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Farming

A Paper for
Farmers and Stockmen



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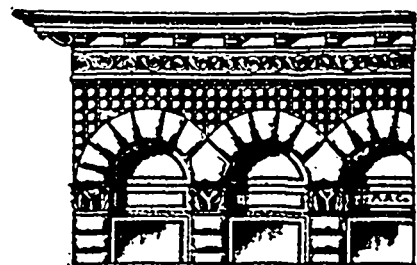
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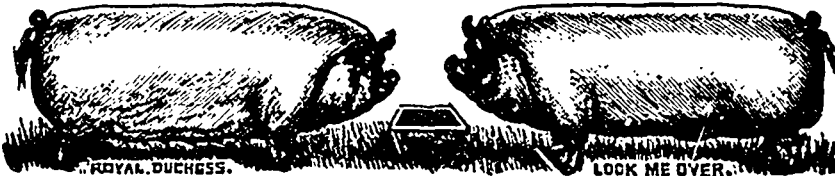
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FARMING

VOL. XVII.

OCTOBER 31st, 1899.

No. 9

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Illustrations Wanted

We are desirous of procuring some good photos of Canadian farm scenes for reproduction in these columns. Any of our readers having such photos will confer a favor by loaning them to us for reproduction. Making a photo-engraving from a photo does not injure it and we will see that all photos sent us for illustration purposes are returned in good order. Photos and descriptions of modern and up-to-date farm-houses, barns, cow stables, pig pens, etc., are preferred, though we will be pleased to have photos of any farm scene including stock.

Dominion Live Stock Matters

The letter from Mr. John I. Hobson, president of the Dominion Cattle Breeders' Association, and of the Provincial Winter Show, which appears in this issue, should be read with interest by live stock breeders generally. He endorses Mr. Gibson's views as published in FARMING for October 17th, in regard to the development of trade in pure-bred live stock with the Argentine Republic. That this trade is worth looking after cannot be doubted. We received the other day a copy of Thornton's record of Shorthorn transactions in Great Britain, from April 1st to June 1st, 1898. In this circular we find that 106 Shorthorns were shipped to Buenos Ayres, as against 55 to all other countries, including 45 to Canada. Though this report shows that Canada is largely increasing her importations of pure-bred stock, yet the Argentine is still by far the largest purchaser of pure-bred live stock in the world. A country that buys annually from five to six hundred pure-bred cattle is certainly worth trading with.

Mr. Hobson also refers to Mr. J. A. McDonald's letter published in FARMING a few weeks ago, and deals very effectively with his statement that Mr. Hodson may favor Ontario breeders too much when he gets to Ottawa. There is no man in Canada better qualified than Mr. Hobson to refute a statement of this kind, and consequently his remarks on this point are timely and well taken. During the past few years Mr. Hobson has visited almost every province in the Dominion several times, and during these visits has addressed live stock meetings, and come in contact with all the leading breeders from the Atlantic to the

Pacific. He is therefore in a position to speak authoritatively as to the influence of Mr. Hodson's work in moulding and shaping the live stock organizations, where there are any, in every province of the Dominion. As Mr. Hobson very aptly points out, the great work that Mr. Hodson has done for breeders in the other provinces in connection with reduced rates on the railways for pure bred stock and inter-provincial trade has not cost those breeders a cent, but has been paid for by the Province of Ontario. The people of Ontario are not, however, complaining of this, but rejoice that the work that has been carried on by Mr. Hodson through the Live Stock Associations has served to bring the outlying portions of the Dominion in closer touch with each other, and to promote a trade between the provinces that in the future will no doubt spread into other lines than pure-bred cattle, sheep and swine. There can be no stronger evidence of Mr. Hodson's ability and disposition to deal fairly and generously with the live stock interests of all parts of Canada than the fact that he was selected by the authorities at Ottawa to fill the important position of Live Stock Commissioner for the whole Dominion.

Canadian Competition in Agricultural Products

Viewed with Alarm in the United States

Some of the agricultural journals in the United States are becoming somewhat alarmed as to Canadian competition in agricultural products in the markets of Great Britain. There was a time when the United States had almost a monopoly of many of the products of the farm so far as the English market was concerned, but this is not the case now. Canada is gradually supplanting the United States in the Old Country markets in many lines, and will continue to do so so long as our farmers adapt themselves and their practices to the conditions necessary in order to supply the kind and quality of product required by the English consumer. This the Canadian farmer is doing to-day as he never did before, and it is not at all likely, now that he has entered upon the good way, that he is going to turn back till he has sifted the possibilities of the English market to the very bottom.

We have a striking example of how Canada has supplanted the United States in the British market, in the cheese trade. There was a time, and it is not so many years ago, when all the cheese imported by Great Britain came from the United States, and Canada supplied none. That condition of affairs is almost reversed to day, as the following table of exports of cheese for the two countries will show:

	United States.	Canada.
1870.....	57,296,327 lbs.	5,827,782 lbs.
1880.....	127,553,907 "	40,368,678 "
1890.....	95,376,053 "	94,260,187 "
1895.....	60,448,421 "	146,004,650 "
1898.....	46,000,000 "	150,000,000 "

From this table it will be seen that since 1880 the American cheese exports have gradually decreased, while those from Canada have increased at an enormous rate, being now nearly four times larger than they were in that year.

Canadian butter exports have also largely increased, and are now several times larger than those from the United States. The combined exports of butter from Montreal and New York from the beginning of this season to October 25th last were as follows, with comparisons:

	1899.	1898.
Montreal, pkgs.	425,711	227,234
New York, pkgs.	103,860	65,564
Total, pkgs.	529,571	292,798
Increase, pkgs.		236,773

Then there is the bacon trade, in which Canadian products are gradually supplanting those from the United States in Great Britain. We might mention other instances, but we have given a sufficient number to show that there is some ground for alarm on the part of American agriculturists.

The following, from one of our agricultural exchanges in the Eastern States, will give some idea of the strong feeling there is across the line in regard to Canadian competition:

"We have several times called attention to the fact that Canada is closely competing with the United States in the sale of agricultural products on the English markets, and that our farmers and exporters need not only to put their best foot foremost, but to keep it to the front all of the time if they desire to retain the trade they have, to say nothing about increasing it as they are able to increase production. And with the trade in England will go not only the remainder of Great Britain, but the prospective trade of other European countries.

"We are by no means professional alarmists, but with our constant watch upon the markets here in Canada, and our study of exchanges, we feel it our duty to warn our agricultural and horticultural readers of the present conditions as we see them. And, if we may believe the very roseate view of Canadian conditions as taken by correspondents of the *Toronto Globe*, the danger of this competition is increasing very rapidly. And their view is corroborated by what we learn from other sources of the work which is being done by the Department of Agriculture for the Dominion of Canada to improve the quality of their products, and to find markets for them."

The journal then goes on to quote extracts from the *Globe's* correspondents in many parts of Ontario on the agricultural outlook and the prospects for this season's crops, and compares the prosperity and progressiveness of Canadian farmers outlined in this correspondence with the conditions to be found in agricultural sections of the Eastern States. It closes the article with the following piece of advice, which Ontario farmers would do well to give heed to:

"But we have quoted enough to show that Canadian farmers are awake, up to date, and trying to be ready to furnish English markets with anything they want, from fat steers and choice hams to canned tomatoes and raspberry jam. Do not let them distance the United States in the race by sending better goods than we can send."

The Export Apple Trade

Complaints of Badly Packed Fruit

Notwithstanding the warning given last spring reports continue to come from Great Britain of poorly packed Canadian apples being received there. Why will our packers, or those who are responsible for the picking, handling, and packing of our fruit persist in following methods that must bring financial loss to themselves and injure the reputation of Canadian apples in the English market? One of the latest reports to arrive regarding the shipments of this year's fruit is that the apples are pressed down so closely in the barrels that many of them are bruised when opened. It is hard to understand why an attempt

should be made to pack more apples in the barrel than the number necessary to cause them to carry in the best condition. All such fruit is sold by the barrel and it would be more to the interest of the shipper to put in too few, rather than too many apples.

But be this as it may, the fact remains that there are numerous complaints this year as to the condition of Canadian apples when they arrive in Great Britain and particularly so in connection with the fall fruit. It would be better for the trade all round if as little fall fruit were sent over as possible. As a rule, unless the apples are perfectly sound, and the greatest care is exercised in picking and packing, fall fruit arrives in the old land in poor shape and a great deal of it has to be sacrificed at prices that must mean a serious loss to the shipper. Like early fodder cheese, fall apples only serve in a large measure to spoil the market for the later and better quality of goods for which high prices are expected. If the bulk of the fall fruit could be disposed of in this country, and only the finest brands sent forward, the market would always be in better shape for the splendid winter varieties of apples which this country is so capable of producing.

Of all the products of the farm which leave Canada for the British market there are none which give a more regular and even price to the producer, when there is a crop, and at the same time bring more varied prices in the old land than apples. From 25c. to 50c. per barrel at the outside will cover the difference in price which local buyers in this country pay the producer, while we frequently hear of the same fruit being sold on the British market at a much greater variation in price. Such a condition of things in one of our most important export trades should not be. If the quality is so nearly alike on this side as to make a difference in price of only about twenty-five cents per barrel, there is no reason in the world for the great variation in values on the other side of the water. The only reasonable conclusion that we can come to in regard to it is that the difference in quality of the fruit when it arrives in England is due to inferior picking, handling and packing of the fruit and its treatment in transit by train and ocean steamer. This is a condition of affairs that can be remedied if those interested only make up their mind to do so. There is a right and a wrong way of packing apples for the export trade, and it should not be a difficult matter for those connected with this trade to find out which is the right way and to follow it.

Canadian winter apples are beginning to arrive in Great Britain, and it is to be hoped that complaints as to the quality, packing, etc., will become fewer as shipments increase. While it may be difficult to get every barrel of fall fruit landed in good condition, there should be no difficulty with the winter varieties if proper methods are adopted in packing and shipping. A large export trade cannot be worked up unless every barrel which goes forward contains sound and honest fruit and is landed in good condition. This should be the aim of every one engaged in the Canadian fruit trade, the grower, the packer and the shipper. So far this season we have had no definite reports of fraudulent packing of fruit, and it is to be hoped that the timely exposure last spring has had a wholesome effect in preventing such dishonest practices in connection with this year's fruit trade.

Farm Telephones

The development of the farm telephone system in the United States may be taken as an indication of the advancement that is being made in the position of the farmer. The day of isolation for the farmer in the older farming sections of this country is past and a new era is opening up before him. By a system of farm telephones he is brought in touch with his neighbor or friend several miles away, and he is made to feel that he is a part of the active life of this busy world. Distances disappear, and stormy weather, bad roads, etc., are not so much of a drawback to the social side of farm life, when one's friends can be called up

any moment for a short, pleasant conversation. It is indeed a sign of the times.

No place on this continent, if not on the whole globe, has developed the rural telephone service as much as the north-eastern portion of the State of Ohio. In one County (Geauga), which is strictly agricultural, hundreds of farmers have phones in their houses. So numerous are the wires that they have been likened to a gigantic spider's web covering the whole country. One of the local companies, known as the Binbridge Tel. Co., is operated by eight farmers, who own everything, from franchise to switch-board. This company was organized two years ago. Each shareholder owns one-eighth interest, and all share equally the assessments and dividends. A number of officers are elected annually including a general manager, who has the general supervision of the lines. The primary object in constructing the lines was not to build them for an investment but as a help in the transaction of business among the farmers of the district, and to give the farmer's household some of the social privileges that are too often lacking on the farm. All material is purchased wholesale. Cedar poles, 25 feet high and 5 to 6 inches in diameter, are used on all long lines. The posts are set 4 to 4½ feet deep and from 200 to 225 feet apart. Good painted cross-arms are securely fastened to the poles with lag-bolts. Special telephone wire ranging in size from Nos. 9 to 12 is used. This comes in coils containing one-half mile and is vastly better than common wire.

Only the best long distance telephones are used. A modern 100 drop switch-board is centrally located in the home of one of the company, who, with the help of his family, attends to this work very satisfactorily. Upon retiring for the night the operator switches on the electric night-bell, which is located in his sleeping room. A call on any wire during the night immediately sets this bell ringing, and it continues to ring until the call is answered by the operator. A record is kept of all the toll messages each day, whether sent or received, and at the end of each month a statement is prepared for each company with which connection is made.

The rental price is \$12 per annum, or \$1.25 per month, to subscribers, for which each one receives for his family, hired help and company the free use of the lines of the company and those with which it has connection. Beyond this a low rate of 10 to 20c. is charged according to the distance. The low rate of rental is made possible in the the country by placing several phones on each circuit. Usually one road or neighborhood is on the same wire, each one having his own signal or ring, as it is called. From four to eight at most are enough on the same circuit to insure first-class service without becoming too mixed up. Electric storms cause some trouble, but by far the greatest difficulty is the induction between parallel wires.

This company started with three outside subscribers and now has over 50, with 30 miles of poles and 100 of wire. Reciprocity arrangements give free use of 150 more phones, including a village of 3,000 population.

Preparing Geese, Ducks and Chickens for Market

In last week's FARMING we gave some information taken from the last annual report of the agriculture and dairy commissioner as to killing and dressing turkeys for the British market, and herewith we reproduce from the same source similar information in regard to marketing geese, ducks and chickens. While this information was intended to help those engaged in preparing poultry for the Old Country markets, it is none the less valuable for those catering to the home trade. The dealers and consumers in our cities and towns are just as desirous of getting their dressed poultry in proper shape as the English consumer is and are willing to pay a premium for neatness, care and skill shown in the goods they purchase.

The extracts from the above report are as follows :

GEESE AND DUCKS.

Geese are in demand in Great Britain for a longer time after Christmas than is usually the case in markets on this side of the Atlantic. It is not probable that a profitable



Figure 9 shows a duck ready to be packed.



Figure 10 shows a back view of a goose dressed and ready to be packed.

trade of large volume can be developed in them in the near future. The supply of ducks, chickens and fowls in Canada is hardly yet sufficient for the demand of the Canadian home trade. Where trial shipments of geese and ducks are to be made, the following points should be observed :—



Figure 11 shows the back view of a fowl ready to be packed.

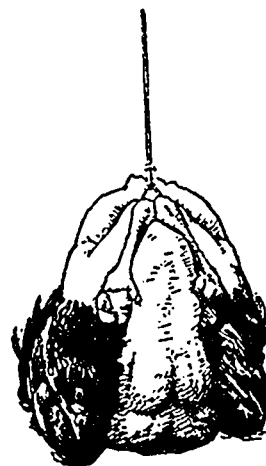


Figure 12 shows the front view of a fowl with the head pushed through under the wing.

29. The geese and ducks should be fasted for at least 24 hours before being killed.

30. They should be killed by cutting in the roof of the mouth. The cutting should be lengthwise, across, and deep enough to reach the brain.

31. All the feathers should be plucked off except on the tips of the wings of ducks. They should not in any case be dipped into water, and the down may be left on.

32. The entrails may be left in.

33. They should be packed about ten in a case. Birds of small size are not wanted, anything under nine pounds in geese is neglected. The most saleable size is from ten to twelve pounds.

CHICKENS AND FOWLS.

It is recommended that they be prepared in the same way as the turkeys which are to be plucked.

The killing may be done by dislocating the neck or in the following way:—A knife with a long narrow blade sharpened on both sides is best. The bird, with its legs tied together, is laid upon its back, its mouth is opened with the left hand, and the point of the blade is inserted into the slit in the roof of the mouth; a firm sharp cut is made into the brain cutting it along its entire length. The bird should be hung for a few minutes to allow the blood to drain out. Then the plucking should be done at once. The wings should be twisted under the back, and the legs also should be tucked up.

Keep More Sheep*

By Fred Hore, Valentia, Ont.

The subject of sheep-raising is one that receives comparatively little attention. It is, nevertheless, of great importance. When considering the advisability of going into any kind of business, the first question we naturally ask is: Does it pay? So the question I shall strive to answer is: Does it pay to keep sheep? I maintain that it does for four reasons—(1) Because a sheep-pen can be cheaply built; (2) because sheep can be cheaply fed; (3) because they require but little attention; (4) because they bring quick returns.

When we have decided to invest in sheep the first thing to do is select the breed we prefer. Some fancy the South-down, others the Shropshire, others the Cotswold; but give me the Leicester, because they are a very hardy sheep, of good size, and will produce a fine fleece. The lambs also will mature in time for the Xmas market, which we must cater to.

The size of the building required will depend upon the number of sheep you wish to keep. For a flock of, say from 12 to 16, a pen 15 by 24 will be sufficient, with a rack along one side or down the centre, as you may prefer. By all means, build your pen high enough to have a loft up over it, as it will save a great deal of work to have the feed always handy. If it is convenient to build by the side of or end of the barn it will save a considerable amount of lumber. One ply of lumber, if put on closely, will make the pen warm enough. By all means sheep should have a yard to run in by day, as they require plenty of exercise.

During the winter months sheep can be cheaply fed on pea-straw as their chief diet, and they will convert it into valuable manure, which will help build up the farm, a practice that is far more profitable than burning the straw or leaving it out in the field year after year to dry out in the sun. But this food alone is not sufficient, and sheep will not keep fat on pea-straw only. As variety is the spice of life, sheep will do better if they get a little cut oat sheaf, clover hay or alsike chaff occasionally. Also, they will be better with a few roots once a day. There is always a considerable amount of light grain and fine chaff on a farm which the fanning mill takes out. This can be profitably used by our little friends, especially in the spring, when they need a little extra feed. In the summer they will live where any other animal will starve, as they graze very close to the ground. We must admit that they are hard on clover. They are valuable as weed-destroyers, as they are

vigorous enemies of foxtail and other weeds of that nature.

In the first place, great care should be taken in selecting ewes for breeding purposes. Don't buy small fine-boned sheep at any price, as it will cost nearly as much to feed them as larger ones. They should be well quartered, long in the body, with heavy bone, a high and showy neck. And if Leicesters they should have a long dark nose (not black) and long thin dark ears. Then, in breeding use nothing but the best males that can be secured, as the lambs will be larger and better. You all know that no buyer wants scrubs. If you have some fine lambs they will buy them and allow you to throw in the rest for good luck.

In the fall sheep should be compelled to take shelter in wet weather if you wish to obtain the best results. Then, in the winter they must be fed twice a day and watered at least once a day. It is advisable to keep a mixture of salt and sulphur where they can always get at it, as this will supply the mineral substance necessary to prevent the wool from falling out. Of course sheep must have their bitters. So a little green balsam brush will supply this need.

But the main care is needed in the lambing season when they should be seen every few hours, and any ewes that may have twins should be put in a small pen for a while where they can get extra feed, and there will be no danger of one of the lambs getting lost. Then during the summer, especially the early part of it, they should be brought into the yard and counted every evening. This can easily be done by always keeping a trough there with salt in it, as they will always wander thither about the time the sun sinks to rest. If a lamb gets its head through a fence and you leave it there till it starves to death, it is not fair to call that bad luck. It is bad management.

Good ewes can be bought in the fall for about six dollars each. In the spring their fleece will be worth on an average at least one dollar. Then good ewes will raise on the average more than one lamb each, which will be worth about four dollars. So you see that from six dollars investment you will realize five dollars return in one year.

Now, taking into consideration the cost of building, the cost of feed and the labor required in looking after them, I would like to know what other animal will yield as good returns for the capital invested.

Every business, however, has its drawbacks. So many farmers give up keeping sheep on account of the useless dogs that are so numerous in this section. I claim that we as farmers and sheep-raisers should be protected from this one great enemy to our business.

In conclusion, I would not advise any one to give up keeping other domestic animals for sheep, because I believe the person who is going to succeed in this day of close competition is the one who has a little of everything. When one thing fails there is something else to fall back upon. "Keep more sheep."

Winter Dairying

By W. J. Casselman, Morrisburg, Ont.

In this section of the province winter dairying has been, and is being carried on profitably where certain conditions are complied with. The first thing necessary in profitable dairying is good dairy cows, for without *these* you will make a failure. To get a good herd of cows is no easy task. The best way is to raise them. Use as good a dairy bull as your money enables you to buy, and then raise the heifer calves from the best cows in the herd. In order to find out which cows are the best it will be necessary to weigh and test each cow's milk separately. This should be done at least once a month for at least two seasons.

Now if we have our good herd we must see that the cows calve at the proper season of the year when dairy products are the highest. The months of September and October is usually the best time. The cows, with proper care and feed, will milk until the middle of the next July or the first of August.

The next necessity is the proper kinds of feed. As profit is what is wanted, the corn plant should be one of

* A synopsis of an address prepared for Farmers' Institute meetings in Ontario, condensed for publication by the Superintendent.

the principal feeds. It can be silaged or used as fodder corn. In order to have the cows maintain their flow of milk during the winter it is necessary to supply them with plenty of succulent and nutritious feeds. For the amount of feed per acre, the corn crop is one of the cheapest, and the silo is the best place in which to save it.

Another and very necessary crop for the dairyman is the clover crop. Peas and oats mixed also make a very good milk food. These three should form the main bulk of the coarse feed. The oat and pea crop should be cut when in the milk stage, and if properly cured make a very good milk feed. In connection with the coarse feeds the cows should be fed a liberal supply of grain feeds mixed so as to form a well-balanced ration. This ration should be arranged to give the cows at least $2\frac{1}{4}$ lbs. of protein, 13 lbs. carbohydrates, and $\frac{3}{4}$ lb. of digestible fat. The best feeds for the production of a large milk flow are those which contain the largest amount of protein.

Cows must be well fed in order to give profitable returns. The feeding should be regular, as the dairy cow is a creature of habit, and when a change is made in her food it should be done gradually. One point in feeding dairy cows should always be borne in mind that it takes a certain amount of feed to maintain the cow, and what is fed in excess goes for profit. The milking should be done at a regular time, and the intervals between milking should be as nearly alike as possible. The labor problem is one of the most difficult the dairyman has to contend with. All of the work with the cows must be done faithfully and well. If the cows are not milked clean it does not take long to decrease the flow of milk. So it does not take long to cut off the profits. Also one great necessity is to have a warm, airy, well-lighted and well-ventilated stable, and warm enough so that nothing will freeze in it in the coldest of weather. Last but not least is the watering of dairy cows, which should be done at least twice each day, at regular intervals, with water not colder than 45° Fahrenheit. The cows should also be salted three times each week at least, or better still a little each day.

Raising Horses for Profit

By Alex. McCaskill

I want to impress upon the minds of farmers and breeders the great importance of producing the two following classes of horses: First, the carriage or coach horse with size, action, and all of the qualities that the market demands at the present time. And, second, the heavy draught horse, with all the shape, quality, style and action that can possibly be produced. These are the leading horses in our markets to-day; they are the most saleable, are in the strongest demand in all markets, and are the most profitable kinds to raise. In all American markets there is a strong demand for them, and with the revival of business throughout our country the demand for good horses is increasing, and we believe will continue to do so for many years to come. These kinds are also the classes that are demanded by the export trade, and this trade is the life and leading feature of our market. It has been increasing every year for the past four years, and has already become larger than the supply. And I believe from every indication that this export trade will continue to grow for many years to come.

These two classes have already advanced very much in price, and will sell for double the amount of money to day than they did in 1895. In the first place a breeder needs to get a good brood mare to begin with, whether it be for carriage or draught purposes. If he is going to raise carriage horses let him get a good carriage mare and then use the services of a carriage stallion. If he is going to raise draught horses get a good draught mare and use the service of a draught stallion. By raising the draught colt well the first winter and by keeping it growing right along, when it is three years old it can be broken to work. It should then do any ordinary work on the farm, and after

that its work will pay for its keeping until it is fit for the market. Sell off the older horses when they are four or five years old; they will then be ready for the market. I think a person could raise draught horses on a farm with as much profit as any other kind of live stock. I think there will always be a demand for draught horses. The lumbermen want them, the city trade needs them, and they are wanted in the British market. I saw a report a short time ago where McDonald, Fraser & Co., Glasgow, Scotland, sold 50 Canadian horses at prices ranging from 20 to 44 guineas each. If a farmer gets \$90 to \$100 for a horse it will pay him all right. We cannot do without the horse on the farm, as most of the farm work is done by machinery and horses. We must then keep on raising them.

Some Fallacies in Pig Feeding

Sanders Spencer, in the Transactions of the Highland Agricultural Society of Scotland, emphasizes the use of common sense in pig-feeding. Because for young pigs the best single food is shorts, and for pigs in the fattening stage, barley-meal, the belief exists that no combination of foods is more profitable than this. He points out that with the pig, as with human beings, a variety of food is not only appreciated by, but is also beneficial to it. The question of a mixture of foods is of, perhaps, the most importance to those pig-keepers who have at their disposal dairy offal. As is well known, skim-milk is a valuable food for both young and fattening pigs. Some pig-feeders, therefore, argue that it is not possible to give pigs too much skim-milk. It has, however, been demonstrated that a far greater return can be obtained from a comparatively small quantity of skim-milk when mixed with other foods than if fed alone, or even if it forms the major portion of the pig's food. This limited amount of benefit derived from feeding skim-milk in large quantities to pigs has led some to express the opinion that its value has been greatly overrated, when put at $1\frac{1}{2}$ d. per gallon. Mr. Spencer, in contradiction of this opinion, quotes the experiments carried on at the Wisconsin Experiment Station by Prof. Henry, which showed the great difference in the value of separated milk when used skilfully or otherwise in combination with other foods.

These experiments clearly proved that skim-milk, in varying proportions of from 1 to 3 lbs. to 1 lb. of corn-meal, was of nearly twice the value of the separated milk when mixed with one-eighth of its weight of corn-meal; or, in other words, that by using an undue proportion of milk to corn you reduced the feeding value of the separated milk by one-half. This explains the great divergence of views of different persons as to the feeding value of skim-milk.

As regards the question of separated milk being of less value for pigs than skim-milk, Mr. Spencer points out that in the latter there would be more butter-fat, owing to the fact that the separator extracts it more completely than hand-skimming, but he also states, what should need no demonstration, that butter-fat is too expensive a food to be fed to pigs. If fat is needed, other and cheaper kinds can easily be added to the milk.

PIG-FEEDING EXPERIMENTS.

Experiments have been conducted at the Midland Dairy Institute Farm, Kingston, Eng., into the much-investigated question of the relative value of separated milk and whey, respectively, when fed to pigs along with corn-meal; whether it is more profitable to sell the whey and separated milk at the dairy, at prices of $\frac{1}{2}$ d. per gallon for whey, and 1d. per gallon for separated milk, or to use these products for fattening pigs; and which of the following rations are most profitable for feeding pigs: Corn meal and water, corn-meal and whey, or corn-meal and separated milk, when the same money value of the three mixtures were used?

The rations given at first per head per day were for lot

1, 5½ lbs. of corn-meal and water; for lot 2, 3½ lbs. of corn-meal, 1 gal. of separated milk, and water as much as required; for lot 3, 4 lbs. of corn meal, 2 gals. of whey, and all the water necessary. The corn in all cases was scalded and allowed to soak for a few hours before it was fed to the pigs with the liquids. After twenty days the quantities of corn-meal were increased by 1 lb. per head per day, bringing the cost of ration per pig per day up to 3 1-6d.

The profits per head were as follows: Lot 1, 12s. 9d.; lot 2, 15s. 3d.; lot 3, 19s. 9. The cost per lb. of increase of carcass weight per day for the several lots were: Lot 1, 3.12d.; lot 2, 2 84d; lot 3, 2 48d. The carcasses of the pigs fed on corn alone were too thick and fat on the back and thin on the belly, and too big in the leaf; the flesh, too, was soft and did not set well. There was very little difference between the carcasses of the pigs given corn and separated milk and of those fed on corn and whey, both lots showing less leaf and more thickness on the belly, with a good proportion of lean. If anything, the corn and whey lot were firmer in flesh.

The experiments showed that 1 gallon of separated milk equalled in feeding value a little less than 2 gallons of whey; that it is much more profitable to turn the skim-milk and whey into pork than to sell them at the prices named above; that where separated milk and whey can be purchased at those prices and used in conjunction with the same value of corn, the quantity and quality of pork will be greatly increased, without any increase in the cost price. As seen above, in feeding value, corn and whey stood first, followed by corn and skim-milk, with corn alone far behind.

In another experiment to ascertain the relative values of barley-meal and corn-meal when fed in equal weights, together with equal quantities of whey, the flesh of the barley-fed pigs was leaner and set better than that of those fed on corn-meal. The latter, however, was of good quality and sold equally well. Corn-meal, moreover, proved a more profitable food and produced a greater weight of increase than barley-meal. No better prices were paid for the barley-fed pigs than those fed on corn-meal, although the former were pronounced better for the "curing trade." So long as this is done, there is no encouragement for the feeder to feed the dearer feed—barley.

GAIN IN FLESH OF SWINE FED ON DIFFERENT PROTEIN COMPOUNDS.

O. Hogamann, in the *Milch Zeitung*, writes on experiments conducted with pigs fed on various protein compounds. The preliminary feeding was on barley-meal. Four lots of pigs were tested, lot 1 receiving meat-meal and potatoes; lot 2, corn-meal, and, later on, ground oats; lot 3, barley-meal; lot 4, peanut cake and potatoes. In addition, all the lots were given salt, calcium phosphate, magnesium phosphate, and potassium chloride, the amounts being proportioned so that the ash content of the different feeding stuffs was equalized.

The largest gains were obtained with the lot of pigs fed on oats. Meat-meal proved to be the next most valuable material, followed by barley-meal and peanut-meal, the two latter being nearly equal as regards the gains made.

The Future of Horse Breeding

Americans are devoting considerable attention these days to the future of the horse. Some of them are very optimistic as to the possibilities of horse-breeding in so far as the United States are concerned and are looking forward to the time when the world's horse-breeding ground will be transferred from Europe to this continent. If that time should come, a condition which is not at all impossible of being realized, Canada should be in a position to get her share of the trade. But she will not be able to take advan-

tage of the improvement that seems to be coming to the horse breeding industry of this continent unless the breeders give more attention to breeding and raising the kind of horses the market demands.

The future of horse-breeding in the United States is treated in a very optimistic way by N. J. Harris in a recent letter to the *Chicago Stock Journal*, from which we take the following:

In the production of any article in a commercial way there are three prime factors to be considered, viz., cheapness of production, quality of product and a demand for the goods. The writer ventures the assertion that the horse breeding industry will soon assume proportions the like of which the world has not yet seen. There never has been a time in the world's history when all forms of productive interests, that of horse breeding included, were reduced so nearly to an exact science. First, a clear understanding as to the demands of the market, and secondly, the most economical methods in production. The ordeal through which the horse breeding interests have just passed has taught a very important lesson, viz., that through all those depressed times certain classes and styles of horses were in active demand at prices much above cost of production. Observation has taught the intelligent breeder that the large, active, energetic draft horse can only be grown where feed is abundant and nutritious all the year round and the climate salubrious, and, further, that nerve force and energy, courage and endurance, soundness in wind and limb, are the production of high altitudes, nutritious food, in condensed form in some arid regions. History records the fact that strictly first-class draft horses are found only in England, Scotland, Belgium, France and America, presumably from the fact that the environments of other civilized countries are not such as to produce a first-class draft horse. If any one should doubt for a moment that the United States can not produce live stock the equal, if not the superior to any other country, it is only necessary to refer to the fact that all forms of European live stock are improved on being subjected to Yankee environment and skill. The fleece and carcass of the Merino sheep have increased more than a hundred per cent. since its introduction. The highest price ever paid for a cow was given (at the New York York Mills sale) for the Shorthorn cow, the 8th Duchess of Geneva by an Englishman, to take back across the ocean to improve the English herds.

Shire and Clyde horses have been exported for like purposes. No one can question the quality of our light-harness horse as to wind and limb. Neither is there any question as to our ability and capacity to produce horses largely, nor in the cheapness of production. In these regards we have the advantage of Europe several hundred per cent. The writer heard an importer say that he bought a horse in Belgium that was costing his owner \$9 per month pasturage, about nine times what it would have cost Central Iowa. When the business of breeding fully crystallizes, as it soon will, in America, does it not look as though European breeders would be driven from the field? In fact, it is only a question of time, for the reason that the Americans are learning that a certain conformation is best for moving heavy loads at a walking gait, and not any particular breed. That the draft horse should be low, long and broad, whatever he may be called. Again, it is observed that the horses for moving lighter loads, at a more rapid pace, require a different conformation, but the same for all light work at quick action. The same size, style, action, grace and beauty, in a coach or carriage team, that would attract the attention of a sporty millionaire, in America, would impress a European prince similarly. It is further noticed that the exporter and buyer for home demand require the same class of horse for similar work, and horse, not breed, is called for. The buyer never asks how a horse is bred; he simply wants to see the horse. If he fills the bill he generally changes hands. The belief is gaining ground that all the heavy horses are the descendants of the Flanders horse, and only branches of families of the same origin, and are not fixed breeds, as some would have us be-

lieve, and that all the lighter horses originated from the desert, hence a common origin. Proof of this position is found in the fact that the heavier breeds can be interbred with great advantage if judgment is used in the mating. The best and most prepotent sires England or Scotland have ever produced were what were considered a cross between Shires and Clyde.

The same happy results have followed, combining the lighter horses. The breeder is looking more after conformation than after so called breeds, studying the classes and the demands of the market. This leads us to the last part of our subject—will there be a demand for what we raise? The answer is, if we raise what the world demands, namely, large, active, stylish, energetic draft horses, the coach and carriage, with size, style, action, beauty and grace, and the lithe, beautiful and sure-footed saddler. There are several sub-classes, such as army, fire and police, express and light delivery, buggy and drivers. These are the misfits of the above classes with less finish, but are nevertheless high-class utility horses. In other words, raise what the world wants and the world will be your market. Many European and South American countries have agents here looking for horses. Will this country strive to meet this demand?

Feeding for Egg Production.

The West Virginia Experiment Station publishes in Bulletin No. 60 the results of two years' work in feeding hens for egg production. The results are summarized as follows:

The principal topics discussed are: 1. The effect of nitrogenous and carbonaceous rations when fed to laying hens. 2. Floored vs. unfloored houses for poultry. 3. The effect of the age of fowls upon egg production.

In regard to the first, an experiment was planned in order to study the effect of these two classes of food upon the health of the fowls, the cost of the ration, the egg yield, the fertility and vitality of the eggs, and the strength, vigor and size of the resulting chickens. Three breeds were selected—White Leghorns, Light Brahmas and Rhode Island Reds. Each breed was divided into two similar lots, which were placed under exactly identical conditions except the food supplied to them. Both lots of fowls were fed each morning a ration of ground feed, mixed either with boiled potatoes or steamed clover hay. The grain mixture for the nitrogenous lot consisted of brown middlings, oil meal, ground oats and corn meal, in varying proportions. The carbonaceous lot received corn meal chiefly. At noon the nitrogenous fowls received a ration of ground fresh meat and bone, which was fed daily at the rate of from five to eight pounds per 100 fowls. At night both lots of fowls were fed all the whole grain they would eat clean, consisting of corn, oats and wheat screenings, the corn predominating for the carbonaceous lot.

Tables are given for each of seven 30 day periods, showing the amount and kind of food consumed by the different pens, also the weights of the fowls in the different pens at the beginning and the end of the experiment. The weights were very nearly the same at the beginning, but a surprising thing is that, while the nitrogenous fowls gained in weight 354 pounds, the carbonaceous lot gained only 34 pounds. The former gained in weight more than 10 times as much as the latter. The nitrogenous lot also laid nearly twice as many eggs as the corn-fed lot. It cost about 10 per cent. more to feed the former than the latter. To sum it up, the nitrogenous fowls gave more than four times as much net profit as the others.

In regard to the effect of the different rations upon the hatching of the eggs, the per cent. of infertile eggs was more than twice as great from the carbonaceous fowls, while the fertile eggs did not hatch so well as those from the nitrogenous lot. It was observed, too, that the nitrogenous eggs hatched from six to twelve hours quicker than the carbonaceous eggs under the same conditions. The chicks were also stronger and more vigorous. The eggs from the car-

bonaceous fowls were found to be smaller than those from the other lot, after the experiment had progressed for some time. Both lots remained healthy and vigorous. The same experiment was duplicated the following year, using White Leghorn pullets and hens, with practically the same results.

Comparative tests of fowls kept in floored and unfloored pens, showed the best results from the latter. This is surprising in view of the fact that the ground was a damp clay. The only explanation is that the unfloored were warmer than the floored houses. It is recommended, however, that if floors be not used, the houses be filled in and made dry underfoot.

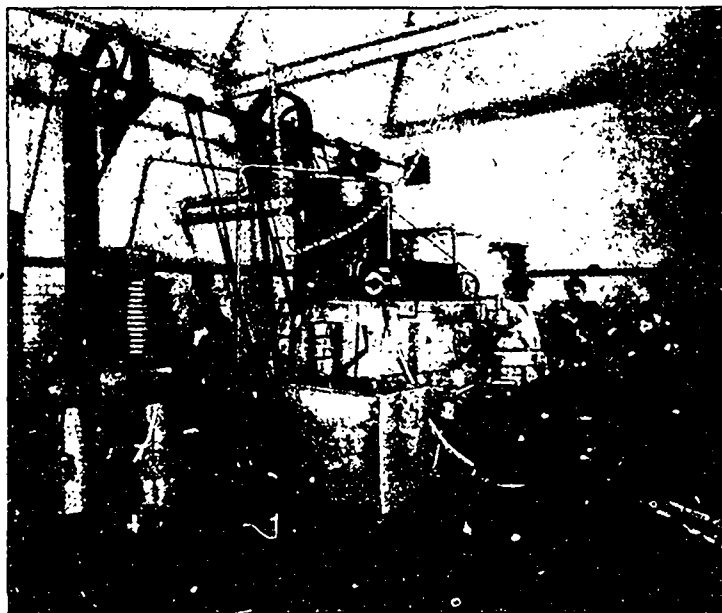
In the tests to show the effect of age upon egg production, White and Brown Leghorn hens three and four years old were used to compare with pullets of the same breeds. The pullets did not quite equal the hens in egg production, but they gained 143 pounds in weight, while the old hens gained 84 pounds.

The results obtained as to the value of old hens and pullets for egg production are the directly opposite of those obtained at the Utah station, a summary of which was given in FARMING for October 10th last. At the Virginia station the pullets did not quite equal the old hens in egg production while the tests at the Utah station showed the profit from young hens or pullets to be fully five times greater than from old hens. We are inclined to the view that the latter results are more nearly correct.

The Salenius Radiator Butter-Maker

Tested at the Quebec Dairy School

This new contrivance for butter-making, devised by a Swede named Salenius, has recently been submitted to a public test at the dairy school of St. Hyacinthe, Que. Judging from the favorable reports published, this machine is well worthy of consideration, and a brief insight into its work will, no doubt, be of some interest to the readers of FARMING.



A model English creamery, showing Salenius Radiator at work.

This apparatus acts as a combined separator and churn, the butter being made directly from the milk. The milk is pasteurized, then cooled to the ordinary skimming temperature before being sent into the machine. The butter comes out on one side as a mass of very fine and soft grains, still mixed with a certain quantity of milk. This milk is removed from the butter by an agitator and replaced by skim-milk which has been slightly acidified by means of a starter. After the butter has been immersed

in this liquid long enough to acquire the desired aroma it is worked in the usual way.

In the old process the butter acquires its flavor during the ripening of the cream before the churning. In the new process this aroma is imparted to the butter by means of skim-milk ripened separately. In both a certain quantity of milk stays in the butter after it has been worked.

We quote from an article published in the *Journal d'Agriculture*, by Mr. H. Pihier, a detailed account of the different parts of the machine :

"The Salenius radiator is composed of :

"(1) A pasteurizer where the milk is carried to a temperature of 158 to 170° F.

"(2) A refrigerator where it is cooled down to a suitable temperature for separating, viz., 125° F.

"(3) A separator presenting certain peculiarities though not noticeably differing from anterior types. The skim-milk escapes from it at the skimming temperature.

"(4) By an ingenious contrivance the cream goes back into a second refrigerator set upon the axle of the turbine where a swift current of cold water cools it down to about 60° F. From there it is forced into a tube by the acquired speed, from which it is projected as a fine rain, radially—hence the name *Radiator*—against the inside wall of the refrigerator. This inside wall is perforated with numerous small holes, through which the cream passes. On the other side of this wall it meets the coloring matter dropping from a cup arranged to that effect. This mechanical work acts as a churning and caused the agglomeration of the fat globules.

"(5) The butter grains thus formed are collected with a small part of the buttermilk in a drum where a set of vertical paddles shoves the mass toward the exit."

Although the test to which this apparatus has been submitted cannot be considered as sufficient to preclude all doubts as to the satisfactory working of its parts, yet the observations taken so far have brought nothing to disprove the claims of the inventor.

From a mechanical point of view the separator is as safely built as our best types, but the task of taking it to pieces for clearing is somewhat more complicated. The skimming could not be improved as the loss of fat is reduced to a minimum.

The quality of the butter seems to be satisfactory. Nothing definite can yet be said as to its keeping qualities, but samples are now under test to determine this latter point.

As to the advantages resulting from the use of this machine, the most important would certainly be an increased regularity in the quality of the butter as well as an increase of this quality: the ripening of the small quantity of milk required to impart an aroma to the butter offering less difficulties than that of a large quantity of cream. To this may be added the reduction in the number of butter-making utensils—a saving of hand work, of time, and space. But it is yet doubtful whether these secondary advantages would not be more than counterbalanced by the high price of the Radiator, the cost of which is far above that of any of our present separators.

Alfalfa or Lucerne.

Experiments in Cutting and Feeding.

A series of experiments lasting over five years has been carried on at the Utah Experiment Station to determine at just what time in its growth alfalfa should be cut for best results, composition, annual yield per acre, and feeding value all being taken into account. In this connection the feeding value of such well-known rough feeds as timothy hay, corn-fodder and red clover has been compared with that of alfalfa. For this experiment a field of alfalfa was divided into three equal parts, one being regularly cut when the first blooms appeared, the second when in full bloom, and the third when half the blossoms had fallen, these being denominated early, medium and late cuttings, respectively. Incidentally, there was made a comparison of the first, second and third crops.

The details of this investigation are reported in Bulletin No. 61 of the above station, and the following are the more important facts, together with the conclusions that may be legitimately drawn from the results :

1. The largest annual yield of hay per acre is obtained by the method of early cutting and the lowest by the late, the average result standing as follows: Early cutting, 100; medium, 92; and late, 85.

2. The early cut alfalfa contains the highest per cent. of protein and fat, the most valuable food constituents, and the lowest per cent. of crude fiber, the most indigestible portion. The former decrease constantly, while the latter increases rapidly from early bloom to the full maturity of the plant.

3. The proportionate amount of leaves to stems is greater at early bloom than at any subsequent time, and both leaves and stems contain a greater per cent. of protein and a less per cent. of crude fiber at this time than at any later period in the growth of the plant. The relative proportion of leaves to stems in the different cuttings is as follows: Early, 42 to 58; medium, 40 to 60; late, 33 to 67.

4. Alfalfa leaves as compared with stems are very much richer in protein, fat and nitrogen-free extract, and they contain a much smaller proportion of crude fiber. The per cent. of the protein and fat grows constantly less and that of the crude fiber greater from the time of early bloom to maturity. The average composition of all cuttings and crops shows the leaves to contain 150 per cent. more protein than the stems, 300 per cent. more fat, 35 per cent. more nitrogen-free extract, and 256 per cent. less crude fiber.

5. The more important nutrients, protein and fat, have the highest per cent. of digestibility in the early cuttings, and it grows less and less with the age of the plant.

6. In the feeding tests, the highest gains were made from the early cuttings and the lowest from the late, the results standing proportionately as follows: Early cutting, 100; medium, 85, and late, 75.

7. The variation in the amount of the different cuttings eaten per day was very slight, being the highest for the early cutting and the lowest for the late, but the quantity of dry matter and also of digestible matter required for a pound of gain was decidedly lowest for the early cutting and highest for the late, the relative amounts of dry matter standing as follows: Early cutting, 100; medium, 131, and late, 166.

8. The annual beef product per acre was largest from the early cuttings, not only in the general average but in each separate season's test, and that from the late cuttings was smallest, the proportional products standing as follows: Early cutting, 100; medium, 79½, and late, 69½.

9. Taking all points of comparison into consideration, both separately and collectively, including everything that pertains to the largest yield and highest feeding value, the tests favor cutting alfalfa for cattle-feeding when the first blooms appear.

CROP COMPARISON.

10. The first crop gave the largest yield in each of the five tests and in fourteen of the fifteen cuttings, while the third crop gave the lowest for every test and in every cutting but one. The average acre yields for the five years, including all cuttings, stand in the following relation: First crop, 100; second, 78; and third, 39. For the early cuttings alone: First crop, 100; second, 83; third, 66.

11. In the average composition of all cuttings for three years, the nutrients of the three crops vary but little. The second has slightly the highest per cent. of protein and fiber; and the third the most fat and nitrogen-free extract.

12. The third crop has largest proportion of leaves to stems; but the per cent. of protein in the leaves is highest in the second crop, and next highest in the first. The leaves of the first crop contain the most fat, and of the second the least.

13. The third crop produced a higher average rate of gain in the feeding tests than the first or second and also higher than any of the separate cuttings. The amount

eaten daily was also highest of all, but the dry matter and digestible matter for a pound of gain were the lowest. In a pound per pound comparison the gains stand as follows: First crop, 100; second, 81; third, 126. Dry matter for a pound of gain: First crop, 100; second 115; and third, 69

14. The beef product per acre, taking the average result of all cuttings for the five years, was very much the highest for the first crop, and decidedly the lowest for the third, standing as follows: First crop, 100; second, 61; and third, 45. But taking the early cuttings alone they stand: First crop, 100; second, 80; and third, 69.

15. Pound per pound, taken as a whole, the results show the highest feeding value for the third crop and the lowest for the second.

16. The average annual beef product from early-cut alfalfa was 705.61 pounds per acre; it required 9,575 pounds of timothy to produce an equal weight; 11,967 pounds of red clover, and 10,083 pounds of shredded corn fodder.

Dairying vs. Cattle Feeding

The following comparison as to the profits to be derived from dairying and feeding cattle was given by Mr. Samuel Dart, Fanshawe, Ont., at an Institute meeting last February. According to his statement, which, we think, many cattle feeders will entirely disagree with, the farmer who feeds cattle for the British market will lose money very fast. In fact, if he kept on feeding a number of cattle for a few years, he would soon have to mortgage his farm to make up for his losses. But such a condition of affairs has come to few cattle feeders who understood their business, and there are many farmers in Canada to-day who have made as much money out of feeding cattle as others have out of dairying. If properly managed both will furnish good returns to the farmer:

PROCEEDS OF A GOOD COW FOR ONE YEAR.

Month.	Milk lbs.	Price per cwt.	Butter.	Skim milk at 14c. cwt.	Cash.
15th March to 15th April	930	70 cts.	6.51	1.30	7.81
To 15th May.....	900	70 cts.	6.30	1.26	7.56
			cheese		
To 15th June.....	1,240	112 lbs. at	7½	....	8.40
To 15th July.....	1,050	95 "	"	....	7.14
To 15th August.....	900	75 "	"	....	5.72
To 15th September.....	780	71 "	"	....	5.32
To 15th October.....	720	65 "	"	....	4.87
To 15th November.....	600	60 "	"	....	4.50
			butter skim milk		
To 15th December.....	450	70c.	3.15	48	3.63
To 15th January.....	360	70 "	2.52	60	3.12
To 1st February.....	75	70 "	2.52	02	3.54
			whcy		1.00
	8,005				\$59.61

COST OF FEEDING AND MILKING SAID COW FOR ONE YEAR.

	Chop, bran.	Hay, roots.	Milking.	
15th March to 15th April..	3.00	1.50	50c.	5.00
To 15th May.....	3.00	1.50	50	5.00
	Pasture.			
To 15th June.....	1.50	1.50	50	2.00
To 15th July.....	1.50	1.50	50	2.00
	Green corn.			
To 15th August.....	1.50	50c.	50	2.50
To 15th September.....	1.50	50	50	2.50
To 15th October.....	1.00	1.50	50	3.00
To 15th November.....	1.75	2.00	50	3.25
	Chop, bran. Corn fodder and hay.			
To 15th December.....	2.00	1.50	50	4.00
To 15th January.....	2.00	1.50	50	4.00
To 1st February.....	1.00	75	25	2.00
To 15th March.....	2.00	2.50	25	4.50
				\$39.75
				39.75

Net profit on one good cow for one year when well fed..... \$19.86
A fair stock for 100 acres would be twenty cows, and the net profit at the above rate would be 397 20

Proceeds of a good steer for export for one year from 2 to 3 years old, assuming the steer at 2 years old to weigh 1000 lbs., at 3 years old to weigh 1400 lbs., the net gain would be 400 lbs. 400 lbs. of live weight at 43c. per lb.....\$19.00

COST OF FEEDING A GOOD EXPORT STEER FOR ONE YEAR.

6 months good pasture at \$1.50 per month.....	\$9.00
6 months feeding in stable { Chop, 10 lbs. per day.... 10c.	
{ Roots 30 lbs. " 2	
{ Hay, 16 lbs. " 4	
	16c.
To six months feed in stable at 16c. per day would be \$4.80	
per month or 180 days at 16c.....	28.80
	\$37.80
	19 00
	18.80
Add 3/4c. to 1000 lbs. increase of price from a store to a fat steer.....	7.50
Balance against the steer.....	\$11.30
Allow the manure in both cases for the labor and throw in the straw.	
It costs \$1.95 more to feed the cow than the steer. Assuming that 20 steers would be a fair stock for 100 acres the net loss would be.....	\$226.00
Let us suppose that what will make 1 lb. of live weight will make nearly 1 lb. butter.	
The net cost of the cow to start with.....	\$40.00
The net cost of the steer, 1000 lbs. at 4c.....	40.00

CORRESPONDENCE

More About the Blower

To the Editor of FARMING:

My blower elevator is giving good satisfaction. I use an ordinary engine for power. Its capacity is 12-horse power but the blower does not require all this power to run it.

My silo is 30 feet high, but I think the blower would elevate the ensilage 50 feet or more.

The blower is preferable to the carriers. It is much easier put up and taken down and there is no litter around after it. Everything that goes in is elevated. The blower requires steady power to run it. If the power lags the pipe will soon fill up. Nothing but an engine would run a blower satisfactorily.

Aylmer, Ont., Oct. 20th, 1899.

E. W. H. LAIDLAW.

Fertilizers

More Information Wanted Regarding Them

To the Editor of FARMING:

I was greatly pleased with the articles in recent issues of FARMING on Fertilization and Soil Restoration as well as those on "intensive" farming by Mr. D. M. Macpherson and others which appeared last year.

These subjects, it seems to me, are of the greatest possible importance to us farmers and I believe a collection of the articles referred to in pamphlet form would meet with a ready sale and be the means of doing good. They should be read by every farmer.

In this country such fertilizing agents as the home resources of the farm will readily supply must necessarily be our chief dependence and the articles on their care, management, application and value are especially important, at the same time I do not wish to depreciate the value of artificial or commercial fertilizers. I believe them to be essential to the best results and an excellent supplement to farm-yard manure as well as an economizer of it.

I notice that the application of lime is recommended by some of your correspondents. It is so easily obtained and so cheap that it may very well be classed with the "home resources," and I have no doubt will be found to give excellent results when used in proper quantities and the best way of being applied.

Perhaps some of your correspondents will kindly give us more definite information about it.

Lime has not been much employed as a fertilizer in this locality and some of us would like to have further light on the subject.

Blyth, Ontario.

THOS. LAIDLAW.

The Dominion Live Stock Commissioner

Mr. Hodson's Work for all the Provinces; Mr. Gibson's Letter Commended

To the Editor of FARMING:

Those who have taken an interest in the work which has been and is being done by the various live stock associations of this country reasonably hope and expect that much good will result from the appointment of a live stock commissioner for the Dominion. That the gentleman appointed is eminently fitted for the position goes without saying. He has proved himself a very strong man in the past and he is not likely to fail us when he takes up the work in the larger field of the Dominion.

It is perhaps a little early to speak of the probable lines along which work will be carried out. Much thought will require to be given to the subject so that the start may be wisely made. Mr. Richard Gibson, however, in a letter in last week's FARMING very properly draws attention to the fact that an effort should be put forth to develop trade in pure-bred cattle with the people of the Argentine Republic. There can be no doubt that if a portion of that trade could be diverted to this country it would be to us of great value. However, it is safe to say that with the Hon. Mr. Fisher as Minister of Agriculture, aided by men like Professor Robertson, and Mr. Hodson as Live Stock Commissioner, much good work will be done in promoting inter-provincial and international trade along these lines.

Further, referring to Mr. Gibson's letter in FARMING, it was pleasing to read a few well chosen words from his pen speaking of the good work which our newly appointed Live Stock Commissioner has done in the past, and foretelling the good results which are likely to follow in the larger field in which his work will soon begin. I have drawn attention to Mr. Gibson's letter for the reason that there are few men in this country better qualified to deal with the subject, and following as it does an article in a previous number of FARMING, written by Mr. J. A. Macdonald, of Kings County, P.E.I. In that article Mr. Macdonald goes on to say: "I would caution Mr. Hodson in his new position to recognize the fact that our wide Dominion comprises more live stock than is found in Ontario. Since Mr. Hodson has been Secretary of the Dominion Cattle, Swine and Sheep Breeders' Associations his labors have been entirely in the interest of Ontario stock-breeders, while breeders in the Maritime Provinces and other parts of Canada have never been recognized by this F. W. Hodson. Now that he will occupy a much more prominent position in the Dominion Department of Agriculture it is to be hoped that he will at least stifle his prejudices in favor of the Ontario breeders and work in the interests of the breeders of every province in Canada alike. Nevertheless, I cannot believe, from his close association with breeders of his native province, that he can do this."

The above is a good illustration of what public men sometimes have to suffer. The statements made by Mr. Macdonald are unjust and ungenerous in the extreme.

Those who know Mr. Hodson and what he has done know well that he has given not a few of the best years of his life in hard and earnest work in striving to advance the stock interests of this country, and we also know that splendid results have followed those efforts.

Who has been the most earnest of all the promoters of the Live Stock Associations?

Has there been any other man in all the Dominion who has done as much as he has done in assisting and promoting the organization of live stock associations in the other provinces? Did Mr. Hodson use his influence for or against the money grant which was given by the Dominion Sheep and Swine Breeders' Association to the association in Manitoba?

Who was it that worked so determinedly to obtain cheap rates for pure-bred live stock from Ontario westward and

now from Ontario eastward? I know whereof I speak when I say that after half rates had been secured for Ontario, all that could possibly be done by Mr. Hodson was done to have them extended to the Maritime Provinces. I think I am correct in saying that as a result of that work each of the provinces enjoys the privilege of sending pure-bred animals from point to point at half fares. Besides all that, we must not forget that while the other provinces have benefited largely by what has been done from a central point yet it was paid for by Ontario.

JOHN I. HOBSON.

Guelph, Oct. 26, 1899.

The Best Canadian Agricultural Paper Wanted in the States---Lessons Therefrom

To the Editor of FARMING:

A. H., New York city, writes me under date of Oct. 7th as follows: "Will you be kind enough to inform me what in your opinion is the best agricultural periodical published in Canada, the annual subscription price, and whether or not you consider it as valuable a publication as the *Country Gentleman*?"

Replying to this correspondent I may say that I have much pleasure in recommending FARMING, published weekly at Toronto, Can., at a dollar a year, as the very best agricultural paper, beyond cavil, published in Canada today. Besides, this correspondent presumably needed a weekly, and as FARMING is the only strictly farm paper published weekly in Canada, I had no other alternative. Whether FARMING is as valuable a publication as the *Country Gentleman* is another matter. The *Country Gentleman* is a \$2 a year paper, while FARMING is but a \$1 paper. All I can say in this regard is that FARMING compares as favorably with the *Country Gentleman* as any dollar weekly published in the United States does, and is a credit not only to its editors and publishers, but to Canada as a whole. The gentleman in question is up-to-date in his farming methods, operating a large farm in central New York, though residing in the city, and has for a couple of years past made purchases of Tamworth swine of me. It was gratifying to me to note the postscript to his letter, "The pigs you sent me are flourishing finely."

There is more in this enquiry than appears on the face of it. Here is an American of education, wealth and business ability looking to Canada for pointers to help him farm better and raise finer stock. May we not conclude that, as straws show the way the wind blows, this man is but a representative of a large number of the foremost farmers and stock-raisers in the United States. If this is so here is a hint to the publishers of FARMING. There are others that would want to subscribe for an up-to-date Canadian farm paper if they knew of FARMING of Toronto, Can. And why?

Time it was not so long ago when our friends across the line turned up their noses at anything Canadian—methods, markets, trade, etc., but a change has been wrought. The high eminence attained in the last few years in the world's markets of our Canadian cheese, Canadian bacon and Canadian pure-bred stock has set the people of the eastern half of the United States thinking, and instead of "looking down" upon "Canadians," now "look up" to us and, a go-ahead people as they are, seeing that we have learned to produce better cheese, better bacon, better blooded stock, they now want to learn of us. This is certainly flattering, and reason and sense will warn us not to get unduly puffed up at our seeming greatness.

J. A. MACDONALD.

King's Co., P. E. Island.

The Agricultural Gazette

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

VOL. III.

No. 4

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

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

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

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

A member of the Sheep Breeders' Associations 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 9,000 copies of this directory are mailed monthly. Copies are sent to each Agricultural College and each Experiment Station in Canada and the United States, also to prominent breeders and probable buyers resident in Canada, the United States and elsewhere.

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

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

F. W. Hodson, 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 for farm or dairy, is requested to forward his or her name and full particulars to F. W. Hodson, Secretary Live Stock Association. 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.

Help Wanted.

A good reliable stockman wanted. Must be accustomed to taking care of both cattle and horses. No 152. a

Dairyman and livestock man wanted to take charge of a large dairy herd and other stock on a 260 acre farm, Minnesota. No. 148. a

Married man wanted as farm manager. Must be pushing, careful and entirely trustworthy. Give particulars as to position or positions held during the past four or five years. References wanted. No. 150. a

Domestic Help.

Working housekeeper for widow on farm. Must be first class plain cook and laundress, tidy about person and work, and able to go ahead without overseeing. No other need apply. Wages to begin with \$8 per month. If satisfactory a permanent situation. Family of six. Apply to Mrs. A. M. B. Stevens, Peebles, Ont. a

Situations Wanted.

A young man used to mixed farming wishes a situation. First-class references. No. 149. a

Married man, having experience in both Ontario and Manitoba, wishes a situation as foreman of a farm. Ac-

customed to the care of all kinds of live stock, including poultry. No. 151. a

N.B.—Where no name is mentioned in the advertisement apply to F. W. Hodson, giving number of advertisement.

Special Notices.

Regarding Work of the Past Year.

The Institutes holding the largest number of meetings are:

Hastings, North	21
Waterloo, South	16
Ontario, North	14
Simcoe, East	13
Middlesex, North	12
Victoria, East	11
York, East	11
Bruce, West	10
Perth, North	10
Prince Edward	10
Lambton, West	9
Lanark, North	9
Port Carling and Bala	9
Ontario, South	9
Parry Sound, West	9

The Institute meetings which were the most largely attended were:

	No. of Meetings.	Total Attendance.
Peterboro, East	6	3,645
Waterloo, South	16	3,410
Middlesex, North	12	2,985
Lanark, North	9	2,895
Bruce, South	6	2,625
St. Joseph Island	7	2,574
Halton	6	2,540
Perth, North	10	2,425
Dundas	5	2,360
Victoria, East	11	2,109
Hastings, North	21	2,054
Simcoe, East	13	2,041
Leeds, South	7	2,035
Wellington, East	7	2,020
Lanark, South	7	2,005

The Institutes having the largest membership to July, 1899, are:

Waterloo, South	510
Hastings, North	438
Halton	417
Peel	416

Ontario, North 406
Lanark, North 365
Middlesex, North 359
Prince Edward 315
The Institutes having the smallest membership are:

Essex, North	43
Union	54
Amherst Island	55
Port Carling and Bala	61
Muskoka, Centre	65
Renfrew, North	66
Addington	67
Muskoka, South	78

Poultry Department of the Fat Stock Show to be a Big Thing.

Farmers will have a grand opportunity of making themselves acquainted with the truths of the poultry industry in December next. There is no opposition to the statement that there is money in poultry; in fact, those few farmers who have kept an account readily acknowledge that, properly managed, it is the best paying department on the farm.

The Fat Stock Show at London, December 11th to 15th next, will attract the principal stock breeders of the country, and such arrangements have been made by the management of the show that the exhibition of dressed poultry will be the best ever attempted in Canada. It will be an education for many who have long desired to investigate the subject, and the opportunity should not be missed.

Breeding poultry is a profitable undertaking, but it is clear that the farmers of Canada yearly lose thousands of dollars through reduced profits, by a want of knowledge of how best to feed, the requirements of different breeds, the advantages of fattening, and the marketing at a season when prices are high. All these points will be discussed by experts, lectures being given each day at the show. Professor Robertson will be up from Ottawa, and none better than he can give the requirements of the British market. Experts, under his direction, will kill, pluck and dress poultry, prior to which will be illustrated the method of cramming adopted in Europe.

The poultry committee consists of four of the best known poultrymen in Canada, namely, Messrs. Bogue and McNeil, of London; Meyer, of Kossuth; and Essex, of Toronto; who will be on the spot to give such information as may be requested.

The prize list is made up of all varieties of dressed fowl, so that the uninitiated may judge for himself what breed makes the best table fowl. The prize money exceeds anything ever offered in Canada, and will doubtless

attract farmers from all over the country, especially as the entrance fee is only 25c. For a farmer or a farmer's wife, interested in poultry, it will be the chance of a life-time, and the means of a considerable addition to the income from this important branch of farm life.

Prize lists can be obtained from the secretary, Mr. F. W. Hodson, Parliament Buildings, Toronto.

The Institutes in Their Relation to Farmers.

By Col. O'Brien, Shanty Bay, Ont.

It is worth while before beginning the work of another year to enquire what results have been attained in those which have gone by, and especially to ascertain how far the farmers themselves have derived any practical benefit from the efforts which have been made on their behalf. In the first place it may be said that the institutes, through the meetings which they hold, are the machinery by which the results of the scientific investigations carried on in our experimental farms and colleges are made known to the farmers. To a great extent this is done by the distribution to the members of the institutes of the publications from the experimental stations. In this way, at a nominal cost, the farmers receive the fullest and latest information from the various subjects in which they are interested. A few of these may be mentioned to show the practical value of such information. It is not too much to say that in the matter of dairying, in its two great branches of cheese and butter making, a complete revolution has been effected which has increased the value of these productions by millions of dollars. Our export of cheese has risen to the enormous annual value of over seventeen millions of dollars. It is true that in the making of cheese, private enterprise has already laid the foundation for this great and profitable industry, but scientific investigation has largely aided in its progress and development. Errors have been detected, better methods have been suggested, and a sure basis has been found, by chemical analysis, upon which the work should be carried on, so that much that before was a matter of conjecture is now reduced to absolute certainty. The art of butter-making hitherto depended for success upon the individual skill of the dairy woman, from having been scientifically dealt with, can now be carried on with the same certainty as to result as any other manufacture. With such success has this been done that a new article of export has been created which bids fair to rival in value the article of cheese, and to double the return from every pound of milk which the farmer produces, to say nothing of the saving of labor to the women of the household. In proof of this we have the fact that the butter

exported in 1896 was valued at over \$1,000,000, while in 1897 it rose to the value of over \$21,000,000.

Again in regard to the cultivation of the soil, upon which success in every branch of agriculture depends, and on the application and treatment of manures, how many improvident methods have been pointed out and improved ones suggested—all based upon investigations and experiments which no farmer could carry on for himself. For instance, the farmer has not only been taught that frequent surface cultivation of the soil between the rows of his turnips and his corn helps the growth of these crops, but he has been given the scientific explanation of the fact.

Again, having been shown what are the various substances of which plants and animals are composed, he is taught the value of all kinds of both plant and animal food—where they are to be obtained and how and in what proportion they are to be used. For example, he is shown the value of clover as a manure, and how that value is obtained. He is informed as to the relative value of food for his cattle, and for the production of beef and milk, of the produce of the turnip field and of the silo, of the precise period at which his corn should be cut, and in a variety of ways he is thus enabled to avoid mistakes and to carry on his work to the best possible advantage.

But not only in the distribution in a written form of this kind of teaching is the Institute of value. By means of lectures and addresses, and in the discussions which follow and the explanation then given, many persons are more impressed, and better informed, than by reading. And we get another valuable result from these meetings. The mind of the farmer is liable to stagnate and grow dull while merely going on in the way to which he has been accustomed, doing things he knows not why, ignorant of the most elementary facts on which success or failure depends, is roused by attendance at these meetings to think and to enquire for himself, to find out what others do and think, and thus go to work on new methods, and not only to do things but to understand why he does them, or why he should not do them, in short, the intellectual side of his nature is stirred and he becomes a thinking and reasoning as well as a working man.

This result leads to one far reaching and most useful. The farmer, from this teaching, begins to learn the true nature of his calling. He sees that it is not that of a mere clodhopper, cut off from all that is interesting or ennobling, either of body or mind. He finds out that it calls into play all the resources of nature—that the sciences of geology, chemistry and botany, and indirectly many others, are tributary to it—that the most hidden things of vegetable and animal life must be enquired into for his benefit, that not only must

he plow his land, but he must learn of what the soil is composed, what it has and what it lacks; one substance required he must abstract from the air, another he must supply in the shape of manure, and so with every operation on his farm he perceives that he has use for a greater variety of knowledge, and a wider scope for the exercise of his mental faculties than any single pursuit that can be mentioned.

This again points out a way in which we may hope to overcome one of the greatest difficulties. We have frequently had cause to regret the fact that so many of the best of our young men turn away from what they deem the dullness and the drudgery of the farm to seek happiness and fortune in what seem to be easier, or more intellectual modes of life. What better cure can there be for this unfortunate condition of things than showing how mistaken is the idea that the life on the farm should be either dull or void of interest, unless the farmer chooses to make it so by shutting his eyes and closing his ears to the possibilities, as well as the necessities of its existence? With enlarged ideas upon this subject will come a desire for better cultivation of the mind, as well as of the soil. And with mental self-respect will come more respect for the person, and all his surroundings. The terms of slight, if not contempt, sometimes applied to the farmer for his too often slovenly appearance will cease to be applicable, and in dress and demeanor he will be able to hold his place both at home and abroad with the best in the land.

If ends such as these (and the list is by no means exhausted) can be practically attained by the operation of the Farmers' Institutes, who will say that the trifling cost of time and money which they entail will not be repaid a thousand fold?

The Ventilation and Temperature of Stables.

By Dr. J. W. Smelser, V.S., Woodbridge, Ont.

The proper ventilation of our stables has great influence in determining the health and vigor of the animals lodged in them. Although attention of late years has been directed to this subject, and considerable improvements carried out in the management of some of our best stables, yet as a general rule the ventilation of the majority of stables will be found very deficient. The breathing of pure air is essential to the health of man and beast, and in proportion to the purity of the air inhaled will be found the vigor and efficiency with which the functions of the body will be performed. There are two chief sources from which the impurities of the stable are derived, namely, the changes produced in the air by the process of respiration and the gaseous matters which are formed by the decomposition of excrementit-

ious and other refuse matters owing to neglect or the want of proper drainage. The air in its ordinary state consists of two principal gases, namely, oxygen and nitrogen, about twenty-one volumes of the former and seventy-nine of the latter, in addition to small quantities of carbonic acid. Either oxygen or nitrogen in a separate state or combined in any other proportions would prove destructive or injurious to life but in the atmosphere. They are blended together in such proportions that the destructive properties of each are neutralized.

The function of respiration comprises the twofold process of inspiration and expiration. At each inspiration made by the animal a considerable quantity of air passes into the lungs, and, having penetrated to the remotest parts of the bronchial tubes, enters the air cells, thence through the capillary vessels into the blood, which has been rendered impure in its circulation through the system. A peculiar change here takes place between the air and the blood. The oxygen of the air combines with the blood, and, uniting with the carbon contained in it which renders it impure, forms carbonic acid, thus rendering it again fit to pass on and supply the wants of the system. The carbonic acid and nitrogen (both in their present state destructive poisons) are expelled from the lungs by the process of expiration into the surrounding atmosphere. The effect of several horses being shut up in the same unventilated stable is to completely empoison the air, yet even in the present day, particularly in agricultural districts, there are too many who carefully close every aperture by which a breath of fresh air can gain admission. The result is, with the breathing of every animal the contaminated air passes again and again through the lungs. The blood cannot undergo its proper and healthy change, digestion will not be so perfectly performed, the nervous system will suffer, and all the functions of life be more or less impaired. and, under such conditions, one need not be surprised at finding sore throat, inflamed lungs, diseased eyes, etc., making their appearance.

Another source of impurity to the air in stables is the presence of deleterious gases resulting from the decomposition of the excretion of the animal and vegetable substances. The principal gases involved are the compounds of sulphur and carbon with hydrogen and ammonia, all more or less injurious to the health. When a person just enters an ill-ventilated stable in the morning he is annoyed not only by the heat of the confined air, but by a pungent smell resembling hartshorn. The urine contains exceedingly large quantities of compounds easily converted by decomposition into ammonia. Influenced by the heat of a crowded stable and possibly by other decompositions that are

going forward at the same time this ammoniacal vapor begins to be given out rapidly almost immediately after the urine is voided. When disease makes its appearance in these badly ventilated stables, is it strange that it spreads with alarming rapidity? When influenza appears in the spring time or in the fall, it is in very many cases due to this cause. The horses of a small establishment rationally treated have it comparatively seldom or have it slightly, but in crowded stables it is sure to prove itself most fatal. The experience of every veterinary surgeon and every large proprietor of horses will corroborate this statement.

Of nothing are we more certain than that the majority of maladies of the horse, and those of the worst and most fatal character, are directly or indirectly to be attributed to a deficient supply of air, cruel exaction of work, and insufficient or bad fare. While the stables of the cavalry forces of Great Britain had poor ventilation the fatalities of disease were enormous, but after the sanitary conditions were improved, diseases which formerly affected whole troops almost entirely disappeared. The poisonous effects of carbon monoxide, which is the gas used for lighting purposes, are well known. It is a common occurrence for whole families to be prostrated from its effects. It has a great affinity for the blood, and displaces the oxygen, death being the result. In like manner the other gases previously mentioned, although perhaps not so poisonous, have a serious effect on the blood. They have a tendency to displace the essential elements of aspiration and life, causing pathological change in the system.

The temperature of the stable is also another important factor. This should seldom exceed 70 or 75 degrees in summer or below forty in winter. The hot stable is thought by some attendants of horses to produce a glossy coat. In winter a thin glossy coat is not desirable. Nature gives to every animal warmer clothing when the cold weather approaches. Horses used for agricultural purposes especially require a thicker coat in order to protect them from the surrounding cold, just as human beings put on additional and warmer clothing, and their comfort is increased and health preserved by it. Warm clothing, even in a cool stable, with good attendance, will keep the hair sufficiently smooth to satisfy the most fastidious. The over heated stable saves much grooming, but at the same time sacrifices the health of the animal. The horse stands, say from twelve to twenty-four hours, and sometimes even longer than this, in this unnatural vapor, and then he is stripped of his clothing and led into the open air, where he is kept sometimes for hours in a temperature of fifteen or twenty degrees or more below that in the stable. Putting the inhumanity of this out of the question,

must not the animal thus unnaturally treated be subjected to rheumatic and catarrhal affections? The return to a hot stable is quite as dangerous as the change from a heated atmosphere to a cold air. This is frequently seen where horses are left out late on pasture in the fall of the year, then taken and confined in close stables, and as a result some disease is contracted likely to be febrile in character. The sudden change of temperature, whether from heat or cold, or *vice versa*, yearly destroys thousands of horses. The stable should be large in proportion to the number of horses it is destined to contain. Box-stalls are preferable to the ordinary open stall, inasmuch as they allow considerable space for the animal to move around and exercise, and lie and rest after a hard day's work. Boxes are also necessary for sick horses, and especially when suffering from any contagious disease. Each box should be about fifteen feet long by ten feet wide, with side walls nine or ten feet high; a pipe should run through to the roof, or else connect with one that does go to the roof of the building, to allow gases generated to escape. This is especially necessary where horses are kept in back stables. Ventilators should also be put in the wall at as high a point as possible from the floor, so as to allow the air to pass in above the animal. There are different modes of arranging ventilators, and any plan will do so long as the animal is not exposed to draughts.

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The Farm Home

Hallow-e'en.

The old time-honored Hallow-e'en will no doubt be observed with the usual vim and vigor by the boys and girls on the farm this week. Biting the swinging or floating apple or ducking one's head for the sunken coin are pleasures both innocent and enjoyable. And if a few boys conclude to put a neighbor's cart on top of the barn or exchange gates, what matter so long as no damage to property is incurred? A boy will often work three times as hard in helping to get Neighbor Jones' wagon on top of the cow shed than in the potato patch. But we should not grumble at this. The one is a task that gives him a great amount of pleasure while the other is one of the uninteresting daily routines of farm life. Perhaps a jaunt of this kind will help him to pick potatoes faster the next day.

About the biggest piece of Hallow-e'en sport we ever heard of was the elevating of a wagon load of wheat, which the farmer had ready to hitch the horses to in the morning, to the top of his driving barn. This meant the unloading of about thirty bags of wheat, the taking of the wagon apart, the carrying of the parts to the roof of the barn, the putting of the parts together and placing the wagon straddle of the roof peak, and the carrying of the bags of wheat to the roof and reloading them on the wagon. We never heard the outcome of this piece of Hallow-e'en labor, but we presume the farmer did not get his load of wheat to market next day. He would likely have to call in his neighbors to help him get his property to terra firma, and perhaps the boys who helped to do the deed assisted in getting the loaded wagon down. But, be that as it may, it is not likely that any particular harm was done anyone. It was, however, a kind of prank which in our opinion involved too much labor for the fun to be got out of it.

We wonder if any of the boys who read this know of any Hallow-e'en prank that meant more work than elevating the load of wheat. It so we would be glad to hear from them. In fact, during the next few weeks, we will be glad to publish in this department short letters from the boys and girls on the farm giving an account of their Hallow-e'en pranks and pleasures this season.

The National Council of Women.

The National Council of Women held its annual gathering last week at Hamilton. While the topics discussed covered a wide field, one or two of the sessions were given up to subjects directly connected with woman's

sphere on the farm. On the evening of October 23, Dr. Mills gave an address on "Instruction in Domestic Economy," in which he emphasized the bread and butter side of education as applied to the education of girls. The great need was instruction in domestic economy, which should be taught in the agricultural colleges, in the Normal schools and Normal colleges, in the high schools, collegiate institutes, academies, and, to some extent, in the public schools. He suggested that two extra courses of instruction should be at once prescribed for the public schools of Ontario, one in nature study, another in domestic science, including weekly practice in plain sewing, darning, patching and knitting, with very simple practical talks on cleanliness, tidiness, cooking, laundry work and general housekeeping.

He was followed by Prof. Robertson, who spoke on "What Women May Do for Agriculture." He emphasized the importance of agriculture, stating that the greater portion of the wealth of Canada came from the farms. He strongly urged on the women to become interested in agriculture, with a view to exercising influence for its uplifting.

Mr. L. Woolverton, Grimsby, read a paper on Horticulture as a Profession for Women, and he advised women to work at gardening if they wished to have good health. He was followed by Mrs. Hoodless, who gave

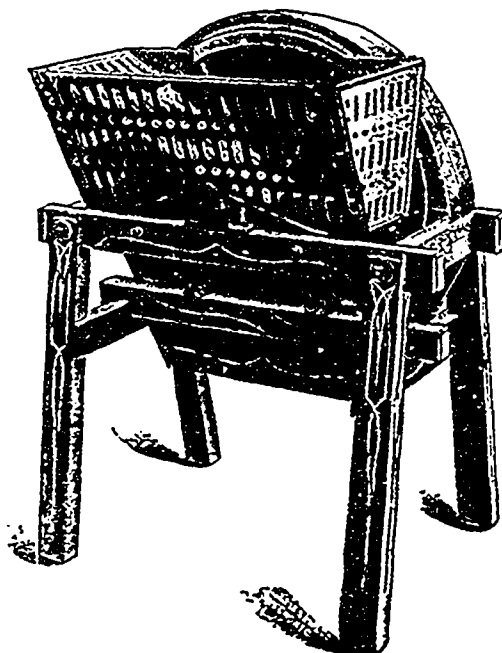
a report of the Woman's Institute at Stony Creek, Ont.

Mr. C. F. Whitley, Ottawa, is corresponding secretary of the council.

The Home Department of the Farmers' Institutes.

Considerable attention has been given of late to the home department of the Farmers' Institutes. There is, however, room for more to be done along this line. In one or two sections Women's Institutes have been formed that are doing excellent work, but we question whether it is the best plan, considering the country at large, to separate the two. Nearly every subject discussed at Institute meetings should be heard by both the women and men, and a subject relating specially to the farm home should prove as interesting to the men as to the women. At every institute meeting provision should be made, if possible, for some subject to be taken up of special interest to the home. This is done in many cases. But where the speakers on the delegation are not prepared to take up work of this kind there may be no one else to do it and very often meetings are held at which not a word is said in regard to the farm home. The local officers should see that no series of meetings is held without some feature of the programme referring to the farmer's home life, and when outside speakers cannot deal

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with this subject an effort should be made to secure local talent for this purpose. Many farmers' wives would perhaps be willing to prepare a short paper on some phase of the home life on the farm if asked. It would, we think, prove an attractive feature.

This question opens up a good field for discussion that we would like the readers of this department to give us their views upon. There may be a difference of opinion as to whether a separate Institute for women would be better than combining the home department with the regular Institute. We would be glad to hear your views upon it. Then we would be glad to have expressions of opinion as to the kind of subjects that would prove of interest to women and young people on the farm. An American exchange in discussing Farmers' Institutes says: "The aim of the Farmer's Institute is twofold, to improve the quality of farm production and to make the daily life of the farmer's family more comfortable." To our mind the latter of these aims is just as important as the former one. Let it then be made prominent at the Institute meetings this winter.

Prof. Robertson's Offer to the Boys and Girls.

Every boy and girl on the farm should read Prof. Robertson's letter in last week's FARMING dealing with the grain competition. It should not be a difficult task to select from the grain in the barn 100 of the largest heads, or those containing the largest number of seeds, of the kind of grain grown on any one field, and also ten heads containing the smallest number of seeds per head. The directions as to sending the different lots are not difficult to follow, and the only cost will be a cotton bag. The prizes given are numerous and valuable, and every boy and girl on a farm in Canada has an equal chance of obtaining one of them. We hope for the good of agriculture in this country a large number will compete.

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Exhibitions.

Counting the Cost.

By Megyra.

The fairs being over for this season, we wonder if they have been to us a source of profit. Have we learned any lessons that will help us during the coming year? Have we seen such perfect exhibits that we resolve during the coming year to do likewise?

It were well, like the traditional wise man for us, before beginning, to first figure up the cost. If the exhibitors adopted this plan there would be a wonderful change in the exhibits; if the judges, there would be a great difference in the awarding of prizes, and if the committees also counted the cost many changes would appear in the prize lists. At the smaller fairs we find a larger prize offered for some useless piece of fancy work that is laid away when the fair is over and re-shown for a dozen years than is given for food stuffs, grains, poultry and the really essential and money-making products, which must be grown fresh every year, or, at least, provided with food. In the larger varieties of fowl, as geese, turkeys and pea fowl, the cost of crate required to carry them is greater than the prize, while dozens of fancy articles can be carried in one small basket. The men (they are never women), who manage these things should endeavor to encourage the production of such articles as are really among the useful industries. The Industrial Exhibition sets a good example in this respect, with its handsome prizes in dairy, apiary and other departments, but even it, in some points, encourages the ornamental rather than the useful. This is especially striking when we notice that the prize is just twice as large for a five o'clock tea cloth or for a centre piece that one could carry to the fair in the pocket or send in a small parcel by mail than it is for a turkey, which, in order to gain the prize, must weigh in the neighborhood of forty pounds, requiring a large crate to carry it, and which must be shipped by express. We would infer from this that the manufacture of tea-cloths and centre-pieces needs encouragement and the raising of turkeys not so much. Yet, anyone with money can embroider, and it takes brains to raise turkeys. We hope the day will soon come when even agricultural societies will not discriminate against the farmers.

In the departments in which women are interested, I would give large prizes for poultry, fruits, apiary and dairy products and bread making. Very often larger prizes are given for cake, biscuits and pies than for bread, yet the latter is more important, and harder to make—also for maple sweets and canned fruits. Yet, at Toronto, the maple manufactures are considered unimportant.

Very much smaller prizes should be given for the woollen, carpet and quilt home manufactures, for these should

all be made in factories, and still smaller prizes for the expensive fancy work. The painting of beautiful pictures should be encouraged, also what is seldom seen in the lists of the small shows—natural history collections. Would not the women of the country, village and cities advance physically and mentally if they adopted the study of entomology, geology, ornithology, anthropology or botany, instead of embroidery and fancy work? If Canada were a silk-raising country, there would be some excuse, for then it would mean encouraging home industry.

If judges would give the prizes in these departments to the article that looked the prettiest and was most appropriate, irrespective of the cost of material or fineness of work, then we would see the soft, downy sofa cushion,

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with perhaps no more than a half-hour's machine stitching in its construction, of some inexpensive and pretty material carry off the red ticket, to the disgust of the hard, solid cushions, covered with silk or linen embroidered with dollars' and dollars' worth of silks. I was shown one on which the silks alone cost eight dollars. A fluffy comfortable, made of wash-silk, sateen, or even cheese-cloth, might win the prize from the small-patched, closely embroidered, unwadded, crazy patchwork quilt. I was told the embroidery silk alone on one cost ninety dollars, and then it was intended only to spread across the foot of the spare bed when it was not winning prizes at the fairs. If we counted the cost, would we make these awfully expensive fancy articles? The cost of that one quilt would pay for warm blankets for all the beds in the house. It would entirely furnish a bed-room with quartered oak and Wilton carpet, or if we were charitably inclined it would supply comfortable clothes for four or five children for a whole year, or it would pay the expenses of the maker while taking a splendid vacation. The time spent would enable her to read dozens of books, or explore the woods for miles in search of health and nature studies. The eyesight used might just be what she will require to give a happy old age. I would not have it thought that our homes should be entirely plain. We should try to surround ourselves and our homes with all things bright and pretty. But who dares to say that one growing pansy or rose is not prettier and by far less expensive than forty flowers embroidered or painted?

Can we not purchase pretty silks already flowered far cheaper than we flower them stitch by stitch. It would not so much matter if it were the wealthy classes only who do this work. I find that those, at least, who exhibit at the smaller fairs are oftenest our farmers' already overworked wives or daughters and the wives and daughters of the workingmen in the country villages.

Before we begin, let us count the cost of everything—materials, health, eyesight, and the time required, not only in making, but also in afterwards caring for these comparatively useless articles, and I am convinced we will simply never begin.

He Played Him.

Some little time back a German musician, a cornet player in a very fair orchestra, got into trouble quite innocently and unexpectedly. "Let's have that over again," requested the conductor, surprised at hearing a note which was not in the score. The note was sounded again and again.

"What are you playing?" he asked, at last.

"I am playing vat is on ze paper," said the cornet-player. "I play vat is before me."

"Let me have a look."

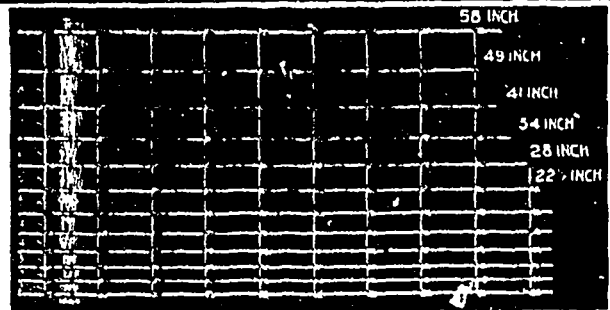
The part was handed to the conductor.

"Why, you idiot," he roared, "can't you see that this is a dead fly?"

"I don't care," was the answer; "he was there, and I played him."

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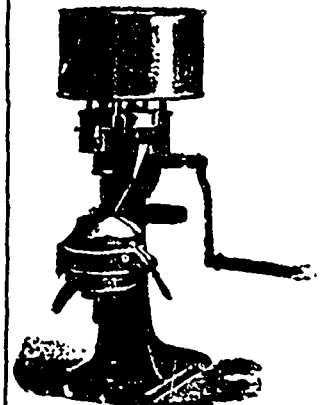
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To Visit Mexico.

Mr. A. F. MacLaren, M.P., Stratford, Ont., has gone to Mexico for a visit of several weeks to recuperate his health. Mr. MacLaren is a large operator in the cheese markets in the West, and in this way is directly interested in the Canadian farmer. We wish him a pleasant trip and trust that he may return fully restored to his wonted vigor and health.

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W. K. Foreman, Port Carling, Ont., wishes to know the saving there is in cutting grain and grinding fodder for stock:

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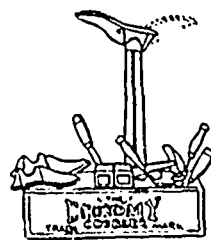
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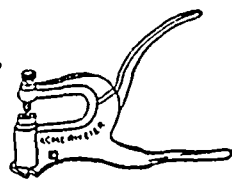


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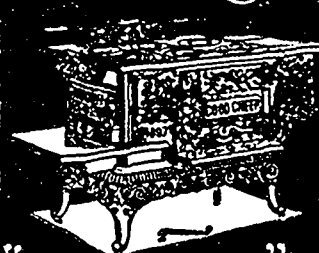
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and mixed with chaffed (cut) hay. For idle horses, oats or corn should not be ground, nor need the hay or straw be chaffed (cut). A cow yielding a large flow of milk should be regarded as a hard-working animal and her feed prepared accordingly. Fattening steers or pigs may be crowded more rapidly with meal than with whole grain, though there is more danger attendant upon its use. Sheep worth feeding can always grind their own grain. In general, idle animals, and those having ample time for mastication, rumination and digestion do not need their grain or roughage prepared as carefully as those with only limited time for these essential operations.

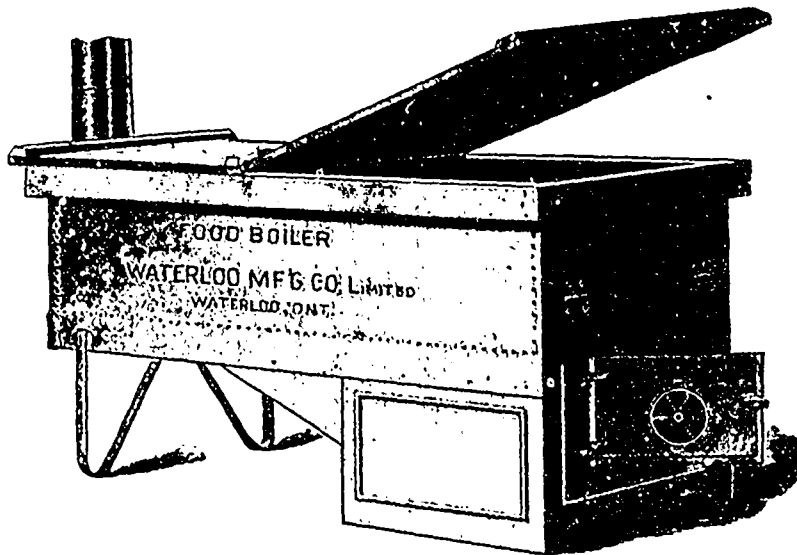
In two experiments conducted at the Kansas Station ear corn and corn meal were compared for feeding steers. In the first trial the results showed that the steers fed ear corn gained somewhat more than those fed cornmeal; they required however six per cent. more grain. In the second trial there was a saving of 35 per cent. of the corn by grinding. This is the the largest saving of grain by grinding yet reported by any of the experiment stations. In the western states it is the general practice to feed corn whole and on the cob to cattle and to allow young pigs to run after the cattle and pick up the droppings.

Experiments were conducted at the the Missouri, Kentucky and Ohio Stations in feeding shelled corn and corn-meal to hogs. In averaging these trials we find that 532 lbs. of cornmeal as against 543 lbs. of whole corn were required for 100 lbs. of gain. This shows that two per cent. only was saved by grinding. Some later experiments conducted at the Wisconsin Station on the same line with an addition of a little middlings to make a greater gain show that 459 lbs. of corn meal and middlings or 499 lbs. of whole corn and middlings, were required to make 100 lbs. of gain, thus effecting a saving by grinding of 8 per cent. It is claimed that for fattening cattle ground grain will enable a better finish to be put on.

There is a difference of opinion among experimentalists as to the value of cutting hay or other fodder for stock. One of the great advantages of cutting hay is that it can be got in less compass and can be handled easily. When hay or straw is cut, moistened and a little meal added before feeding, it is in a condition to be rapidly masticated and swallowed so that the nutriment has a longer time to remain in the stomach for digestion than when long dry hay is fed. This is an item of importance with hard worked horses which are in the stable only at night. In regard to this point Prof. Henry says: "Horses not hard worked, fattening cattle and farm stock generally, have ample time for mastication and digestion, and with these there is less necessity or none for cutting hay or straw." The results of some tests made at the Kansas Station extending through three seasons with corn stocks cut in lengths varying from 1/4 to 2 inches, show that instead of the cows

The "Waterloo" Food Boiler

Used chiefly by Stock Feeders, Butchers, and for General Farm Use.

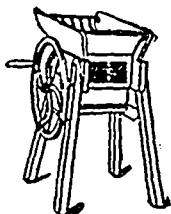


For Simplicity, Durability, Economy, and Saving of Time and Labor, it has no equal. Write for circulars.

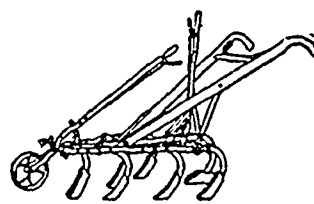
WATERLOO MANUFACTURING CO., Limited.
WATERLOO, ONT.



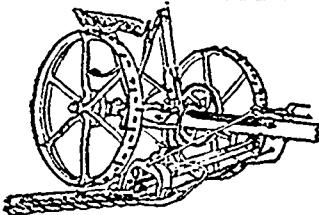
THE MAXWELL BINDER.



ROOT CUTTER.



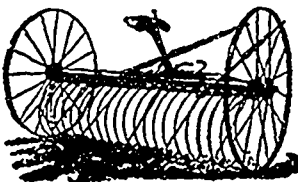
SCUFFLER.



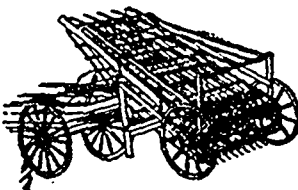
THE MAXWELL MOWER.



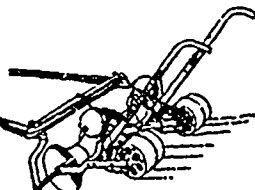
TEDDER.



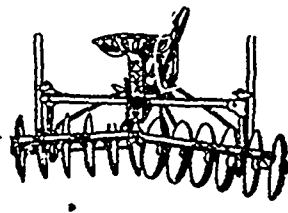
STEEL HORSE RAKE.



LOADER.



TURNIP SOWER.



DISK HARROW.

David Maxwell & Sons

ST. MARYS, ONTARIO, CANADA

MANUFACTURERS OF BINDERS, MOWERS,
REAPERS, HAY RAKES, HAY TEDDERS,
HAY LOADERS, SCUFFLERS,
DISK HARROWS, TURNIP SOWERS, ROOT
CUTTERS, WHEELBARROWS, ETC.
RESPONSIBLE AGENTS WANTED IN ALL
UNOCCUPIED TERRITORY.

consuming most of the cut fodder there was an average waste of 31 per cent of all the cut fodder. The value of cut corn or cut fodder depends so much upon the character of the fodder used, the animals to which it is fed and the manner of feeding that it is difficult to give more definite information as to the actual increase in value by cutting fodders.

CORN AND MILLET AS FERTILIZERS.

To the Editor of FARMING:

Will you please answer through the columns of your valuable paper as to the value of corn and millet as fertilizers, and if they possess any important value for ploughing under and following with wheat or other grains? Also can you inform me where cow peas can be procured and at about what cost per bushel?

OBSERVER.

Answered by C. A. Zavitz, Experimentalist Ontario Agricultural College, Guelph.

(1) Green manuring with clover, peas, and other leguminous crops actually enriches the soil in nitrogen obtained from the air. The ploughing under of corn, millet, buckwheat, and other non-leguminous crops, however, adds practically no essential fertilizing ingredients to the soil except those which were taken out by the plants, but supplies a mass of vegetable matter which decays in the soil, and thus improves its physical properties. Many fields are very poorly supplied with humus and the ploughing under of any succulent and leafy growth will prove beneficial. In this way corn, millet, and buckwheat are useful for green manuring, but when clover or peas can be grown and ploughed under, much better results can be expected.

Experiments have been conducted at the Ontario Agricultural College by ploughing under different crops as green manure for winter wheat. In the results of four tests, land on which buckwheat was grown and ploughed under produced an average of 29.9 bushels of wheat per acre and land on which common field peas were grown and ploughed under, produced an average of 37 bushels of wheat per acre. This shows a difference of a little over 7 bushels of wheat per acre in favor of using common field peas as against buckwheat as a green manure for winter wheat.

(2) Some of the leading varieties of cow peas can be obtained as follows: Southern Black Eye at \$2.25 per bushel from D. Landreth & Sons, Philadelphia, Pa.; Whip-o'-will at \$2.50 per bushel from Henry Phillips, Toledo, Ohio; New Era at \$4 per bushel from Iowa Seed Co., Des Moines, Iowa; Warren's Extra Early at \$3 per bushel from W. H. Maule, Philadelphia, Pa., etc. As the cow peas are mostly too late in growth to suit our climate, the seedsmen in Ontario do not advertise them extensively, but no doubt they would secure seed to fill all orders.

"ALPHA" DE LAVAL CREAM SEPARATORS MISREPRESENTED

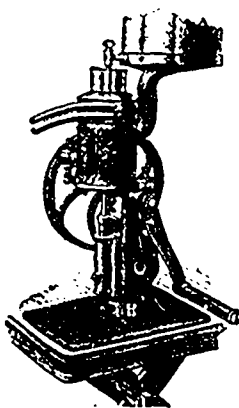
AT MARKHAM, ONT.

WE publish for the benefit of our patrons a full report of this test, which is an overwhelming refutation in every particular of the statements as published in the Markham *Economist* of July 6th, 1899.

Cream Separator Test

As cream separators are claiming considerable attention just now, it is with pleasure we note a very interesting contest which took place at the farm of T. Weir, Esq., Scarboro,

a few days ago, between the "Alpha de Laval," represented by Messrs. Lindback & Cassallen of Toronto, and the National by M. Stonehouse, of this place, and T. C. Rogers, of Guelph, later Instructor at the O. A. C. Dairy School for the past eight years. Mr. Weir operated both machines and a given weight of milk run through each. The test of skimming was made by the Babcock Tester, the pounds of butterfat being practically the same in both separators. The National, however, was the easier to turn, although putting through seventy-five pounds per hour more milk, and seems in many other ways to have advantages which make it superior and more practical separators for farmers than the De Laval. One strong point in favor of the National is its home manufacture, being made in Guelph, by the old and reliable Raymond M'fg. Co., the De Laval, we understand, being partly made in Denmark and finished at New York, which besides being a foreign machine, is much dearer in price. Judging from appearances, simplicity of construction, easy cleaning, etc., seems to be much in favor of the home machine. Mr. Stonehouse, the agent of them, is not only an experienced, practical dairyman and buttermaker, well known here, but has used a separator for quite a number of years.—*The Markham Economist*, July 6th, 1899.



BABY ALPHA

MARKHAM, Sept. 22, '99.

To The Canadian Dairy Supply Co.,
Gentlemen,— Montreal, Que.

Hearing the various reports given out by the agents of the National Separator Co., of Guelph, Ont., saying that they have beaten the "Alpha" De Laval in a test at my place which was run June 27th, 1899, in justice to the "Alpha" Baby No. 1, I will give you the following facts relative to this contest:

Prof. Rogers of Guelph, was present, representing the "National," and C. R. Lindback of Montreal, representing the "Alpha." I had on trial the "National" Separator, advertised capacity 333 pounds per hour, and "Alpha" Baby No. 1, 300 pounds per hour. It was agreed by both parties that I would turn both machines. This is the result of test:

Machine.	Amt. skimmed per hour.	Speed of machine per minute.	Butter fat in sk. milk.	Density of cream.
Alpha	330	6000 to 6500	.04	38.80
National	330	9000	.07	34.20

By this can be seen that the "ALPHA" beat the National in all points, running a heavier cream, running above advertised capacity, skimming closer and running at much less speed.

We made a test of skim milk from "Alpha" Baby No. 1, which I had skimmed the evening before and we found it tested .02, showing the variance in speed caused the difference .02 in next day's test.

We run milk through "Alpha" first, and I being slightly nervous at start, I ran it at uneven speed, while the "National" was run 55 turns all through the run. I'll say further in justice to the "Alpha" that from the time it was placed on my farm I never had any trouble with it, while the "National" did not work satisfactorily different times, and Mr. Rogers also had to change his bowl before the test.

As result of the test I have bought the "Alpha" No. 1, and am running it right along, and am pleased to say it is giving entire satisfaction. Yours truly,
Brown's House, Ont. THOS. WEIR.

P.S.—Also one of the reasons I bought the "Alpha" it was much stronger built and therefore much more durable.

We honestly believe that Alpha De Laval Cream Separators are superior to any separators sold in Canada. They do their work perfectly, require less power, do not get out of order, anybody can operate them.

Please ask for particulars.

The Canadian Dairy Supply Co.

327 COMMISSIONERS STREET
MONTREAL, QUE.

Ontario Veterinary College, Toronto, Canada.

The Ontario Veterinary College opened its halls for the admission of students on Wednesday, October 18th. The opening lecture was delivered by the principal, Prof. Andrew Smith, F. R. C. & S. The prospects for a prosperous session are exceedingly favorable, a large number of freshmen being present from the United States, as well as from Canada. Most of the undergraduates have already returned. Students are still entering.

Never put corn, kafir cornmeal or any other grain in the milk for calves. The starch of corn has to be changed to grape sugar before it is digestible. This change only takes place in the presence of an alkali and is done chiefly by the saliva of the mouth. When corn is gulped down with the milk the starch is not acted upon by the acids of the stomach, but remains unchanged until it comes in contact with the alkaline secretions of the intestines. With hogs the stomach is small and the intestines long. This allows starchy matter to be digested in the intestines. The opposite is true with the calf, the stomach being large and the intestines short. Unless the starchy matter is largely digested by the saliva of the mouth, complete digestion will not take place in the intestines and the calf scours.

Flax seed meal or Blachford's meal made into a jelly or gruel are good to mix with skim-milk to take the place of butter-fat. Oil meal is frequently used for this purpose, but, like skim-milk, it has a large amount of fat removed and is not as good as meal with the fat in.

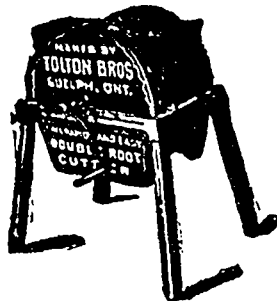
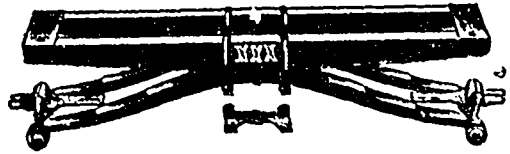
Stock Notes.

SHROPSHIRE SHEEP FOR AUSTRALIA.—On Thursday last, the 19th inst., Messrs. Alfred Mansell & Co., live stock exporters, Shrewsbury, shipped from the port of London, per steamship *Star of Victoria*, a valuable consignment of high-class Shropshire rams and ewes on account of Mr. R. G. Wilson, of Melbourne. The selection included one of Mr. Buttar's best rams this season, sired by Buttar's Reserve 9381 (son of Buttar's Stamp 7361, by the renowned Corstan True Blue 2550) from a Bonaparte ewe, and owning as his grand sire the late Mr. Mansell's 70-guinea Lord Patriot 4627. Mr. P. L. Mills, whose flock secured the Prince of Wales' 100-guinea challenge cup for the best pen of sheep of any breed at the 1898 London Christmas Show, supplied three high-class rams, two of which were sired by the 230-guinea Ruddington Eclipse, and the other by that very successful sire Joe Chamberlain 9530, one of the best sons of Odstone Conservator 8153. The ewes were specially selected to combine correct type with high breeding and fine dense wool, and bailed from the celebrated flocks of Mr. R. P. Cooper and Mr. A. E. Mansell, and owned for their sires such valuable and well-known rams as Dream Star 8977 (sire of Mr. A. E. Mansell's Royal, winner of this season), by the 175-guinea Montford Dreamer and Shensstone Dreamer purchased by Mr. R. P. Cooper at 165 guineas, and also sired by Montford Dreamer before alluded to. These ewes were in lamb to sires of the highest merit, and should they reach their destination in safety Mr. Wilson should have the nucleus of a flock of Shropshires second to none.

Carry your Stock and Farm Produce on Waggon fitted with the celebrated

"XXX" Bolster Springs

They are the only perfect spring made. In comparison with these all others are useless. Address J. H. MORROW, General Sales Agent, Brighton, Ont. Special inducements to introduce where we have no agent.



TOLTON'S NO. 1 DOUBLE ROOT CUTTER

Points of Merit :

1. To change from pulping to slicing is but the work of a moment.
2. There are two separate wheels, one for pulping and the other for slicing.
3. The united force of both wheels is always used in doing the work in either capacity.
4. The hopper is between the wheels, and does not choke

THE ONLY DOUBLE ROOT CUTTER MANUFACTURED.

Fitted with Roller Bearings, Stool Shafting and all that is latest and best in principle, material and construction.

TOLTON BROS., - - GUELPH.

The National Cream Separator

MANUFACTURED BY
THE RAYMOND MANUFACTURING CO.
LIMITED

GUELPH, ONTARIO



A wise investment that progressive farmers are buying as they buy other useful machinery. The National will yield from $\frac{1}{2}$ to $1\frac{1}{2}$ lbs. of butter per week per cow more than it being done by the old laborious wasteful methods of skimming milk. One pound of butter per week from one cow for 9 months, at 15c. per lb., will pay 8 per cent. interest on the cost price of the National. Easy to run by boys 8 to 12 years old. Easy to clean. Simple to operate. The neatest in style and finish. A perfect skimmer. Guaranteed as represented, and a trial for one week given to intending buyers. If not satisfactory, may be returned to us at our expense. No risk. Sold on their merits. Send for testimonials and Catalogue.

GENERAL AGENTS

Creamery Supply Company

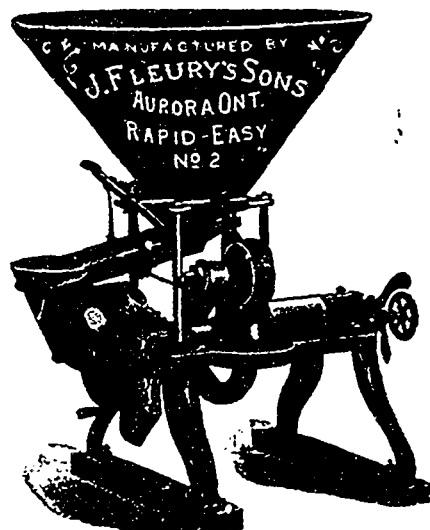
MARKET SQUARE, GUELPH, ONTARIO

Also Dealers in Creamery and Dairy Supplies.

ACTIVE AGENTS WANTED

Style No. 1.
Capacity—330 to
350 lbs. per hour.
Price, \$75.00

Rapid - Easy Grinders



do MORE work with the SAME power than any OTHER 80 LBS. of steam will do more work with R. E. GRINDERS than 100 LBS. with other Grinders; and FOUR horses more than SIX.

LETTERS JUST RECEIVED

Mr Robert E. Mickel, Brighton, Ont., Sept. 23, 1899.
"I suppose it would be of interest to you to know that I have been using the Rapid-Easy Grinder No. 3, which I purchased from your agent, Thomas Cheer, since last January. It has proved to be a success, having done all the work it was recommended to do, and MORE, I have ground over 7,000 bushels of grain of all kinds with the FIRST PLATES, even to Herrick, which it ground as FINE AS SNOOF."

Mr. Charles Mackey (A. McD.), Stayner, Sept. 18, '99.
"We started the grinder at THREE o'clock, and when we quit at FOUR we had ground 15 BAGS of oats, 15 BAGS of mixed peas, barley, weeds and wild oats. They went through FLYING and were a FIRST-CLASS job."

J. FLEURY'S SONS, Aurora, Ont.

Gold Medal for Plows, etc., at World's Fair, Chicago.
On application we will send a beautiful lithographic hanger showing this Grinder.

BRITISH SHORTHORN TRANSACTIONS.—Thornton's Record of British Shorthorn transactions from April 1st to June 30th, 1899, has just been received. As usual it shows that by far the larger number of sales of Shorthorns has been made to South American buyers, the number being 106. Canada comes next with 45 purchases; then Africa with 6; Russia 3 and France 1. According to this statement the United States made no purchases during this period. While South America still leads in the number of purchases the number coming to Canada is gradually increasing. Since June 30th a large number of imported animals have come into this country, and now that the demand for good stock has increased larger importations are looked for.

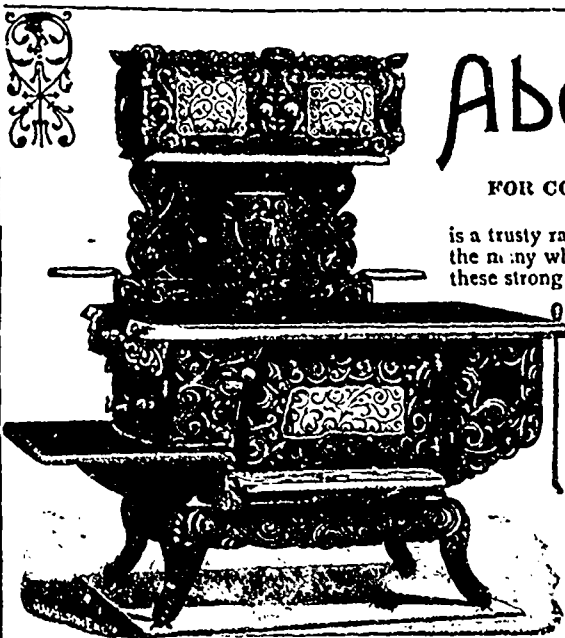
BUSINESS IN OXFORDS GOOD.—J. H. Jull & Sons, Mt. Vernon, Ont., write: "Our Oxfords are doing finely. September rain started the grass, which has started the sheep afresh. Over 65 breeding ewes will go into winter quarters in fine shape. Business has also been good. We received twenty letters of inquiry the last two days. The season's sales so far are as follows: 3 yearling rams and 7 ram lambs to J. Bate, British Columbia; 1 aged ram, 1 aged ewe, 2 shearling ewes, 2 ram lambs, 2 ewe lambs, to W. Heskett, Fulton, Ohio; and 1 ram lamb each to Thos. Powers, Cuba, N.Y.; W. E. Beckett, Hewett, Ont.; G. W. Potter, Summerset, N.Y.; W. J. Pearson, Browns' Corner, Ont.; R. E. White, Jenesso, N.Y.; Shanon Bros., Cloverdale, B.C. One yearling ram to G. Grieves, Maple Lodge, Ont.; 1 aged ewe to W. H. Newton, Pontiac, Mich.; 2 yearling ewes, 1 ram lamb, to J. J. Houston, Appledore, Ont.; 1 ram lamb to J. Carney, Grand Valley, Ont.; 1 yearling ram and 1 ram lamb to J. Stuart Wilson, Edmonton, N.W.T.; 1 ram lamb to F. Griffin, Burgessville, Ont.; 2 aged ewes, 4 yearling ewes, to J. R. Chilcott, Mt. Vernon, Ont.; 3 ewe lambs to W. Jonson, Jarvis, Ont.; 1 ram lamb to A. Rice, Currie's Crossing, Ont.; 1 ram lamb to F. Hall, Drumbo, Ont.; 1 two-year ram and 2 yearling ewes to F. C. Ricketts, Short Track, N.Y.; 1 yearling ewe to Albert Cross, Beaton, Ont.; 3 aged ewes to W. Courtney, Princeton, Ont.; 1 yearling ram to P. M. Campbell, Balderson, Ont., and 1 ram lamb to Wm. Fry, Sutton West, Ont."

SOME PRIZE-WINNING YORKSHIRES.—Wm. Howe, North Bruce, Ont., writes: The fall exhibitions are over and my stock of Yorkshires are in good, strong, healthy condition, and have won the most of the first prizes that they competed for—in all 15 firsts, 9 seconds, and 6 third prizes. At the three riding exhibitions of Bruce county, namely, Walkerton, Paisley, and Port Elgin, my stock won ten out of the thirteen first prizes offered for Yorkshires, also first for bacon hog over six months and second for bacon hog under six months at Port Elgin, open to all breeds, grades and crosses, this being the only place that a prize was given for bacon pigs. I have now on hand nine boars over six months, and five sows over six months, also twelve pigs ready to ship in a few days; also two sows yet to farrow; one of them is Oak Lodge Victress 2nd, that has won first prize in the aged sow class every time she has been shown. She is in pig to Oak Lodge Clarence 2nd, also a first prize winner over one year at all the shows.

Publishers' Desk.

We are informed by Messrs. Tolton Bros., of Guelph, that they have had a most successful season with their far-famed Pea Harvesters and New Patent Bunchers which have, with their excellent working, won the hearts of the farming community so much so that their prospects were never better for the sale of these machines than at the present time. Their Double Root Pulper which is now being advertised in another column is fast becoming a favorite with stock men who know how to appreciate a good thing, and while the firm never were so busy at this season they are still behind in filling orders for this excellent pulper.

IT HAS NEVER FAILED—Thus says the Cook.



THE
Aberdeen
FOR COAL AND WOOD

is a trusty range, and the testimony of the many who have used it emphasizes these strong points in its construction—
A perfect baker—a perfect cooker—the oven is rapid—the draft is quick—the heating is uniform—there's perfect ventilation. Compared with some makes it is a wonder of economy—and withal it's so simple and easy to manage—artistic in design—beautifully mounted—splendidly fitted—the King of Ranges.

Write for booklet

The Copp Brothers Co., Hamilton
BRANCHES—TORONTO AND WINNIPEG

110 for 10 Cents

This book contains one hundred and ten of the best humorous recitations, embracing the Negro, Yankee, Irish and Dutch dialects, both in prose and verse, as well as humorous compositions of every kind and character. Sent, postpaid, with our illustrated catalogue of books and novelties for only ten cents.

Johnston & McFarlane
71 Yonge St., Toronto, Can.

Thorold Cement...



Barn of Beswetherlek Bros., Hagersville.
Size of Floor, 60x120 ft. Put in with Thorold Cement in 1896.

They say:—"Our floors are as hard as stone. We clean our stables by driving a team and wagon through the stable on the concrete behind our stock, and load the manure on the wagon. We can truly say it is just perfection for stable floors."

Do you intend renewing your stable floor this fall? If, so, why not consider the question of putting in a Cement Floor? It is cool in summer, can always be kept clean with very little labor and without the soakage which is found so annoying and unhealthy for man and beast in connection with wood floors, is warm in winter, as cheap as a wood floor and will last for all time. It is smooth, but not slippery. Write for prices and full information to

ESTATE OF JOHN BATTLE
THOROLD, 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 cents 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
SHUPLY & DIETRICH
GALT, ONT.

MONEY LOST

Your cash goes to the Merchant, from them to the Wholesale Merchants, from them to the Manufacturers. The manufacturers give a discount for cash, the wholesale merchants give a discount for cash, and the retail merchants give you a discount for cash **when they give you one Blue Trading Stamp for every ten cents represented in your purchase.** In every business cash demands a discount, and it is

YOUR CASH THAT KEEPS THEM ALL GOING, EVEN THE BANKS

You are, therefore, entitled to your Trading Stamps, which are equal to, and in many ways better, than money.

1. Trading Stamps are exchangeable for your choice of thousands of handsome, as well as useful, articles, such as Clocks, Watches, Mirrors and Rocking Chairs, Writing Desks, Tea and Dinner Sets, Lamps, Cameras, Silverware, Musical Instruments, Onyx and Parlor Tables, etc.
2. Trading stamps are more convenient for both buyer and seller, and represent



SAVINGS that you formerly lost by neglect.
 SAVINGS that come to you daily on all purchases.
 SAVINGS that every member of the family can help to make.
 SAVINGS that enable you to furnish your home FREE.



By collecting Trading Stamps you can also on Red Letter days further increase your savings by getting your share free of the percentage of Stamps lost by others.

The Merchants who give Trading Stamps sell at small profits, but quick returns, thus getting all the money they require from their customers, and giving their customers, and not the banks, the discounts which they receive themselves.

Capital turned over twenty times a year at five per cent. is better than twice a year at forty per cent.

BEAR IN MIND No merchant can charge for nor sell you a single Trading Stamp. **THEY ARE DISCOUNTS** for the cash you pay them.

THE STAMPS ARE
 THE BOOKS ARE
 THE GOODS ARE **FREE**

The Stamps of the Dominion Trading Stamp Co. are the same in all cities, and, like bank bills, are transferable and redeemable at all showrooms.

SPECIAL OFFER TO THE READERS OF THIS PAPER

Which is Your Nearest Showroom?

- Toronto—231 Yonge St.
- London—216 Dundas St.
- Brantford—33 Colborne St.
- Ottawa—Sun Life Building.
- Kingston—179 Wellington St.
- Brockville—King St.
- St. Catharines—54 St. Paul St.
- Woodstock—Opera House Bldg.
- Hamilton—115 King St. E.
- Peterboro—431 George St.
- Belleville—311 Front St.
- Stratford—Windsor Block.
- Berlin—70 King St. W.
- Galt—Imperial Block.
- Guelph—St. George Sq.
- St. Thomas—314 Talbot St.
- Winnipeg—282 Main St.
- Vancouver, B.C.—Cor. Cordova and Richard Sts.
- Victoria, B.C.—Cor. Front and Broad Sts.
- New Westminster, B.C.

CUT ACROSS HERE

<p>TEN</p> <p>FREE</p>	FARMING	<p>By cutting out and presenting this Coupon at any showroom of the Dominion Trading Stamp Co. on or before December 1st, 1899, a book containing full explanations of how to save your discounts, together with ten Stamps, will be presented free.</p> <p style="text-align: right;">DOMINION TRADING STAMP CO.</p>
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Market Review and Forecast

Office of FARMING,
Confederation Life Building,
Toronto, Oct. 30th, 1899.

General trade continues healthy and prosperous. Remittances continue to be satisfactory both from the country and city, which is a good indication of how trade is progressing. The feature of the week in financial circles in the United States was the firmness of sterling exchange. Money continues firm, though it is not as tight as it was a few weeks ago. Call loans are steady at Montreal at 5½, though some brokers claim they can get all they want at 5 per cent. Discount rates have not changed.

Wheat.

The wheat situation shows very little change during the week, though a little weaker feeling is noticeable in some quarters, especially in Chicago. A week ago December option in Chicago sold down to 69½c., which was the lowest point touched this season. This price is within 1¾c. of that of the corresponding date last year, when December wheat sold at 68¾c. and the world's supply in sight was 35,000,000 bushels, as compared with 75,035,000 bushels as the world's supply in sight at the present time. The *Price Current* sums up the wheat situation as follows:

"Wheat market conditions have not changed much during the week, speculative prices closing but slightly lower than a week ago. The cash trade in wheat appears to have assumed a waiting condition. Buyers are showing an indifferent interest, and farmers are slow sellers at present prices. The advance in export freight rates caused by the withdrawal of transports for South Africa, has influenced lower markets here without advancing European markets correspondingly. But this influence is believed to be only temporary. The market closes somewhat firmer than earlier in the week."

The increased ocean freight rates on account of the war is no doubt having some effect on the market. Very little change is reported in the situation at Montreal. The market here is dull. Red and white are quoted at 66½ to 67c. and goose at 70 to 71c. north and west. On the Toronto farmers' market red and white bring 70½ to 72c., spring five 68c. and goose wheat 72 to 73c. per bushel.

Oats and Barley.

Cable reports show the English markets dull for oats, with holders anxious to realize. The Montreal market has been fairly steady. Oats are easier here at 25½ to 26¼c. for white east and west, with mixed at ¼ to 1c. less. On the farmers' market oats bring 30½ to 31c. per bushel.

At Montreal an increased export demand is reported and quotations there are 53 to 54c. for No. 1, and 48 to 49c. for feed barley. Barley is quoted here at 42c. for No. 2 west, and 35 to 36c. for feed barley; on the Toronto farmers' market it brings 45 to 48c. per bushel.

Peas and Corn.

The market for peas is easier at Montreal and 1 to 2c. lower on the week. They are steady here at 57c. north and west, and 59c. east. On the farmers' market peas bring 63½c. per bushel.

There appears to be a greater disposition to hold the new American corn crop, and old corn is nearly exhausted. The scarcity of cars is interfering with the receipts here. Corn is quoted here at 40 to 43c. on the track, Toronto.

Bran and Shorts.

Ontario bran is in demand at Montreal, where it sells at \$15 to \$15.25 per ton in car lots, and shorts at \$17 to \$17.50. City Mills here continue to sell bran at \$13 and shorts at \$16 in car lots, f.o.b. Toronto.

Eggs and Poultry.

The English egg markets are reported firmer and higher at an advance of 3d. to 6d., and there is a good demand. A good export enquiry is reported at Montreal for fresh and pickled stock. Shippers throughout the province report that they have shipped about all they can spare from the local trade. There is a decrease of 65,169 cases in the exports this year as compared with last year. Owing to the warm weather, consumption has fallen off some. The demand here is good for strictly fresh eggs at 17 to 18c., wholesale. On the Toronto farmers' market new-laid eggs bring 20 to 25c. per dozen.

The warm weather has been somewhat against the dressed poultry trade. Choice turkeys sold at Montreal at 10 to 10½c., chickens at 9 to 10c. and ducks at 8 to 9c. per lb. in large lots. Wholesale prices here are 10 to 12c. for turkeys and 5 to 7c. per lb. for geese and 60 to 70c. for ducks and 40 to 60c. per pair for chickens. On the farmers' market prices are about 10 per cent. in advance of these figures.

Potatoes.

These seem to be in good supply. At Montreal they bring from 40 to 45c. per bag in large lots. Receipts are large here and cars on track are quoted at 35c., and out of store at 40c. per bag. On the Toronto farmers' market potatoes fetch 40 to 50c. per bag.

Apples.

Business is active in winter apples. Sales at Montreal are reported at \$2.85 to \$3.15 per barrel in large lots. Some account sales received lately net \$2.25 to \$2.40 at Ontario points, while others are reported that only net \$1 to \$1.75 per barrel.

Hay and Straw.

The demand for Canadian hay for the Transvaal reported by us last week has been corroborated during the week and some large contracts are likely to be put through shortly. The Montreal market is firm owing to limited spot offerings on account of a great scarcity of cars. Choice No. 1 is quoted at \$8.50 to \$9.50. No. 2 at \$7.50 and clover at \$6.50 to \$7. These prices are considered too high for export and it is reported, that in consequence, buyers have gone to Quebec and the Maritime Provinces where they can get supplies cheaper. The demand for baled hay here is brisk. No. 1 timothy in cars on track is quoted at \$8.50 to \$9.00, and clover at \$8.25 per ton. On the Toronto farmers' market hay brings \$11 to \$13; sheaf straw, \$9.50 to \$10, and loose straw \$4 to \$5 per ton.

Seeds.

Seeds at Montreal are steady at 8 to 9c. per lb. for red clover. Flax seed is firm at \$1.13 to \$1.40 per bush. Timothy and clover seeds

at Chicago and Toledo show advances at from 9 to 10c. per bush. On the Toronto farmers' market red clover brings \$4.25 to \$5. Alsike from \$5 to \$7.20; white clover from \$7 to \$8; timothy, \$1 to \$1.15, and timothy unflaked \$1.50 per bush.

Cheese.

The cheese markets show a further decline due it is said to a large falling off in the consumption of cheese in Great Britain on account of the high price. The English market is reported steady at the reduction in price. At Montreal the market is steady under a better cable inquiry with sales of finest eastern at 10½ to 11c. and finest westerns at 11½ to 11¾c. per lb. The exports from Montreal, Portland and New York to date this season only show the small increase of 27,556 boxes over those of last year for the same period. At the local markets during the week prices have ranged from 11 to 11½c. with some going under the 11c. Quite a number of sales were made at eastern Ontario markets at from 11½ to 11¾c. while most of the western factorymen were holding for 11½c. which buyers were not disposed to pay.

Butter.

The English market shows a further weakness owing largely to the report of larger supplies coming forward from the Antipodes. It is stated that that part of the globe will have 3000 tons of butter to export; and the expectation of this large increase in supplies is causing a depressed feeling in the market. Canadian, however, has not declined as much as Danish and Swedish butter for the reason that it had not advanced to such a high pitch before the break. A further decline of ½c. per lb. has taken place at Montreal, and sales of choice fresh creamery have taken place at 20½ to 21c., and fine goods at 20 to 20½c. per lb. Prices in Great Britain have declined 20s. to 25s. on Danish and 10s. to 12s. on Canadian during the past two weeks. There are indications that a steadier market may be looked for soon. Prices for creamery butter here have not fallen off so much. Quotations are 22 to 23c. for prints and 20 to 22c. for tubs. Choice dairy butter in large lots brings 17 to 18c. for tubs, 18 to 19c. for lb. rolls and 13 to 14c. for tubs of medium quality. On the Toronto farmers' market lb. rolls bring from 20 to 25c., according to quality.

Wool.

The wool situation shows signs of improvement. At Montreal foreign wools are firm, and the mills have been buying more freely. There has been more enquiry for Canadian pulled wool and fleeces, a large lot of the latter quality having changed hands at 17½c. Quotations there for Canadian are 17 to 18c. for fleeces and 20c. for pulled. Fleeces here continues at 14 to 15c., unwashed at 8 to 8½c., and pulled at 15 to 16½c.

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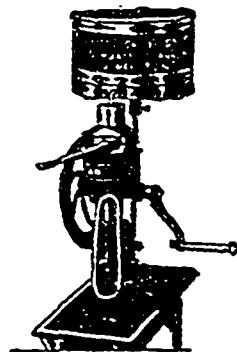
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Cattle.

The general cattle situation shows little change. At all the leading markets in the United States and Canada an over-supply of poor quality is reported, while buyers find it difficult to get all the choice quality they require. At the Toronto market on Friday the receipt of live stock of all kinds was light with the exception of hogs. The quality of the fat cattle, both butchers' and exporters', was poor, with a few exceptions. Trade was fair, and would, no doubt, have been better had there been more good cattle. As it was, prices for all classes, owing to light deliveries, were firmer. More good cattle, both butchers' and exporters' are wanted. There was an active trade in feeding bulls and rough heavy steers for the byres.

Export Cattle.—Choice lots of these sold at \$4.60 to \$5 per cwt., while light ones sold at \$4.25 to \$4.50. The bulk of exporters sold at \$4.30 to \$4.70 per cwt. Heavy export bulls sold at \$4 to \$4.25, and light ones at \$3.40 to \$3.65 per cwt.

Butchers' cattle.—Choice picked lots of these equal in quality to the best exporters but not so heavy sold at \$4.25 to \$4.40, good cattle at \$3.60 to \$3.70, medium mixed cows, heifers, and steers at \$3.40 to \$3.50, and inferior to common at \$2.60 to \$3.12½ per cwt.

Stockers.—At Buffalo good stockers sell readily, while poor ones are draggy. On this market on Friday yearling steers weighing 500 to 600 lbs. each were easy at \$2.50 to \$3, while heifers and black and white steers sold at \$2 to \$2.60 per cwt.

Feeders.—Light steers weighing 800 to 900 lbs. each sold at \$3.25 to \$3.50 per cwt. Heavy feeders were firmer, choice grade steers in good condition, 1,100 to 1,200 lbs. each, for farmers' purposes, while not plentiful, sold at \$3.75 to \$3.90, and rough steers of the same weight at \$3.40 to \$3.60 per cwt. Feeding bulls bring \$2.75 to \$3 per cwt.

Calves.—These continue strong at Buffalo. On Friday here calves sold at \$4 to \$8 each.

Milk cows.—About twenty cows were offered, a few of good quality, and sold at \$28 to \$55 each.

Sheep and Lambs.

Prices were firmer here for sheep on Friday at \$3.25 to \$3.50 per cwt. for ewes and \$2.50 to \$2.75 for bucks. Butchers' sheep bring \$2.75 to \$3 each. Receipts of Canadian lambs have been light at Buffalo and consequently prices have been stronger. The call seems to be for the lighter weight lambs weighing around \$3 to \$7 lbs. each. Lambs here bring \$3.25 for culls to \$3.50 to \$2.75 per cwt. for good to choice, while picked lots bring \$4 per cwt.

Hogs.

Receipts were fair at Friday's market with prices steady at \$4.37½ for the best bacon hogs of good quality weighing 160 to 200 lbs. each, and \$4 per cwt. for light and thick fat. Unculled ear loads sold at \$4.25 per cwt. Essex and Kent corn-fed hogs sold at \$4 to \$4.12½ per cwt. There is a report that lower prices are to follow. But this does not seem to be in keeping with the Montreal *Trade Bulletin's* cable of Oct. 26th re Canadian which reads thus:

"Under somewhat lighter supplies the market is steady, and it is hoped that the decline has been checked. No. 1 pea-fed Canadian bacon is quoted at 42s. to 46s. and No. 2 at 40s. to 44s."

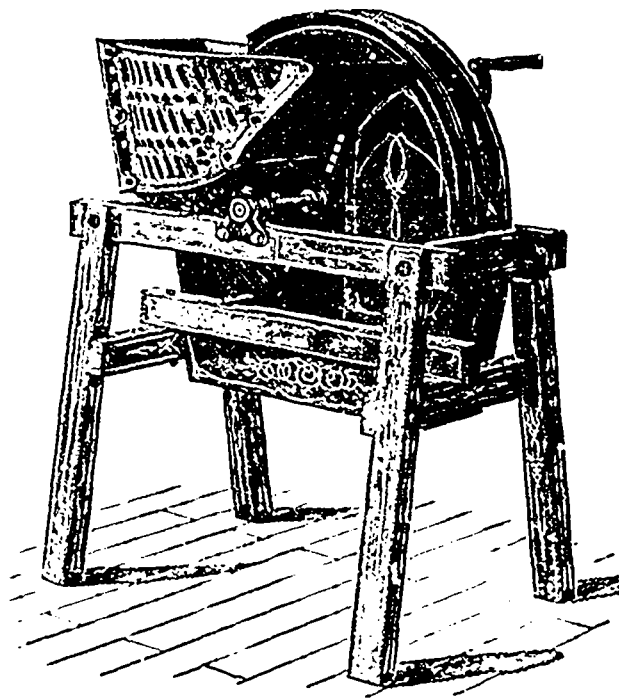
At Montreal prices for live hogs are a little lower, ranging from \$4.25 to \$4.50 per cwt.

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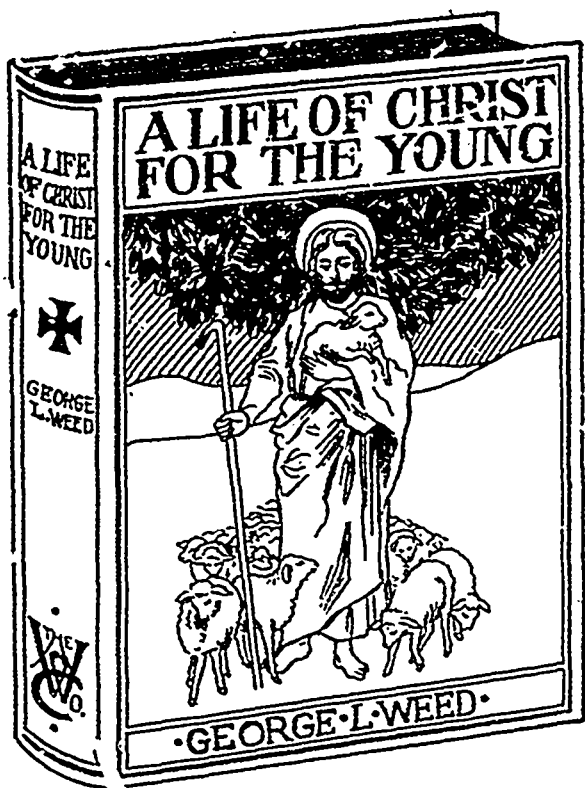
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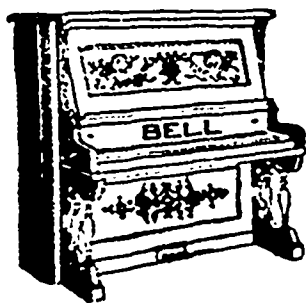
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