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V. 19 # 24

Toronto, December 10, 1901.

THE FARMING WORLD

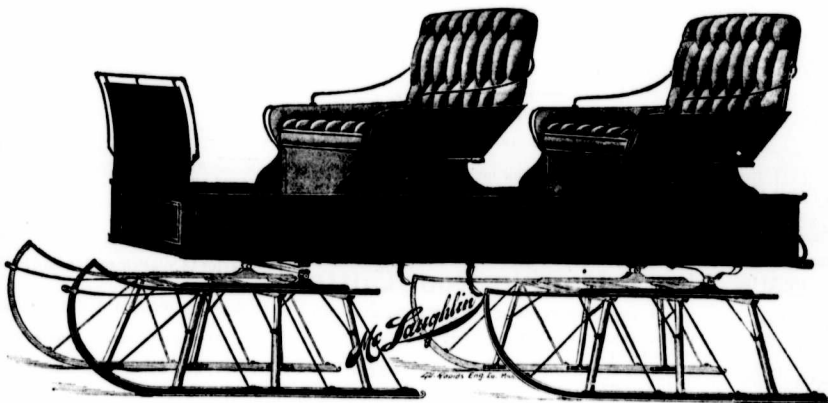
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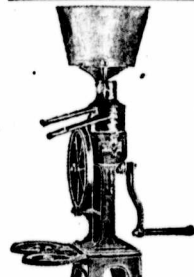
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The Farming World

For Farmers and Stockmen

VOL. XIX

DECEMBER 10th, 1901.

No. 24

An Apologist for the Railways.

THE first and most obvious comment which is evoked by the letter, signed "Viator," which appears in this issue of *The Farming World*, is that it occupies a good deal more than a page of this paper's none too plentiful space. Upon consideration of room, a detailed discussion of "Viator's" apology for the railways must be postponed until the next number. In this issue we may content ourselves with a few remarks upon some of the outstanding features of this attempt to place the case for the railways in the most favourable light.

One thing that is worth noting is that *The Farming World*, in the article to which "Viator" takes exception, expressly stated that the instances of unjust railway rates cited were purely a recapitulation of points brought out in the controversy of last winter. Every instance of inequitable freight rates, which "Viator" attempts to explain away, had been published already. *The Globe* was especially active last winter in the campaign and, as a matter of fact, all of the cases quoted appeared months ago in its columns. An anonymous correspondent, signing himself "St. Lawrence," attempted to controvert some of the *Globe's* accusations against the railways, and the *Globe* subjected "St. Lawrence's" statements to a most destructive examination and analysis. Nearly all of the instances quoted, however, appeared unchallenged. "Viator's" defence is somewhat belated.

The facts just mentioned cast some light upon a passage in "Viator's" communication, in which he permits himself to use language which is not free from offensiveness. "You have brought," he says, "these charges upon the strength of so-called proofs which you have not investigated for yourself, but which you found floating about in one or two Ontario newspapers, which also took them on trust without making any attempt to verify them; so that you are in the position of a retailer of second-hand fabrications against men like Sir Thomas Shaughnessy and Mr. Reeves, who have reputations to lose and who, like the rest of us, ought not to be assailed without just cause."

"One or two Ontario newspapers" is a term designed to suggest, though not explicitly making

The statement, that the charges appeared in small or unimportant journals. Such language should not be held of assertions to which a leading newspaper like the *Globe* gave publicity and maintained against the efforts of the apologists for the railways. The remainder of the paragraph, with its distinct note of arrogance may be dismissed with no further comment than that it is regrettable that complaints as to the nature of the service given the people who in one way or other have paid or are paying for the railways, are received with no greater civility.

It is worth noting that "Viator" in his letter is at once distinctly on the defensive, and is conscious of the fact and anxious to disguise the fact. His disingenuous reference to the journals which have already given publicity to these charges of discrimination is a case of this.

"Viator" concludes his letter with a request to *The Farming World* to be accurate. *The Farming World* has been accurate and will be accurate in the matter. In the next issue an examination of the details of "Viator's" reply will show on which side of the discussion accuracy lies.

Provincial Winter Fair.

Everything is now in readiness for holding the Provincial Winter Fair at Guelph. The entries are bigger than ever before. The large building erected last year will be taxed to its full capacity. The entries in the cattle, sheep and swine class total 1,172, and in the live poultry 2,150. Great interest is shown among the farming community and comparatively the attendance will show an increase as large as the entries.

Farmers' Institutes are availing themselves in large numbers of the opportunity of having their members admitted free to the Fair, and the Secretaries are enthusiastically endeavoring to have their own particular district well represented in the attendance.

The railroad rates are very low. Single fare for return tickets can be obtained from all points east of Fort William. Persons of New Ontario have signified their intention of being present. It will be the largest gathering of those interested in the live stock business ever gathered together in Canada.

With the arrangements which

the City Council of Guelph have made for the accommodation of visitors, every one can be assured of accommodation upon their arrival at Guelph.

The Show will be conducted along the most advanced lines, with the object of giving as much instruction as possible to those who are present. Everyone will have an opportunity to learn and no one can afford to be absent if interested in any of the subjects to be discussed. The endeavor of the Management has been to bring each department to its highest state of efficiency. The show promises to be most successful. Take advantage of the cheap fares. Come, if you can only spare half a day. The show opens on Tuesday, December 10th. The judging will commence at 3 p. m., and from that time until the show closes at 5 p. m. on Friday, December 13th, each day will be filled with interesting and practical discussions. Do not miss them.

Lessons from the Winter Show

The Provincial Winter Fair, which takes place at Guelph this week, affords a splendid opportunity for obtaining object lessons in good live stock. As a rule all the animals shown at an exhibition of this kind are of good quality. Few if any, very inferior animals will be found there, simply because breeders and feeders who have been accustomed to show their animals, know that there is no use in entering inferior animals in the competitions. And yet a marked distinction will be found between the very best types and the very lowest types at the show. It is in noting these distinctions and in finding out wherein one animal is superior to another that the educational value of the show is found. At previous winter shows several of the judges, after making the awards, gave their reasons for so doing. Very valuable lessons can be obtained by listening to the judges. Then the addresses on the carcasses and live animals by practical men will be of very great value.

In looking over the animals two or three things will be noted. It will be found that, as a rule, all the choice animals are well bred. This indicates that good blood is the foundation of all good animals. No scrubs show such perfection of form, such wealth of flesh, and such good returns on the block as

the well bred animal. It will also be found that all the good ones are well-fed. While it would be impossible to so feed a scrub as to make the highest type of animal out of him, on the other hand a well-bred animal cannot be brought to a state of perfection unless it is well fed. Good blood and good feed must go hand in hand. But these alone cannot always suffice to produce the highest

type of animal. Good care must play an important part in perfecting a good animal. Mr. Kerrick, of Illinois, who has perhaps won more prizes for fat cattle than any other feeder in America, states that his cattle are never abused by word or deed. And so in examining the live stock at Guelph, it will be found that the best animals have these three requisites: good blood, good feed and good care.

The West Wants Eastern Cattle

As this country grows it becomes more apparent that its prosperity depends in no small degree upon the extent to which inter-provincial trade is developed. In no line is this more noticeable than in live stock. The little taste the breeders and stock raisers of Eastern Canada, and more particularly of Ontario, have had of this trade has convinced them that the more it can be extended and enlarged the greater prosperity will come to farmers of both the Eastern and Western portions of the Dominion. In the West they want our pure bred animals as well as stockers for the great ranches, while in the extreme east, in the Maritime provinces, the farmers are looking for better breeding animals.

The development of this trade and the bringing of these distant portions of the Dominion into close touch in live stock matters had its origin in the work of the Dominion Live Stock Associations in encouraging the shipment of pure bred stock to the West and in securing greatly reduced freight rates over the Canadian Pacific Railway. The boon conferred upon the live stock industry of the country by this corporation cannot be over-estimated. The freight of a car of pure bred stock to British Columbia is now about \$200 less than it was a few years ago. The local associations in the West co-operated with the Ontario organizations in bringing this trade up to its present important position, while since taking up work at Ottawa the Dominion Live Stock Commissioner has given the work a new interest and a new life that means the rapid expansion of this trade in the near future.

And it would seem as if this rapid expansion had already arrived. During the past few weeks items have appeared in *The Farming World* showing that several large orders have been received from British Columbia for stockers for the ranches. On Nov. 23rd the first lot was sent forward consisting of some four hundred head of calves and yearlings of excellent quality. They were bred in most instances from grade Shorthorn cows and sired by pure bred Shorthorn bulls and consequently should give a good account of themselves on the Pacific ranches. In addition a further order for 1,000 stockers has been received and will be shipped as soon as they can

be collected, provided that they can be secured at reasonable prices. In 1900 \$5,000 worth of stock was shipped from Ontario to British Columbia. This year so far, \$25,000 worth has been shipped and there are now on hand orders which will amount to some \$25,000 or \$30,000 more.

All this goes to show what the possibilities of this trade are. Agriculture in British Columbia is developing along certain lines very fast indeed. These lines are chiefly dairying, cattle raising and fruit growing. This year about 500,000 lbs. of creamery butter will be made while there are a number of private dairies that will have as much more to dispose of. To develop the dairy, good dairy stock is being brought in and a large number of pure bred animals of the dairy types have been sent to that province from Ontario and Quebec this year.

The ranching business in British Columbia is just in its infancy. Conditions on these ranches are such that the proportion of calves to the number of cows kept is small and there is difficulty in having cows breed every year. Consequently to develop the ranching business to the fullest extent stockers must be brought in and the shipments that have gone forward and are to go, if they turn out as is expected, should greatly increase the demand for eastern stockers. These ranches are not conducted on a small scale. There are several whose herds run up into the thousands and a number of smaller ones that run from 500 to 900 head each. Beef cattle that have never been fed have been shipped fat from the upper Fraser country in March. These cattle have obtained their living on the open plain, with no special attention paid to them.

There are other advantages that might be mentioned to show the development of that part of Canada, such as lumbering, mining and fisheries, the development of which forms a large market for live stock, dairy products, etc. To show the value of this market some of the prices for farm produce may be given. Eggs seldom sell for less than 20c in summer, and in winter sell for from 50c to 60c a dozen. At the present time butter is retailing at 35c a pound. Dressed beef by the carcass sells for from 9c to 10c per lb. during the winter.

These prices show that the trade in live stock with British Columbia is well worth looking after as well as that of Manitoba and the Territories. The trade with the former is the one that is attracting attention just now, inasmuch as representatives from British Columbia are at present in this province in connection with the shipments already referred to. Mr. C. H. Hadwin, secretary of the British Columbia Dairy and Live Stock Association, is at present in Ontario and may be reached through the Live Stock Commissioners at Ottawa. He will be at the Winter Fair this week at Guelph. Parties able to supply stock for the west should communicate with Mr. Hadwin at once.

What the Argentine is Doing

While discussing ways and means for developing the agricultural interests, and more especially the live stock interests of this country, let us not forget what other lands are doing. The Argentine has not claimed the attention of our breeders as much lately as before that country shut off the importation of pure bred stock from Great Britain. And yet the country is advancing and developing along lines that make it one of the world's greatest food producers.

Captain A. W. Pearce of Sydney, Australia, who visited Canada about a year ago and who previous to that time had made an extended sojourn in the Argentine, has issued an interesting booklet on that country. His description will open the eyes of many to the enormous progress that country has already made and the wonderful prospect it has before it. For years they have been buying the best stock money could buy and their exports have increased at a most rapid rate. The value of the pure bred stock imported into that country from Great Britain for the five years ending in 1900 was \$2,800,000. In 1898 there were in that country 97,000,000 sheep, 27,000,000 cattle and 5,000,000 horses. Some of the principal exports in 1900 were: Wheat 2,042,167 tons, frozen mutton 2,372,969 carcasses, frozen beef 261,365 quarters, and wool 424,224 bales (double size).

The internal affairs of the country are well managed, and there is an excellent railway service not state owned. The charge to convey cattle 300 miles is 10s (\$2.50) each and sheep 1s (25c) each. Sheep are all loaded from the end and walk fore and aft, the train in two tiers being loaded very quickly. The soil and its capabilities are good. The country is peopled by all nationalities. But we have no desire to advertise that country at the expense of our own fair land. Our object in again directing attention to it is to show what a powerful rival that country is and is destined to be in competing in the world's food markets. The people of Australia and New Zealand will perhaps feel this competition more keenly than we will.



A Scene at the East York Plowing Match.

Plowing and Plowing Matches

No more important work is carried on on the farm than that of plowing. To plow well should be the aim of every young farmer. In a general way, good plowing takes into consideration the character of the land and has for its ultimate object a good seed bed.

We are somewhat inclined to the view that good plowing is not so much in vogue in the country generally as it was 15 or 20 years ago. The advent of the "broad gage, roll over, turn over anyway to get over style of plow," of some years back tended to encourage loose and careless methods of plowing, and which accounts in a large measure for the scourge of weeds to be found on many a Canadian farm. There is a right and a wrong way of plowing, and it will pay every farmer to cultivate the best method.

A renewed interest has been aroused in good plowing in many localities in more recent years through the revival of the old-time plowing matches. These plowing matches when properly conducted do a great deal of good in any locality. They put the old plowmen on their mettle and encourage the younger men to better methods in cultivating the soil. Arranging for annual plowing matches might well come under the work of Farmers' Institutes.

Prof. James Atkinson, of the Iowa Agricultural College, who, by the way, is a graduate of the Ontario Agricultural College, gives a scale of points for use at plowing matches as follows:

"For plowing of uniform depth, width and straightness, with surface trash well covered or buried, 80 points; for good commencement, 10 points; and for a good finish, 10 points. The first item of 80 points may be divided up as follows: Uniform depth, 20; uniform width, 20; straightness, 20, and complete covering of all surface trash, 20. Most of these terms explain themselves."

We reproduce elsewhere a scene at the annual match of the East York Plowmen's Association held on Adam Bell's farm, Agincourt, on November 6th last. It was indeed a lusty contest between

the skilled plowmen of Scarboro and the surrounding townships. One of the features of the match, and it is a most encouraging one, was the honors won by the young men. Master Robbie Couperwaite of Markham, a lad of only fifteen years, secured first prize for the best finish over veterans of many years' standing, and first in his own class under 16 years of age. A number of plowmen took part in

the different classes. Owing to the lack of moisture in the soil the appearance of the work in sod was not so good as it otherwise would be. In the sod competitions ten plowmen took part and in stubble land, twenty-five. The Association which conducts this match is an active one and deserves credit for the success of the 1901 match. William Doherty is President, and Alex. Weir, Agincourt, Secretary.

Chicago Fat Stock Show

Canadians to the Front; Partial List of Winnings

(Chicago, Dec. 5th, 1901.)

The Great International Live Stock Exposition, which was such a success in 1900, has far excelled itself in 1901. This has proved the greatest show of the year in America, and for quantity and quality of the stock exhibited has probably never been excelled on the Continent. New buildings of large extent have been erected and the whole are closely filled with the choicest stock from the United States and Canada. Primarily it is a fat stock show, and the carloads of extra prime steers are a sight to see. Hundreds of well-fatted and thick-fleshed fellows from the ranches and the feeding yards of the West do not look as if there was any scarcity of corn where they were fed. In the barns are the choicer specimens of the various beef breeds.

CATTLE.

The show of Shorthorns is a grand one. The judging has not been finished, but in the aged bull class, C. E. Leonard, of Belair Mo., won with "Lavender Viscount." Geo. Harding & Son, Waukesha, Wis., were second with "Best of Archers," and J. G. Robbins & Son, Horace, Ind., were third with "The Lad for Me." In two-year-olds "Choice Goods" was first for J. G. Robbins & Son; "Justice," was second, owned by C. E. Clark, St. Cloud, Minn, and Geo. Harding & Son third with "Golden Victor." In cows "Cicely" was again to the front and won the blue ribbon against a strong class. C. E. Clark second with a roan of great scale and fine quality. W. C. Edwards & Co.

Rockland, and J. & W. B. Watt, of Salem, were the Ontario exhibitors of Shorthorns. In Herefords there was a grand show and one of the white faces won the championship for the best fat steer in the show. He was sold for fifty cents per pound, live weight. H. D. Smith, Compton, Que., won third place in the aged bull class with "Mark Hanna." There were no Aberdeen Angus cattle from Canada, but a fine lot in the show, and they were the reserve for the championship. It will be remembered that this breed won last year for the champion steer and he sold for \$1.50 per pound, live weight, just three times the price paid for the Hereford of this year. There is a large show of Gallows—the best ever seen together in America. D. McCrae has 25 head. They are not judged as we write, but in the class for fat he showed and won two firsts, but the decision was reversed on appeal because the heifers were not spayed. This left the class to Wavetree Herd from Dundee, Minn., which had a lot of steers of fair quality, but neither as fat as the Canadian heifers nor as good in quality. A. M. & Robert Shaw of Brantford, and T. Lloyd Jones, of Burford, have also Gallows in the show. W. J. Rudd has a herd of Devons.

HORSES—CLYDESDALES.

Graham Bros., Claremont, Ont., were very successful with their exhibit of Clydes. They won first for their 3 year old stallion "Koyal Cairnton," and second for the two year old "Premier Prince." In

the class for yearlings they had third place with "Royal McQueen." For yearling fillies they got third and fourth with "Royal Queen" and "Lady McQueen," both by the great sire MacQueen. With their Clyde mare "Moss Rose 2nd" they got fourth place which was very creditable, as she had been quite out of sorts and under the veterinary's care ever since she landed in Chicago. With the three year old mare, "Cherry Startk," they made a second. She won first in her class, \$40 for best three year old mare, the medal for best American bred mare, \$50 for best draft mare, any breed, under 1750 lbs., \$75 for best Clyde mare, any age, and the Clydesdale special silver challenge cup, value \$500, for best mare any age.

SHEEP

The Canadians have stormed the sheep barn with a grand lot of the fleecy beauties. In the wether and fat classes, which are the only ones judges, so far they have won in nearly every one of their breeds. In Cotswolds, E. F. Park, Burgessville, Ont., won first and third for fat wethers, 1, 2 and 3 for lambs, first for pen of five wethers and the championship.

In Leicesters, Orr & Lilloco, Galt, had nearly as good a record. They were first for shearing wethers, for pen of five, and had

1st and 2nd for lambs. John Kelly, Shakespeare, was second for yearling wethers and J. M. Gardhouse, Highfield, third. In Lincolns J. T. Gibson, Denfield, was the winner in all the classes with J. H. Patrick, Ilderton, second for wethers, one year old. The championship of the breed for fat wethers going to J. G. Gibson. In Dorsets, J. A. McGillivray won second and third for yearling wethers. In Southdowns Teller Bros., Paris, won first for yearlings, second for pen and the championship. In Shropshires, Richard Gibson, Delaware, had 1st and 3rd for shearing wethers, 1st, 2nd and 4th for lambs and first for pen of 5. John Campbell had second for fat yearling and third for lambs. T. Lloyd Jones & Son, Burford were second for pen of 5 Shropshire lambs. Richard Gibson had the championship. In grades and crosses R. Gibson was first for best wether, any breed and won the championship for the best two wethers in the show.

SWINE

In Improved Yorkshires, D. C. Flatt & Son, Millgrove, Ont., had a good lot and little competition. He won several prizes and sold well, getting \$400 for a young sow and \$700 for a fine long-sided boar. There were but few Canadian exhibitors in the swine department.

Our Western Letter

Still at the Wheat—More Boats Needed—Buying Ontario Poultry and Meats.

Winnipeg, Dec. 2nd, 1901.

The past week has been practically eventless. There has been nothing worthy of record. While the activity of the previous week has in no sense diminished there has been no change in the situation as chronicled in previous letters. Every nerve is strained to the utmost tension, in the strenuous effort to get as large as possible a proportion of the crop moved before the close of navigation. At the same time dealers are forced to be extremely cautious, to avoid being caught with stocks on hand, which must be held over or shipped all rail. To add to their difficulties shipping is exceedingly scarce. It is easier to get the grain to Fort William than to find vessels for the water transportation. So it is said that dealers will buy only what they have secured shipping for. Farmers on the other hand are rushing the crop to market as fast as possible. In fact they are mostly obliged to do so, having no storage for it. It would be supposed that this would have a weakening effect upon the market, but such does not appear to be the case as the prices keep well up. Almost every day reports are received that this or the other place is "full" and wheat has to be turned away. At Indian Head the Board of Trade complained that the blockade was unreasonable and that the railway was not supplying a fair number of

cars compared with other points. This drew forth a letter to the Winnipeg papers signed by seven grain buyers at Indian Head, stating that there had been no such blockade. The truth is hard to come at in these cases, but the secret seems to lie in the objection of the elevators to accepting storage wheat. Rather than accept what they cannot buy they say they are full, and turn the load away. There is no doubt that many elevators have had to wait for cars, but there is less doubt still that many buyers have tried in this way to get wheat for a cent or two below market price. The world moves fast, and the farmer is not so terribly slow, but it takes a pretty swift individual to keep pace with the concentrated trickery of a corporation. The only way that suggests itself, whereby the producer can put his grain into the hands of the independent buyer is via the Farmers' Elevator, and the increase of these is to be looked for if the present rate of grain production is maintained.

I calculate that at least 18,000,000 bushels of wheat have been exported up to the 30th of November, and that 10,000,000 bushels are stored at Winnipeg and interior points. This makes an approximate total of 28,000,000 bushels marketed or only one-half of the estimated crop. To forward the 10,000,000 bushels in store will re-

quire something like six weeks at present rates. Navigation may close at any date and at the outside can scarcely remain open more than another fortnight. Looks as if we should need not only another railway but another lake as well to market our grain.

About Thanksgiving, and from then until Christmas we begin to realize the disadvantages incident to an exclusively grain raising country. Where producers are hypnotized, as we might say, by one staple and neglect all others they are fair victims for those who produce those others. An estimate of the loss sustained by the Manitoba farmer through neglecting the poultry trade may be formed from the fact that one firm in this city brought in three cars of poultry from Ontario last week. The same firm has placed an order for a car of Ontario mutton and lamb for the Xmas trade. They also expect two cars of these meats from Prince Edward Island. When such difficulties beset the wheat grower one would suppose that the incidental aids of the kind referred to would not be neglected as they are. What does this prove? The profits of wheat growing? Where we find a man constantly complaining that everything is conspiring to rob him of his profits, and yet year after year he keeps in the same line of business, we can only conclude that the business is a paying one. But because there are dollars in wheat is no good reason for neglecting the dimes of the poultry, dairy, sheep and other incidentals of the farm.

Manitoba's wheat and that of the N. W. T. grown this present year would make bread for the whole of Canada for over two and one-half years. Manitoba's wheat would make bread for her present population for forty years, and the oats and barley would keep them alive for another quarter of a century at least, should they be reduced to a Scotch diet.

It is somewhat remarkable that there has been no word of complaint this fall about freight rates. The more one has to ship the greater the reason for complaint—that would seem to be a reasonable statement, but in our case it seems to work the other way about. When we've lots we don't miss the freight—when we've little we need it all. The excessive rate remains, and when we get this crop marketed and begin to do our figuring, then perhaps we will be ready to join you Ontario kickers.

Just south of us, in North Dakota, is grown the largest flax crop in the United States. We can grow flax up here too—to beat the Dutch or the Dakotans either, and though we are somewhat suspicious that Yankee reciprocity might not be so friendly as it looks, yet we should welcome any such measure that would give a market for the flax we would grow if we could sell it. Some years ago a much larger crop was grown but prices have fallen off to an extent that has discouraged its cultivation.

Correspondence

Freight Rates.

A REPLY TO OUR EDITORIAL OF NOV. 12TH THE RAILWAY SIDE OF THE CASE PRESENTED.

Editor THE FARMING WORLD

The accusations which you bring against the Canadian Pacific and the Grand Trunk are that whilst those railways have been bonused by the Canadian people, nevertheless they discriminate against the Canadian shipper and in favor of the shipper in the United States; secondly, that their rates within Canada are exorbitant and oppressive to a degree, the Canadian farmer being singled out as the principal victim. You will allow that a graver indictment could not very well be preferred. One can imagine the farmers who read your paper saying: "Our editor is a highly respectable man; we are sure that in private life he would not bear false witness; hence we conclude that in arranging the railways in this fashion, he has weighed his words and that the instances of extortion and discrimination which he cites have been carefully investigated by him and are substantially true." Yet the fact is, that you have brought these charges upon the strength of so-called proofs which you have not investigated for yourself but which you found floating about in one or two Ontario newspapers, which also took them on trust without making any attempt to verify them; so that you are in the position of a retailer of second-hand fabrications against men like Sir Thomas Shaughnessy and Mr. Reeve, who have reputations to lose and who, like the rest of us, ought not to be assailed without just cause.

I will take the cases you cite in the order in which you print them.

(1.) "Twenty years ago the Northern and the Midland railways carried lumber to Toronto and Port Hope for \$: a thousand feet, and now the rate is double that." Then, arguing from the particular to the general, which is a vicious process, you assert that railway rates for all kinds of freight have been increased throughout Ontario in the last twenty years.

The simple truth is that while twenty years ago lumbering was carried on at a comparatively short distance from Toronto and Port Hope, the lumberman of today is operating at points much further north. Mile for mile, the present lumber rate is considerably lower than it was then, whereas, by ignoring the changed conditions you are making people believe that it is higher. The sweeping assertion as to the general advance of rates which you base upon this suppression of the truth is, of course, entirely without foundation.

(2.) To show that the Ontario

fruit-grower is denied a market in the Canadian Northwest in consequence to the high rates of the Canadian Pacific, you print an old story to the effect that the late Mr. John McMillan, M. P., had to pay \$518 for shipping a car-load of apples from Seaforth to Prince Albert, while at that time cattle were being shipped from Prince Albert to Montreal for \$197.

It is true that the rate on apples, at that time, from Seaforth to Prince Albert, was \$1.57 per 100 pounds, and, when you come to think it over, a charge of about \$2.50 per barrel for taking apples a distance of 2,000 miles, over three railroads, would not appear to be excessive. However, this rate was reduced by one-third three years ago. Since which time the rate on apples between the two points mentioned has been only \$1.05 per 100 pounds.

(3.) It is impossible to ship car-loads of mixed fruit to Brandon, "and the town is not large enough to justify the sending of a car loaded exclusively with one sort of fruit."

If you had taken the trouble to look at the Canadian Pacific tariff you would have seen that mixed fruits can be shipped by the car-load to Brandon as well as other Manitoba points. The summer rate, lake and rail, from Hamilton (a central fruit point) to Brandon is 89 cents per 100 pounds; the winter rate, all rail, \$1.02.

(4.) "Grapes can be sent from Detroit to Chicago (175 miles) for 49 cents per 100 pounds, but the charge on them from Windsor to London (75 miles) is 32 cents."

The distance from Detroit to Chicago is not 175 miles but 272 by the C. P. R.'s Wabash connection and 286 by the Grand Trunk. Then the distance from Windsor to London is not 75 miles but 110 by the Grand Trunk and 113 by the Canadian Pacific. The rates on grapes from Detroit to Chicago are 30 cents per 100 pounds for car-load lots, 37 cents for less than car-load lots. On the other hand, the rates from Windsor to London are 23 and 30 cents respectively, or, if the grapes are shipped in barrels, 19 cents and 26 cents.

(5.) "Apples shipped to the British market from Seaforth are charged 5 cents per barrel or \$39 a car more than when shipped from Ingersoll or Wingham, which happen to be competing points."

The original story, which your type-setters have mangled, was that the excess was \$9 per car. But even at that it was untrue, that is, if the apples were shipped at the same time and to the same British port. Rates to British ports are made up of the inland rate to the seaboard plus the ocean rate. The ocean rate, with which the railways have nothing to do, may vary from week to week; and

it often happens that the rate, say, to Glasgow is higher than the rate to Liverpool or vice versa. The apple rate to the seaboard is 23½ cents per 100 pounds from Ingersoll, 25 cents from Seaforth, 26 cents from Wingham. Thus, the rate from Seaforth, with one railway, is lower than the rate from Wingham with two, although you assert the opposite.

(6.) "Clover seed is brought from Toronto to Seaforth for 24 cents per 100 pounds," but "clover seed is brought from Chicago by way of Toronto for 19 cents."

The rate from Toronto to Seaforth for car-load lots is 17 cents, for less than car-load lots 26 cents, while the lowest rates from Chicago to Seaforth are 21 and 34 cents respectively.

(7.) "Men who raise sheep in Ontario cannot ship the wool to Toronto as cheaply as men in England or even Australia can ship to the same place; for the rate from Bradford in England to Toronto is 17 cents a hundredweight, and the rate from Dundas to Toronto is exactly the same; from Hamilton to Toronto it is even higher."

The rate for compressed wool the form in which wool is usually shipped from England from Bradford to Toronto is 72 cents per 100 pounds.

(8.) You say that in 1897 an investigation was held into cattle rates from Western points to Montreal, and give a table showing that the Ontario cattle shipper is discriminated against, and the American shipper favored, by the Canadian railways.

The investigation you speak of seems to be the one made by a gentleman connected with the Patrons of Industry, who, when it came to the pinch, refused to allow the railways to meet his charges before the only tribunal competent to decide such matters, namely, the Railway Committee of the Privy Council at Ottawa. The table you publish does not name the shipping points in Canada and in the United States from which it professes to give the rates to the seaboard. I am unable to find, after careful examination of the tariffs in force in 1897, that any of the cases of discrimination alleged in the table really occurred.

The facts about the cattle traffic to the seaboard are briefly these. A great part of the cattle trade of the United States is concentrated at Chicago. The report of the Union Stock-Yard Company for 1900 shows that over 14,500,000 cattle, calves, hogs and sheep, with 96,000 horses, were received by rail at Chicago, exclusive of the animals driven in from the surrounding country. It took 277,000 cars to carry this vast herd. Packing houses and local consumption accounted for 12,000,000, and 2,900,000 were shipped out by rail. The cattle reach Chicago from the western ranches in train-loads, and are shipped out in train-loads. In Ontario, on the other hand, cattle

have to be collected here, there and everywhere by the car-load, such a thing as a whole train-load being seldom seen. Rates out of Chicago to seaboard are fixed by the numerous American railways competing for the business. The Canadian Pacific and the Grand Trunk have to choose between accepting those rates for the haul to Montreal or going without a share of the traffic. If they choose the latter course, then their revenues are diminished by just so much, the rate is low. Yet leaves a bare margin of profit. As said, the American cattle are carried mostly in train-loads from Chicago, so that the fact that rates are lower per mile of haul than in Ontario, where the expensive work of gathering them in small lots from far and near has to be performed, is not at all surprising. The American farmer or ranchman who raises the cattle has to pay more, it should be remembered, than the rate from Chicago; he has to pay the rate to Chicago as well. Yet you compare the rate from the Chicago stock-yards to the seaboard with the rate from the original shipping point of the Ontario farmer, without appearing to see that it is unfair to do so.

The assertion that the rate per car from Ontario points to the seaboard at Montreal is higher than the rate per car charged by Canadian railways from Chicago to Montreal, is another of those half-truths which are more dangerous than whole lies. The rates from Ontario points off the main routes may be higher, because at such points the cost of collecting the cattle is much greater than the cost of simply coupling an engine to a train-load at Chicago. But there is no discrimination whatever against Ontario main-line points and in favor of Chicago or any other American point in the cattle traffic or in any other kind of traffic carried by the Canadian Pacific and Grand Trunk Railways.

This exhausts the list of the charges you make in your article of November 12th. Before you assail the Canadian railways again, let me beg of you to take the trouble to be accurate. If I may say so, you owe that much to your readers. The freight managers will always be able to furnish you with the facts of any case which seems to involve hardship or injustice to the farmer or to anyone else. They are not infallible, they make mistakes like other men but are always ready to correct them and acknowledge that they have been to blame when it is shown that wrong has been done. May I ask you to be good enough to follow their example in that respect?

Yours respectfully,
"Viator."

The Bacon Hog Comes "High"

Editor THE FARMING WORLD:

I noticed in an article in one of your recent issues with reference to

the fall in the prices of hogs, and stating that there was a good profit to the breeder even at the present prices.

It seems to me that some people speak of the cost of producing the hog of to-day as they would of the hog of fifteen, or even ten, years ago, forgetting the fact that the cases are in no way parallel. Some three years ago, through the columns of your paper, I made the statement that the long lean pig could not be produced at less than 7 cents, live weight, which statement called down upon me some very severe criticisms. Now what are the facts? In less than a year from that time the packers were paying as high as 7 cents a pound, later on still higher prices. Why these high prices, if as was then stated, $\frac{1}{2}$ to 4 cents would pay for production? Short supply was the answer. And why the shortage? Simply because thousands of farmers had found to their cost that it would not pay, and rather than attempt to raise the long nosed feeding animal, went out of the business altogether.

I have been over a large area of country during the past two or three years, and have met with scores of farmers who used to make pork raising one of the leading branches of their business, but who now say there is no longer any money in it, even at the prices paid.

The farmer of to-day is like the man in other lines of business, he counts what it costs to raise and quits if it does not pay.

In feeding sheep and cattle (that is, those of the right sort) they use up quantities of feed of different kinds that would be unsaleable, or at least, should not be sold off the farm, and bring it all together into money, while the hogs eat money's worth from birth till death.

There was more profit in the smooth, easy-fed pig of a few years ago at 4½ cents than in the pig of to-day at 7 cents. Very many farmers I have met during the past fall are going back to the easy fed pig of the past, for their own use and butchers' trade, and leaving the bacon hog to those who choose to grow them. I only desire to show in this article that the statements I made have been borne out by facts.

Well, perhaps we should not grumble, as if we do sell a few cents per hundred cheaper, it does not cost us nearly as much to produce.

R. L. Holdsworth,
Port Hope, Ont., Nov. 29, 1901.

Note.—We are pleased to have the views of our friend on this important topic. We think, however, that many readers of this journal who have been selling bacon hogs during the past ten months at from \$6.50 to \$7.50 per cwt., will hardly agree with his contention that the business don't pay. Surely if it paid to feed the

smooth, easy-fed pig at 4½ cents per lb., there should be big profit in feeding the bacon hog at 7 cents, even if we admit that he costs considerably more to produce. Experiments conducted at the Agricultural College, however, show that if properly handled it costs little, if any, more to produce the thrifty bacon hog than the "smooth, easy-fed pig." But we would be glad to hear from any of our readers as to how the production of the bacon hog has paid them during the past summer. We are also open for experience on the other side. It is always more satisfactory to have both sides of a question presented. Those opposed to the bacon hog should ask themselves the question: "What would be the price of the smooth, fat hog to-day, if our export bacon trade had not been developed?"—Editor.

Toronto Live Stock Trade.

Statistics compiled for the eleven months, ending Nov. 30th, show quite a large increase in the live stock trade at Toronto cattle market. For the eleven months just completed, as compared with the same period last year, business has increased in cattle nearly a third, in sheep nearly a fifth, and in calves more than a fifth. The number of hogs, owing partly to scarcity, but more to the practice of packers in buying their stock direct from the farmer instead of through the market continues to decrease. The following are the receipts for the eleven months of this year and last:

	1900.	1901.
Cattle	125,754	163,391
Sheep	110,374	128,861
Hogs	179,571	141,488
Calves	6,067	7,879

The following table of receipts of live stock since 1887, omitting calves, will be found of interest. We look for a big boom in the live stock business of Toronto when the new stock yards at the Junction are completed.

	Cattle.	Sheep.	Hogs.
1887	70,075	58,849	34,932
1888	75,320	62,844	36,209
1889	93,525	92,346	56,570
1890	102,371	54,051	53,780
1891	100,904	49,525	50,757
1892	102,571	49,382	74,116
1893	86,710	49,883	74,557
1894	93,481	119,710	139,862
1895	99,233	125,732	154,382
1896	104,887	95,075	194,104
1897	138,155	88,460	217,765
1898	147,256	86,443	301,942
1899	140,154	112,436	245,271
1900	133,210	118,474	197,607
1901 (to date)	163,391	128,861	141,488

Traveller: "I say, your razor's pulling most confoundedly!"

Local Torturer: "Be it, Zur? Wull, 'old on tight to the chair, an' we'll get it off zummow!"—Punch.



Frank T. Shutt, M.A., Chief Chemist, Dominion Experimental Farms

The Causes of Soft Pork

We have had occasion frequently during the past couple of years to refer to the soft pork investigations conducted at the Central Experimental Farm, Ottawa. These investigations were arranged on a most elaborate and exhaustive plan and were in the immediate charge of Mr. Frank T. Shutt, M. A., chief chemist, who has been ably assisted in the work by J. H. Grisdale who planned and conducted the feeding trials. The investigations were completed some months ago and a bulleting compiled by Mr. Shutt has just been issued by the Department of Agriculture giving a detailed account of the work.

After considerable preliminary work as to the composition and nature of "firm" and "soft" pork, immature or "unripe" pork, standards of firmness, etc., the first series of feeding trials began, followed by a laboratory examination of the pork produced. There were in all about 180 pigs in this first series which began in May 1899 when the majority of the pigs were between one and two months old. The pigs were Tamworths or Tamworth grades. The scheme of the trial was such that information would be gained as to the effect upon the quality of the pork of the following possible factors:—

(1) Character of food (a) fed throughout life, and (b) fed during the initial and finishing periods, respectively. (2) Limited and unlimited supply of food. (3) Soaked or cooked grain as against dry or uncooked grain. (4) Age of animal when slaughtered. (5) Exercise and lack of exercise. (6) Locality or district where raised.

A variety of foods was given principally corn meal, peas, oats

and barley, beans and clover fed in different combinations and by different methods. We have not space here to give in detail how the feeding of each pen was conducted. The results of the first series are summarized by Mr. Shutt as follows:

1. That of all the grain rations employed, that consisting of equal parts of oats, pease and barley gave the firmest pork. It may further be added that the fat was deposited evenly and not too thickly and that this ration gave a very thrifty growth.

2. That no difference could be observed in the firmness of the pork from the preceding ration whether fed soaked or dry.

3. That when half the grain ration consists of corn meal, the resulting pork shows an increased percentage of olein; in other words a tendency to softness.

4. That in this ration (half corn meal, half oats, pease and barley in equal parts) the feeding of it boiled gave a slightly higher olein content, but this is only apparent when the average from the four pens is taken into consideration.

5. That considering the effect of feeding the ration of oats, pease and barley during the first period (to a live weight of 100 pounds) and corn meal during the finishing period, compared with the reverse of this plan—that is, corn first, followed with oats, pease and barley—we may conclude that the former gives firmer pork.

6. That in both methods mentioned in the preceding paragraph, no marked difference was to be observed from the ration fed dry or previously soaked, though taking an average of the two groups on each ration the "dry feed," gave a somewhat higher olein content.

7. That when corn meal formed



Samples of Soft Pork.

half the first period ration, and the whole of the second period ration, the resulting pork was somewhat softer than from that of any of the rations already discussed. We conclude that the longer the period during which corn is fed as a large proportion of the ration, the softer will be the pork.

8. That beans produce a soft and inferior pork. The growth of the pigs so fed was poor and miserable and the deposition of the fat meagre.

9. That corn meal fed exclusively as the grain ration, either dry or previously soaked, results in an extremely soft fat, the percentage of olein being considerably higher than from any other ration tested. The pork was of an inferior quality. Here also we noted the miserable growth of the animals, the ration in no sense being an economical one.

The general results from immature pigs show undoubted proof of the "soft" character of the fat of young pigs. Though all show a very large percentage of olein, the proportion of this constituent present varies with the character of the ration. The order of softness is practically identical with that found for the mature pigs.

The second series of feeding trials were carried on in 1900 and were undertaken to obtain corroboration of certain results as well as to ascertain the influence of several modifications in the rations already employed. In this second series the effect of the ration on the fat of the finished pig simply was determined.

The results obtained from the first series were confirmed in all their important features from the data of the second series. There are, however, from this latter series several additional and important features to be noted. In every instance in which it has been tried, skim-milk has produced a much firmer fat than resulted from the same grain ration, fed without skim milk. Root crops such as turnips, mangels and sugar beets can be fed so as to produce a good quality of pork. No softening effect was noticed, due to the feeding of rape, artichokes or pumpkins, cooked or raw. Mr. Shutt summarizes the results from the record series as follows:

1. That the one great controlling factor in the quality of the pork of finished pigs lies in the character of the food employed.

2. That Indian corn and beans tend to softness, i.e., to increase the percentage of olein in the fat. If these grains are used they must be fed judiciously if first class firm pork is to be produced. If fed in conjunction with skim milk it has been shown that a considerable proportion of Indian corn may be used in the grain ration without injuring the quality of the pork.

3. That a grain ration consisting of a mixture of oats, pease and barley, in equal parts, gives a firm pork of excellent quality.

4. That skim milk not only tends to thriftiness and rapid growth, but counteracts in a very marked manner any tendency to softness.

5. That rape, pumpkins, artichokes, sugar beets, turnips and mangels can be fed in conjunction with a good ration without injuring the quality of the pork.

6. That the fat of very young pigs and animals of unthrifty growth is softer than that of finished pigs that have increased steadily to the finishing weight.

One important fact established by these investigations is that

the food has a very great deal to do with the quality of the pork produced. Farmers should bear this in mind when preparing their hogs for the bacon market. The foods which Mr. Shutt mentions as always making good pork are among the staple articles produced in Canada and there is no reason why feeders should go outside of these and thus endanger the quality of our bacon. Parties desiring fuller details of these experiments should write the Department of Agriculture, Ottawa, for a copy of Bulletin No. 38.

Practical Pointers for Hog Raisers

Spring and Fall Litters—Good Pens—Feeding Young Pigs.

Some weeks ago we submitted the following five questions to a number of our leading feeders and breeders of hogs with a view to obtaining data that would be valuable to farmers engaged in the production of the bacon hog. There has been a most liberal response to this enquiry which we have pleasure in publishing:

1. Is it advisable for the average farmer to raise fall litters of pigs?

2. Are fall litters more profitable than spring litters?

3. What method would you advise for housing fall pigs during the winter?

4. What kind of food would be best to winter them on?

5. When would be the best time for marketing fall pigs?

As will be seen there is a difference of opinion as to whether spring or fall litters are the more profitable in the replies which follow. It is pretty well agreed, however, that if handled properly fall litters can be made profitable to the average farmer. A good plan to follow is to have litters both spring and fall so as to have hogs to market every six or seven months. Where several brood sows are kept litters might be had every three or four months. The advice given below on feeding young pigs is very good. Farmers should aim to keep young pigs growing from the start:

PROF. G. E. DAY, AGRICULTURAL COLLEGE.

In reply to your inquiries, I beg to submit the following replies, though I know there is room for a great deal of difference of opinion in connection with some of the matters:

1. I am not prepared to speak for the average farmer, but I do not see why any farmer could not raise fall pigs, especially if he has them farrowed in September.

2. Very often hogs are a better price in the spring than they are in the fall; though I am not prepared to say that fall litters are necessarily more profitable than spring litters.

3. Young pigs, if safely started before the cold weather comes, are very little trouble to house satisfactorily. A dry place to sleep where they can be kept compara-

tively warm is the main thing. I think the more exercise they get through the winter the better for them, though I know that, in many cases, this is a very difficult thing to provide. If they can be fed in some open shed, with a comparatively snug sleeping place made at one end of the shed, I believe this would be as satisfactory an arrangement as could be obtained. The main thing regarding their housing is to see to it that their place is dry. I would not recommend a stone or concrete building for them; but would rather make a rough shelter and bank it round with fresh horse manure than put them in a stone or concrete building.

4. For starting young pigs after weaning, I know of nothing better than finely ground barley mixed with middlings and skim-milk. A few finely ground oats with the coarse hulls sifted out, also do well in a mixture of this kind. The pigs should be taught to eat a few roots almost from the time of weaning, and the quantity of roots can be increased as they grow older. Sugar beets, mangolds or turnips are all good for pigs, though preference is given them in the order named. As they get older, almost any grain mixture will do, but I would prefer to make barley the basis of the ration.

5. No fixed rule can be given for the time of marketing pigs. The best time, it seems to me, is as soon as they are ready. A great many farmers make a serious mistake by holding their pigs too long before they commence to fatten; and, as a result, by the time they are fat enough to go to market they are much too heavy. Many good pigs are spoiled in this way. I think it is best, on the whole, to keep them growing nicely, and have them fat enough for market by the time, or a little before, they weigh 200 pounds. I do not think it is necessary to keep pigs until they are 8 months old or so in order to produce a first-class product. Pigs of a growthy, thrifty nature can be got on the market from six to seven months old and still make a first-class product. There is a great deal in the breeding as well as in the feeding of pigs.

THOMAS TEASDALE, CONCORD, ONT.

1. At the prices pork has been selling at lately it should pay to raise fall litters of pigs, providing you have proper accommodation for them.

2. I think as spring pigs can run out on pasture and will not require as much expensive feed as in winter, they are more profitable than fall litters.

3. A dry, warm pen with plenty of dry bedding and a yard to run out in on fine days.

4. I think shorts or middlings and barley meal are probably as good as anything for young pigs.

5. I don't know on what particular date pork sells the best, but as a rule it is best to sell when pigs weigh from 160 to 200 pounds, providing they are in right condition as to fatness.

R. H. HARDING, THORNDALE, ONT.

1. Yes (decidedly).

2. Yes, I think early fall litters are more profitable than spring litters.

3. I prefer a warm frame building for hogs, and I like to let them out on nice days for exercise.

4. Sugar beets or yellow mangolds, as the principal feed with a small quantity of meal, the price usually decides for me what kind of meal to feed.

5. The best time to market is a hard question to answer. Usually, I think May, June and July have brought the highest prices.

I think many feed too much heavy meal to young pigs. They should have very little of such until they are four or five months old.

ROBT. TWISS, WOODBURN, ONT.

1. I think fall litters can be raised with profit by the average farmer who has suitable feed pens, etc.

2. I find that spring litters are more profitable.

3. The plan I pursue is to have the pigs fed in a different apartment from where their bed is for many reasons.

4. The best results can be had from raising hogs by feeding no hard grain. I would recommend feeding shorts, roots, skim-milk, etc.

5. If for the bacon market hogs should be marketed when they weigh about 190 lbs. each.

J. G. CLARK, W. ODRUFFE FARM,
OTTAWA

1. I don't think the average farmer would make a profit from fall litters.

2. Not in my experience.

3. I have had most success where I could provide pens in a part of cow barn.

4. I like a little skim-milk with shorts and barley meal. When the intention is to hold over for August or September market they may be brought along very nicely with pulped mangolds or other roots and a little grain chop.

5. With regard to the best time for marketing I have not watched the markets very closely, having sold most of mine for stock rais-

ing, but I have realized best prices along in summer.

J. A. RUSSELL, PRECIOUS CORNERS,
ONT.

1. Yes.

2. No, but just as profitable, for this reason: Have the sows farrow early in September, and when the pigs get three weeks old let the sow and pigs run out on the stubble, and also have the run over the orchard. By eating falling apples and what grain they can find on the fields, with a little milk and ground barley and fine shorts mixed fed night and morning, one can have the pigs when two months, long fellows weighing from 50 to 60 lbs. each in healthy condition. I would recommend the grass run for spring pigs, having sows to farrow about the first of April.

3. I would not advise confining them in the house, but would have pens with an outside door to each one, so as to let the pigs run out in the yard any time they wish. But they should have a clean, warm place inside to sleep in.

4. Ground barley, fine wheat shorts and coarse bran, equal parts of each by bulk, soaked one day be-

fore feeding, two pails of hot water put on just before feeding. Feed this morning and evening, and sugar beets or mangolds at noon. When finishing them for bacon hogs feed ground barley and peas dry, with another trough in the pen to drink from. Feed this for the last three weeks to make the flesh firm.

5. The first part of February or any time that month, following the advice given in my answer so far, one can have his September pigs weighing when five months old 200 lbs. each and over of the true bacon type and firm, that is if you have the right breed of hogs to start with. I have the pure bred Yorkshires and can have them that weight at five months every time.

I think, however, it would be better if more farmers would have their sows farrow at different times of the year and follow out my plan of feeding them and I think the price of bacon hogs would be more regular. When every person has his pigs ready for market at the same time, down goes the price. It would be better to have \$6.00 per hundred the year round, than have \$5.00 one time and \$7.00 another.

(To be continued.)

Ontario Fruit Growers

The forty-second annual convention of the Ontario Fruit Growers' Association was held at Cobourg last week. There was a large attendance of members from all parts of the province, besides some growers from Nova Scotia and Quebec. The proceedings throughout were most interesting and a lot of practical information given on fruit growing. The convention was graced by the presence of two Americans, Prof. Waugh of Burlington, Vt., and Prof. H. E. Van Deman, ex-United States Pomologist at Washington, whose contributions to the meetings were very valuable indeed. The chair was taken by President W. H. Orr.

SAN JOSE SCALE.

After the reports of a number of standing committees had been presented Mr. Geo. E. Fisher, San Jose Scale Inspector, reported upon the season's work. The scale had developed at very few new points. People, however, were ignorant of the scale and more knowledge regarding it should be disseminated. In the old centres of infestation the destruction wrought by the scale was worse than ever known before and was really alarming. Trees of all kinds were killed, even apple. More spraying material had been distributed than in 1900. A large quantity of the material was not necessary but every part of the tree must be reached. Mr. Fisher recommended a solution of lime, salt and sulphur in these quantities: 33 pounds of lime, 15 pounds each of salt and sulphur, with water enough to make 30 gallons. Fumigation was a good method to kill the scale. Crude petroleum was more destructive to insect life than anything

else, and he recommended this on apples, pears and plums. For peaches whale oil soap was the thing, but it required to be used liberally at 2½ pounds to every gallon of water. The scale could not be eradicated by spraying but could be kept in check. The only way to destroy it was by fire. A resolution was passed asking the Government to pass permissive legislation, making it a punishable offence for anyone to neglect to eradicate the scale at once when it is located, either by the owner or inspector, by burning the infected tree, or by fumigation with hydro cyanic gas, or spraying with crude petroleum or other means approved by the Department; also that a township must, on petition of 15 ratepayers, appoint inspectors to inspect all fruit trees under the supervision of the Provincial inspector, the inspector to be paid one-third by the township, the balance by the Province; also that the Government supply spraying material on the same terms as the past season.

FRUIT PACKAGES

The committee on fruit packages reported that owing to some buyers having stocks on hand the act fixing the standard of packages, which was supposed to go into force on January 1st would become inoperative for another year.

Dr. Saunders told the convention of several experiments conducted at the Central Experimental Farm. One showed that bees cannot puncture sound fruit though they can do injury to fruit that has been cracked or the skin ruptured. He advised apple growers to keep more bees. Considerable work had been done at Ottawa to produce apples

suitable for the Northwest. For several years all efforts had proven a dead failure. Some years ago a package had been received from St. Petersburg, which contained Siberian crab seeds. These were cross fertilized with hardy varieties, such as the Duchess, and a variety had been secured that could be grown in the Northwest. They were now being distributed there and being developed at the farms at Brandon and Indian Head.

An interesting address on fruit-growing in Simcoe County was given by G. C. Caston. At one time it was considered impossible to grow fruit in the Georgian Bay district, but every year of late showed that fruit-growing was every year moving further northward. Some of the finest apples were grown on the Georgian Bay, while the Collingwood district was noted for its plums. Mr. Caston advocated the formation of more local associations in affiliation with the Provincial Association.

Prof. Van Deman brought greetings from the American fruit-growers. He saw very little difference between the fruit grown in Ontario and in the United States. North America grew the best apples in the world. He advocated packing apples in boxes instead of in barrels. He also gave some very valuable information in regard to apple and peach culture.

Prof. Robertson gave a talk on some of the requirements of the fruit-growing trade. He argued for honesty in trade and referred to an incident in connection with the Glasgow Exposition. For the benefit of some distinguished visitors three barrels of special Canadian apples were purchased, but when opened the centre of the barrels were found to be filled with rubbish. Great care should be exercised in packing, grading and sorting. Misrepresentation was to be avoided and fruit should be delivered in the best possible condition. He advised exporters not to ship too many qualities. From twelve to fifteen were enough. At present we ship to England 1,000,000 barrels, but if we wanted a greater share of that trade better goods must be shipped. Prof. Robertson instanced shipments of apples of 14,000 barrels, and of these less than 6,000 were delivered in good condition. Canadian vessels now had, however, the best system of cold storage afloat.

COLD STORAGE

On the second day of the convention Prof. Robertson addressed the members on the cold storage facilities provided by the Government for the safe transportation of fruit. The facilities would be useless unless the fruit was forwarded in good condition. Prof. Robertson referred in pointed terms to some statements that lately appeared in the Canadian Horticulturist, the official organ of the Fruit Growers' Association, which created the impression that the Government cold-storage system was not operating

successfully and characterized them as misleading. His remarks made a stir in the meeting and brought out a discussion which lasted most of the day. In outlining the work of the Government Inspector at Montreal, Prof. Robertson stated that export apples had been found in such condition on arrival at Montreal that they would not pay freight. A responsibility rested upon shippers who should exercise care, skill and honesty in packing fruit. On account of the cold storage facilities provided cheese and apples were being delivered in better condition than ever before. Referring to the Hanrahan system of cold storage he stated that plans of a cold storage car of this system were submitted, which he considered, had many excellent points. The railway companies had, however, refused to fit up cars with it for the reason that while it was a good car for fruit, it was not a safe car for rolling stock, and moreover, it would cost too much to acquire the patents. The companies had, however, supplied the department with cars equally effective.

In dealing with the articles published in the Horticulturist Prof. Robertson objected to some letters that had appeared to the effect that shipments of pears, owing to improper cold storage facilities, had failed. He showed that these statements were inaccurate. The shipments were sent from Grimsby and when examined at Montreal by three inspectors, some were found to be scabby, under-sized, deformed, over-ripe and not up to the grade marked. Some of the cases were sent to Ottawa and in one case there were 60 specimens over-ripe. The article referred to was misleading and should never have been published in the official organ.

Mr. Wolverton in reply stated that he had been acting solely in the interests of the fruit-growers. He was one of the shippers of the pears and claimed they were in good condition when they left Grimsby. He did not know where they got out of condition. A letter received from the consignee gave it as his opinion that it was too cold in the refrigerator while the agents of the vessel stated that it was three days out on the steamer before the cold storage was at forty degrees. A number of others took part in the discussion, which seemed to show a feeling of distrust of the treatment received from the steamship companies. In summing up the discussion Prof. Robertson stated that it was the intention of the Government to have an experimental cold storage at Ottawa. In the charges made by him he imputed no motives to anyone, only the statements in the Horticulturist were so misleading that he felt it only right to make the facts public.

MORE EDUCATIONAL WORK NEEDED

A desire was expressed to have the Horticulturist publish weekly instead of monthly. There was a great need for the dissemination of

literature on fruit culture and it was suggested that the Minister of Agriculture publish a series of practical bulletins on the first principles of fruit culture.

In a paper on "Freight on Fruits" Mr. H.W. Dawson asked why there should be a higher charge for carrying a barrel of apples than a barrel of flour. He showed that in some instances apples had paid from 50 to 100 per cent. more than flour. He advocated the united action of shippers and growers and a railway commission.

Mr. G. C. Creelman, Superintendent of Farmers' Institutes, addressed the meeting on Horticultural Societies, their relation to the home school and Province. He referred to the changes that are taking place in the home and school life and the demand for education along more practical lines. The study of horticulture would add much to the wealth of the country and the local horticultural societies could do much to help educational work in this line.

Mr. C. C. James, Deputy Minister of Agriculture, spoke of the many openings for young men in horticulture. No work required more capable men and there were unlimited opportunities, for no other calling presented so wide a scope. He advised young men who might think of entering the professions to turn their attention to this.

The addresses of Father Burke of Prince Edward Island and W. H. Bunting, Canadian Fruit Commissioner to the Pan-American, were received with interest. An illustrated lecture on "The Orchard" which dealt more particularly with the development of fruits buds by Prof. Waugh of Vermont was well received.

The receipts of the Association for the year was \$7,036.17, and expenditures \$6,661.14, leaving a balance of \$375.03. The officers for 1902 are: President, G. C. Caston, Craighurst; Vice-President, W. H. Bunting, St. Catharines; Directors, District No. 1, R. B. Whyte, Ottawa; No. 2, W. Whitney, Iroquois; No. 3, Harold Jones, Maitland; No. 4, Walter H. Dempsey, Trenton; No. 5, Major Snelgrove, Cobourg; No. 6, Elmer Lick, Oshawa; No. 7, M. Pettit, Winona; No. 8, E. Morris, Fonthill; No. 9, J. S. Scarff, Woodstock; No. 10, W. W. Cox, Collingwood; No. 11, T. A. Race, Mitchell; No. 12, Alex. McNeill, Walkerville; No. 13, C. L. Stephens, Orillia; Auditors, A. P. Pettit, Grimsby, and W. M. Orr, Fruitland. Messrs. A. M. Smith of St. Catharines and Thomas Beall of Lindsay were elected honorary members of the Board of Directors.

Owing to the extra work entailed as editor of the Horticulturist, Mr. Wolverton resigned his position as Secretary-Treasurer, which he has held for a number of years. He will be succeeded in this office by Mr. G. C. Creelman, Superintendent of Farmers' Institutes, who will act as Secretary-Treasurer in the future.

(To be Continued.)

The Sugar Beet World

Devoted to Sugar Beet Culture in Canada and Allied Industr.es. Specially
Representing the Farmers' Interests

Edited by JAMES I. WLER

Sugar Beetlets

The sugar industry is a very great one, the consumption of sugar being about equal in value to the wheat and oat crops combined.

The beet now used for making sugar is a highly developed plant, and has been secured as the result of careful cultivation and selection for a long period.

Between 13 and 15 pounds of seed per acre are used that there may be no breaks or vacant spaces in the rows.

It has been found difficult, if not impossible, to transplant beets to fill up gaps.

Experience in sections where the industry has been carried on for several years has demonstrated that it is much more economical to sow the seed thick at the outset and remove all surplus beets at the time of thinning.

By means of a sharp hoe, a large share of the surplus beets are removed from each row, leaving bunches of plants eight or nine inches apart from centre to centre.

Deep preparation of the ground and subsequent thorough cultivation up to the time of thinning leaves the soil in such fine tilth that the beets grow well below the surface.

Beets grown above the surface are useless for sugar purposes.

A rotation of crops is necessary, a four years' rotation being probably better than three years, though there is no definite rule in regard to it.

Beets should follow wheat or some other cereal which will allow plowing in the fall, and if needed, subsoil at that time.

The rotation must be adapted to the character of the soil.

If the loam tend toward clay, a hoed crop, either corn or potatoes, should be interposed between two consecutive crops of beets.

Experts Supplied.

In order to satisfy the demand for information on sugar beet matters The Farming World has made arrangements with several experts, who are prepared to give lectures upon the industry and also report upon the soil and conditions necessary for the successful operation of sugar factories. The fee for such services will be merely a nominal one. The work is undertaken simply for the benefit of the industry at large and not as a money-maker.

The Farming World will also supply forms of acreage contracts, covering the "Act" passed by the Ontario Government at the last session, and approved by the Minister of Agriculture. Full particu-

lars and terms will be supplied upon application to the editor, Sugar Beet Department.

New Companies.

The Walkerton Sugar Co., Limited, has been incorporated with capital stock of \$300,000.

The Canadian Beet Sugar Company incorporated under the laws of the State of New Jersey, is authorized to do business in Ontario, with a capitalization of \$600,000. The Canadian Headquarters are at Baden, Adam Haufman being attorney for the company.

The Dresden Beet Sugar Co. of Dresden, Ontario, is seeking incorporation with capital stock, \$500,000.

Dresden

The Town Council and the Beet Sugar Company have concluded an agreement in which the company is to receive a bonus of \$40,000 (already voted), the company agreeing to operate the factory for ten years. In case they fail to do so, to return to the town the money with 4 per cent. interest. The



Harvesting Sugar Beets on the farm of Henry Stokes, Sombra Township, Lambton County, Ontario.

company to have a fixed assessment of \$20,000 for ten years. Nothing remains but for the farmer to contract for the beets.

London.

The Ontario Agricultural College, Guelph, gives the result of the analysis of sugar beets grown in the London district last summer under Government supervision.

Seed was furnished twenty-five farmers, of whom twenty-one sent samples to the College, and it was found that Westminster farmers were unusually successful, both in the quality and quantity. The

beets were pulled between Oct. 22 and 25. The results:

	Per cent.		Yield per acre.	
	sugar in beet	Purity	Tons	Lbs.
C. Wakeling	15.2	89.4	21	309
V. J. Craig	13.8	82.0	9	251
John Anderson,	13.9	90.7		
Arthur Smith	17.2	84.2	16	1,598
Wm. Hill	16.9	92.2	15	1,939
B. H. Crump	15.8	91.2	13	962
Thos. McComb	14.3	83.8	13	132
Wm. Piper	16.4	90.7	22	1,213
Wm. Lowray	16.7	89.6	9	1,080
D. Hartson	16.4	90.3	6	29
Robt. Blinn	17.2	90.9	22	383
J. R. Deacon	14.4	83.0	14	1,724
D. H. Dale	15.4	88.5	19	576
Wm. Brown	15.2	87.0	9	665
J. W. Crinklaw	16.7	87.1	19	161
Adam Nichol	14.6	91.6	21	1,554
Geo. Laidlaw	15.2	88.4	24	
Arthur W. Baty	15.3	88.0	22	1,600
David Beattie	15.2	87.9	22	1,600
W. J. Walker	15.5	85.8	17	428
Henry Odell	16.3	89.5	19	941

Alcohol from Beets.

The only alcohol producing plant of the kind in the United States is approaching completion in Essexville, just outside the limits of Bay City. This institution was erected by Pittsburg capitalists. The molasses results from the manufacture of beet sugar and cannot be converted into a merchantable saccharine article. Another bi-product is potash, which is an important factor in the manufacture of glass. The Pittsburg men have made contracts with about a dozen sugar factories for their molasses. The annual output of the works is estimated at 3,000,000 gallons of alcohol and 9,390,000 pounds of potash.

Lindsay.

The business men of this town have at last awakened to the advantages of a sugar factory and are taking up the matter in a business manner. Recently a deputation waited upon the County Council and asked their assistance in securing acreage contracts. So impressed were the members of the Council with the way the project was put to them that \$300 was granted and the work of securing premises from farmers to grow beets has already commenced. The farmers are taking hold of it, and another year will see Lindsay in the race for a factory.

Walkerton.

The new Beet Sugar Company just organized at this point, is engaged in securing acreage contracts and also stock subscription. The business is being pushed with great activity and the prospects for a factory for the season of 1902 are encouraging, in any event

the farmers will raise a large quantity of beets and ship them if there is not a factory at Walkerton.

Wiaraton.

Work upon the Wiaraton Sugar Co.'s factory is suspended for the season, but during the winter all the stone for the buildings will be quarried and put upon the ground ready for the early start in the spring. In the meantime contracts for the machinery will be given and everything be gotten ready for a rush. It is expected the plant will be completed by Sept. 15th, 1902.

Peterboro.

Peterboro heads the list this year in their experiments in the growing of sugar beets. Now that it is proven that the beets of proper quality can be raised, it remains for the farmer to show that the necessary quantity will be raised to warrant the location of a sugar factory at this point. All conditions, such as railway facilities,

is the intention of local capitalists to take up the project, if satisfactory arrangements cannot be made with the present promoters.

The Growing of Sugar Beets for Profit.

BY EDWARD NELSON, THIRD PRIZE
ESSAY, ILLINOIS STATE FAIR.

Farmers can raise sugar beets profitably. A farmer can grow corn, wheat, oats and live stock as extensively as he pleases and still find it very profitable to grow a few acres of sugar beets.

To such all that needs be said is—plow up that feed lot and plant it to sugar beets; cultivate often and keep clear of weeds. But to the farmer who wishes to devote his entire time to beets and who hasn't forty, eighty or more acres of feed lots, but whose land is ordinary corn land, as we call it, a little more attention is necessary to secure a profitable crop.

Good soil is half the battle, therefore plant beets on the strongest soil attainable.

A few "don'ts" will perhaps

14th. Don't tell your men—"you know how to do it, when you get done here go over there, I'll be back to-morrow. Be there yourself or have a good hustling foreman with each gang.

15th. Don't let your interest in the crop wane if dry or wet weather sets in.

16th. Don't go fishing until beets are laid by.

Now what shall you do to grow a good crop of beets? A crop so profitable as to fully compensate you for the time spent.

Select good second year sod for fields which you know would produce a heavy crop of corn under average weather conditions. Clay loam is good. Black soil which doesn't tend to be mucky is suitable. It is important that land be well drained.

Break the ground in the fall if practicable after having scattered a liberal supply of stable manure over it. In fall breaking it is well to plow deep, but if for some reasons you fail to break your ground in the fall, avoid going deeper than previous plowing in the spring.

When spring opens, say about the 20th of April, or possibly earlier, fit the field, or part of field which is clearest of weeds and plant it. If it was fall plowed, the disc or spring tooth harrow will pulverize the surface nicely. Follow with float, harrow, roller and repeat if necessary until you have a firm seed bed. Then plant about half an inch deep.

As the season advances, if the weather turns off dry, plant a little deeper so as to place all the seed in moist soil, but do not plant two inches deep in order to get to the moisture. If you have neglected fitting your ground down immediately after plowing or discing, disc up moist dirt near the surface and fit it down as quickly as possible and plant. To secure a good even stand it is important that the depth be uniform and all the seed placed in moist earth.



Beet Plow at work on the farm of Henry Stokes, Sombra, Ont.

water, drainage, limestone, etc., are of the best, no better to be found in the whole Dominion, and it is now "up to the farmer" and the capitalists. Peterboro should have a factory for 1902.

Baden.

The Canadian Beet Sugar Company are hard at work securing acreage contracts for a sugar factory at this point. Meetings are being held in all parts of the county, and over 2,000 acres of beets have so far been contracted for. The prospects for a factory are good. A site has been secured and it is expected work upon the factory building will be started just so soon as the promoters are satisfied that the necessary quantity of beets can be secured.

Galt.

The sugar factory at this point is not yet an assured fact. Negotiations are still going on with the New York parties but nothing definite has been decided. Acreage contracts are being secured and it

throw some light on the subject of growing beets for profit.

1st. Don't plant beets on poor, white clay ground.

2nd. Don't plant on steep hill sides.

3rd. Don't plow your land wet.

4th. Don't let plowed ground lie open to the sun in the spring.

5th. Don't be afraid to plant early.

6th. Don't be afraid to harrow, roll and drag the ground down very firmly.

7th. Don't be afraid of expense so long as you think the crop needs working.

8th. Don't get the blues if the weather seems to be against you.

9th. Don't be afraid to sow plenty of seed.

10th. Don't wait for beets to get large before you cultivate.

11th. Don't wait for the beets to get large before you thin them.

12th. Don't be afraid you'll cultivate too much so long as beets are not too large.

13th. Don't wait too long after thinning before you cultivate and hoe the beets.

AGENTS WANTED

Active agents or young farmers to contract Sugar Beet acreage. "Good pay." Write for particulars to the

LONDON SUGAR BEET REFINING CO.

LIMITED
LONDON, ONT.

E. H. DYER & CO.

Builders of

SUGAR MACHINERY

Cleveland, Ohio

Will contract to build complete beet sugar plants, including all machinery and buildings; also furnish the necessary technical and skilled help to operate them.

Later plowing, some of it will likely have a heavy rain and a crust will form. If you will watch the weather closely, however, you need not be bothered much with crust.

When a storm period is on, get ready to go to work, then soon as ground will do, fit and plant. Usually storm periods do not follow so closely that seed will not germinate and come up before a second storm. However, you will be apt to have some field, or part of a field crust just after planting and as the young beets are trying to push through. Soon as the ground is sufficiently dry to permit it, go the fields with a roller crosswise of the rows. If the ground is baking hard and deep, take a light harrow or one horse weeder and break the crust, going, as with the roller, cross-wise of the rows.

A good stand is of great consequence, of course, so watch closely. If the ground is properly fitted and seeded and in case of crust, if that is broken in time to save beets from curling, a perfect stand of beets before thinning is more readily secured than a perfect stand of corn.

Cultivate with spiders first time, running spiders as close to the row as possible without digging into the rows. Soon as the plant has four leaves begin thinning. They grow rapidly and it is better to commence training the boys to do this work while the beets are small, since they will then have learned how to do the work by the time you'll want them to hustle on account of beets being large in having boys do the thinning many things are to be watched in order to leave satisfactory work behind. A boy soon finds it easier to pull the large beets in a bunch and leave a small one than the reverse. A boy will want to make as much money as he can and of course his rate will be according to the quality and quantity of his work, but he will naturally place quantity above quality, so that feature of boys' work needs strictest attention.

After the beets are properly thinned and weeded, the greater part of the work is over, but of course the crop will need attention all along. Doing the right thing at the right time is what counts. In order to have a good dust mulch the hoe will likely needs be used and while hoeing the men should thin to one any bunch which might have been left by the thinner, and they should be on the lookout for double-beets and thin to one, all such. After every shower until the beets get too large to cultivate, the ground should be stirred in order to keep it from baking. You will thus conserve the moisture and at the same time arrest the germination of weed seed.

Nothing more remains to be said in a general way. Different ways of doing some part, or parts of the work may suggest themselves and an experiment may convince you that you have found a better way to do the work.

Different soils and conditions may require different management but low the directions given, you will have a fat purse after your beet on the whole, I believe, if you follow the directions given, you will have a fat purse after your beet harvesting is over.

OTTO WEINSHAUSEN, Pres., Treas. & Mgr.

Authorized Capital \$250,000.

American Copper, Brass and Iron Works

MANUFACTURERS OF COMPLETE EQUIPMENTS FOR

BREWERS, DISTILLERS, BEET SUGAR FACTORIES, REFINERIES, GLUCOSE WORKS, ETC.

WILL CONTRACT FOR COMPLETE PLANTS IN ANY PART OF THE WORLD

TELEPHONE MAIN 1296
Cable Address "WEINSHAUSEN" A.B.C. Code

ESTABLISHED 1867
INCORPORATED 1890

113-119 Michigan St., cor. La Salle Ave., - CHICAGO, U.S.A.

The American Construction Supply Co.

Main Offices:
71 Broadway, New York, N.Y.

Western Department:
401 Atwood Bldg., Chicago, Ill.

Specialties:—BUILDING OF BEET SUGAR FACTORIES;
AND BEET SUGAR FACTORY SUPPLIES.

We have the record of building modern equipped and economical running factories. More than 20 years' experience in this special business. Correspondence solicited.

We are also sole representatives of BUETTNER & MEYER, Urdingen, Germany, manufacturers of the best pulp drier in the world. This drier received the prize of 20,000 marks offered by the "Centralverein für die Rubenzuckerindustrie" in Germany.

Bartlett, Hayward & Co.

ESTABLISHED 1832

Designers and Constructors

Beet Sugar Factories

RESULTS GUARANTEED

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Branch Office:
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The Kilby Manufacturing Co.

FOUNDERS AND MACHINISTS

Corner Lake and
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Cleveland, Ohio

New York Office:
220 Broadway.

Builders of Complete Machinery for Beet, Cane and
Glucose Sugar Houses and Refineries.

The Agricultural Gazette

The Official Bulletin of the Dominion Cattle, Sheep and Swine Breeders' Association, 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 yearbook.

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 10,000 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 25th 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.

A. P. WESTERVELT, Secretary,
Parliament Buildings, Toronto, Ont.

FARM HELP EXCHANGE.

The Farm Help Exchange has been started with the object of bringing together employers of farm and domestic labor and the employees. Any person wishing to obtain a position on a farm or dairy, or any person wishing to employ help on a farm or dairy, is requested to forward his or her name and full particulars to A. P. Westervelt, Secretary, Live Stock Associations. In the case of persons wishing to employ help, the following should be given: particulars as to the kind of work to be done, probable length of engagement, wages, etc. In the case of persons wishing employment, the following should be given: experience and references, age, particular department of farm work in which a position is desired, wages expected and where last employed.

These names when received together with particulars will be published FREE in the two following issues of the "Agricultural Gazette" and will afterwards be kept on file. Upon a request being received the particulars only will be published, the names being kept on file.

Every effort will be made to give all possible assistance, to the end that suitable workers, male or female, may be obtained. Every unemployed person wishing to engage in farm or dairy work is invited to take advantage of this opportunity.

Situations Wanted.

Wanted.—A situation as manager of a stock farm, by a married man, 27 years of age, who has had a great deal of experience, and is thoroughly competent and reliable. Good references can be given. No. 961. a.

Wanted.—A position on a dairy farm near Toronto, by a first-class man, who was raised on a farm and who is a good milker. No. 960. b.

Help Wanted.

Wanted.—A herdsman, a single man, who has had experience in feeding and fitting Shorthorns for shows and sales. Steady employment and good wages. No. 865. a.

Wanted.—Two good men, one experienced in taking care of dairy cattle and one a good farm hand, who will be expected to take care of the horses. Must be reliable, honest and of good moral character. No. 866. a.

Wanted.—A good man for general farm work, must be reliable and trustworthy, and would be expected to do a good share of the teaming around the farm, and at times do the chores usually connected

with farm work. Would prefer married man with small family, would employ by the year. No. 864. b.

N.B.—Where no name is mentioned in the advertisement, apply to A. P. Westervelt, Parliament Buildings, Toronto, giving number of advertisement.

Pure Bred Stock for the North West Territories.

Arrangements have been made between the C. P. R. and the Department of Agriculture of the Northwest Territories to deliver pure bred bulls from Ontario to the Territories for \$5.00 per head, pure bred cows and heifers at \$7.50 per head. Full particulars and rules will be published later. Enquiries should be addressed to A. P. Westervelt, Toronto, or C. W. Peterson, Regina.

Farmers' Institutes.

Under this head the Superintendent of Farmers' Institutes will each week publish matter relating to Institute work. This will include instruction to secretaries and other officers, general information about Institutes and Institute work, suggestions to delegates, etc. He will also from time to time review some of the published results of experiments conducted at the various Agricultural Colleges and Experiment Stations of Canada and the United States. In this way he hopes to give Institute members some valuable agricultural information which they might not otherwise receive, on account of not having access to the original publications. If any member at any time desires further information along any of the lines discussed, by applying to the Superintendent he will be put in direct communication with the Institution that has carried on the work.

G. C. CREELMAN,
Superintendent Farmers' Institutes.

Secretary Foster Appeals to the Farmers of North Hastings.

In view of the approaching meetings of the Farmers' Institute, it appears to me to be a matter for consideration for every farmer, whether these meetings are of any importance, and if so, what we are doing in order to increase the interest in them and to get the most out of them.

We notice by the annual reports for the year ending June 30th,

1901, that the attendance at the meetings and also the membership are larger than ever before.

The number of meetings held throughout the year was 730; the attendance 131,653, and the membership 20,387. North Hastings stands highest in the number of meetings held, seventh in attendance, and second in the list of members, the number of meetings in North Hastings 22, attendance 2,781, and the membership 578. The increased attendance and membership throughout the Province certainly shows that the meetings are becoming more popular, and the information to be obtained through them, and the reports sent to members are being more eagerly sought after.

It would perhaps be well for us as farmers to ask ourselves, or to consider a few questions. First, is it necessary for us to make any effort to increase our knowledge regarding our farms, our farm stock, or our farming operations? Second, is the Farmers' Institute, as a means of obtaining information regarding our business, worthy and deserving of our attendance and support?

In reply to our first question we might ask: If we are in need of a lawyer or a doctor on a difficult case, who is the man we are most likely to employ? It is the man whom we are confident, has made the greater effort and the best use of his opportunities to obtain knowledge, and is thereby able to give us the help we need; and these are the men who are being employed, and are being successful in their sphere. The same applies to teaching, mechanics and all other professions and lines of business, and if so surely there is great need of our obtaining all the knowledge we can if we would keep pace with the progress and advancement of the age in which we live. Competition is keener in the markets to-day than ever before. The consumers who are paying their good money for our products are only satisfied with the best. It is the best only that commands the highest price and the poorer quality that is a drug on the market. It is by the aid of knowledge and skill we are enabled to produce the best in our lines, hence the necessity for effort to secure it.

Regarding our second question, the practical information given us by many of the delegates in the past, and the many assurances received from those who have made use of the information given in the reports sent to members, and from the fact that the information thus to be obtained comes within the reach of all, forces me to the conclusion that the Institute is at least one of the best sources for securing information at the least possible cost, and that it is deserv-

ing of the hearty support and co-operation of all who are interested in the success of agriculture. Let us have a grand rally at our regular meetings to be held at Stirling on the 6th, and at Madoc on the 7th of December. Let every official and every member strive to secure the attendance and membership of some one else, and come de-

termined to ask some questions relating to the subject under discussion.

The women will find it interesting and no doubt profitable too, if they make an effort to be present at the Ladies' Meeting in the afternoon.

J. G. FOSTER,
Sec. N. H. F. I.

A Simple Method of Disposing of House Sewage for Farm Homes

By M. J. Quinn, Department of Public Works, Toronto

In these days of popular education when the people throughout the province have the benefit of free lectures in dairying, fruit growing, domestic science, etc., it is noteworthy that a knowledge of so important a subject and one so closely allied to the Physical and moral welfare of the people as sanitary science is confined to a limited number.

True, the principles of the science is an open book to the medical profession, and is freely discussed at medical conventions, but these dis-

that "so long as the stuff is put down deep enough there is no danger," and herein lies one of the greatest causes of many of the diseases which at times are epidemic in whole communities, viz.: the pollution of the water supply.

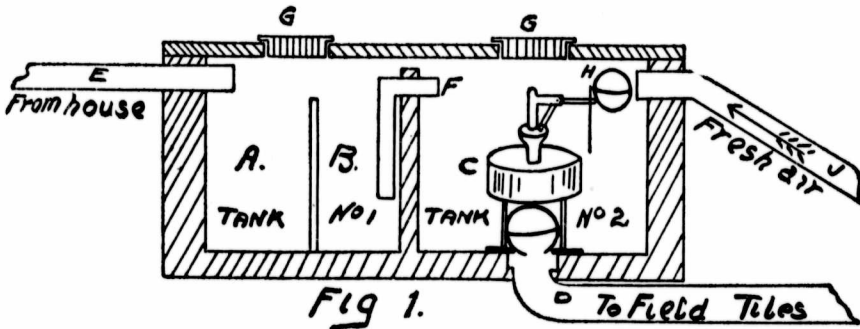
How is the water supply polluted by decaying organic matter buried deep under the surface of the earth?

In answer to this question a brief explanation of the existing physical conditions may be more convincing than bold assertions

to cause the innumerable ills produced by drinking impure water.

It may be said that wells are too far removed from cess-pools to be in any danger from this source, but the experience of the village of Lawson, near Basle, in Switzerland will be sufficient to controvert any assertion to that effect. In the village referred to, which had not within the memory of man been visited by epidemic typhoid, and in which not a single case had occurred for many years, there broke out in the year 1882 an epidemic which simultaneously attacked a large portion of the inhabitants.

About a mile from Lawson and separated from it by the mountainous ridge of the Stockhalden, which was probably an old moraine of the glacial epoch, lies a small parallel valley, the Furlenthal. In a small isolated house situated in the valley, a farmer who had just returned from a long journey, was attacked by typhoid and within the next two months three other members of the family contracted the disease; the dejecta from the patients together with all the house slops having been emptied into a small brook which flowed past the door.



ussions are mainly reported in professional journals and do not reach the great mass of the people at all.

In the matter of public sanitation the question of effectually disposing of sewerage in small towns and villages, is one of the most important problems that has engaged the attention of scientific men. The great cost of a system of sewerage as used in large places has rendered this course impracticable while the use of privy pits and cess-pools has been found objectionable and dangerous. That there is a desire on the part of those living in towns and villages, as well as in less populated districts for what are known as the "Modern Convenience" of the city, is evidenced by the thousands of cess-pools in existence or being built for the purpose of hiding away far beneath the surface of the earth the various organic and liquid wastes from the private residence, public house or institution as the case may be.

Those in authority labor under the dangerous yet common delusion

without the reasons being given therefor.

Over the whole surface of the earth where vegetation is possible nature has provided a most wonderful scavenger system composed of millions of little workers to the cubic foot; these little workers are known as microbes, other species are also found in vast numbers in the water and air.

The natural functions of many of these microbes, tend to produce one result, viz: purification, and when one comprehends that both the sun and air are essential to the life of the various species of microbes which are necessary to the proper decomposition of waste matter, it will be unnecessary to state that in the deep sub-soil where both are impossible, microbe life cannot exist, and hence it is that instead of being converted into life producing matter at the surface of the earth, with its dangerous properties destroyed; organic matter is allowed to decay and putrify in the deep dead earth until it is washed into some near-by well or stream, there

Ten years previously it had been proven that direct connection existed between this brook and the springs on the mountain side, which supplied the village with water; and as the disease had not occurred in a single house supplied with well water, the authorities suspected that the water supply derived from the springs was infected with the disease germs, and on investigating found conditions existing as related above. In order that the connection between the brook and the springs might be proven beyond doubt, the following ingenious experiment was made; eighteen hundred weight of salt was dissolved in water and then emptied into the brook, with the result that within a few hours the water coming from the springs was of a decidedly salty flavor; a similar experiment with two and one half tons of flour produced no result, showing that while the earth was capable of filtering the water so well that even such minute particles as wheat flour were prevented from passing through it was incapable

without the presence of air and aerobes to properly purify and oxidize it.

This remarkable case shows:

1st. That the power of mischief possessed by sewerage placed beyond the action of bacteria, is enormous.

2nd. That the diffusibility of typhoid poison in water is practically infinite.

3rd. That water containing the germs of disease may not be purified by filtration through a mile of solid earth (a filter so fine as to arrest particles of wheat flour).

The moral to be drawn from the foregoing is that the greatest care should be exercised in the disposal of waste matters, and that under no circumstances should they be buried deeply under the surface of the earth.

The question will be asked, "how is decaying matter to be disposed of at the surface of the earth without creating a nuisance?" In answer to this question it may be said, that as far as it applies to human excreta, two methods have been found to work successfully viz—the dry earth closet, the contents of which are dug into shal-

low trenches at regular intervals, and the septic tank system, the latter being preferable for the reasons that while it performs all the work of the dry earth closet it will also take care of all the liquid wastes from the house, and it requires little attention, while the former depends for its success upon unremitting care.

low trenches at regular intervals, and the septic tank system, the latter being preferable for the reasons that while it performs all the work of the dry earth closet it will also take care of all the liquid wastes from the house, and it requires little attention, while the former depends for its success upon unremitting care.

A brief explanation of the construction and operation of the Septic tank system will be of value to those who are anxious to have their premises in the best possible sanitary condition, and who are willing to go to a comparatively small amount of trouble to produce the desired results.

Referring to the accompanying cuts it will be seen that a tank (fig. 1) constructed preferably of bricks or stone well bedded in cement to prevent leakage, is built at such a level as to allow the discharge pipe "D" which is of glazed tiles to leave it at a depth of not more than twelve inches beneath the surface of the earth. Where the surrounding land is level this tank may be located quite close to the building where, if covered with earth (and sodded over if desired) it will not cause any inconvenience. If more convenient it may be placed any distance from the house and the inlet pipe "E" laid along a mound or ridge of earth, and covered with earth to protect it from the frost; this pipe must under any circumstances have a slight continuous fall from the building too, and must enter the tank at the top as shown. If however there is a considerable slope to the land the tank may be buried beneath the surface, it being borne in mind that pipe "D" with its branches must not be more than twelve inches beneath the surface and must be perfectly level. From pipe "D" about every two feet (ordinary "T" fitting will just give the desired length) are run branches of field tiles. (fig. 2) the total contents of which should be equal to the amount of water which will be discharged at each operation of the valve. The bend connecting the tank to the system of sub-surface tiles should be of iron, solidly cemented into the bottom of the tank to allow of the caulking in of the valve with lead.

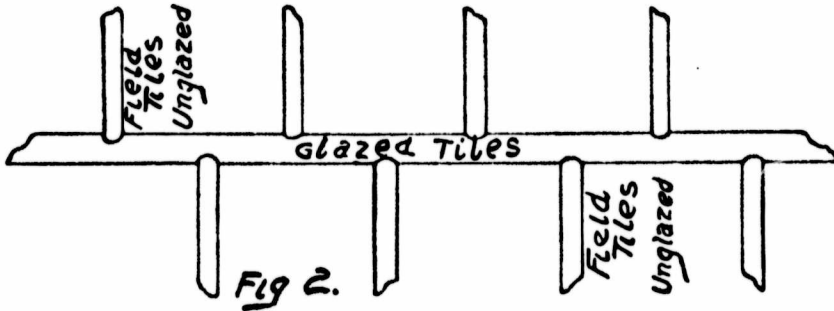
The valve described in this arti-

"J" the mouth of which is turned down permits the entry of fresh air which passes over the sewerage and up through the soil pipe "E" to the roof. Manholes "G" "G" provide access to both tanks.

The operation of the tank is as follows:—All the sewerage from the building enters the tank through pipe "E" filling compartment No. 1, the solids being compelled to float by the gases generated underneath. When this compartment is filled the liquid overflows through "F" into compartment No. 2, the valve "C" of which is closed. When however the liquid rises to the level at which float "H" is set the valve opens, discharging the whole contents of compartment No. 2, be it fifty or five thousands gallons into the system of sub-surface tiles through which it soaks into the earth there to be taken care of by nature as already explained.

As the valve closes automatically when the tank is nearly empty, it will be seen that sufficient time will be given for that which has just been discharged to soak away before the tank fills again and the operation is repeated.

A word respecting the solid por-



cle which is manufactured by the Dominion Flushing Valve Co., of 558 Dufferin St., Toronto, is a comparatively recent invention, and is the only thing of its kind which can be set at any level, will open and close automatically, and, as it needs no adjusting it can be put in by almost any person. It overcomes the only objection ever made to the Septic tank system, viz. that when the emptying of the tank depended upon a servant or some member of the family to pull a plug at regular intervals, replacing it when all the liquid had escaped, it was sometimes forgotten and the tank overflowing caused the pipe between it and the house to fill up, thereby causing a great deal of annoyance and expense.

It will be noticed that a dividing wall is built in the centre of the tank to a height of about two inches from the top, the latter space being left for the free passage of fresh air, and a sub-dividing partition of planks with small spaces left between to allow the liquid to pass through is built in compartment No. 1. The object of the latter partition is to keep the bulk of the solids from overflow "F". Pipe

tion of the sewerage retained in compartment No. 1. The valve of the system will be appreciated when it is stated that so thorough is the actions of the millions of bacteria on this body, causing the almost immediate disintegration and decomposition of everything entering the tank, that tanks when opened after a year's use, and into which the sewerage from buildings containing many inmates was emptied, were found to contain not more than two or three pails full of a kind of earthy substance, from which scarcely any odor was perceptible. It must be borne in mind of course, that no disinfectants are necessary with this system, and nothing in the shape of chemicals should be allowed to enter the tank if the life of the bacteria, which is so essential to its success it to be preserved.

Regarding the size of the tank necessary, it may be said that for an ordinary family a tank four feet long by three feet wide and from thirty to thirty six inches high would be sufficient, while for hotels or institutions one large enough to hold about eight gallons for each inmate would be ample.

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Some Valuable Farm Appliances

The Evolution of Cream Separation.



DR. DE LAVAL.

Separation of cream from milk by mechanical process is a modern invention. Twenty-five years ago it was practically unknown. In the book on "The People and Industries of Sweden," published by the Swedish Government in 1900, after recounting various futile efforts to get away from the old shallow pan setting of milk to gather cream it says: "It was not till 1864, by the ice method, invented by J. G. Swartz, that a system was given suitable for manufacture on a large scale. This method, 'Système Swartz,' by which the rising of the cream was hastened by plunging round or oval cans in very cold water, quickly spread in Sweden and was not slow to be adopted in Norway, Denmark, Finland, Germany, Austria and other countries. . . . From 1871 to 1880 it was almost the only system in use and is still employed in certain creameries.

"But since 1880 the ice method has little by little given place to centrifugal creaming, a method in which by means of special machines the cream is immediately separated from the milk. Thanks to this great advantage, the system has spread rapidly in this country. The "Separator" now employed almost exclusively in creameries throughout the world, was invented in 1878 by the celebrated Dr. Gustaf De Laval. From time to time it has undergone certain modifications and improvements. With the application of the "Alpha" disc system, invented by the ingenious German Baron Von Bechtolsheim and the "split-wing" device more recently invented by the American, Mr. Perrigan, the "Alpha-Laval" Separator has become well nigh perfect". . . .

Dr. De Laval did not attempt to overcome or counteract nature, but to the well-known principle of gravitation he added that of centrifugal force. When the whole milk was run into a hollow steel bowl revolving with great rapidity, cream being the lighter was drawn to the centre, while the skim milk being the heavier was thrown to the inner circumference, and then by ingeniously contrived outlets, the cream came out by one tube, the skim milk by another, the separation being immediate, continuous and practically perfect.

A distinguished writer has said: "For every person who is entitled to be called an originator there are ten thousand who must be as im-

mitators. The world waits a long time — sometimes centuries — for some one to originate a very simple thing, which works mighty changes in commercial and home life; then it takes but a very short time for many others to set to work imitating the thing which they had not the skill to originate." This applies with special force to Dr. De Laval and his important invention, which practically wrought a revolution in Dairy methods throughout the world.

Imitations and infringements, however, have had but little effect on the successful career of the De Laval Separator. From nothing the business has grown to enormous proportions. The Swedish official book continues: "In 1898 the factory employed 700 workmen, and more than 30,000 of the separators were turned out and shipped to all parts of the world. The total number of machines made up to the end of 1899 exceeded 200,000."

The force in this factory has now been increased to 1,000 hands, while the splendid American plant of the Company at Poughkeepsie, N. Y., called by the "American Machinist" the best equipped machine shops in America, in addition employs nearly half as many, turning out a complete machine upon an average of every six-and-a-half minutes. Again the shops at Montreal, Chicago and San Francisco, constantly keep at work a great number of skilled men, and are always calling for more. With the adoption of the De Laval Separator to hand use on the farm, the field has become immensely extended. During the year 1901 the product of the De Laval organiza-

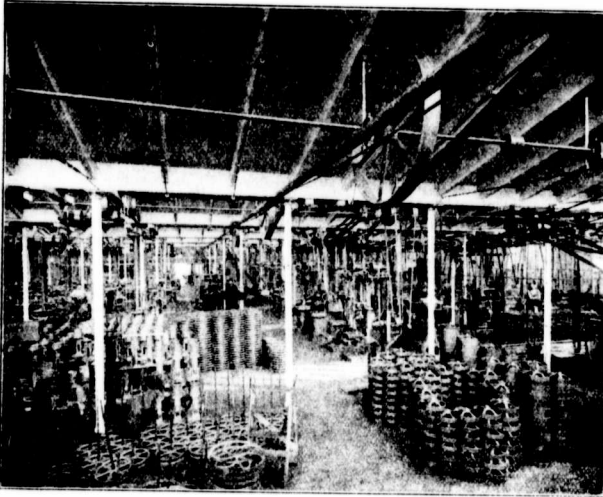
tion will exceed 56,000 machines, in all the various farm and factory sizes manufactured, and still there has never been a single month when all orders were entirely filled. This will bring the entire number produced to date considerably over 300,000.

The demand for De Laval machines from the Canadian dairy farmers has increased so rapidly that it has been found necessary, in addition to the plant at Montreal to establish offices and warehouses at Winnipeg and Toronto, in order that the dairymen may have their orders promptly filled. An efficient agent represents the Company in every dairy district, ready to show and explain the machines, and put them out on trial to those who desire to install the same in their dairies.

The secret of the great success of the De Laval Cream Separators is, not only that they are the first in an important field, and have shown the way to all later ones which followed, but they have always led in improvements, and have ever been of superior mechanical construction. The "Alpha" discs, and "Split-wing" tubular shaft have already been mentioned. Together they effected, both in hand and power machines, a more even distribution of the milk in the separating bowl, thereby affording much greater capacity, with more exhaustive thoroughness in skimming. For the power sizes a change was also made in the bowl construction, which obviated previous possibilities of clogging from poor milk and long running. Besides this a new method of bowl locking and unlocking precludes springing of the bowl spindle; a



Making the De Laval Machines.



Putting the De Laval Machines Together.

new sectional top bearing permits of expansion from heat; and new sight feed lubricators save oil as well as prevent spattering or the setting of bearings.

The unapproachable efficiency, re-

liability, and durability of the De Laval machines in every size and kind made have always been unquestioned and they richly deserved the eminence they have attained.

Natural Product of the Farm

A recent American publication suggested that a cause for the slow increase of Canada's population is the exodus occasioned by the attractions of the Great Republic's superior system of government. Those, however, who have given the subject intelligent thought know that the "system of government" is not an attraction but quite the contrary. Young Canadians formerly went to the United States simply because their superiority had been so frequently demonstrated that they easily commanded the best situations, and their abilities and characters, developed by the "more strenuous life" and healthy environments of their childhood easily gave them the advantage in a field where qualities such as they possessed are in demand. In just the same way and for the same reasons the youth of the farm left the more rigorous life of the country and going to the towns and larger centres where his sterling character and habits, fostered and nurtured in the country, placed him in the lead at once.

No better example of the truth of this latter statement can be found than that afforded by the McLaughlin Carriage Co. of Oshawa, Ontario. Its founder, Mr. R. McLaughlin, served his apprenticeship on his father's farm in the township of Darlington, and is no stranger to the axe, the plow and the logging bee. These experiences of his boyhood developed and strengthened his natural adaptability to hard work and painstaking

industry so that, when he took up the carriage making trade he had all the qualifications essential for success, and the great concern of which he to-day is president and general manager, may be proudly looked upon by every farmer in the country as a "natural product of the farm" and is a means of inciting the boys of the farm to noble efforts and patient toil.

Longfellow's verse:—

"The heights by great men gained
and kept
Were not attained by sudden flight.

But they while their companions
slept
Were toiling upward upward in the
night."

is verified by the experience of this great concern.

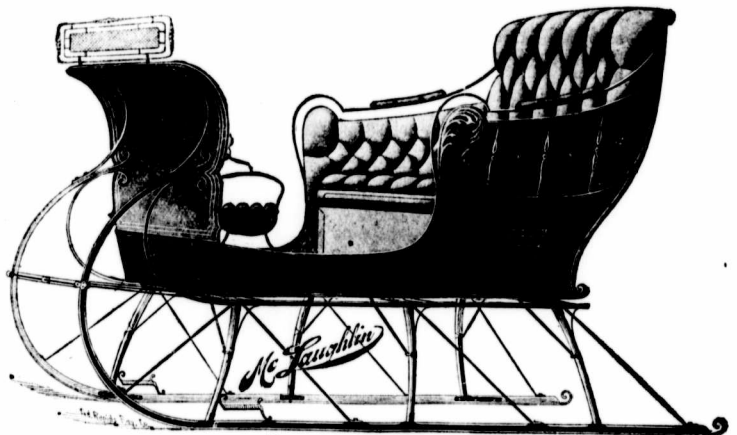
All of those associated with it in a managerial capacity devote their whole efforts to the success of this business. Practical members of the firm are constantly supervising the buying, manufacturing and selling, as well as the careful inspection of the stock. This, of course, means hard work, long hours and much mental and physical exertion, but the "farmer boys" of yore do not falter at these obstacles, but rather enjoy coping with and overcoming them.

A brief description of the factory, machinery and methods would take more space than is at our command, but all may be summed up in the words "Twentieth Century factory, up-to-date machinery and tools, intelligent and honest management."

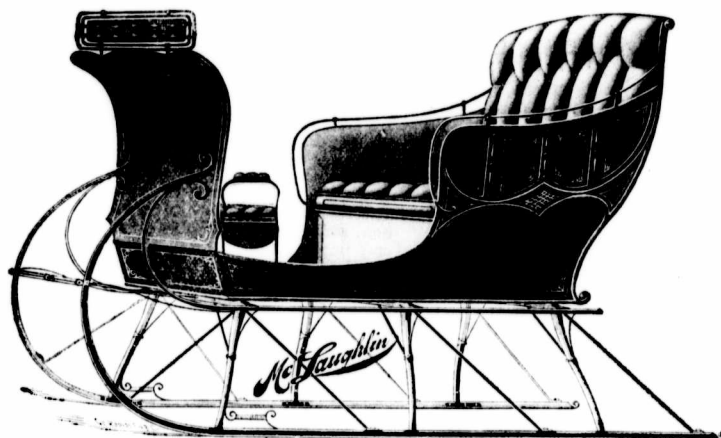
The finished articles prove the farm to be no obstacle to the cultivation of esthetical taste, for nowhere on the continent can be found designs that so successfully combine beauty and style with comfort and utility. However, the strong feature of their work is its durability, every part of every vehicle is built to last, and, indeed, so well have they succeeded that Oliver Wendall Holmes' "One-Hoss Shay" has almost become an accomplished fact. Local repairers find their business decrease as the use of McLaughlin carriages increases.

It is not surprising then that, with principles and energy as above suggested governing it, this firm's business has so rapidly increased that they now occupy the largest and best equipped carriage factory under the British flag which they run to its utmost capacity, and which from present appearances will soon prove too small for their rapidly increasing trade.

Let the boy of the farm who fancies his lot an irksome one, remem-



No. 199 1/2—Quite Up-to-Date.



No. 214 1/2 - Comfort and Ease.

ber that after all there is no better college in which to cultivate those traits of character necessary to success in the commercial as well as the professional world. Let him thus inspired with fresh courage and higher hopes continue that

which for the present is his work confident that success in it fits him for greater successes on the farm, in the shop, at the desk or wherever his future life's work may be prosecuted.

Dairying in Manitoba

Visitors to Manitoba speak in terms of wonder of the possibilities of that province for dairying, and it is somewhat surprising that in view of these advantages her dairy trade is not greater. But the explanation of this probably lies in the well known fact that the cow only secures her proper place in the farm economy after the farmer has passed through the evolution of grain and beef into dairying. Compared with the value of grain produced the butter and cheese is a small item but it is improving each year as will be seen from the following figures:

Value Dairy Products.	
1895	\$324,177
1897	450,213
1899	470,559
1900	643,991

The figures for 1901 will probably go beyond the million dollar mark!

The output of the creameries and cheese factories is yearly improving in quality and the quantity of first-class dairy is also notably increasing. This is in large measure due to the Dairy School, of which we presented illustrations last week. This institution has now been in operation for about six years. Of late years the number of students has been very encouraging. There were forty-two in attendance in 1901 and 60 are enrolled for 1902. The course covers the months of January, February and March, and graduates are given diploma upon proof of having successfully operated a factory for one year. The staff consists of the director and lecturer, Mr. C. A. Murray, Provincial

Dairy Superintendent, and a staff of four assistants, including a lady instructor in home dairying.

The school has not yet secured a permanent location, and the accommodations are not at present up to the requirements. It, as is confidentially expected, the province is to have an Agricultural College in the near future, a suitable building will of course be provided. The present equipment is modern in design and consists of all necessary machinery for cheese and butter-making and milk-testing, whether at the home dairy or in the factory. The Home Dairy Course opens on the 6th of January, the professional course on the 14th of February, and students of the former may continue through the latter course if they wish to do so. Beside the practical work the lecture course includes the following: Care of Milk, Butter Making, Cheese Making, Care of Factories and Dairies, Milk Testing, Book-keeping. The school is, of course, free.

Note.—This description of Manitoba Dairy Schools did not reach us in time for last week's issue, in which the illustrations appeared.—Editor.

A Bequest to Agriculture.

The will of the late W. E. H. Massey has been published. A bequest is made of five shares in the Massey-Harris Co., equalling about \$5,000 to the Ontario Agricultural College. The proceeds from this is to be devoted to assisting farmers' sons and daughters who may be deemed worthy to obtain an education at the College. We know

of no other similar bequest being made to agriculture. It is a tribute to the value of the work done at the College. The late Mr. Massey will ever be remembered by the agriculturists of Ontario.

Butter Making Pays.

That the butter-making business is a profitable one and has come to stay is shown by the annual report of the St. Marys Creamery Co. This company has a large creamery in the town and operates in connection with it several skimming stations in the surrounding country. During the twelve months ending in November the total output of butter was 422,933 pounds as against 311,546 pounds for the twelve months previous. The patrons received \$72,986.64. There has been a steady advance in the net price paid the patrons since the company began operations in 1898. In 1898 the net price per pound was 14.05c, in 1899 16.18c, in 1900 16.86c and in 1901 17.25c. The required number of pounds of milk to make a pound of butter has decreased from 24.58 in 1898 to 23.93 in 1901. The directors' report announced a dividend of 5 per cent. on the paid up capital stock of the company. Butter-making is carried on all the year round and since 1898 \$259,378.63 have been paid the patrons.

Canadian Shorthorns Quarantined.

Until full particulars are known it is hard to understand the report in the daily press of last week to the effect that Dr. L. F. Vogelneau of Buffalo had quarantined 28 Canadian Shorthorn cattle a few miles from that city. He states that these cattle are liable to confiscation and he is awaiting instructions from Washington in regard to the matter. It will be remembered that Dr. Vogelneau was the inspector appointed some months ago by the American authorities to test cattle in Canada destined for the United States. At the representation of the Hon. Mr. Fisher this officer was recalled and the United States authorities decided to accept the certificates of duly appointed Canadian veterinarians at the post of entry. These Canadian officials are available to our breeders free of cost to tuberculin test all pure bred cattle bought in Canada for shipment to the United States, and the report that the 28 Shorthorns referred to are liable to confiscation is a mystery.

A little girl ate her dinner with so good an appetite that by the time dessert was placed on the table she could eat no more. She sat silent and sorrowful, and looked mournfully at the dainties piled on her plate.

"Why don't you eat, my darling?" asked her fond and anxious mother.

"Oh, mamma," cried the disconsolate child, "because only my eyes are hungry!"—Tit-Bits.

The Farm Home

The New Excelsior.

The shades of night were all pulled down

As onward hustled through the town

A youth who bore where breezes stirred

A pennant with a single word,
"Commercialism!"

His brow was moist; his eye below
Gleamed with a dull and smoldering glow.

And like a cracked and ancient bell
Arose his queer, defiant yell,
"Commercialism!"

"Oh, wait!" the pastor hailed the youth,

"And humbly learn eternal truth."

"I'll think of that," the boy replied,

"When I have turned the golden tide.

"Commercialism!"

"Oh, come to school!" the master said.

"And fill with lore your youthful head."

The boy yelled back, as on he raced,

"Old man, I have no years to waste,

"Commercialism!"

"Oh stay!" the maiden softly cried.

"And I will be your loving bride."

The youth called back with scornful smile,

"Just wait until I've made my pile,

"Commercialism!"

Then cried the sage, "Beware the joys

That link themselves to golden toys!"

"Bah!" cried the youth, "you do but jest!

I've linked my lie unto this quest.

"Commercialism!"

One day they found him dead and cold

Beside his chests of worshipped gold;

And on the breeze that round him moaned

They heard that fateful word intoned,

"Commercialism!"

Cleveland Plain Dealer.

Is It Anybody's Business?

The world is made up of various kinds of people. People with natures widely differing, and what a very uninteresting, monotonous world it would be if all were of one opinion on every question. Then, when we realize this, why do we go to such pains to criticize all the doings of other people? Of course, we know that other people are finding flaws in our methods equally as great as we find in

theirs. We think, "It is not their business how we do our work, how we eat, how we drink, how we sleep."

The people whom I am going to criticize are those who most criticize me, viz: Those who always have some tale of some other person and who always prefix their stories with, "They say"—

"They say, she is not what she ought to be, that she is on the streets all hours of the night." (Perhaps nine o'clock.) I reply: Is it anybody's business?

"They say, he spends all he earns on girls and never saves a cent." Well, that is neither your business nor mine, as long as we are not the girls.

"They say, he sits in the house doing nothing, and hires a man to do the work." Is it anybody's business?

"They say, she is extravagant and a high flyer, spending all her husband can make." Is that your business?

"They say, she is an untidy housekeeper, only cleaning the floor and stove once a week and never cooking a pie or cake." Is it anybody's business?

"They say, he goes with Miss T—and they are going to get married." Well, is it anybody's business?

They also say, if they are not engaged they ought to be." Well, is that anybody's business?

"They say, he runs all around the country, having a good time, neglecting his work." Is it anybody's business?

"They say, he is away in the hole and cannot pay his debts." Well, is that your business, if he owes you nothing?

"They say, her husband cannot live with her, and they have parted." Is that my business, as I am not her husband?

Why enumerate further? We all have listened to these scandal-mongers, tale-bearers, gossips, or whatever name we wish to call them. We find that they are both male and female and we find them constantly busy

"Poking his nose into this or to that

For a rat or a cat or a bat."

And where the tale is not sufficiently clear, they think how it might have been, and are soon telling their thoughts of the matter as part of the original story. And they act as though they were the only perfect part of creation about whom no ill could be said, and they never seem to realize that we are all the while backbiting them for some of their many, yes very many, peculiarities. Have you ever noticed that those who carry the most tales are the very people about whom other people might have most reason to talk were they given to slandering.

Of course, we all know that we are perfect and that no person can truthfully say evil of us, therefore, we think we have a perfect right to say all the evil we can learn or invent about others. We should rather, knowing our own perfection, look with a charitable eye on the imperfections of all others, considering, that under the circumstances, they are, perhaps, as good as could be expected of them. But I care not how bad people will talk of me, if only no kind (?) friend tells me what has been said. People who repeat the evil tales to the person most interested consider they are conferring a favor. I say, "No! No!" When we tell a young girl some slander that has been said of her, we embitter her life; we make her hard and unforgiving, and take from her much of the pleasure of living. Had she never heard it her life would have been just as joyous and free as though it had never been said. Then from all scandal-mongers and from all kind (?) tale-bearers "Good Lord deliver us." But if we hear any good of anyone let us make haste to repeat it, not only to others, but to him or her about whom it is said. Let that be a part of our business.

M. E. Graham.

Hints by May Manton.

MISSSES' SHIRT WAIST, NO. 3955.

To be made with or without the fitted lining.

Simple shirt waists that close at the back are much in demand for young girls and are exceedingly attractive and becoming. The very pretty model shown is made of corduroy in Napoleon blue, but velveteen, flannel, silk, albatross and all waist cloths are equally appropriate. The original includes the fitted lining but, when preferred, the waist can be made unlined.



3955 Misses' Shirt Waist,
12 to 16 yrs.

The foundation, or lining, is smooth and snug and extends to the waist line only, but closes through the waist at the centre back. The

waist proper is plain at the back and drawn down in gathers at the waist line, but in front is laid in a single plait at each shoulder and stitched to a few inches below the shoulder seams; a novel arrangement which provides graceful fullness while giving a plain effect. The sleeves are in bishop style with the new deep and flaring cuffs. At the neck is a regulation stock worn with a tie of black satin that matches the belt.

To cut this waist for a Miss of 14 years of age 3 yards of material 21 inches wide, 2 1/4 yards 27 inches wide or 1 3/8 yards 44 inches wide will be required.

The pattern 3955 is cut in sizes for Misses of 12, 14 and 16 years of age.

The price of above pattern post-paid is only 10 cents. Send orders to "The Farming World, Confederation Life Building, Toronto, giving size wanted

Hints to Housekeepers.

A common mistake in cake-making is the practice of baking a full receipt at a time, no matter how small the family may be. As a result there is too much cake on hand, it becomes stale and eventually is disliked. Most cakes are much better if eaten the same day they are made. Since after a little experience cakes are made so quickly, it is far better to bake often, using only half of the receipt at a time. Another mistake, which often is the means of spoiling a good cake, is the custom of using too much flavoring. If the materials used are of the best, the taste should be so dainty that very little, if any, flavoring is required. The icing should always be flavored delicately. The speediest and most satisfactory form of baking cake for family use, or for guests, is in a sheet, usually about an inch in thickness. Ice as usual and cut into squares, rounds or any desired form of serving.

To make a cheap floor stain take two ounces of permanganate of potash, put it into a gallon of water, and mix thoroughly until dissolved. Then, with a large flat painting brush, paint evenly all over the boards required to be stained. When quite dry, paint over again, and they will be a good dark brown. Next day give the floor a good polish with boiled linseed oil; the day following with beeswax and turpentine.

Oysters, being both nourishing and easily digested, are often ordered for invalids. However, they do not always tempt a sick person's appetite in their simple, unshelled garb. Make half a pint of good beef tea, thicken it with a little arrowroot to the consistency of cream. When it has boiled let it cool; put in the oysters, and let all heat slowly but thoroughly. Do not let it boil. By avoiding this, the oysters will remain quite mel-

low and tender, and as digestible as if eaten uncooked.

An easy polish for the daily rubbing of the dinner-table is an emulsion made from two parts of table oil to one part of vinegar. This applied with a soft cloth or flannel and rubbed afterward with a dry one, will be found efficient in removing all ordinary stains. If cod is boiled in salted water with a bouquet of vegetables, a slice of onion, a stalk of celery or a sprig of parsley, and half-a-dozen pepper-corns, its tastelessness will be replaced with a very agreeable flavor.

Some one who understands the raising of house-plants advises that it is a good plan, when seeds are to be sown in window-boxes or pots for the house, that the earth be first baked thoroughly in the oven. This will destroy all insects, seeds and germs of any sort that are likely to injure the plant.

Woman's Sphere

They talk about a woman's sphere As though it had a limit.

There's not a place in earth or heaven,

There's not a task to manking given,

There's not a blessing or a wo,

There's not a whisper, yes or no,

There's not a life, or death or birth

That has a feather's weight of worth

Without a woman in it.

The Perils of the Kodak.

A girl in our town owns a kodak and delights in taking pictures. Her father was sitting on the front porch the other day, and, having the kodak primed, she took a snap shot. Presently the father went into the house and the hired girl came out, sat down in the same chair, and the daughter took her picture also.

When the picture was developed it showed the aged father sitting in the chair with the hired girl sitting in his lap. The girl kodakist had forgotten to remove the film and both pictures were therefore taken on the same plate. When the old lady, after seeing the picture, grappled with her aged companion, it looked for a while as if things were going her way, but he finally shook off her grip and escaped by way of the path leading to the alley.

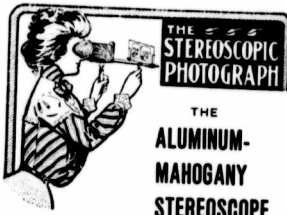
A Home College Course.

The Saturday Evening Post, of Philadelphia, announces two new departments which will challenge the interest of the young men and women throughout the country. "A Home College Course," as one of them is called, has been designed to meet the wants of ambitious young people who have not had the advantages of a university training.

"To the Young Man Beginning Business" is the second of these new departments. In it the most successful men in a dozen occupations will write about what help-

ed them to the front in their own business, and give a list of books and magazines bearing upon it.

These new departments will begin early in January, and will be made a permanent feature of The Saturday Evening Post.



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Total payments for the year ending June 30th, 1901, £302,177.
Net profit on paid-up capital, 26 1/4%.
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The Farming World.

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Publisher, . . . D. T. MCANISH.
Editor, . . . J. W. WHEATON, B.A.

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South Muskoka Women's Institute.

An enjoyable meeting of the South Muskoka Women's Institute was held on November 23rd, when the following essays were read: "Care of Milk on the Farm," the point taken up being, 1st, care of utensils; 2nd, cleanliness while milking; 3rd, a proper place to keep the milk. This is a topic of great importance since milk forms such a ready means of conveying disease to those who consume it, and we were pleased to have the subject further enforced by another essay on, "How to Obtain Pure Milk," in which were enumerated the causes of impure milk—poor fodder, bad water, foul air in the stable, lack of cleanliness in milking, neglecting to air the milk directly after milking, mixing fresh milk with old, and rusty tin pails. Another branch of the subject, "Souring of Milk," was taken up, and a clear, simple description given of the nature, action and sources of the bacteria which cause the milk sugar to turn to lactic acid, and also of other troublesome microbes. This speaker also explained why milk sours during a thunderstorm. That it is not due to the presence of electricity has been proved by discharging electric sparks over the surface of milk, which produced little or no effect. The souring is due to the fact that bacteria grow most rapidly in the warm, sultry weather, which usually precedes a thunderstorm.

This was followed by an address on, "The Making and Marketing of Butter," the speaker referring briefly to the mistakes and difficulties most frequently encountered. A very common mistake is the idea that cold water is not necessary for deep setting if the cans are kept in a cool place in winter.

A large amount of butter fat is lost in the skim milk in this way. At this season of the year much difficulty is experienced with slow churning cream from their cows that are near the close of their milking period. This arises from a viscid substance in the milk from such cows, which can be washed out. Stir in as much water as there is cream, let it stand till the cream rises, then draw off the water. On the point of marketing, several grocersmen had been interviewed and were found unanimous in expressing a desire that all butter should be made in pound prints wrapped in parchment paper. They are quite willing to pay more for it, it is so much more profitable for retailing than the large rolls. Samples of good and bad parchment paper were shown with a warning to test the quality before buying.

After this, the discussion turned on poultry—a sadly neglected branch of farming. A member gave an essay on, "Care of Poultry," giving much valuable information regarding the proper housing and feeding of fowls, and emphasized the need of reproducing summer conditions in winter as far as possible, by means of a warm room, fresh raw vegetables, fresh water or milk to drink, meat or ground bones, dust baths, sunlight and exercise. This we must provide if we desire to have eggs when prices are highest.

Alice Holingworth, Sec'y.

The Bee Keepers

The Canadian Bee Keepers' Association held its annual meeting at Woodstock last week, at which several important addresses were delivered. Prof. Harrison of the Ontario Agricultural College gave a very instructive address on the cure of foul broods, which brought out considerable discussion.

Prof. Shutt of Ottawa, in addressing the convention, made an important announcement to the effect that the results of his research during the past season to ascertain the difference in composition between ripe and unripe honey, it having been held that only ripe honey should be put on the market, showed that ordinary laboratory methods of estimating water were not applicable in honey analysis, and consequently that the percentages of water as usually quoted, were not to be regarded as strictly reliable. Honey consisted largely of two sugars, dextrose and levulose, and in the ordinary course of analysis the latter suffered decomposition, making the water content appear larger than it really was. He hoped to have more definite data on this point during the coming year.

The address embraced a large amount of valuable information on the chemistry of honey, which was illustrated by the samples under analysis. The position of honey as a food was fully dealt with, and

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it was shown to be the most palatable, agreeable and digestible of all saccharine foods. He did not think that water was used to any great extent as an adulterant, but, if such were used, it was generally in the form of a glucose made of diluted acid and sugar. He thought the time would come when honey would be used not only as a table luxury, but as a staple food. It had been used ages and ages before the Christian era, and was the first sugar known.

A discussion followed the address in which a number of practical beekeepers took part. It was shown that in making analysis for water percentages it should be borne in mind that the conditions differ according to the nature of the season. A wet season produces more water than a dry season. Prof. Shutt stated that unripe honey contained two per cent. more water than ripe honey.

Mr. Fixture, of the Experimental Farm, Ottawa, read a paper on experiments conducted to determine the effect bees have on fruit, in which he showed that bees did not injure sound but unsound fruit. The Government Inspector of Apiaries, Mr. Wm. McEvoy, presented his report. He had visited over seventy apiaries and had found foul brood in twenty-nine and dead brood in many others.

The officers for 1902 are: President, J. D. Evans, Islington; Vice-President, James Armstrong, Cheapside; second Vice-President, W. A. Chrysler, Chatham; directors, W. J. Brown, Chard; J. K. Darling, Almonte; M. B. Holmes, Athens; C. W. Post, Trenton; J. W. Sparling, Bowmanville; J. D. Evans, Islington; A. Pickett, Nassagaweya; James Armstrong, Cheapside; John Newton, Thamesford; F. A. Gemmell, Stratford; W. A. Chrysler, Chatham; Samuel Wood, Nottawa; and Prof. F. C. Harrison.

Horses for the New Troops

W. Harland Smith is busy looking up horses for the Canadian troops now being raised for service in South Africa. Though from 11,000 to 12,000 horses have already been shipped to South Africa from Ontario he does not anticipate any difficulty in securing the 600 required. Mr. Smith estimates that there are about 600,000 horses in Ontario so that the range of selection is still wide. It may be possible that a couple of car loads of horses will be bought in the North West in order to make a comparison between western and eastern horses for the work.

Northwest Creameries.

The total output of butter from the Government Creameries in the Northwest Territories last season was 672,432 pounds as against 628,184 pounds for 1900. About one-third of the output was shipped to the British market, where it arrived in first-class condition. In one creamery at Church Ridge the quantity of butter rose from

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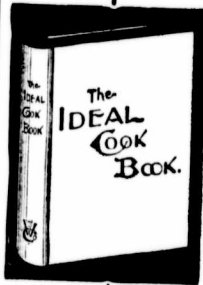
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By Eveleen Harrison

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31,674 pounds in 1899, to 65,325 pounds in 1900 and to 121,419 pounds in 1901.

Feeding Dairy Cows Loose and Tied.

The Pennsylvania Experiment Station has recently concluded an experiment undertaken with the object of ascertaining the relative values of feeding dairy cows loose and in stalls with a view chiefly to lessening the cost of handling the cows by the former plan. The results are summarized in Bulletin No. 56 as follows:

1. The results of this experiment

failed to show any advantage in having water constantly before the cows in the stable. The cows that were turned into the yard for water once a day made as good returns as those having constant access to water in the stable.

2. Much more bedding was required to keep the cows clean and comfortable in the pen than in the stalls. Apparently it would not be economical to keep milch cows loose in pens on farms where the supply of bedding is limited.

3. Considerably less labor was required to care for the cows in the pen than for those in the stalls. The increase in the amount of bedding would also result in the pro-

duction of a greater bulk of manure.

4. The fewest bacteria were found in the milk of those cows which stood in the stalls constantly, and which were consequently the cleanest.

Poultry and Eggs.

Advertisements under this head one cent a word. Cash must accompany all orders under \$2.00. No display type or cuts allowed. Each initial and number count as one word.

BROWN LEGHORNS, forty choice cockerels and a few May pullets. Grand birds, early and prolific laying strain, pullets lay at five months. While prolific laying is foremost in breeding standard qualifications not discarded, as this strain won at Pan-American. Correspondence solicited. Eggs in season. John B. Pettit, Fruitland, Ont.

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BRONZE TURKEYS.—My stock has won first and second premiums at the largest shows in England, Ireland, United States, and Canada. My stock pleases customers, as I have sent out 500 turkeys and only four were dissatisfied. Choice stock now for sale. W. I. Bell, Angus, Ont.

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A Word to Farmers...

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An invaluable book by Tho. Shaw, professor of Animal Husbandry at the University of Minnesota, and known to every Canadian farmer. This book is recognized as by far the most original and comprehensive on the subject of which it treats. Publishers' price is \$1.50.

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Forage Crops

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The Farmer His Own Lawyer

A new premium of the closing month of the old year is a valuable book entitled "Be your own Lawyer." This gives in condensed form the business laws of Canada—forming a practical and ready reference for Magistrates, Land Owners, Tenants, Builders, Contractors, Farmers, etc. The legal forms are all filled out in detail, signed and even sealed, thus serving as a model which any person can follow.

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PURE-BRED STOCK

NOTES AND NEWS FROM THE BREEDERS

These columns are set apart exclusively for the use of breeders of pure-bred stock and poultry. Any information as to importations made, the sale and purchase of stock and the condition of herds and flocks that is not in the nature of an advertisement will be welcomed. Our desire is to make this the medium for conveying information as to the transfer of pure-bred animals and the condition of live stock throughout the country. The co-operation of all breeders is earnestly solicited in making this department as useful and as interesting as possible. The editor reserves the right to eliminate any matter that he may consider better suited to our advertising columns.

We learn that Mr. A. C. Hallman, New Dundee, Ont., well known throughout the Province as an Institute lecturer and breeder of Holstein cattle and Tamworth swine, has sold Spring Brook Stock Farm at a good figure. Because of this, breeding operations will be discontinued there after the end of March next. Mr. Hallman has not definitely decided yet what his future plans will be. But it is probable, if he can get a suitable place that he will continue in the line of business in which he has been so successful.

Special attention is directed to the dispersion sale of Shorthorns to be held on Wednesday, December 18th, 1901, at Hagerman, Ont. Mr. S. G. Little has been a successful winner at the local fairs in his district. All the prize animals will be offered. Thirty-four animals in all will be offered and parties desiring good breeding stock should attend.

Official records of American Holsteins-Friesian cows from November 15 to November 28, 1901, are summarized as follows:

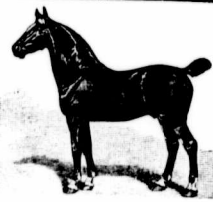
"During this period of less than two weeks thirty-two reports have been received. Eight full-age cows average: Age 9 years, 16 days; 21 days after calving; milk 415.4 lbs.; butter fat 13.471 lbs.; equivalent butter 80 per cent. fat, 16 lbs. 13.4 oz., or 15 lbs. 11.5 oz. 85.7 per cent. fat. Five in the four-year old class average: Age 4 years, 4 months, 12 days; 13 days after calving; milk 376.9 lbs.; butter fat 12.680 lbs.; equivalent butter 80 per cent. fat, 15 lbs. 13.6 oz., or 14 lbs. 13.7 oz. 85.7 per cent. fat. Eight in the three-year old class average: Age 3 years, 4 months, 21 days; 27 days after calving; milk 318.6 lbs.; butter fat 11.245 lbs.; equivalent butter 80 per cent. fat, 14 lbs. 0.9 oz.,

or 13 lbs. 1.9 oz. 85.7 per cent. fat. Eleven classed as two-year olds average: Age 2 years, 3 months, 15 days; 13 days after calving; milk 284 lbs.; butter fat 9.168 lbs.; equivalent butter 80 per cent. fat, 11 lbs. 7.4 oz., or 10 lbs. 11.1 oz. 85.7 per cent. fat."

Sheep.

On Thursday, the 24th of October, Messrs. Alfred Mansell & Co., the well-known exporters of Pedigree Live Stock, Shrewsbury, shipped from the port of London, per S. S. "Waivera," the most valuable consignment of Shropshire sheep ever exported from this country on behalf of Messrs. Geo. Simonds, Gardner, Oldmeadow, S. Wellard, and Davies, of Tasmania, and Messrs. Seth Smith and Aitken, of New Zealand. Accompanying these were also some 50 ewes and a few stud rams shipped on behalf of Mr. A. E. Mansell, who is shortly to settle in Tasmania.

Mr. George Simonds' consignment comprised of "Lord Cardiff," the Royal winner of this season, for which Mr. Simonds gave the unprecedented price of 400 gns. at the Harrington Sale, also a son of shearing ewes selected at the same sale for 25 gns. each. It should be stated that Mr. Alfred Tanner had been fortunate enough to secure the service of "Lord Cardiff" for the season, though we are given to understand that the price paid for the hire was a very high one. Another valuable animal was the 180 gna. ram lamb, sired by Fortification 9498, the consignees being Messrs. S. Wellard and Davies, for whom Mr. Simonds purchased at the Harrington Dispersion sale. Mr. Wellard also secured 5 very choice ewe lambs. Mr. Oldmeadow's shipment comprised of 5 shearing and 5 two-shear ewes—quite some of



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The only nest in the World which positively prevents hens from eating their eggs.

Simple—Effective—Durable
No springs—Eggs cannot break. The inclined nest gathers them safely in lower section. Prevents fleas, or parasites, etc. Everlasting, never failing, comfortable. Thousands now in use. Ask your dealer for it or write to L. P. MORRIS, Inventor, Mir, 13 Antoine St., N. Yacinthe, Que.
Price 45c. each. AGENTS WANTED.



DISPERSION SALE of Shorthorn Cattle

24 FEMALES 10 BULLS

At Woodslee Farm, Markham

WEDNESDAY, DECEMBER 18, 1901

The herd consists of a choice lot of cows with calves by their side, and cows in calf. Some of the bulls are about 2 years old and fit for service. They have all been purchased by the proprietor within the last two years, as follows: Prince Louis (imp.) = 32082 =, Royal Standard = 27653 =, Noreman = 10897 =, Chief of Stars (imp.) = 4015 =, Chivalry = 12833 =, Red Stanley = 23345 =, Sir Roland = 20662 =, Ronald = 25225 =, Bobs 34605 = and Engineer = 31781 =. The stock is all in first class breeding condition. Woodslee Farm is one mile from Unionville Station, G.T.R., 18 miles from Toronto. Conveyances will meet the forenoon trains from both east and west at Unionville. Lunch at 11. Sale at 1. Terms: 9 months' credit, on approved joint notes; 5 per cent. per annum off for cash. Send for catalogue.

CAPT. T. E. ROBSON, M.P.P., Auctioneer.

S. G. LITTLE, Hagerman, Ont.

ALWAYS MENTION THE FARMING WORLD WHEN WRITING ADVERTISERS.

Spooner's "PHENYLE"
Powder
"Phenyle"
GERMICIDE
DISINFECTANT..

KILLS CHICKEN LICE

and Lice on Horses and Cattle, and Ticks on Sheep. Keeps them Healthy, Easily applied; no dip required.

60lb. boxes, 1lb. packages.....25c. lb.
70lb. pails.....15c. lb.
400lb. barrels.....10c. b

If your Druggist does not sell it, send direct to

ALONZO W. SPOONER,
Laboratory, PORT HOPE, Ont.
It will cure and prevent hog cholera. 73

the choicest lots at this memorable sale. Mr. Gardner's 3 shearing ewes, also from Harrington, were of a high order of merit, and quite the type in favor at Tasmania.

The New Zealand lot comprised of 15 ewes and 2 rams, the latter being consigned to Mr. Seth Smith, who also had one of the ewes. Both rams were exceptionally good sheep and were sired respectively by *Bonny Dreamful* and *Fortification*, two of Mr. Mansell's most successful sires, whilst Mr. Aitken's 14 ewes were picked specimens from this justly celebrated flock.

The value of this shipment ran into some thousands of pounds, and should they do well Tasmania and New Zealand breeders of Shropshire sheep will have the nucleus of the best and most valuable strains of blood. To enumerate the sires appearing in the pedigrees would be class and arrange a long line of Royal and other winners which have emanated from Harrington and elsewhere during the last quarter of a century, including such well-known rams as *Fortification* 9498, bred by Mr. A. E. Mansell, winner R. A. S. E. and sire of the Royal Winner of 1900, sold for 240 gns., the 180 gna ram lamb of 1901, and many other winners; *Montford Dreamer* 7622, a celebrated sire and the progenitor of numerous Royal winners; *Fair Star* 5177, sire of 32 rams sold at Harrington in 1895 at an average of £12 3s Od; *Ulster Rose* 9734, bred by Miss Rose and a most successful sire; *Rose Bush* 10194, sire of the 400 and 220 gna. rams of 1901, and numerous other Royal winners; *Montford Kaiser* 10506, bred by Mr. T. S. Minton by *Montford A.* dam by the 120 gna. Phenomenon; *Dream Star* 8977, by the 175 gna. *Montford Dreamer*, and a great winner at numerous shows.

Oats and Hay for South Africa.

The Department of Agriculture at Ottawa has received orders from the War Office for hay and oats for South Africa up to the end of February next, amounting to 75,000 tons and representing an expenditure, including freight charges and transportation, of \$3,000,000. Thirty-seven steamships will be required to convey the forage to South Africa. Up to November 30th the expenditure in Canada by the War Office for supplies for South Africa amounted to \$4,068,514, and by adding the orders first received, it means a total outlay of over \$7,000,000. This does not include orders filled by other agencies than the Department of Agriculture, or the expenditure for horses.

"It's a solemn thing to be married," said Aunt Rachel. "It's a good deal more solemn not to be," said a merry girl.

Stock

IMPERIAL HOLSTEIN-FRIESIAN STOCK FARM

10 Young Bulls from one month to four months, bred from Winner R's Du Koi.

W. H. SIMMONS,
New Durham, Ont.

Glen Crescent Shorthorns and Oxfords

Two Young Bulls by imp. "Precious Stone" and imp. "Blue Ribbon" for sale. Can spare a few more Oxford females.

J. W. WIDDIFIELD,
Uxbridge, Ont.

DAVID McCRAE, Janefield, Guelph, Canada, Importer and Breeder of Galloway Cattle, Clydesdale Horses, and Cotswold Sheep. Choice animals for sale.

SHROPSHIRE

Bred from the best Imported Stock.

Also Silver and White Wyandottes.

W. D. MONKMAN, Bond Head, Ont.

The Up-to-date Herd Tamworths

Bred from sweepstakes herd.
Young stock of both sexes for Sale.

W. H. McCUTCHEON, BRUSSELS, ONT.

MAPLE LEAF HERD OF LARGE YORKSHIRES

...Young Stock for Sale

ROBERT NICHOL, BRUSSELS, ONT.

JOHN DRYDEN BROOKLIN, ONTARIO

BREEDER OF

CRICKSHANK SHORTHORNS and CHOICE SHROPSHIRE SHEEP

Choice Young Bulls and Ram Lambs for sale. Write for prices.

FOR SALE

Pure Bred Improved Yorkshire Pigs.

**ANNANDALE FARM,
TILSONBURG, ONT.**



Live Stock Label in large or small lots, also odd numbers supplied. Send for circular and price list
R. W. JAMES,
Bowmanville, Ont.



ALVA FARM GUERNSEYS

The Typical
Dairy Breed

Good
Animals of
Both Sexes
for Sale



SYDNEY FISHER, Knowlton, Que.

FOR IMMEDIATE SALE.

SPLENDID 300-Acre Farm, 5 miles from Brantford, 240 acres cleared. Three two-story stone houses, 11 rooms, cellars full size. Frame barn 45 x 100, all or 3 other barns, 3 drive houses, 2 sheds, 20-acre orchard. 60 rods from railway, excellent soil. For full particulars, address

S. G. READ,
Broker, 129 Colborne St., Brantford, Ont.

Our market reports are reliable and up-to-date. They are written specially for The Farming World and are of inestimable value to every farmer.



ROCK SALT for horses and cattle, in ton and car lots. **TORONTO SALT WOKKS,** To onto

Oxford Downs for Sale!

1 Imported aged Ram
4 Good Shearing Rams
15 Good Ram Lambs
12 Nice Ewe Lambs
6 Shearing Ewes
The above are all sired by Imp. Rams, 8 or 10 aged Imported Ewes

—PRICES REASONABLE—
SMITH EVANS, : GOUROCK, ONT.

OXFORDS AT BRANT FARM

Choice ewe lambs and ewes of all ages. Prices to suit times. Orders booked any time for show stuff for 1902. Fitting a specialty.
Burford Station
Tgraph & Phone
J. H. JULL & SONS,
Mt. Vernon, Ont.

"EAGLE" in 100's and 200's. "VICTORIA"

EDDY'S PARLOR MATCHES

Are put up in neat sliding boxes convenient to handle No sulphur. No disagreeable fumes. Every stick a match. Every match a lighter.

..... For sale by all first-class dealers.

OAK LODGE YORKSHIRES



are acknowledged to be the best type of bacon hog to produce the ideal carcass for the best English trade. **CHAMPIONSHIP HERD AT TORONTO INDUSTRIAL EXHIBITION FOR NINE YEARS** also sweepstakes on Dressed Carcass at Provincial Winter Show. We have on hand now a large herd of different ages. Our prices are reasonable and the quality is guaranteed to be choice. Write

BRETHOUR & SAUNDERS,
Burford, Ontario

Market Review and Forecast

Office of The Farming World,
Confederation Life Building,
Toronto, Dec. 9th, 1901.
While business in wholesale lines is but fair at this season the retail trade is exceedingly brisk. Many wholesale houses are beginning to take stock. Money keeps steady at 5 per cent. on call. Discount rates range from 6 to 7 per cent. on mercantile paper.

Wheat.

The wheat market, generally speaking, is considerably stronger than a week ago. Cables are higher and prices have advanced on this side. During the week the Chicago market has advanced nearly 5 cents, and prices near the end of the week were strong at 76½¢ for December, and 79½¢ for May delivery. The Western winter wheat crop is in fairly good condition and this is having some effect on the speculative market. Locally the markets keep firm. There is a good milling demand here for wheat and business is active at 74¢ to 75¢ for red and white, middle freights. Goose is quoted at 66¢ to 67¢ and spring at 74¢ east. Manitoba keeps firm at 87¢ for No. 1 hard, 84¢ for No. 1 northern and 81¢ for No. 2 grinding in transit. On Toronto farmers' market red and white bring 77¢ to 79¢, goose 66½¢ to 67¢ and spring file 70¢ per bushel.

Oats and Barley.

The oat market still continues strong with prospects of still higher prices. The Government, it is reported, is finding some difficulty in filling orders in the West and may have to buy more in Ontario. The fresh lot of orders for the War Office lately received have created another flurry in the market. At Montreal the market is a little quiet owing to the close of navigation but in Ontario things are active and the market very strong. At local points sales have been made at 45½¢ to 46¢ to millers. Dealers complain that holders in the country are asking too high values, which blocks business somewhat. At the farmers' market here oats bring 49¢ per bushel.

The barley market continues strong. Prices here range from 51¢ to 57¢ as to quality and point of shipment. On Toronto farmers' market malt barley brings 54¢ to 62¢ per bushel.

Peas and Corn.

The pea market keeps strong and in good demand here at 81¢ north and west; 82¢ middle freights and 83¢ east. On the farmers' market small peas bring 78¢ per bushel.

Corn continues to advance. At Montreal American mixed in car lots is quoted at 72¢ to 73¢ and Canadian yellow at 69¢ to 70¢. Canadian mixed is quoted here at 59¢ west.

**The Canada Permanent & Western Canada
Mortgage Corporation**

Head Office, Toronto St., Toronto

SAVINGS DEPARTMENT

<p>\$1 and upwards received on deposit Interest paid or compounded half-yearly at.....</p>	<p>3½ ⁰/₁₀₀</p>	<p>\$100</p>	<p>and upwards received for which de- bitures are issued with con- pions attached for half yearly interest at.....</p>
Invested Funds		-	\$23,000,000

Bran and Shorts.

Ontario bran is quoted at Montreal at \$18.50 to \$19.00 and shorts at \$20.50 to \$22.00 per ton in car lots. City mills here sell bran at \$18 and shorts at \$20 in car lots, f. o. b., Toronto.

Potatoes and Beans.

The potato market keeps firm. Choice quality are quoted at Montreal at 75¢ to 80¢ per bag in car lots. There is a good demand here at 60¢ per bag in car lots. On Toronto farmers' market potatoes bring 75¢ to 80¢ per bag. The bean market keeps steady. Montreal quotations are \$1.40 to \$1.45 per bushel for primes and \$1.50 to \$1.55 for hand picked in large lots. The demand here is good. Quotations are \$1.60 to \$1.65 for choice hand-picked and unpicked at \$1.40 to \$1.45 per bushel. Some dealers, however, only quote about \$1.25 per bushel for hand-picked.

Hay and Straw.

The further orders of 30,000 tons of hay received by the Government for South Africa has caused no little excitement in the hay market. This makes 75,000 tons in all to be supplied from the 1901 crop. The demand continues good on both local and export account. In some sections it is hard to get sufficient cars to supply the demand. Cable reports are good and everything points to the big crop being got rid of at profitable prices for the farmer. Montreal quotations for baled hay are: No. 1 timothy \$10.25 to \$11, No. 2 \$9.25 to \$10, clover mixture \$8.25 to \$9, and clover \$7.50 to \$8 per ton. The demand here is good and prices steady at \$8.50 to \$9 in car lots, Toronto. On the farmers' market

timothy brings \$10 to \$11.50 and clover \$7 to \$8.50 per ton, and sheaf straw \$9 to \$10.

Eggs and Poultry.

The export market for eggs keeps firm, which keeps prices high and business active on this side. Straight lots of fresh arrivals are quoted at Montreal at 20¢ to 21¢ and new-laid at from 23¢ to 26¢ per dozen in case lots. The offerings of new-laid here are very scarce. The market is steady and strong at 19¢ for choice and 17¢ for fresh gathered in case lots. On Toronto farmers' market strictly new-laid eggs bring 30¢ to 40¢ a dozen.

Owing to too large supplies for the Thanksgiving trade being received at Montreal trade there during the week has been rather dull. A lot of this hold-over stuff had to be sacrificed at very low prices. Quotations there for regular lines are: Choice dry-picked turkeys 8½¢ to 9¢, young chickens 7¢ to 7½¢, ducks 8¢ to 9¢, and geese 5¢ to 6¢ per lb. Receipts have fallen off considerably here and there has also been a falling off in the demand. Quotations are 5¢ to 8¢ per lb. for turkeys, 5½¢ to 6¢ for geese, 40¢ to 75¢ per pair for ducks, and 20¢ to 50¢ for chickens. On Toronto farmers' market live and dressed chickens bring 25¢ to 50¢ per pair and ducks 45¢ to 60¢, and geese 6¢ to 6½¢ and turkeys 8¢ to 10¢ per lb.

The Canadian Produce Co., 36 and 38 Esplanade East, Toronto, will pay until further notice for spring chickens 5¢ per lb. For

PYNY-BALSAM cures all coughs. It soothes, it heals, it cures quickly and certainly. Pyny-Balsam sells more widely every year. Manufactured by the proprietors of Perry Davis' Pain-Killer.

OUR PRICE FOR CHICKENS HAS GONE UP

Our demand has doubled. Deal with a reliable firm; be careful of strangers. See our prices on this page.

THE CANADIAN PRODUCE CO., TORONTO

hens (including last year's birds) 2½¢ per lb. For ducklings 5¢ per lb. Crates supplied free and express paid up to 50¢ per 100 lbs. of birds. These prices are for live weight.

Seeds

Canadian clover seed is giving good satisfaction in England and the demand has increased. Canadian red clover is preferred to the American, and Canadian alsike is also in favor. At Montreal there is a very firm feeling and red clover is up 25¢ to 50¢ per cwt. at \$8.25 to \$9.75, and alsike at \$10.75 to \$12.75. Timothy is also firmer and higher at \$5.75 to \$6.25 per cwt. On Toronto farmers' market alsike brings \$6.50 to \$7, red clover \$4.50 to \$4.75, and timothy \$2 to \$2.50 per bushel.

Fruit

Apples keep high though comparatively little business is doing. At Montreal No. 1 quality sells at \$4.50 to \$5 and seconds at \$3.50 per barrel in large lots. At Toronto apples bring from \$2.50 to \$4 per barrel.

Cheese

The improved feeling in cheese reported a week ago has been strengthened during the week. Holders on this side are more conservative and though cable orders are more numerous they are refused on account of being too low. At the end of the week there was a decided change for the better on both sides of the Atlantic. At Montreal finest westerns are quoted at 9½¢ to 9¼¢, and finest easterns at 9¼¢ to 9½¢. A number of the local markets have closed down for the season.

Butter

The butter market keeps steady, though cable reports are lower, owing to liberal arrival of Australian. Danish butter also shows a decline. The Trade Bulletin refers to last week's trade as follows:

"The market is steady with a fair amount of trading in finest November creamery at 20½¢ to 20¼¢, and at 19¢ to 20¢ for fair to good. There is some Manitoba dairy on the market, a lot of 50 tubs selling at 15½¢, the quality being sold boring but uneven and with little too much salt in it. A lot of poor grade sold at 14¢. There is an enquiry for this class of goods and Western dairy for shipments east."

Choice creamery is quoted here at 20¢ to 22¢ for prints and 19¢ to 20¢ for solids. There are many complaints of the turnip flavor in the butter received here. The writer sampled some from a leading creamery last week that was very objectionable because of the turnip flavor. When will dairymen learn to feed only such foods as will give a good flavor in the product? They are losing money by feeding turnips. While this turnip

butter is a drug on the market, the demand for better and clean flavored grades keeps up well. Choice dairy is quoted at 16½¢ to 17½¢ for pound rolls and 16¢ for tubs in round lots. On Toronto farmers' market pound rolls bring 15¢ to 17¢ and crocks 14¢ to 17¢.

Cattle

There is not much change in the cattle situation. Choice animals in all the classes keep strong and in good demand but other quality is seemingly not wanted. At Toronto cattle market on Friday the receipts were not large, comprising 644 cattle, 1,627 hogs, 818 sheep and lambs, and 20 calves. The quality of the fat cattle offered shows little, if any, improvement. Business was slow except for good to choice, well-finished animals. These being few in number, were soon picked up at firm prices. The bulk of the offerings were of the inferior kind and judging from the prices offered the farmers or drovers must be giving them away. Only a few feeders and stockers of good quality were offered. One choice lot of feeders weighing 1,135 lbs. each sold at \$3.90 per cwt. Milch cows sold at \$30 to \$50 each. Two thousand turkeys were purchased by Harris to be delivered this week at 7½¢ a pound live weight.

Export Cattle—Choice loads of these are worth from \$4.50 to \$4.65 per cwt., and light ones \$4.00 to \$4.30 per cwt. Heavy export bulls sold at \$3.75 to \$4.25 and light ones at \$3.25 to \$3.65 per cwt., choice export cows sold at \$3.00 to \$3.65 per cwt.

Butchers' Cattle—Choice picked lots of these, equal in quality to the best exporters, weighing 1,075 to 1,150 lbs. each, sold at \$4.30 to \$4.60 per cwt., good cattle at \$3.80 to \$4.00, medium at \$3.40 to \$3.55 and inferior to common at \$2.40 to \$3.25 per cwt.

Feeders—Heavy, well-bred steers from 1,100 to 1,200 lbs. each, sold at \$3.50 to \$3.90, and other quality at \$3.25 to \$3.50 per cwt. Light steers, 900 to 1,000 lbs each sold at \$3.00 to \$3.20 per cwt. Feeding bulls for the byres 1,000 to 1,300 lbs. each, sold at \$2.50 to \$3.00 per cwt.

Stockers—Yearling steers weighing 500 to 800 lbs. each sold at \$2.50 to \$2.75, and off colors and those of inferior quality at \$1.75 to \$2.00 per cwt. Light stock bulls 500 to 800 lbs. each sold at \$1.75 to \$2.50 per cwt.

Calves—These are in fair demand at Buffalo. Good to choice veals bring \$6.75 to \$7.25 per cwt. At Toronto market ordinary calves bring \$2 to \$8 each.

Sheep and Lambs

There was only a light run of sheep and lambs. Prices for sheep ruled about the same but lambs

BE SURE YOU GET THE KIND YOU HAVE ALWAYS HAD—Owing to the great popularity of "The D. & L." Menthol Plaster, unscrupulous makers are putting up one like it. For rheumatism, neuralgia, &c., nothing is better. Made only by Davis & Lawrence Co., Ltd.

"THE D. & L." EMULSION OF COD LIVER OIL taken in cases of general debility and loss of appetite, is sure to give the best results. It restores health and renews vitality. Davis & Lawrence Co., Ltd., manufacturers.

LOW WIDE-TIRE WHEELS FOR WAGONS



Made to fit your axles.

If you do not already know of the great advantages, send at once for Catalogue to the

Dominion Wrought Iron Wheel Co.

9 and 11 Brock Ave., TORONTO, ONT.

WILSON'S HIGH-CLASS SCALES

SPECIAL PRICES THIS MONTH

On 2,000 lb.

Diamond Steel Bearing
SCALES

Write To-day.

C. WILSON & SON

50 Esplanade St. E., TORONTO, ONT.



The Razor Steel Secret Temper, Cross-Cut Saw



WE take pleasure in offering to the public a Saw manufactured of the finest quality of steel and a temper which toughens and refines the steel, gives a keener cutting edge and holds it longer than by any process known. A saw, to cut fast, "must hold a keen cutting edge."

This secret process of temper is known and used only by ourselves.

These saws are elliptic ground thin back, requiring less set than any Saws now made, perfect taper from tooth to back.

Now, we ask you, when you go to buy a Saw, to ask for the Maple Leaf, Razor Steel, Secret Temper Saw, and if you are told that some other Saw is as good, ask your merchant to let you take them both home and try them, and keep the one you like best.

Silver Steel is no longer a guarantee of quality, as some of the poorest steel made is now branded silver steel. We have the sole right for the "Razor Steel" brand.

It does not pay to buy a Saw for one dollar less and lose 25¢ per day in labor. Your Saw must hold a keen edge to do a large day's work.

Thousands of these Saws are shipped to the United States and sold at a higher price than the best American Saws.

MANUFACTURED ONLY BY

SHURLY & DIETRICH,

GALT, ONT.

ALWAYS MENTION THE FARMING WORLD WHEN WRITING ADVERTISERS.

Agricultural College.

- (1) Three Weeks' Creamery Course—Dec. 2, 1901.
- (2) Twelve Weeks' dairy Course—Jan. 4, 1902.
- (3) Two Weeks' Course in Stock and Grain Judging—Jan 8, 1902.
- (4) Four Weeks' Course in Poultry Raising—Jan. 10, 1902.

Ladies admitted to Dairy and Poultry Courses.

SEND FOR SPECIAL CIRCULARS.

Guelph, November, 1901.

JAMES MILLS, M.A., President.

were dearer. Some choice lots of grain-fed ewes and wethers sold at \$3.75 per cwt. and even a little more was paid for one or two lots. Sheep sold at \$2.75 to \$3 per cwt. for ewes and \$2 to \$2.50 for bucks and spring lambs at \$2.75 to \$3 each and \$3 to \$3.75 per cwt.

Hogs.

There was a fairly large run of hogs at an advance of 12½¢ over a week ago. Best select bacon hogs 160 to 200 lbs. each sold at \$6.12½, fats at \$5.62½, and lights at \$5.87½. Unculled car lots sold at \$5.90 to \$6 per cwt.

For the week ending December 14th, the Wm. Davies Co., Toronto, will pay \$6.12½ per cwt. for select bacon hogs, \$5.87½ for lights and \$5.62½ for fats.

The Trade Bulletin's London cable of Dec. 5 re Canadian bacon reads thus:

"The market is weak and 38 per cwt. lower, owing to more liberal imports from Denmark. No. 1 Canadian sides 538 to 578."

Horses.

The continued demand for horses for remounts has advanced prices for that class of horses over what they were a year ago. At Montreal trade is quiet in other lines, quotations being:

Carriage horses	\$175—\$350
Heavy draughts	125— 225
Light roadsters, drivers and saddles	100— 250
Remounts	110— 145

There is nothing doing in horses here. The general trade is dull and at Grand's all attention is being directed to securing horses for the new Canadian contingent. About 200 will be shipped this week. They are a very good lot and said to be superior to anything yet sent to South Africa. W. Harland Smith states that the report in the daily press during the week attributed to him that 25 per cent. of the western horses died at sea is an error. What he did say was that 25 per cent. of the Strathcona horses did not get through the sea voyage, while only 4 per cent. of Ontario or eastern horses were lost at sea.

Medals Come High.

Twenty gold medals, thirty-three silver medals and thirty-eight bronze medals were won by Ontario fruit-growers at the Pan-American. The latest announcement in connection with these is that each exhibitor will have to pay for his medal at the rate of \$75 for a gold medal, \$5 for a silver medal, and \$1.50 for a bronze medal. At these prices the aggregate value of the medals would be \$1,722. It looks as if it would pay better for our successful fruit men to be content with the honor and let Uncle Sam keep his medals.

PUBLIC OPINION is strong in favor of Pain-Killer. For over sixty years the foremost household remedy for cuts, bruises, sprains, and all bowel complaints. Avoid substitutes, there is but one Pain-Killer, Perry Davis'. 25c. and 50c.



FATTENING AND CONDITION POWDER

THE great Blood Purifier for Cattle, Horses, Sheep and Hogs. A handful of this wonderful Purina mixed with the usual feed strengthens the nerves, hardens the muscles, and generally invigorates. Recommended by eminent veterinary surgeons in Canada and United States.

Gustave LaBelle & Co. Montreal, Que.

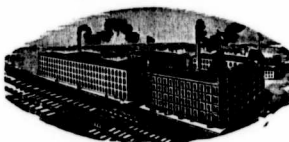


Champion Evaporator Construction

The corrugated pan of a Champion Evaporator, placed directly over the hottest part of the fire, is its shallow boiling heater. The arrangement is such that the first sap entering the evaporator is first made into syrup. Simple in operation, and easy to clean. A boy fourteen years old can handle our largest outfit. Send for circular giving full details of best method for handling a maple sugar camp.

The GRIMM MFG. CO., 84 Wellington St., Montreal, Que.

BELL .. PIANOS ... AND BELL .. ORGANS.



Built to last a lifetime
By the Largest Makers
in Canada



BELL is the Musician's Favorite

The BELL ORGAN AND PIANO CO., Limited, GUELPH, Ontario

Catalogue No. 41 Free

BE UP-TO-DATE Save Money, Labor and Team by using

...ONTARIO RIDING PLOW

This plow has a lighter draft than any other plow doing the same work. Anything plow should be asked to do it can do with less strain on team or ploughman.

It is the simplest plow made and can be run by any man, woman, boy or girl who knows how to manage a team.

'He who by the plow would thrive
Must never walk but always drive.'



Ontario Riding Plow No. 3.

Send for Catalogue

The Perrin Plow Co., Limited Smith's Falls, Ontario

Model Dairy
Exp. Farm

WE LEAVE IT TO THE READERS TO SAY

"Who Juggles Figures and Facts"

AND WHO, BY THE TRUTHFULNESS (?) OF THEIR STATEMENTS, SHOULD BE ENTITLED TO THE HONOR (?) OF BEING CONSIDERED A DIRECT DESCENDANT OF ANANIAS.

The DeLaval Company advertise a "voluntary" (?) statement purporting to be from the engineer of the Model Dairy, in which he says "it took but one-fourth as much steam to do our work with it (DeLaval) as the 'United States' used." Such a statement is so ridiculous on its face that no experienced dairymen would doubt that it was **voluntary** on the part of the DeLaval Company.

We have hundreds of statements from dairymen who have used both separators, that the U.S. runs easier than the DeLaval and wears much better.

The truth is that Engineer Downey was never present when the U.S. was running, with one or two exceptions, when his department was unable to get sufficient steam to run so much as a Babcock Tester until very late in the forenoon. The work in the Model Dairy was done before he got around in the morning.

Now read what Mr. Van Alstyne, Supt. of the Model Dairy, over his own signature, says in reference to power in September, when the DeLaval was running.

"We found the power insufficient, and were obliged to put a cut-off in the pipe leading up-stairs to prevent the herdsmen drawing on our steam at times when we needed it for the dairy work, and as the weather became colder the latter part of September, this trouble increased to such an extent, that, one day with both burners lighted, we found our steam entirely out, so that we intended making a change before your machine was put in, and we were delayed a week in order to get the consent of the proper authorities, we then used soft coal, which did not give satisfaction, because it filled the flues of the boiler, and we changed to coke, which was eminently satisfactory."

Remember this was when the DeLaval Separator was running, and before the U.S. was put in. They could not get steam enough to run the DeLaval.

This "voluntary" (?) statement says further, "that the 'U.S.' had an expert to run it." He was in no sense an expert, had never worked in a creamery or dairy, or attended a dairy school or experiment station. The DeLaval did have experts to run theirs. Both operators were graduates and rank partizans of the DeLaval, and were angry because we objected to having unfair and prejudiced operators run the U.S.

A Few Facts Regarding the Machines Used in the Model Dairy.

The DeLaval Separator was one made specially for that work, but after the first period was sent back to their factory to be fixed over and improved, if possible, for a second trial.

The U.S. Separator was one taken from regular stock and used in our exhibit. After the first period it was returned to its booth, and remained there until we were requested by telegraph from the Superintendent of the Model Dairy to put in the U.S. to make a second run. We wondered why the necessity for tele-

graphing such a request, but telegraphed back we would comply with the request. [We learned later that the DeLaval was shaking so badly that it was not deemed safe to run it longer, therefore the necessity for arranging by telegraph to replace the DeLaval with the U.S.]

The DeLaval Separator is a top heavy machine, filled with 40 to 50 discs, and when they get out of balance cause trouble, if continued in use, therefore the necessity for immediate change when it begins to shake. They claim to run at low speed, but always, when in competition with the U.S., attempt to run at very high speed—sometimes more than 50 per cent. higher than they advertise to run. They know that their separator cannot run at high speed long, so run it at high speed only in tests with the U.S.

The U.S. is more substantially made, and does stand high speed, and runs longer and easier at its speed than the DeLaval does at its claimed lower speed.

As to the truthfulness of their other statements, we leave it to the readers to decide from the following:—

The DeLaval Co. state:—"The letter from the Model Dairy management and employees was written Oct. 21st."

Mr. Van Alstyne, Supt., states:—"The date on my carbon copy, as I gave it to their (DeLaval) representative, is Oct. 1st, and not Oct. 21st."

The DeLaval Co. state:—"The official skimming record of the DeLaval machine during its allotted run is .0161."

Mr. Van Alstyne states:—"The reading should be .0172, instead of .0161."

The DeLaval Co. state:—"The official skimming record of the U.S. machine during the allotted run is .0543."

Mr. Van Alstyne states:—"The average per cent. of fat left in the skimmilk (U.S.) was .0138."

Remember that Mr. Van Alstyne was the Superintendent of the Model Dairy, and that the above statements of his are exact quotations from letters in our possession signed by him.

Then, consider whose statements are to be depended on, his, or our "would-be competitors," the DeLaval Co., who are in an awful condition of mind, and squirming terribly because the U.S. did beat them in the Model Dairy, and are resorting to all sorts of schemes to break the force of the victory of the U.S. over the DeLaval Separator.

We will also call attention to one or two other of our "would-be competitors," the DeLaval Co., truthful (?) statements.

They say they received a Gold Medal at the World's Fair, Chicago, while in reality they received only a Bronze Medal.

They have advertised for over a year that the DeLaval Separator was awarded a Grand Prize at Paris, 1900, but now admit in their advertisements that this award was to the "Societe Anonyme Separator," which company exhibited at Paris a butter extractor, called a Radiator, and did not exhibit a cream separator.

For proof of our statements we refer to the official records.

VERMONT FARM MACHINE COMPANY

Bellows Falls, Vt., U.S.A.