Protection of the live-stock interests by veterinary service and quarantine.

During the last ten years, very

marked progress has been made in improving the quality of manufactured farm products, such as butter and cheese, and in feeding live stock profitably.

There has been much less improvement in the methods of cultivating crops, in the selection and general use of the most productive varieties of cereals, grasses and roots, and in maintaining the fertility of soils.

Research and Illustration.

Every experiment is capable of rendering a two fold service. It may discover what was before unknown; and it may illustrate and demonstrate the application in a profitable way of principles and methods which are not new. It is seldom advantageous to combine in one experiment the objects of research and illustration. It is always a good plan to concentrate effort and attention on a few things, until some real progress has been made. The hurried multiplication of experiments, without definite comprehensive plans, may cause amazement, but they seldom yield practical service. The history of experiment stations maintained by the Governments in all lands shows a general tendency towards making them, or letting them become "show places," having therefore a very limited range of usefulness. Too much Barnumism renders no service to science or to farmers.

Information Presented in a Taking Way.

When any principle or method that may be applied to farm management has been discovered as a good one, the information about it should be given in such a way that it will be as soon as possible beneficial to those for whom it is intended. There is great danger of valuable information being buried in bulky printed reports beyond the hope of resurrection. For men who are mostly employed in working with material things, such as land, farm tools, animals and products, illustrations should be given (1) where they can see them, (2) in such a way that they can readily understand them,

and (3) so that they will be attracted to learn and to put the lessons into practice.

The dairying service of the Department has been useful in that way through the Dairy Illustration Stations. These have been object lessons which the farmers could readily see and copy from.

A similar system, suited to illustrate,—that is to make clear,—the relative productiveness of different varieties of grains, of roots and of fodder plants, would be readily accepted and acted upon by the farmers.

The quality and quantity of crops which would be obtained on the same land, in the same season, from different methods of tillage, might be illustrated in such a way as to quickly cause nearly all the farmers who saw them to put the best methods into practice on their own farms.

Local Organizations to Co-operate.

To accomplish that, I would recommend that some local organization of farmers, such as a farmers' institute, an agricultural society, or farmers' club, should provide an "illustration field," or "illustration station," to be used in the way and for the purposes indicated. In any county where one of these organizations was not disposed to do so, I would propose that the county council, or the township or parish council, should be assisted to provide a small "illustration station." No property need be purchased, and there would not be any necessity for engaging a local superintendent on salary. From ten to twenty acres of suitable soil should be arranged for. It should be fairly uniform in character, situated near a market town, beside a public road, and, where practicable, close to a schoolhouse.

The farmers' institute, or other local organization, might arrange with the farmer occupying the land to conduct the "illustration work" according to directions which would be furnished from the Dominion Department of Agriculture. The illustration field for a county need not be permanently in one locality. The illustrations might be given in one place for a year or two, and then in some other locality, after they had served their purpose in the first place.

The Government Should Provide the Plan and the Seed.

The Dominion Department of Agriculture should provide the plan in general and in detail. For each locality it should aim at the accomplishment of something definite, in introducing varieties of seeds, methods of cultivation, and improvement in the fertility of soils. The work to be carried on at each "illustration station" or field should be directly adapted to furnish information to the farmers on what would be useful to them in their district at once.

The plan should be simple and clear, in order to make it as effective as possible in affecting the practice and products of the neighborhood. For instance, one-fourth of an acre each of four different varieties of oats might be grown side by side. The rule should be to grow not more than four varieties of any one kind of grain. One-eighth of an acre might be grown each of four different varieties of carrots and of four different varieties of potatoes.

For illustration of different methods of culture, one-quarter of an acre of some suitable variety of Indian corn for fodder might be sown broadcast; one-quarter of an acre in rows two feet apart, with the seeding quite thick in each row; another fourth of an acre with the corn in rows three feet apart, and cultivated according to the best known methods; and a fourth one-quarter of an acre with the corn three feet apart, but left uncultivated. Such an illustration of methods of corn-growing would result in a general adoption by the farmers of the best methods. Similar illustrations should be given of methods of cultivating other crops.

The Dominion Department of Agriculture should provide the seeds, and compensate the occupier of the land, who would be Superintendent of the Illustrations, for the expense incurred in the extra labor of sowing and cultivating the comparatively small plots.

I estimate that the expense to the Government for the seeds and such compensation for labor would amount to from \$50 to \$100 per "Illustration Field," according to the size and work.

This would be a means of obtaining a large measure of volunteer service from a great number of leading farmers, in spreading information in a thoroughly practical way throughout the localities in which they lived.

Travelling Inspectors and Lecturers.

A practical farmer with a good knowledge of business methods, and ability to express himself clearly in writing and in public speaking, should be secured as travelling inspector and lecturer for each group of twenty or twenty-five "Illustration Stations." The information which they would gather at these stations during the summer would furnish most useful material for meetings of farmers held to discuss agriculture during the winter months.

I estimate that if one hundred "Illustration Stations" were in existence in Canada at suitable centres, each would be visited during the year by from 500 to 1,000 farmers, who would examine the work carefully for the purpose of learning all that could be transferred into the management of their own farms.

The Klondike Would not Be in It.

I think by that means the quantity of crops could be increased at least twenty-five per cent. from the same acreage, without extra expense, within ten years. That would mean an annual increase of wealth for all time afterwards; and the educational value of the "Illustration Stations" to the farmers themselves and their families would go on growing in a manner that cannot be estimated in dollars and cents. The annual value of the crops from the farms in Canada is estimated variously at from 220 to 270 millions of dollars. In a few years the increased value of the farm crops traceable to these "Illustration Stations" would amount to so many millions a year that even the Klondike would not be in it, by comparison, as a means of enriching the people of Canada.

Estimate of Costs.

I estimate that the expenditure to be made by the Dominion Government for giving effect to this scheme would amount to from \$100 to \$300

for each station, including the administration and the travelling inspectors and lecturers. In the course of three years there might be an "Illustration Station" in each county.

For the encouragement of those who sought to excel in carrying on the work, the Government might arrange to award a gold medal to the superintendent in each group of stations who conducted the work in every respect in the best way. Silver and bronze medals might be given to the others in the order of merit.

Then a special Provincial medal might be provided for the most successful superintendent in each province, and also one grand Dominion medal and diploma, which would confer great honor on the one fortunate enough to win it. These would cost very little in proportion to the good they will do.

Pigs and Poultry to be Included.

After a few years, the plan might very well include methods for increasing the fertility of soils by the growth of such crops as clovers, peas, beans, etc.

It would not be desirable to take up any illustration work with live stock in connection with these stations, except, perhaps, with pigs and poultry. With modifications to suit the nature of the work, the plan could be applied to the establishment and maintenance of "Illustration Stations" for these two branches of live stock; and very great benefits would result from illustrating the best methods of selecting breeds and of rearing, housing, and feeding them.

NOTE.—The Department of Agriculture is very desirous of having the above scheme fully discussed by those interested and the columns of FARMING will be open for this purpose, and we trust our readers will give us their views for publication.—EDITOR.

PROPER DISTRIBUTION OF FERTILIZERS IN THE SOIL.

It may not be considered an important matter by many who use commercial fertilizers, as to how much opportunity they give them to dissolve and distribute their fertility where all the roots of the crops can get it, but it is a matter which should receive the most careful consideration by all farmers, and be carefully worked out, practically, on every farm where these manures are used.

It is a very common practice, when planting potatoes, corn, and other crops that are usually cultivated in hills or close drills, to put all the fertilizer in the hills or rows. When we come to think of the very small space that a fertilizer so placed will occupy when even entirely dissolved, compared with the space the roots occupy, the folly of the plan can easily be seen. If we were to put a handful of almost any commercial fertilizer in a potato or corn hill at planting time, it would need to be dissolved before it could be of any service to the plants when they grow. How much water would be needed to properly dissolve it? Perhaps a thousand times more in measure than the fertilizer. We cannot live upon clear molasses, nor upon oil, nor upon any other equally concentrated food alone. No more can a plant live upon solutions of nitrogen, phosphoric acid, and potash, that are more than five hundred times

stronger than they should be. The human system would soon have a disease that we call indigestion or dyspepsia. And why may not plants have indigestion? Indeed, these solutions are so strong in some cases that they actually cause the death of the tender plantlets. Even seeds may be killed by the caustic character of the strong acids and alkalis that come in contact with them.

But while a part of the soil may be overcharged with fertilizing material, by far the larger part is needing it. When we think of how far the roots of our crops extend; how they permeate every inch of the soil, in most cases, in their search for moisture and food, it is very easy to see how needful it is that the food should be there for them to lay hold upon. Not only does the plant need enough to start it in the growth while the roots are yet all in the hill, but it needs it all the way through life.

There need be no fear that the fertility will be lost by being scattered throughout all parts of the soil, that will finally be within reach of the roots. They will find all in due time, and it will be much better for the crop in the end than if it were all put where the roots may reach it in the first few weeks of their growth. The feeding area of the roots is greatly increased as the season advances. I have seen whole surface soils of a corn field so netted with tiny rootlets after cultivation had been stopped that a small knife blade could not be run into the ground without cutting some of them, and the same thing is true of most potato fields, if properly cultivated.

The fruit grower needs to do some thinking on this same line. The roots of his trees and vines go all over the ground, and in many cases the orchard trees and other things are planted so close together that they interlock in their hungry chase for moisture and fertility that they have a noiseless but no less real war underground. It is the survival of the fittest, indeed, and oftentimes, none of them survive very well.

Not long since, when lecturing to farmers' institutes in western New York, I saw a few of about as foolish attempts at manuring orchards as one could imagine. There were piles of farmyard manure over two feet high carefully placed close to the trunks of the trees. It reminded me of what my friend, Prof. L. H. Bailey, once said of the absurdity of this practice, that it is like putting a feed of oats in a sack and then tying it to a horse's leg, instead of putting it in his manger. The manure will in time spread its fertility somewhat, but it can never do the good in such a position that it could if scattered at once where the feeding roots are. The same is true in principle of commercial fertilizers. Scatter them where they will be needed, instead of putting an excess in a few places and none elsewhere. They are easily dissolved, especially nitrogen and potash, as they are usually found. Failures to get good results are often rightly chargeable to such unwise applications as have just been described, and in some cases, actual damage has occurred. Feed the crops liberally but as wisely as you would your animals.

H. E. VANDEMANA.

DEHORNING CATTLE.

Notwithstanding the strong objection to it in some quarters the dehorning of cattle is largely practised in some sections. A common practice is to dehorn the cattle after they have reached maturity. This involves considerable difficulty and sometimes seriously injures the animal, especially if done by a novice. Many of these disagreeable features may be avoided by preventing the horns of the young calves from developing. This can be easily and effectively done when the calf is two or three days old by applying substances that will prevent the growth of the horn. Caustic potash is best adapted for this purpose and if applied to the growing horn at two or three days old, a hornless animal will be the result. The following directions for using caustic potash given in a recent bulletin by the New Hampshire Experimental Station will be of value at this season of the year:

The hair should be cut away from the young horn as thoroughly as possible so that the potash may come in intimate contact with the parts to be treated. The oily secretion should be removed from the parts to be touched with the potash, by wiping carefully with a rag or sponge moistened with soap suds, or water containing a little ammonia. Parts not to be touched should not be moistened.

The stick of potash is rolled up in a piece of paper so as to leave one end exposed. The exposed end is dipped in water to moisten it and then rubbed on the button or embryo horn until the skin begins to start, care being taken that the whole of the button and the border or matrix is included in the treatment. In young calves a few days old a surface half an inch or a little more in diameter will cover these parts.

Caustic potash, or caustic soda, which answers as well, can be obtained at almost any drug store. When not in use it should be kept in a closely-stoppered vial, one with a rubber stopper preferred, or it will liquefy.

After the calf is two or three days old the sooner the potash is applied the better.

THE IDEAL DAIRY COW.

Those of our readers who have had the pleasure of hearing our good friend, John Gould, at the dairy conventions in Ontario during the past five years will appreciate the following extract from his pen on the ideal dairy cow.

The ideal cow is not large; she weighs about 1,000 pounds; she is something like a race horse, for speed in the horse and milk in the cow are allied. Beef in a horse and beef in a cow means strength always. It is a question of nerve power, and that is something food will not produce, only maintain. For the typical dairy cow you must have race horse type, bony and muscular, whether she is a Holstein, a Jersey, or whatever she may be. You will find her with bony head and strong jaw, long between the eyes and nose, with broad muzzle. She should have a very bright, protruding eye—I want a cow I can "hang my hat" on her eyes. Why? Simply on account of her brain power. It means strong nerve force, and that means action later on, I want a thin neck and retreating brisket. The lines above and below must not be straight, or she will steal from you; I want her slightly depressed behind the shoulders, with sharp chine; I don't want too straight a back bone. She must have large organs of reproduction—you want a cow with a straight back; I want her wedge-shaped. I want two wedges, large in rear, large in heart girth, i.e., wide between forward legs, sharp on shoulder. This gives me large heart action and the strong arterial circulation I want. Then last, but by no means least, she must have a good udder, for one-half of the value of the cow is in her udder. She should have a long udder from front to rear. Then she must have a good handle on each corner of her udder. And why? Because if she gives two pails of milk per day it is a matter of some labor to milk her.

THE HORSE SHOW AND MILITARY TOURNAMENT.

The Horse Show and Military Tournament to be held in the Armories, Toronto, on Wednesday, Thursday, Friday and Saturday of this week promises to be the greatest event of its kind ever held in Canada. There are considerably over thirty entries more in the horse classes than there were last year, and the interest in the show is greater than ever. The auction sale of boxes brought prices that were never realized before, and altogether the combined show will be the great event of the year.

The secretary, Mr. Henry Wade, has been busy for weeks past in receiving and arranging the entries. Mr. Wade is very desirous of having more of the farmers attend the show, and has made special arrangements to have most of the heavy horses shown on the morning and afternoon of the first day (May 4th). The attractions on this day will be specially for the benefit of the farmer, and it is to be hoped that a large number will attend. The events of each day will also be interesting. The general admission is 25 cents.

RULES AND REGULATIONS FOR USE IN CHEESE FACTORIES AND CREAMERIES.

A subscriber wishes to know the rules and regulations generally adopted by farmers' co-operative cheese and butter factories. If a complete list is desired we would advise writing the Agricultural and Dairy Commissioner Ottawa for a copy of a bulletin issued by him containing them. The following, however, are among those in general use by cheese factories and which may be adapted for use in creameries:

(1) The milk of each patron shall be tested at any time during the season; and at the discretion of the directors a statement of the quality of the milk of all the patrons shall be posted up in the factory in a conspicuous place where it may be seen by all the patrons and shareholders.

(2) In case any milk furnished should be of such a doubtful quality as to warrant the assumption that it has been adulterated, a committee appointed by the directors shall visit the premises of the patron, see his cows milked morning and evening, and have the quality of such milk compared with the record of the tests made of the milk which he was previously furnishing, and if a substantial difference in quality is evident, it shall be optional with the directors as to whether they shall (1) prosecute the patron according to law, (2) effect a settlement with him upon the payment to the funds of the manufacturer, of such a sum as may be agreed upon, or (3) exclude the patron from the privileges of the factory for a stated number of years. (Where a factory is paying for milk according to its quality this clause would not be needed.)

(3) Each patron upon being notified shall convey in a wagon or otherwise his or her share of the cheese manufactured from the factory to the point of delivery, as agreed upon by the salesman, and failure to comply with this rule will subject the patron to a fine of \$2, which shall be deducted from his share of the receipts from the sale of cheese.

(4) If any patron upon being notified shall send to the factory milk which is sour or unfit for use in cheese-making, such milk shall be returned to his or her milk-stand and a charge sufficient to pay the manufacturer for the expense of drawing it to the factory, and to the milk-drawer for returning it to the milk-stand shall be made in every case. The decision of the directors in this matter shall be final.

(5) In the case of any patron who does not continue to furnish the milk from his or her herd to the factory until the close of the manufacturing season, a sum equal to — cents per pound of all the cheese manufactured from the milk which they have furnished during the

season, will be deducted from his or her share of the receipts, unless he or she shall first have obtained the consent of the directors to such discontinuance.

(6) Milk shall be supplied from only healthy cows, which are fed upon wholesome food, with access to plenty of pure water and salt.

(7) The pastures, yards and lanes shall be kept free from carrion and all decaying matter which may cause noxious smells.

(8) Each patron shall furnish pure, sweet milk, to which nothing has been added and from which no part has been removed or kept back; and if any be reserved it shall be of the average quality of milk given by the herd of cows.

(9) Milk must be drawn from the cow in a cleanly manner; the udders should be brushed or washed, and milking with dry hands is preferable to the practice of dipping the fingers in the pail in order to moisten them.

(10) Immediately after the milk is drawn from the cow it should be strained through a wire or cloth strainer.

(11) The milk shall be aerated by dipping, pouring or stirring, or by the use of an aerator.

(12) The milk must be kept in a place where the atmosphere is free from foul and injurious smells.

(13) All milk to be conveyed to the factory on the public milk wagons shall be delivered on the side of the public highway (unless otherwise arranged by the directors) upon a milk-stand of convenient height.

(14) The surroundings of the milk stand shall be kept clean and free from bad smells; and the feeding of swine within 100 feet of the milk-stand is strictly forbidden.

(15) The milk shall be delivered on the milk-stand at a time to suit the convenience of the milk-drawer, who shall not leave any milk-stand before 5.30 a.m., and who shall reach the factory with his load not later than 9 a.m.

(16) The cheese-maker shall reject any milk

which he considers to be unfit for use in the manufacture of the finest quality of cheese; and his judgment in the matter shall be final.

(17) Each patron who furnishes milk to the factory is thereby considered as having agreed to the foregoing rules and regulations.

YOU CAN'T DO IT.

You can't keep chickens in health without grit.

You can't make eggs from food that produces fat.

You can't make a hen set until she wants to.

You can't keep fowls thrifty without green food of some kind.

You can't make profit with a crowded yard.

You can't succeed without hard work.

You can't keep fowls in good condition that are literally covered with lice.

You can't put brains into an incubator and brooder.

You can't have a good growth by in-breeding.

You can't get any satisfaction out of a lazy hen.

You can't become a successful fancier until you have become well versed in poultry culture.

You can't afford a big expense in this business; the less help you have the better.

You can't speculate on the markets. Prices change with the whirlwind.



This is a picture of a scene that happens all over the world of Farming. The pigs are off for a ride in the express cars for the new houses in the new town. The horses are ready to leave for the train time is nearly up. & trains wait for no one.

Jas. H. Shaw
Sincere Obit

The Ontario Agricultural Gazette

The Official Bulletin of the Dominion Cattle, Sheep, and Swine Breeders' Associations, and of the Farmers' Institute System of the Province of Ontario.

THE DOMINION CATTLE, SHEEP, AND SWINE BREEDERS' ASSOCIATIONS.

Annual Membership Fees:—Cattle Breeders', \$1; Sheep Breeders', \$1, Swine Breeders', \$2.

BENEFITS OF MEMBERSHIP.

Each member receives a free copy of each publication issued by the Association to which he belongs, during the year in which he is a member. In the case of the Swine Breeders' Association this includes a copy of the Swine Record.

A member of the Swine Breeders' Association is allowed to register pigs at 50c. per head, non-members are charged \$1.00 per head.

A member of the Sheep Breeders' Association is allowed to register sheep at 50c. per head, while non-members are charged \$1.00.

The name and address of each member, and the stock he has for sale, are published once a month. Over 80,000 copies of this directory are mailed monthly. Copies are sent to each Agricultural College and each Experiment Station in Canada and the United States, also to prominent breeders and probable buyers resident in Canada, the United States and elsewhere.

A member of an Association will only be allowed to advertise stock corresponding to the Association to which he belongs; that is, to advertise cattle he must be a member of the Dominion Cattle Breeders' Association, to advertise sheep he must be a member of the Dominion Sheep Breeders' Association, and to advertise swine he must be a member of the Dominion Swine Breeders' Association.

The list of cattle, sheep, and swine for sale will be published in the third issue of each month. Members having stock for sale, in order that they may be included in the Gazette, are required to notify the undersigned by letter on or before the 9th of each month, of the number, breed, age, and sex of the animals. Should a member fail to do this his name will not appear in that issue. The data will be published in the most condensed form.

F. W. HOBSON, Secretary,
Parliament Buildings Toronto, Ont.

LIVE STOCK FOR THE WEST.

A car load of thoroughbred live stock was last week shipped from Ontario to the West by the Live Stock Associations. The car was in charge of Prof. George Harcourt. Stock was loaded at the following points: London, Guelph, Milton, Leaside Junction, Locust Hill, Sharbot Lake, and Smith's Falls. At Winnipeg a Short-horn bull from W. G. Pettit, of Freeman, will be delivered to Mrs. Joan G. Field; an Ayrshire heifer from Walter Nichol, of Pattsville, will be re-shipped to Alex. Laurance, Greta; a Short-horn bull from H. and W. Smith, Hay, and another from J. E. Shibley, Harrowsmith, will be re-shipped to D. Fraser and Son, Emerson, two Ayrshires from R. G. Steacey, of Brockville, will be re-shipped to Steele Bros. of Glenboro'. J. G. Barron and Wm. Chamber at Carberry and Brandon, respectively will each receive a Short-horn heifer from John Isaac, of Markham. At Moosomin a Guernsey bull will be delivered to A. McArthur, of Welwyn, from Caldwell Bros., of Orchard. At Indian Head, Wm. Dickson will receive two Shorthorn heifers from W. G. Pettit, Freeman. Mr. David McCrae, of Guelph, shipped a Galloway bull to Mr. Van Veen, of Fort Qu'Appelle, to be delivered at Qu'Appelle. An Ayrshire bull will be delivered at Regina for A. E. Risk, from Robert Davies, Toronto. At Calgary, two Shorthorn bulls will be delivered to W. R. Stewart, Fort McLeod; a Shorthorn bull from W. G. Pettit, Freeman, will be re-shipped to Wilfrid Waterhouse, of Innisfail. A Berkshire pig from J. C. Snell, London, will be re-shipped to T. Shannon and Son, Cloverdale, B.C.; and a Guernsey bull and a Guernsey heifer from Wm. Butler and Son, Dereham Centre, will be re-shipped to G. Bradley-Dyne, Sidney, B.C.

Farmers' Institute Department.

THE SUCCESSFUL AND POOR DAIRY-MAN COMPARED.

By W. C. SHEARER.
The Poor Dairyman.

In breeding and rearing his herd he does not go to much trouble or expense; he usually uses a grade sire of

no particular breeding; he generally buys him at some sale when things are selling cheap; he raises four or five heifer calves from him each year; they are small, stunted little things the first summer, and never seem to get over this first setback. When these heifers become cows, here is their usage: he has them due to calve in May and June; they have been poorly fed all winter on straw and turnips, with lots of exercise. As soon as any signs of grass appear, they are turned out on the roadsides till their own pasture gets a little start; they milk fairly well through the month of June, as long as there is good growth. He does not sow any soiling crops, and when the drouth of mid summer strikes them, "they shrink in milk wonderfully." If it happens to be a moist, wet season, the grass keeps green and growing fresh. He thinks, "I'm all right this year, for the cattle can take care of themselves, and give considerable milk too; but in a season like some we have had lately, when the drouth continues throughout harvest and well along into the fall, his cows become very thin in flesh, and nearly go dry altogether. But to liven them up a little, he keeps a splendid dog, and they are always brought up to be milked with the inspiring aid of that lively animal. If you ask him how much milk this or that cow gives, his answer is, "Oh, not very much; I never weigh each one's milk separately and have too many colts and horses, and they keep the grass rather close for the cows to get much. I made a mistake too last spring in not sowing something for green feed in case of a dry spell. I expected we would have a showery season, as the last two or three seasons have been too dry for anything to grow, but I guess I've got caught in the same fix again." He keeps ten cows and supplies his milk to the cheese factory. They have averaged 2,700 lbs. of milk each, and which brought \$22 apiece from the factory. They made some butter to trade at the store, before and after the season, which would with the cheese money amount to about \$26 each for the whole year. He keeps two breeding sows, and always sells the little pigs when weaned. He does not believe in fattening pigs;

for he is sure that on the whole they eat more than they are worth. These sows have two litters in a year each; the fall ones he sells at about \$1.25 each, and the spring litters at \$2 each. He also has half a dozen breeding ewes from which he averages from eight to ten lambs. His returns account stands about like this:

FEED FOR HIS CATTLE.

15 tons hay at \$8 per ton	\$120
10 tons straw at \$2 50 per ton.	25
1,100 bush. turnips at .05.	55
Oats and peas.	100
	\$300

INCOME FROM HIS CATTLE.

10 cows at \$26	\$260
10 fall pigs at \$1.25	20
12 spring pigs at \$2.	24
10 lambs at \$3.	30
100 bushels wheat at 75c.	75
Fat ewes and two-year-olds sold.	90
	\$500
	300
	\$200

The Good Dairyman.

Some points in breeding and rearing a good dairy herd.—He keeps a good sire at the head of his herd, one that has been bred from a large and deep milking cow. Has been using Shorthorn sires till two years ago, he is now using a Holstein sire, bred from a heavy milking and also a grand butter producer. His practice is to have the cows he desires to raise heifers from calve between January and May. He raises these calves on milk, pulped roots and hay with some bran and ground oats, and aims to keep them growing fast right along and never on any account to let them get stunted; knowing that on the good and thrifty condition of the heifer depends in a great measure the future cows, whether she turn out a profitable or an unprofitable one. Having got these fine, strong, healthy young heifers to become mothers at two years old, he attends to them very carefully and feeds them an abundance of rich, succulent and milk-producing food. In order to provide this food for his cows he at two or three times, a week apart, sows a mixture of peas and oats, one part peas to two of oats, and about May 15th or as soon as it seems safe from frost, he sows an acre or two of corn for soiling. He starts to feed it when the oats and peas get too ripe, always endeavoring to keep up the cows to a full flow of milk right through the dry hot weather of harvest. He sows plenty of corn to keep up all the choice succulent feed the cows require, which, with the after growth on hay and stubble fields, furnishes an abundance of feed right on till October. He begins to keep them in as soon as the nights are cold, because he finds that cold, stormy or wet weather reduces the yield of milk very quickly, and it is more difficult to regain than it is to keep it up, for with a little care at the right time this loss from shrinkage can be very greatly helped. He keeps five brood

sows and has them have pigs in August, sells these fat in February or the 1st of March following. Then he has his second lot of suckers come in January. These he feeds cheaply on skim milk, mangels, with some middlings and aims to have them average 100 lbs. each the first of May, when they are sold as store pigs to the cheese factory. He also purchases in the fall and feeds till May for the Old Country market eight fine steers. He aims to clear \$100 on these, for his cows cannot consume all the rough feed he grows on his farm. He raises half a dozen heifer calves each year to keep up his herd, and has that number of the older ones to dispose of yearly.

If you ask him what any or all of his cows give in milk or money, he can tell you, for he weighs each cow's milk one day in each week and multiplies by seven days, giving him her amount each week and it comes out so correctly that there is only a difference of about 100 pounds between his and the cheesemaker's weights, which is pretty close work. He keeps 21 cows, which averaged him in seven months at the factory 6,250 pounds of milk, or \$50 each. The best cow gave 9,460 pounds or \$75.68, and the poorest cow gave 3,500 pounds or \$28, a difference of \$47 to the credit of that excellent cow. If all had given the same as the poor cow, he would have received \$600; and if all had given as much as the best one, his cheque would have amounted to \$1,600. His returns are about as follows:

100 tons of ensilage at \$1 50	\$150
50 " " hay at \$8.00	400
30 " " straw at \$2.50	75
2000 " " turnips at .05	100
21 cows to \$20 of grain each	420
	\$1,145
21 cows at \$54 each	\$1,134
8 fat steers, profit	100
45 fat hogs	360
40 spring pigs at \$5.00	200
6 fat cows at \$30	180
300 bushels of wheat at .75	225
	\$2,199
	1,145
	\$1,054

He thinks as near as he can estimate that his cows consume about \$18 or \$20 worth of grain each in a year.

Ontario Agricultural College.

Announcements concerning the College work will be published weekly under this head.

NOTES FROM THE DAIRY DEPARTMENT.

By Prof. H. H. DEAN.

How the Per Cent. Fat in Milk Affects the Yield of Cheese.

There are still some who maintain that it is just to "pool" or divide money among patrons of a cheese factory according to the weight of milk. The following tests conducted in the Dairy Department of the Ontario Agricultural College show how far from justice this plan is.

Three hundred pounds of milk testing 4.35 per cent. fat, produced 34½ pounds of green cheese and 33

pounds of cured cheese. On the same day and under the same conditions of handling, as far as possible, three hundred pounds of milk testing 3.15 per cent. fat, produced 27 $\frac{1}{4}$ pounds of green and 26 pounds of cured cheese. A difference of 1.2 per cent. in the fat made a difference of seven pounds in the yield of cured cheese from 300 pounds of milk, or at the rate of 2 $\frac{1}{4}$ pounds per 100 pounds of milk. At 8c. per pound of cheese it makes a difference of about 18c. per 100 in the value of this milk for cheese-making.

Another illustration will suffice. This time we had two vats of milk, 300 pounds in each, one of which tested 4 per cent. fat and the other 3.1. The yield of cured cheese from the former was 30 $\frac{1}{2}$ pounds, and from the latter 26 $\frac{1}{4}$ —a difference of 4 $\frac{1}{4}$ pounds. We have numerous instances where the difference is as great or greater than in the cases cited, which go to show that all milk should be tested as it comes to the factories and the proceeds of sales divided according to its cheese making value and not according to its bulk.

Dairy School.

The dairy class which has just completed the short course in dairying is the largest which has yet attended the Dairy School. To have 110 students on the register means a large force of improved dairymen and dairywomen. Although the course was extended to twelve weeks a larger number remained until the close of the term than ever before. We have one or two butter-makers and two or three persons who would make capital assistants in a creamery who have not yet secured places. Anyone desiring a maker or an assistant may write the Dairy Department, O. A. C., Guelph.

PHEASANT CULTURE.

By T. SHANNON McGUIRE, M. D. C. M., Hamilton, Ont.

From Egg to Egg.

It is surprising why the most beautiful, interesting, and profitable of all the feathered tribes should be so little known until recently to the fanciers of America. But when we consider that the home of the pheasants is China, whose animals and birds were almost unknown until the famous Chinese wall which isolated that country from the rest of the world was battered down, it is apparent why the introduction to this country of pheasants has been so long delayed. Since that event commerce has slowly wended its way into the most remote parts of China, and been the means of giving to western countries the richest, rarest, loveliest, and most gorgeously plumed birds that adorn the earth. For when we take into consideration that there are about twenty distinct varieties of pheasants, all of them as rich and varied in color as the rainbow, all very beautiful, yet the different varieties widely differing from each other in their styles of grace and beauty, there can surely be found in the pheasant tribe an ideal bird to suit the taste of every fancier no matter how versatile.

Imports of the Mongolian pheasant into Oregon, which have proved such a marked success and profit to the farmer and keen delight

to the sportsman, have stimulated other states and individuals within the last few months to import many new and rare specimens.

As pheasants have undoubtedly come to stay, it behooves us to keep pace with the times, and to at once begin to educate our readers in this most pleasant and profitable industry, which is at present showing such rapid progress in many parts of Canada and the United States. It is only a very few years since the Mongolian pheasant was introduced into Oregon, and in order to show the progress they have made we here reproduce a letter written by the game-warden of that state:

Portland, Ore., Nov. 3.—The Mongolian pheasant continues to thrive and increase in this state, where they were first introduced as a game bird on the American continent. This increase is the more remarkable because of the failure of the Legislature to provide adequate laws and funds for their protection. They have become the favorite market bird in this city, over 10,000 having been sold here last year during the one month the market sales are permitted by law—Oct. 15th to Nov. 15th.

"There is a great demand for these birds, for stocking purposes, from nearly every state in the Union, scores of letters being received at this office every week, making inquiries as to their habits, and how they can be obtained. The demand has now become greater than the supply, as only birds bred and raised in confinement can be legally shipped out of the state, and then only upon affidavit of the shipper that the birds are such as to entitle them to shipment.

"I have no doubt that the effort made by your commission and other enterprising citizens to stock your state with this, the greatest game bird on earth, will prove successful. All that is necessary are wise protective laws, strictly enforced, prohibiting their killing for five or six years, to thoroughly establish them.

"Your climate is colder than ours, and the environment in your state not as favorable for their rapid increase; but they are a hardy, prolific bird, and I feel confident that they will gain a foothold if given a fair chance.

HOLLISTER D. MCGUIRE,
"State Fish and Game Protector,
Oregon."

With all due respect to Mr. McGuire concerning the comparison of this country with Oregon, we believe the East has equal, if not superior, advantages. Pheasants can stand the coldest of climates, but they suffer much from wet. This country is cold, but Oregon is wet, and we think the odds are in our favor.

The December number of *Birds* (a Chicago publication) has a well written article on the Ring-Necked Pheasant, from which we copy this extract referring to the State of Ohio: "A law has been enacted forbidding the killing of the pheasants until November 15th, 1900. Two hundred pairs liberated last year increased to over two thousand."

When we take into consideration that a hen pheasant will hatch a covey of from eighteen to twenty-four young birds from each setting, the result is not greater than might be expected. In the same article in *Birds* a prediction is made that the Mongolian pheasant will, in the Western States, take the place of the prairie chicken, and in the East the quail and common pheasant, by which is meant the ruffed grouse (partridge). Massachusetts has also spent several thousand dollars in stocking that state with pheasants, and the report which is before us is very encouraging.

We come now to our own country—Canada. A few years ago there were a number of Mongolian pheasants lib-

erated in the province of British Columbia. They have bred so rapidly that they now outnumber all other game. So great has been the success that though the law provided protection until 1900, it was so amended to allow the killing of male birds for a month this past fall, and many hundreds of them were shot. Two years ago a pair of pheasants escaped from a gentleman who resides in the country near St. Catharines, Ont. A year ago last fall one large flock was seen near where the birds escaped, proving that they could find feed and endure our winter. This past fall several large flocks were seen in the same place, showing that they increase as the English sparrow did after being imported into this country several years ago. Our highest hope is that the pheasants will prove as great a blessing to this country as the English sparrow has a curse.

From the last report of the Game Commissioners of Ontario we print a small extract of their recommendation to the Government in relation to pheasants:

"We have felt no small degree of pride in endeavoring to keep Ontario abreast of the times in this respect, and it is humiliating to us to see other and less pretentious states far in advance of our province in thus encouraging the introduction of birds which would not only furnish delicacies in the way of food supply, but also tend to beautify the country, make it more interesting, and furnish an incentive for business men and others to take healthful recreation and exercise. This work must be done in order to replace native birds, which in many cases are becoming practically extinct, and which cannot be restored by propagation or otherwise.

"We say plainly that we feel no compunction in asking that a certain amount of money be devoted to this laudable object, because now that the work of the Game Laws is about self-sustaining, we feel that the Government should devote some of the moneys to this end."

It is more than likely that the Ontario Government will act on the above recommendation and appropriate a large sum of money to stock Ontario with English and Mongolian pheasants. The birds to stock Ontario should be bred by Ontario fanciers, if they can supply the demand, as they will then be acclimated, and one such bird is worth two imported from a warmer country. Besides, other things being equal, we do not think a prudent Government will discourage our own honest industries by purchasing pheasants from the people of a foreign nation.

Hatching the Eggs

As the season is now too late for purchasing the birds themselves, we assume that most fanciers will commence the pheasant industry by purchasing the eggs. We will here pass over how pheasants' eggs should be packed for shipment, as the eggs when received by the beginner will be properly packed, and will be a better lesson than we could describe. After the eggs have been received, they should be turned daily until they are put to hatch, whether in an incubator or under bantam hens. It is better, if under bantams, that the nest should be on the ground and on fine black earth, if possible.

Incubators.

It is easy enough to hatch pheasants' eggs in any good incubator that will hatch hens' eggs, but they must be managed differently. The moisture necessary for hens' eggs would destroy

pheasants' eggs. The shell of the pheasants' egg is much closer grained and not so porous as hens' eggs. If too much moisture is furnished to the pheasants' eggs by the incubator, the chicks will be too large and so crowded in the shell that they cannot get out when the twenty-four days arrive, which is the time they usually take to hatch. Golden pheasants' eggs sometimes hatch in twenty-two days.

The Massachusetts Game Commission has been experimenting in hatching pheasants' eggs, and from the report of the committee to the Government, we reprint the following extract, which speaks for itself:

"From our incubator we obtained a hatch of ninety-five per cent., and, notwithstanding our inexperience, the entire hatch was from ten to fifteen per cent. higher than from the average hens."

There is another argument in favor of the incubator. The vermin, scabby legs, and other diseases which the young pheasants are exposed to when hatched under hens are avoided.

Brooders.

Outdoor brooders are not desirable for the work, as the sudden changes of weather render it impossible to maintain an even temperature, and it is inconvenient to give the chicks proper care in stormy weather, while the high winds cause the temperature to fluctuate and sometimes set fire to the brooders. The result of the exhaustive investigation made during the past season has led to the construction of a brooder house, partly covered with glass, for the protection of the young birds during wet and cold weather, and equipped with brooders that are self-regulating and even in temperature. There is no guess-work about it; the temperature, once established, can be sustained with very little care. Our investigations and experience warrant the conclusion that with proper incubators and brooders and the scientific plan of feeding the young, which we will now explain, nine-tenths of the cost and labor in raising pheasants may be saved, as well as saving the lives of ninety-nine per cent. of the young pheasants.

o be continued.)

SPRAYING EXPERIMENTS.

The spraying outfits sent out by the Provincial Government will give instruction in spraying at the following places in their respective divisions during the first half of May:

Western Division.

Seaforth—Monday, May 2nd, 2 p.m., R. Govenlock's orchard. Goderich—Tuesday, May 3rd, 2 p.m., H. Curwin's orchard. Exeter—Wednesday, May 4th, 2 p.m., R. S. Lang's orchard. Ridgetown—Thursday, May 5th, 2 p.m., Edward Lenebinc's orchard. Leamington—Friday, May 6th, 2 p.m., G. H. Mills' orchard. Amherstburg—Saturday, May 7th, 2 p.m., Edwin Patton's orchard. Dutton—Monday, May 9th, 2 p.m., Job Hodder's orchard. Port Burwell—Tuesday, May 10th, 2.30 p.m., Freeman Chute's orchard. Port Rowan—Wednesday, May 11th, 2 p.m., H. M. Barrett's orchard. Springvale (near Hagersville)—Thursday, May 12th, 2 p.m., John Holbrook's orchard.

Central Division.

St. Catharines—Monday, May 2nd, 2 p.m., A. Pay's orchard. Niagara-on-the-Lake—Tuesday, May 3rd, 2 p.m., Freels Bros.' orchard. Ancaster—Wednesday, May 4th, 2 p.m., Major Walker's orchard. Waterdown—Thursday, May 5th, 2 p.m., James Mc-

PREMIUMS

Books on Agriculture

The following books on agriculture are recommended in the last report of the Ontario Agricultural College as suitable to the requirements of the Canadian farmer:

- First Principles of Agriculture, by Voorhees. \$1 00
- Soils and Crops of the Farm, by Morrow & Hunt. 90
- Milk and Its Products, by H. H. Wing. 90
- Fertility of the Land, by Roberts. \$1 10
- The Soil, by King. 65

—\$5 55

The whole of these five books will be sent free for eight new yearly subscriptions at \$1.00 each. Any single book for two new yearly subscriptions at \$1.00 each.

FEEDS AND FEEDING, by Prof. W. A. HENRY, Dean of the Agricultural College of the University of Wisconsin. Price \$2.00. It is a substantial, large, 5vo volume of 675 pages, printed from new type upon clear white paper and substantially bound in art vellum. In its preparation the extensive experiments conducted by investigators in the old world, as well as the work of American stations, have all been carefully garnered, sifted, compared and arranged in the best form possible, care being taken to give the subject matter a practical, helpful bearing to the farmer and stockman. The numerous tables contained are well digested and arranged in form to convey quickly and accurately to the mind the data and summaries of results of feeding trials, analyses by the chemists, digestion work, etc. etc.

Sent free for three new yearly subscriptions at \$1.00 each.

THE BOOK OF THE DAIRY. By W. FLEISCHMAN. 344 pages, illustrated. Price, \$3.50. Sent free for five new yearly subscriptions at \$1.00 each.

Free Seeds

Seed Grains

COLLECTION A.

10 Packets Vegetables. Price, 50c.

- | | |
|---------------|------------------|
| 1 Packet Beet | 1 Packet Parsnip |
| 1 " Carrot | 1 " Cabbage |
| 1 " Cucumber | 1 " Radish |
| 1 " Lettuce | 1 " Squash |
| 1 " Onion | 1 " Tomato |

Given for one new yearly subscriber at \$1.

COLLECTION B.

10 Packets Flowers. Price, 50c.

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|---------------------------|----------------|
| 1 Packet Phlox Drummondii | 1 Packet Pansy |
| 1 " Stocks | 1 " Nasturtium |
| 1 " Petunia | 1 " Dianthus |
| 1 " Portulacca | 1 " Balsam |
| 1 " Mignonette | 1 " Aster |

Given for one new yearly subscriber at \$1.

COLLECTION C.

20 Packets Vegetables and Flowers. Price, \$1.00.

- | | |
|-----------------|-----------------|
| 1 Packet Aster | 1 Packet Squash |
| 1 " Pansy | 1 " Watermelon |
| 1 " Stock | 1 " Musk Melon |
| 1 " Balsam | 1 " Lettuce |
| 1 " Phlox | 1 " Celery |
| 1 " Sweet Peas | 1 " Carrot |
| 1 " Cauliflower | 1 " Beet |
| 1 " Cucumber | 1 " Radish |
| 1 " Onion | 1 " Tomato |
| 1 " Cabbage | 1 " Vine Peach |

Given for two new yearly subscribers at \$1 each.

COLLECTION D.

20 Packets Vegetables. Price, \$1.

- | | |
|------------------|-----------------|
| 1 Packet Beet | 1 Packet Carrot |
| 1 " Parsnip | 2 " Cabbage |
| 2 lb. " Cucumber | 1 " Lettuce |
| 1 " Musk Melon | 1 " Watermelon |
| 1 " Celeriac | 1 " Onion |
| 1 " Radish | 1 " Squash |
| 1 " Tomato | 1 " Vine Peach |
| 1 " Parsley | 1 " S. Savory |
| 1 " Sage | 1 " Thyme |

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|-------------------------------------------|------|
| Page. Beet, Early Intermediate..... | 5c. |
| " Cabbage, First and Best..... | 10c. |
| " Carrot, Half Long, Scarlet..... | 5c. |
| " Cucumber, Long Green..... | 5c. |
| " Lettuce, Selected Nonpareil..... | 5c. |
| " Onion, Yellow Globe Danvers..... | 5c. |
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| " Radish, Olive Gem..... | 5c. |
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| " Asters, New Giant Flowering, Mixed..... | 15c. |
| " Sweet Peas, Selected Finest Mixed..... | 10c. |
| " Wild Garden Flower, Mixed..... | 5c. |

Two special subscriptions at 50c., as offered on another page in this issue, will count as one yearly subscription in respect of any of these premiums. Now is your opportunity. Our friends should take advantage of this special offer to obtain some of the valuable premiums with very little trouble, and without incurring the least expense.

Address, **FARMING, 44-46 RICHMOND ST. WEST, TORONTO**

FREE To Old and New Subscribers FREE

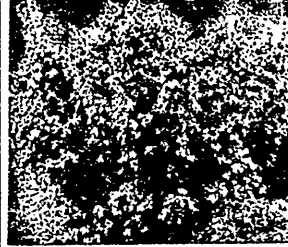
All those who will pay up all arrears and renew their subscriptions to the end of 1898, or who send us in new subscriptions between now and 1st June will receive

THE STANDARD WAR MAP FREE

It is a beautifully colored Map, bound in stiff paper covers, size 24x32 inches, showing the seat of operations in the War between the United States and Spain. This will be given in addition to any premium to which those sending us in new subscriptions are entitled. In remitting, be sure to mention this unment if you wish to get the map.

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Buy **CANADIAN GROWN STOCK** only, and thus escape the dreaded San Jose Scale so prevalent in the States. There is no more reliable, healthier, hardier, or more complete assortment than mine. Good reliable salesmen wanted in a number of fine townships, to start work at once. Complete outfit free.

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YOU RIDE A BRANTFORD AND YOU'LL RIDE THE BEST

A BUSY BIG FACTORY

FOR months past our factory has been running twenty hours per day with two staffs of men employed. Every available inch of floor space is occupied, and the entire factory is a mammoth hive of industry. Exclusive of office employees or agents, nearly 500 men are working night and day to supply the unprecedented demand for Brantford bicycles that comes from every corner of the Dominion, from many countries of Europe, from Australia and South Africa. Never before in the history of the company have we experienced so much difficulty in filling orders promptly, and never before have our agents been so grievously disappointed in getting goods. While we sincerely regret our inability to turn out more wheels, we ask our agents and customers to wait and be patient. There are many important features in connection with our '98 Red Birds that will repay them for any delays from which they may suffer, among which are the following:

- Positively Dust Proof Bearings
- New Narrow Tread
- New One-piece Crank Axle
- New Blind Nuts
- Patent Ball Oilers
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- Handsome New Style Front Forks
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- Extra Strong Rear Fork Brace

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- Best Quality One-piece Rims
- Double Swaged Spokes
- Herring Bone Tread Electric Tires
- New B Shaped Chain
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- New Wilson Rear Hub Brake
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- Etc., Etc.

Our new 1898 catalogue is now ready and will be sent on receipt of address.

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Eastern Division

Marysville--Friday, May 6th, 2 p.m., Joseph McGurn's orchard. Hallowsmith--Saturday, May 7th, 2 p.m., Thomas Alton's orchard. Sydenham, P.O. Rentrew--Monday, May 9th, 3:30 p.m., Joseph Knight's orchard. Arnprior--Tuesday, May 10th, 2 p.m., Claude McLachlin's orchard. Carleton Place--Wednesday, May 11th, 2 p.m., Cornell & Patten's orchard. Carp--Thursday, May 12th, 2 p.m., Hugh Goarley's orchard. Alexandria--Friday, May 13th, 2 p.m., Angus McDonald's orchard, Lot 38, Con. J. Lochiel Tp. Henry--Saturday, May 14th, 2 p.m., Peter Paquette's orchard. Hawksbury--Monday, May 16th, 10 a.m., A. R. Fraser's orchard. Campbellford--Tuesday, May 17th, 10 a.m., Miss Jane Johnston's orchard.

QUESTIONS AND ANSWERS.

WHEN TO SOW LAND PLASTER.

St. Helen's, April 20, 1905.

Editor FARMING:

Would you please answer the following questions through your valuable paper. When is the proper time in the spring to sow land plaster on clover? At what age should lambs be castrated?

JAMES RAMAGE.

(1) Land plaster contains practically no plant food. Its beneficial action consists in making the mineral matter of the soil available to plants; and it is believed to have the greatest influence on compounds of potash, rendering the potash available. However, it is a well known fact that many soils which used to be benefited by land plaster no longer respond to its application, owing, probably, to the reduced amount of potash in the soil. Consequently, the use of land plaster has greatly decreased, and comparatively little is used to-day. On some soils it may give increased yield, on others no benefit will be derived, and I think it is safe to say that in most instances it will hardly pay for itself. It may be applied as soon in spring as the clover has made a good start.

(2) There is room for some difference of opinion as to the best age at which to castrate lambs, practice varying from two days until several weeks. A very safe rule is to castrate before the lamb is one month old, or as soon as the testicles are sufficiently developed to admit of operation.

G. E. DAY, Agriculturist.
Ontario Agricultural College.

CORN AS A MANURE.

Editor of FARMING:

Would corn make a good crop to plow under for manure, and how does it compare in value with clover and peas as a manure?

FARMER.

I regard corn as entirely unsuited for plowing under for manure. Of the other two crops clover would have a higher value than peas, as it would add more nitrogen to the soil.

BUY



No other make of salt will give such satisfaction. Every package is guaranteed to the purchaser.

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R. & J. Ransford
CLINTON, ONT

which it had gathered from the air; and, moreover, its roots are larger, penetrating more deeply, bringing up some plant food from the subsoil, and vastly improving the mechanical condition of the soil. The corn roots would not have the beneficial influence of clover roots on the mechanical condition of the soil. Corn gathers no nitrogen from the air, and consequently would not increase the plant food in the soil, and the corn plants are of such a character that they would not readily decay and become incorporated with the soil. I don't think there is any comparison between corn and clover for this purpose, as the corn is totally unfit.

G. A. DAY, Agriculturist.
Ontario Agricultural College.

Publishers' Desk.

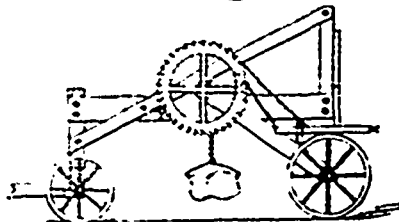
Lump Jaw.—Those of our readers who have not received a copy of "The Illustrated Treatise on Lump Jaw," issued by Fleming Bros., of St. George, Ont., should send for it, if they are interested in the subject. It is sent free to any address.

Perfection Land Rollers.—The attention of those who are contemplating the purchase of a land roller is called to the advertisement of the Lancaster Machine Co., Lancaster, Ont. The rollers made by this firm are reliable and at the same time reasonable in price.

The Dake Engine.—We have received a number of enquiries for information about this engine which seems to indicate an increase of interest in modern motive powers for farm purposes. Last week's issue contained a notice regarding this particular motor, and those desiring further information are referred to the Jencks Machine Co., Sherbrooke, Que., who will send their catalogue and full particulars free to anyone interested.

Disinfectants.—For poultry houses as well as for dog kennels "Sanitas" disinfecting sawdust and "Sanitas" crude disinfecting liquid has been very highly recommended by the best authorities. The disinfecting liquid is very strong and will stand diluting with 40 to 50 parts its own volume of water. A postal card addressed to Spratt's Patent (Am.), Limited, 239 to 245 East 56th Street, New York, will procure full information.

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NOUVELLE PATENT.

Capacity of Lifting 18,000 lbs. WITH NO EQUAL.

Lifting and carrying stones at will, so you can make with them fences from four to five feet high. You will clear your land for the mowers and reapers. To lift a stone you make the lever work, and the hooks will hold it when lifting. You can lift, remove, and put into fence a stone in ten minutes. Agricultural societies should buy it. Farmers, if they like, may join in club to buy it. Price moderate. For all particulars address to

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Capacity from 175 to 2,500 lbs. per hour.

Retail Prices from \$65 to \$500 each.

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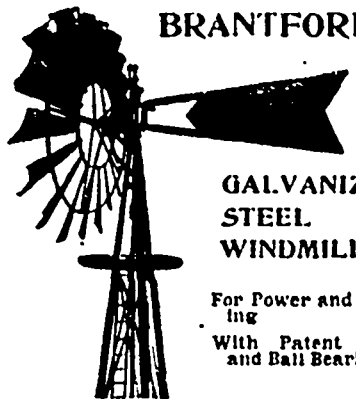
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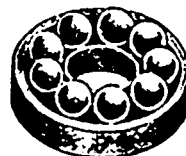
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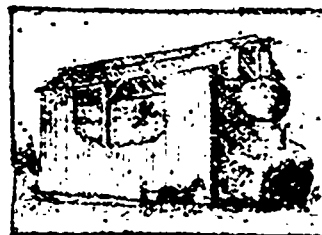
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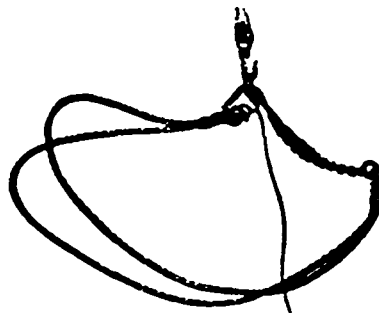


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For unloading hay and all kinds of loose grain.



Unloads on either side of farm floor without changing car. No chain-lug necessary. Malleable from Cast. Steel Forks. Knif-Passing Pulleys. Will work on stacks as well as in barns. Satisfaction guaranteed.



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Works in connection with Pitching Machine, and is the most complete apparatus ever offered to the public for pitching sheaves. Sheaves left in the mow just as they come from the load.

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Vessot's Fertilizer Distributor.—All plants, particularly fast growing ones, owe their success in a greater or less degree to the manner in which the fertilizer, whether manure or chemical, has been mixed with soil preparatory to planting. Messrs. S. Vessot & Co., of Joliette, Que., have perfected a machine which it is said will prepare the ground in a very effective way by means of chemical fertilizers, for such plants as tomatoes, celery, cabbage, corn, tobacco, potatoes, etc. A full description of this machine will be sent on application to the manufacturers.

Embossed Metallic Ceilings.—For all classes of mural decorations the embossed metal plates are rapidly displacing wood, plaster and paper in up-to-date buildings of every kind. It is claimed that they are more easily applied, cannot crack or drop off, and are practically fireproof. They undoubtedly have the advantage over other materials both for walls and ceilings in artistic appearance and durability, also in the fact that they are easily cleaned, do not harbor vermin or disease germs. They are also moderate in price and can be laid over plaster if necessary. Write to the Metallic Roofing Co., 1192 King street west, Toronto, for catalogue of 150 handsome designs and full information.

Emigration to the Northwest.—Messrs. Osler, Hammond & Nanton, of Winnipeg, Man., in speaking of the prospects for immigration into the Canadian Northwest, express great satisfaction with the present outlook. They state that in Southern Alberta, the district which the Crow's Nest Pass Railway, connecting with the Calgary and Edmonton Railway at Macleod, is opening up, there is a large area of very desirable land for farming or ranching either on a large or small scale, which will probably attract a large number of settlers, and that the Pincher Creek and Cardston Districts will also fill up very rapidly. They also very highly commend the Olds District, about fifty miles north of Calgary, as a location for mixed farming and ranching on a small scale. It lies near enough to the main line of the C.P.R. to give settlers easy access to all markets. There is already a very desirable class of settlers in this district, and it is consequently attracting others of the same class to the locality. The prospects in North Saskatchewan are brighter than ever before.

Last year's good crops and good prices have aroused the enthusiasm of the settlers and the certainty of another successful year which the immense rise in grain and produce has already assured, will greatly increase their satisfaction. The old-settled country about Prince Albert and Duck Lake presents great opportunities to intending settlers and investors. The Rosthern District on the Qu'Appelle, Long Lake, and Saskatchewan Railway is also going ahead rapidly, and the Hague District, lying directly south of it. In both of these districts there is first-class land. Osler, Hammond & Nanton have lands for sale in all parts of Manitoba and the Northwest. Intending settlers can obtain full information from them as to any part of the country.

Stock Notes

Messrs. A. M. & R. Shaw, Brantford, report their stock to be doing well. There is a good demand for Galloway bulls this spring. They have sold out all their bulls over ten months old. They have yet three young bull calves of very fine quality for sale, also two heifers one and two years old. Last week they shipped to the Cochrane ranch, at Leithbridge, N.W.T., seven superior Galloway bulls and also one bull to the Montreal district.

ROBT. J. EVANS, secretary of the National Duroc Jersey Record Association, writes from El Paso, Ill., that the entries for Vol. IV. of their records closed April 1 with 2300 entries. One thousand of these were made since Jan. 1 and more than 500 in March alone. The 200 shares, comprising the original capital stock, have all been sold; there are however a few stockholders holding several shares who may be willing to part with shares to those desiring to join the association. Vol. IV. will be issued in May.

MR. R. E. WHITE, of Perth, Ont., reports that all his stock have wintered well, and the young bulls of his herd are going to make good ones. A Shorthorn bull calf from "Ly Gordon," the heifer purchased from Mr. A. Johnston last spring (which was the best heifer he had) promises well, and should get cattle of the easy feeding sort. The Ayrshire bull, by Grand Duke, bred by Mr. J. McCormack, of Rockton, and from Brownie of Hurside, bred by Mr. R. Robertson, formerly of Howick, Que., has a so trace of the old bull. Golden Guinea is in fine form and fit to head any herd.

OSLER, FAT STOCK CLUB. This club has had a very successful year. At the annual meeting held on April the directors' report was presented, and showed a most prosperous year's work. There was paid out for prizes last year \$155. And yet the club has a surplus of \$130.18. One of the special features of the annual show last year was the fine display of bacon hogs. The club is to be commended for its encouragement to breeders to produce only a type of hog suitable for the export bacon trade.

Farmers' Binder Twine and Agricultural Implement Manufacturing Co., Limited.
(BRANTFORD, ONTARIO).

WE think it necessary to immediately advise you to refute the treacherous and damnable reports that are being put out and circulated against this co-operative movement of farmers by our enemies. Some are stating that this mill is closed down, others that we are pleading with the Government to reinstate the duty on binder twine; others that raw material has so tremendously advanced, and that the present moment is the correct time to buy twine requirements for the harvest of 1903; while still others are claiming that the great American combine must absorb this enterprise, as it will be impossible for us to manufacture twine on a free trade basis. We have simply to say, in answer to all these diabolical statements, that there is not a single word of truth in them; the mill is being run three hundred days in the year to its utmost capacity; we have requested the Government not to reinstate the duty on twine; and we are just now manufacturing a quality of pure Manilla 650 feet long, known as our Sampson brand. It and our splendid Red Star (the farmer's pride) are superior to anything that has ever yet been placed on the Canadian market. As in the past, we will again shortly set the price on binder twine for the coming harvest at a fraction above actual cost of production, that all other manufacturers and dealers will have to follow. All we now ask, after five years of honest and determined endeavor in the interest of agriculturists of Canada to hold this Company as an independent concern, is that they, the farmers, give us their continued loyal support. Order our twine early from our appointed agents, listen to no statements made by the enemy, and remain truly loyal in not purchasing one single pound of American or other twine in opposition to us until they inform themselves positively that every ball of this Company's twine is exhausted. Small samples and prices will be sent you in the near future, or can be had on application.

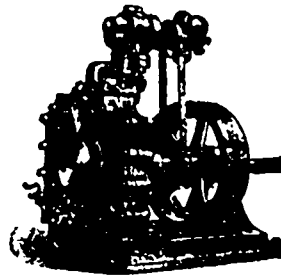
We ask you, as an intelligent man, to plead with your people to realize the importance of this company getting their undivided individual support, and to understand what our being driven from existence through indifference or scepticism on their part would mean to them in the future. The Salt Act would simply be repeated a hundredfold.

Faithfully yours,

JOSEPH STRATFORD.

General Manager, Brantford

The... **Dake Engine**



Also for Yachts.

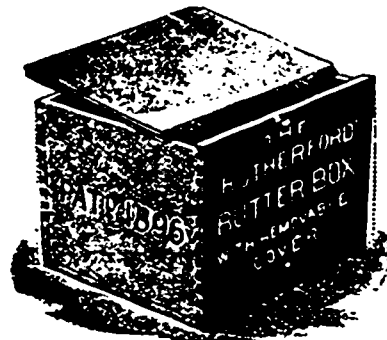
Launches, Dynamos, Etc.

For Driving every Description of Cutting, Grinding, Sawing, Threshing, and Pumping, or other Machinery used on a Farm.

ECONOMICAL. EASILY OPERATED. COMPACT and PORTABLE.

Send for special circular and testimonials.

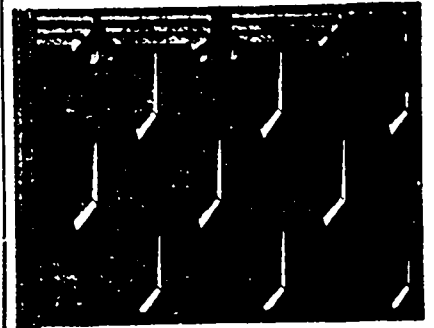
THE JENCKES MACHINE CO.,
30A LANSDOWNE STREET,
Sherbrooke, Que.



Made of Kiln dried spruce. Smaller at Bottom. All boxes paraffined lined. For sale by Dairy Supply Furnishers and Produce Dealers.

They're **Reliable...** That's why they're popular.
Eastlake Steel Shingles

Can't leak, can't rust, can't burn, and can be laid more quickly than others because of their perfect patented construction.



One Shingle.

There's true economy in using genuine Eastlakes—they never fail. Avoid Imitations and write us for full information.

METALLIC ROOFING CO.
(LIMITED)
1192 KING ST. WEST. - TORONTO

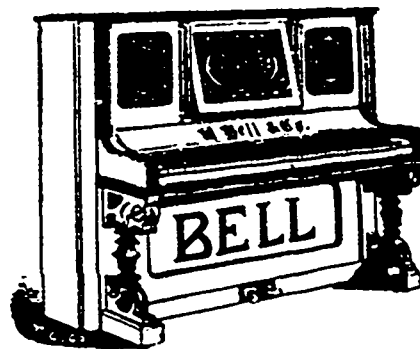
Our Abundance Plum



and other Trees, Plants, Vines, Roses, Ornamentals, etc., are reliable and up to date: none better. Send for priced catalogue of 1893, giving variety and prices to suit the times. Special offers to buyers. Also choice Seed Potatoes. Three new Rambler Roses, crimson yellow and white (2 years), by mail for \$1. No Agents employed.

A. G. HULL & SON, Central Nursery,
St. Catharines, Ont.
Mention this paper.

The Unparalleled Reputation of



The BELL PIANOS and ORGANS . . .

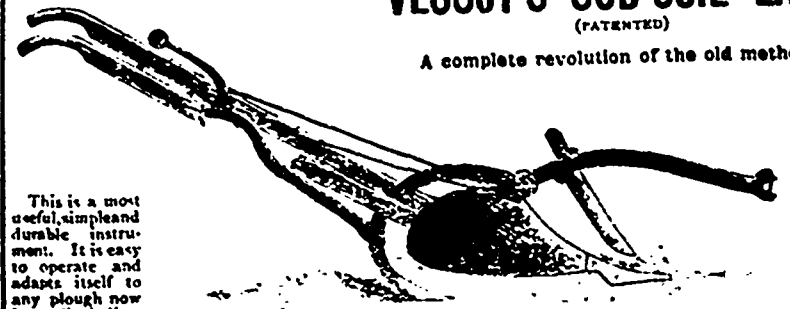
Is accepted without dispute by all other makers . . .

ORGANS from \$40 upwards
PIANOS from \$250 upwards

Only the best materials used. All others are rejected.
On Reasonable Terms from all Agents
Manufactories: GUELPH, Ont.

THE BELL ORGAN & PIANO CO., LIMITED

Something New in Agriculture is **VESSOT'S SUB-SOIL LANCE**



(PATENTED)
A complete revolution of the old methods.

This is a most useful, simple and durable instrument. It is easy to operate and adapts itself to any plough now in use (including the sulky) and makes it but very little harder to draw. It is sold very cheap.

THE VESSOT IMPROVED GRAIN GRINDER LEADS
S. Vessot & Co., Sole Manufacturers **Joliette, Que.**

MARKET REVIEW AND FORECAST.

Office of FARMING,

44 and 46 Richmond street W., Toronto.
May 2nd, 1898.

Progress in trade continues. Prices of food products are gradually advancing, and, in some instances, with leaps and bounds. This, to a large extent, is due to the outbreak of hostilities between the United States and Spain. Still, the advance in prices is not altogether due to the war. There have been indications, in Canada especially, of a revival in trade for some months back. Last week the number of failures in the Dominion was practically the smallest in the commercial history of the country. During the progress of the war we may look for unsettled markets as far as stocks and wheat are concerned. If at any time the Americans gain over the Spaniards the wheat market will decline; if, on the other hand, the Americans meet with a reversal the price would advance, as it would indicate a continuance of the war.

Wheat.

The excitement in the wheat market continues. The London, England, market is in a whirl of excitement, such as it has not experienced for years. Letter is said to be manipulating there. Prices advanced 3s. to 3s. 6d. during the past few days, making a rise of 5s. to 6s. during the week. The Chicago market has been in a state of excitement ever since the war feeling began. Prices have advanced steadily during the week, and on Friday, July wheat was quoted at 94 3/4c., though there was an easier feeling later.

At Canadian points there has been an advance of from 10 to 15c. during the past ten days. Receipts at Montreal during the past week were three times greater than the week previous. The total world's supply in sight was reduced to 64,394,000 bushels last week, showing a decrease of 4,120,000 bushels. As compared with a year ago, however, there is an increase of 10,673,000 bushels. Reports from nearly every source point towards good crops, and with the extra acreage sown the supply of wheat is not likely to run short next fall.

At Toronto during the week there has been a steady advance, though offerings have been small. Farmers seem inclined to hold for a larger price. On Friday the market was weaker, in sympathy with the slump in prices in the west. Prices for red winter range from \$1.03 to \$1.05. Manitoba wheat is firm at \$1.32 for No. 1 hard Goderich and \$1.36 to \$1.38 Toronto freightless.

Barley and Oats

Oats are firm and prices are somewhat higher. They have been selling during the week from 33 to 34c. At Montreal oats have made a gain of 2 to 2 1/2c. during the week and are quoted at 38c to 38 1/2c. at Montreal. Cable reports indicate a strong advance in the British market, due to the prospects of a falling off in United States shipments and a shortage in Russian stocks as compared with a year ago. Canadian white oats are 1s. to 1s. 6d. per quarter higher at 18s. 6d. c. f. an i.

The barley market is reported nominal, with nothing much doing.

Peas and Corn.

There has been an advance in peas during the week, and the market is firmer with prices ranging from 59 to 62c. The latter figure was freely quoted at the end of the week. Cable reports show an advance of 1s. to 1s. 6d. per quarter and a firmer market. Receipts have increased at Montreal and prices are 3c. higher.

The corn market is somewhat in sympathy with that of wheat, and has advanced several cents during the week. Canadian yellow is quoted at 34c. west and American at 42 1/2c. to 43c.

Bran and Shorts

Are in fair demand; the ruling prices being \$12 to \$13 for shorts, and \$10.50 for bran west. At Montreal buyers are offering \$13.50 for bran with holders asking \$14. Shorts are quoted at \$15 and \$16 as to grade.

Potatoes.

At Toronto the increased supplies from farmers' wagons seem to be making the demand for carload lots less active. Cars on the track are quoted at 50c. to 52c. Potatoes out of stores sell at 60c. to 65c.

Eggs and Poultry.

The egg market has been quite steady during the week, with the demand about equal to the supply. Prices have advanced a little

and 10c. to 10 1/2c. have been the ruling prices. At Montreal there has been a similar advance and eggs are quoted at from 9 1/2c. to 10c. The London market is steady with a good demand at the advance of 3d. per long hundred. Irish eggs in Liverpool are 5s. 6d. to 6s. Dealers are not buying poultry.

Cheese.

Cable despatches continue to show a firmer and higher market for cheese with a good consumptive demand. Fancy qualities of both English and Canadian are very scarce and are bringing good prices. Fancy Canadian is quoted at 44s. to 45s. for colored and 42s. for white, fine at 40s. to 42s. 45s. in England is about equal to 9c. here. There is no old stuff on the market here. At Montreal new cheese was sold during the week at 8c. for white and 8 1/4c. for colored. There is very little new stuff coming in. In the Belleville district sales of April make are reported at 7 1/2c. The outlook for cheese is much brighter than could have been hoped for a month ago and the old stocks in England will be pretty well cleared before any large quantities of new goods arrive.

Butter.

The cable reports in regard to the butter market are not so encouraging as for cheese. The market is weaker and lower, with supplies of both home and foreign large and increasing. Prices are down 2s. There is, however, an improved feeling on this side. Owing to the lowering of prices at Montreal, there has been considerable buying on export account, which has tended to relieve the market somewhat. Prices are from 1c. to 1 1/2c. higher and 16 1/2 to 17 cents have been paid at Montreal. Dealers, however, are looking for lower values next week as much larger supplies are expected. The advance in cheese, however, will likely induce many factories that were making butter to make cheese, and in a week or two supplies of creamery butter may not be so large.

The Toronto market has not responded to the decline in butter as quickly as elsewhere. Creamery prints have been quoted during the week at 15 to 20 cents and tubs at 17 to 18 cents. Dairy butter in large rolls is more liberal in supply, the demand was good towards the end of the week, but the market was a cent lower, 14c. being the top price. Pound rolls are quoted at 14 to 15c., dairy tubs are scarce and bring about 15c.

Cattle.

The London market advanced 2d. per stone during the week, owing largely to decreased supplies from the United States. The demand is good and the market is firmer. There is a somewhat firmer feeling in the west and fine cattle rule higher. In some sections butchers' cattle are easier.

Export cattle.—On Tuesday's market very little trade was done. Choice sold at \$4.35 to \$4.40. The ruling prices were \$4 to \$4.25. On Friday the offerings were fair and the demand good. Prices ruled from 4c. to 4 1/2c.

Butchers' cattle.—There is a better feeling in this line and choicest cattle advanced slightly towards the end of the week. Prices ruled as follows: Common to medium, 3c. to 3 1/2c.; good to choice, 3 1/2c. to 3 3/4c.; fancy, 4c. to 4 1/2c. The higher priced cattle sell easier.

Stockers and Feeders.—The market is firm with a short supply. Light stockers for Buffalo sell for 3c. to 3 1/2c.; feeders bring from 3 1/4c. to 3 1/2c. Some medium stockers are wanted at \$3.50 to \$3.60.

Milk Cows and Springers.—There is a fair demand for newly calving cows and well-forward springers. Prices are firm at from \$25 to \$40. On Tuesday's market there was a lot of poor stock, and some were left unsold.

Cattle.—The supply has been large during the week; though all sold readily, excepting some poor ones at from \$2 to \$6.

Sheep and Lambs.

There has been a firm market with light offerings. Yearling lambs bring \$5.75 to \$5.85 per cwt., and culls \$4.25 per cwt. Sheep for exporters and butchers are quoted at 3 1/2c. to 4c. for ewes as to weight; the lighter bringing the higher prices. Bucks sold during the week at 3c. to 3 1/2c., and spring lambs at \$3.75 to \$5 each. The Buffalo market is reported steady.

Hogs.

The supply has been large, yet the market has remained firm. Choice singers are selling at 4 1/2c. and light and heavy hogs at 4 1/4c. The market for hog products is generally firm, and the outlook good. There has been an increase in the movement of hogs in the west, and prices are fully 10 cents higher per 100 lb. than a week ago.

Isaleigh Grange Stock Farm

Ayrshire and Guernsey Cattle.
Improved Yorkshire Swine.



Shropshire Sheep. Our Ayrshire herd is headed by the noted bull, Matchless 7560, sire, Glencairn III., imp. 6055; dam, Nellie Osborne, imp. 5358.

Our Special Offer

consists of six choice young Ayrshire bulls and a few heifers; two extra Guernsey bull calves, and a choice lot of sheep and pigs. All at very low figures for immediate sale.

T. D. McCallum, Manager,
Danville, Que.

J. N. GREENSHIELDS, Proprietor

W. C. EDWARDS & CO. Breeders and
..... Importers

PINE GROVE STOCK FARM,
Rockland, Ont.

On the C.P.R. and G.T.R. Railways. Special bargains on young bulls of superior merit and select Scotch breeding. Also thick young heifers at the right prices.

Ayrshires, Jerseys, Shropshire Sheep, and Clydesdale Horses.

Post Office, Telegraph Office, and Steamboat Landing, Rockland, Ont., on the C.P.R.

JOS. W. HARNETT, Manager.



LAURENTIAN STOCK and DAIRY FARM,
North Nation Mills, Que.

Ayrshires, imported and homebred herd headed by imported Tam Glen 2nd, No. 1310 D. A. H. B. Jerseys all of the celebrated St. Lambert family; herd headed by **Liangar Fogs of St. Anne's** 25704 A.J.C.C. Berkshire Pigs. Young stock of all the above breeds for sale.

Post Office, Telegraph Office, and Railway Station, North Nation Mills, P.Q., on the C.P.R.

A. E. SCHRYER, Manager.

Ingleside Herefords

Largest herd of choice-bred Herefords in Canada. Winners of both the first and second herd prizes at Toronto, Montreal, and Ottawa, 1895, 1896, and 1897. Also silver medals same years for best bull and best female. This herd is of the "up-to-date-beef kind," combining early maturity and quality.

TAMWORTH SWINE.

Orders booked for Spring Pigs. Pairs not akin

H. D. SMITH,
Ingleside Farm,
Compton, Que.

Farm 2 1/2 miles from G.T.R. station

A. J. C. C. JERSEYS of the richest breeding. Our herd is mated for large butter records; can always supply animals of both sexes and ages. Whole herd rich in St. Lambert blood. Bulls ready for service, and several cows direct granddaughters of Stoke Pogis the 3rd. Prices to meet the times.

HILLSDALE STOCK FARM,
Milford, Hants Co., N.S.

HILLVIEW STOCK FARM

WE are now offering for sale a very fine SHORT HORN BULL, CALF, 7 months old, bred by Arthur Johnston, Greenwell, Ont. Also one 17 months old AYRSHIRE BULL. Both first-class animals. For prices and particulars address

R. E. WHITE, Perth, Ont.

ITALIAN BEES. Fine, strong colonies in the colonies. Dovesided Hive, on Hoffman frames, 10 in. J. W. Hive. Write for prices. **ALPINE MCGREGOR,** Ingleside P.O., Ont.

FOR SALE

Jersey Cattle, Duroc-Jersey and Chester Swine; Collie Dogs and Mammoth Bronze Turkeys; Choice Cows and Helters fresh calved or soon due. Also young heifers and bulls. D. J. Sows due in March and April. Handsome Collies of both sexes and M. B. Turkey Eggs in season. Prices low.

CHAS. MACKAY, Box 80, Thornbury, Ont.
Glenhyrst Poultry Yards

OLENTANGY INCUBATOR. This Machine will hatch every fresh egg, so thousands testify. It is the best Self-Regulating machine made. Brooder; \$5.00. Catalogue free. Address, **GEO. S. SINGER, Carleton Place, Ont.**

SHOEMAKER'S STOCK WINS!

In the hands of his customers in Ontario and beyond winning every prize in stock. Every season always "Takes" the best in quality and low prices. Large 4th stock. **SEE POULTRY ANNUAL & A. L. TAG FOR 1898** is a colorful 100 pages best paper. It tells all about everything in the poultry line. It is fully illustrated with finest engravings. It should be in every library. Price only 15c. Money refunded if not satisfactory. Address, **S. S. SHOEMAKER, FREEPORT, N.L., S. S. A.**

GOLDEN WYANDOTTES

My pen contains prize-winners and imported birds. First prize cock at London (1897) head my pen. Eggs for 13: \$2.00 for 40.
WM. WILLIAMS, Bloomington, Ont.

EGGS FROM WINNERS

Mated to produce winners in Light Brahmas, Buff Cochins, Houdans, Red Caps, Black Spanish, S.L. Wyandottes \$1.50 per 13. Barred Rocks, Brown and White Leghorns, \$1 per 13. Mammoth Pekin Ducks, \$1 per 13. Can also spare some high-class exhibition Game Eggs, \$2 per 13. Our stock won 263 prizes the past season. Satisfaction guaranteed. Address,

J. C. LYONS, Lucknow, Ont.

S.C.W. LEGHORNS

Utility strain, Extra large birds, Prolific layers of large eggs. 200 hens in 1897 averaged 16 1/2 doz. each. Also H. P. Rocks (E. B. Thompson's strain). Incubator **R. C. ALLAN, Cobourg, Ont.**

Eggs for Hatching.

R. C. White Leghorn eggs purchased from me last year produced first prize winners at Toronto, Guelph, Owen Sound, Peterboro, and Stratford. At the last named a cockerel purchased from me won special as best bird any breed in the show. I have won more "firsts" at "Ontario" show on this variety than all other exhibitors combined. Eggs \$2.00 per 13. Plymouth Rocks and Dark Brahmas same price.

W. J. BELL, Angus, Ont.

HATCH Chickens BY STEAM
With the **MODEL EXCELSIOR Incubator**
Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced. Best-class incubator made. **GEO. E. STAMM,** 114 to 120 N. 6th St., Calgary, Ill.

GLENHYRST POULTRY YARD.
EGGS FOR SALE.

White Wyandotte, White Plymouth Rock, Cornish Indian Game, Black Minorca, Houdan, Black Langshan, White Langshan, Barred Plymouth Rock, Silver Laced Wyandotte, \$1.50 for fifteen, or \$2.50 for thirty. Packed in patent boxes. Will replace at half price any not fertile. Also poultry supplies.

Will exchange any of the above for first class Tamworth pigs or light Brahma Pullets, any strain. Dorset and Shropshire sheep, Tamworth pigs, Shetland ponies, Jersey cattle all ages. Registered. Prices right. **STRATFORD BROS. Brantford Ont.**

OSHAWA POULTRY YARDS

S. L. Wyandottes, Red Caps, Golden Poland, and Rose Comb Black Minorcas. All high class stock. **EGGS, \$1.00 per Thirteen.**

W. H. KIRBY, - Oshawa, Ont.

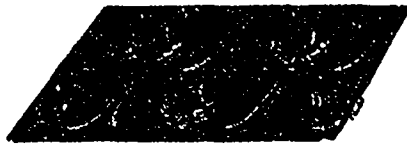
H. Minorcas, Barred P. Rocks, L. Brahmas, Recherche Stock.

Birds imported from best yards in England and United States. Eggs \$1.00 per dozen. A few good birds for sale. **W. L. BROWN,**
176 Wharfedale Road, London West, Ont.

FOR SALE OR EXCHANGE.

A pair of young Peacocks. White variety. Full plumage next spring. Very rare. Also a pair thoroughbred Pigs. **Wm. B. Scott, Milford, Ont.**

New Metal Roofing...



Patent Safe Lock Shingle.



TOP LOCK
Cut showing Top and Bottom Lock.



SIDE LOCK
Cut showing Side Lock.

Our Patent Safe Lock Shingles are so constructed that they lock or fasten on all four sides, making perfect joints, absolutely proof against the weather.

Buildings covered with our roofing look pretty, are fire and lightning proof, and will last a lifetime.

Samples and Prices sent free upon application.

Metal Shingle and Siding Company
Limited

PRESTON, ONTARIO

"SPRAMOTOR IS FIRST" THE REST NOWHERE.



Send three-cent stamp for 76-page copy-righted edition of catalogue and treatise on the diseases affecting fruit trees, vegetables, etc., and their remedies.

At the test of Spraying Apparatus held at Grimsby on the 2nd and 4th April, under the judges appointed by the Fruit Growers of Canada, and with 24 competitors, nine from Canada and five from the United States, the "SPRAMOTOR" was awarded first place, and the nearest competitor to it was more than double the price. This result was a great surprise to the people and very gratifying to Canadian enterprise. Write to the Department of Agriculture of Ontario for a copy of the Judge's report.

SPRAMOTOR CO.,
357 Richmond St., LONDON, Ont.

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FLEMING'S LUMP JAW CURE

Is sold under a positive guarantee to cure, or money is refunded



SHOAL LAKE, MAN., Jan. 26th, 1898
DEAR SIR,
In regard to our experience with your Lump Jaw Cure, we used it on seven lumps last season. It worked all right. Some of the lumps had broken and run several times before using it.
Yours truly,
FLEMING & SHORT.

PRICE, \$2.00, sent by mail
Illustrated Treatise on "Lump Jaw" sent free

Address

FLEMINGBROS., Chemists, ST. GEORGE, ONT.

Churn Churn Churn

Does your butter work to a "paste" before the salt you use dissolves?

Poor salt spoils what might be good butter. A sharp-grained salt is practically insoluble.

Windsor Salt dissolves easily—it is "taken up" in the butter with very little working. Progressive grocers sell

Windsor Salt

The Windsor Salt Co.
Limited,
Windsor, Ont.

Woodstock Steel Windmills

FOR POWER AND PUMPING

Get a **DANDY**

WITH GRAPHITE BEARINGS
They Run without Oil.

Steel Towers, Pumps, Tanks, Saw Tables and Watering Troughs, etc.



WOODSTOCK WINDMOTOR CO. Limited.

Woodstock, Ont.

THE DAISY GRAIN GRINDER THE DAISY BARREL CHURN

With New Common Sense Stand.



Has No Equal.



Stronger, Lighter and More Convenient than over, and has Roller Bearings.

The 1898 "DAISY" is far in advance of any other Churn in the market. Fitted with improved Gas Vent if required. The Gas Vent is not necessary, but you can have it if you want it.

SOLD BY DEALERS EVERYWHERE.
Manufactured only by

THE WORTMAN & WARD MFG. CO., Limited,

LONDON ONTARIO.

Write for Descriptive Circular and Implement Catalogue before purchasing any other.

ULRICH'S ENSILAGE Seed Corn

This Celebrated Corn is Sold all over Canada.

Giant Prolific,
Mammoth White,
Red Cob
Yellow Dent,
Improved Leaming.

Ask your dealer to procure SEED for you and you will be well pleased with results. No fancy prices. Write for Free Samples and Book of Testimonials.

E. R. ULRICH & SONS,
Springfield, Illinois.

CREAM . . . SEPARATORS

THE ALEXANDRA

Hand and Power. Capacity 160 to 2,000 lbs. \$50 to \$350.

THE MELOTTE

Hand Style only. Capacity 330 to 850 lbs. Price \$100 to \$185.

Up-to-date Dairy Machinery and Supplies.

AGENTS WANTED.

R. A. LISTER & CO., Ltd.,
18 St. Maurice Street, MONTREAL.

Cheese Factory and Creamery Supplies

The "MONTREUIL" Curd Cutter.

The Best in the Market

The space between the small cutters is $\frac{1}{4}$ inch, and the large blades cut $\frac{1}{4}$ of an inch in thickness.



Butter and Cheese Factory Outfits a Specialty.

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THE PLESSISVILLE FOUNDRY
PLESSISVILLE, QUE.

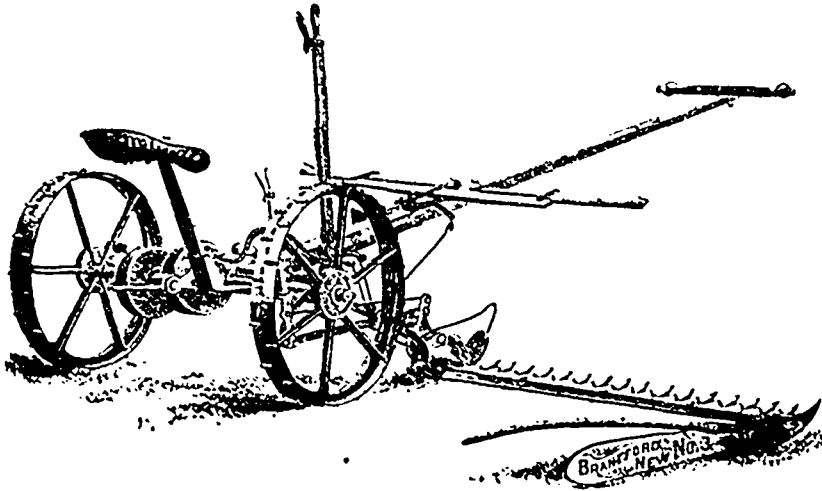


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BRANTFORD

No 3 Mowers

Are Famed the
World over.



They do their Work Beautifully

MASSEY-HARRIS CO., = Toronto
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THE Thorold Cement

High in Quality 50 Years in use.
Low in Price

The Leading Cement for Building Bank Barns, Cement Floors
in Stables, Silos, Culverts, Pig Pens, etc.

Deafness and Head Noises - - - -

Relieved by using

Wilson's COMMON SENSE Ear Drums

They are safe, comfortable, and invisible; have no wire or string attachments. Read this letter:-

Stratford, Ont., Feb. 2nd, 1898
C. B. Miller, Freehold Loan Building,
Toronto, Canada,

Dear Sir, - I got a pair of Common Sense Ear Drums from you on January 20th, 1897, while I was in Seaforth, and have been using them ever since. I lost one this morning and at my work is telegraphing must have good hearing.

I gave the Pamphlet I had to a party in Wingham, so please send me the price of Drums alone.

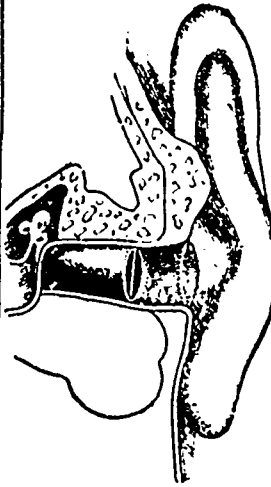
I have recommended them to several, but do not know if they got them or not.

I could not do without them now so please send Drums as soon as possible.

Yours truly, W. J. SUTHERLAND.

Write for Pamphlet giving many other testimonials showing benefit in cases of
Catarrhal Deafness, Roaring and Hissing Sounds, Discharge from Ears, Relaxed, Sunken or Thickened Drums.

Stops Progress of Deafness and Protects Sensitive Ears



C. B. MILLER, Sole Agent for Canada, Freehold Building, 60 Victoria Street, Toronto

Seed Peas and Potatoes. Prussian Blue Peas (some bugs) 75c a bushel. Great Divide Potatoes 50c a Peck. Empire State and Rose of Erin Potatoes, 75c per Bag of 30 pounds. These varieties stand well up to the top at the O.A.C., Guelph. JAMES BOWMAN, Guelph, Ont.

BARRED ROCKS Choice Prize-winning Stock Sotting (13 eggs) \$2.00. Two settings at one time \$3.50. You need vigorous stock and new blood.

R. F. HOLTERMANN, BRANTFORD, ONT.

The editor of the *English Agricultural Gazette*, referring to

Thomas-Phosphate Powder

says -

"Despite the fact that it seems to set some of the teachings of scientific experts at defiance, I am bound to bear testimony to the wonderful results that have followed its use on many farms."

Where it had been used it completely upset his previous theories, and convinced him of its great value, both on plowed and meadow lands.

- Use it on your GRAIN
- Use it on your CORN
- Use it on your ROOTS
- Use it on your PEAS
- Use it on your GRASS LANDS

IT WILL PAY



- Plow it into your ORCHARDS
- Use it on your HOPS
- Use it on TOBACCO

It is the only safe, perfectly available phosphate known. Guaranteed by manufacturers, Chemical Works, London, Eng.

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ST. JOHN, N.B.