

THE Farming World

Address THE FARMING WORLD FOR FARMERS and STOCKMEN CONFEDERATION LIFE TORONTO



See page 729 for larger half-tone from this photo.

PLEASED TO GIVE ANY INFORMATION WE CAN REGARDING CUTS

FOR ILLUSTRATING your advertisements, circulars, or catalogues with pictures of your stock, implements, or any other thing, you will find

OUR HALF-TONE CUTS

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Illustrations in "Farming" are samples of our work.

We also make designs, zinc etchings, wood cuts and electros.

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THE ALEXANDER ENGRAVING CO.

(Successors to Moore & Alexander)

16 Adelaide Street West, TORONTO, Ont.

THE DE LAVAL COMPANY

acknowledge that there

Has been Lying about Paris Separator Awards

One of their latest advertisements is headed

' MORE LYING AS TO PARIS SEPARATOR AWARDS '

which is one of the most truthful statements they have made lately, and as we believe the readers will acknowledge if they try to reconcile some of their statements in the advertisement referred to with some in their previous advertisements.

In the advertisement headed "More Lying as to Paris Separator Awards" they publish what purport to be three "official" statements, dated Stockholm, Sweden. A careful perusal of these will show that they are what the courts call secondary evidence and never accepted by any court if there is primary evidence. The Paris Exposition was not held in Sweden.

Two weeks ago they advertised as follows :

"At the Paris Exposition the De Laval machines received the Grand Prize, or highest award, * * * being entered and receiving such award in the name of 'Societe Anonyme Separator,' which is the French translation of 'Separator Corporate Company,' the name of the De Laval European organization."

Notice by this advertisement they claimed "Societe Anonyme Separator" to be their European organization, thus acknowledging that no award was given to Aktiebolaget Separator.

But when we proved that "Societe Anonyme Separator" exhibited a Butter Radiator or Butter Extractor, and not a Cream Separator, they lose their tempers again and accuse us of "lying and misrepresentation" and advertise the three statements referred to above in their efforts to prove that the Aktiebolaget Separator did get an award at Paris, and claim it as their European organization.

We call special attention to the dates of these statements, viz.: December 5, 1900; April 2, 1901, and April 17, 1901, then ask the reader to bear in mind that it was in the last of November, 1901, that they advertised that the award they claim was given to "Societe Anonyme Separator." From which it will be seen that they pay no attention to facts or their previous statements when caught in a trap.

Being cornered on one claim, they abandon it and claim another; cornered again, they go back to their first abandoned claim. We recommend our "would-be competitors" to try once more.

An expert remarks that the De Laval Company will have to "eat hair" in order to make their statements hang together.

We still say that the official list of awards distributed at Paris did not contain an award to the De Laval Separator Company or the Aktiebolaget Separator.

The United States Separator still leads the world

To-day it has no equal

VERMONT FARM MACHINE CO. BELLOWS FALLS, VT.

Short Talk on Separators.

IN order to draw attention away from the shortcomings of their hollow bowl machines, competitors make a lot of words over the "Alpha Discs" simply because they can not use them in their own separators. We could leave them out—but they increase the capacity of any given size hollow bowl, **five** times. They make absolute clean skimming under adverse conditions, possible. The "Alpha" bowls travel from one-third to one-half slower than any other, thereby saving **power** and **wear** and **tear**.

Space is limited—more about it next week.

MONTREAL
WINNIPEG
NEW YORK
CHICAGO
SAN FRANCISCO
PHILADELPHIA
POUGHKEEPSIE

The De Laval Separator Co.
77 York Street,
Toronto.



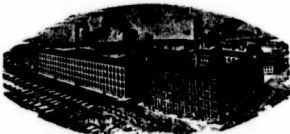
SECOND TO NONE!

FAMOUS CHAMPION FEED MILLS

Stand without a peer. Secure a machine and your profits will increase at once.
We have for sale cheap all makes of grinders replaced with the "Champion." Send for catalogue.

S. VESSOT & CO.
108 Front Street East. TORONTO. Ont.

BELL.. PIANOS... AND ORGANS.



Built to last a lifetime
By the Largest Makers
in Canada



BELL is the Musician's Favorite
The BELL ORGAN AND PIANO CO., Limited, GUELPH, Ontario
Catalogue No 41 Free

TOLTON'S No. 1 Double Root Cutter

POINTS OF MERIT

1. To change from pulping to slicing is but the work of 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, STEEL SHAPING, and all that is latest and best in principle, material and construction.

TOLTON BROS., GUELPH, Ont.

ALWAYS MENTION THE FARMING WORLD WHEN WRITING ADVERTISERS.

Business Muscle...



Belleville Business College
Limited
BELLEVILLE, ONTARIO
We teach full Commercial Course
Full Shorthand Course
Full Civil Service Course
Full Telegraphy Course
Our graduates in every department are to day filling the best positions.
Write for Catalogue. Address,
J. FRITH JEFFERS, M.A.,
Principal

Maxwell's "Favorite" Churn.



Patent Foot and Lever Drive.	No.	HOLDS	LIST 1	Capacity
•	1	8 gal.	•	8 to 9 gal.
•	2	10 "	•	10 to 11 "
•	3	12 "	•	12 to 13 "
•	4	15 "	•	15 to 16 "
•	5	20 "	•	20 to 22 "
•	6	25 "	•	25 to 28 "
•	7	30 "	•	30 to 35 "
•	8	40 "	•	40 to 50 "

Superior in Workmanship and Finish
DAVID MAXWELL & SONS
St. Mary's, Ontario, Canada.

Windsor
Salt
Makes
Good Butter
Better
Yet!

BEST GROCERS SELL IT

The Farming World

For Farmers and Stockmen

Vol. XIX

DECEMBER 31st, 1901.

No 27

Happy New Year.

NOT for many years have the farmers of Canada had such a prosperous one as during the year that comes to a close this week. 1901 will be remembered by them as a year of plenty and of good prices. Because of this pleasing retrospective the Canadian farmer can enter upon the new year with confidence and with greater faith in his chosen calling and in his beloved country. The Farming World joins in wishing him even greater prosperity than the year just closing has given him. Farmers of Canada, we wish you a prosperous and Happy New Year.

The Provincial Winter Fair

SOME HINTS AND SUGGESTIONS FOR THE FUTURE

"An immense success!" "A great show!" "Splendid meetings!" "An advance in agricultural exhibitions!" These were the common expressions heard on every hand by those attending the Winter Fair at Guelph. Each one of these expressions seemed to voice accurately the almost unanimous verdict of the vast crowd of visitors. The only attractions, so called, presented at this show were what might be called right ideals for our stock growers, and the imparting of solid information calculated to be helpful to those engaged in this industry; yet the people came in crowds. More than two thousand members of the various farmers' institutes of the province visited this exhibition for the express purpose of obtaining more accurate information regarding some particular branch in which they were specially interested. All through the exhibition there was manifest a deep interest in the proceedings, and there was seen everywhere a strong thirst for accurate knowledge. All this seems to augur well for the future prosperity of this great industry.

The one great drawback seen at the show was the manifest lack of sufficient room. The live stock were jammed together to an uncomfortable degree; but these having found a place in the building, there was little space left for the vast crowds of visitors who wished to inspect the stock. We sincerely trust that those in authority will seek to provide a remedy before the next exhibition is held.

There is need for a large amphitheatre for exhibiting the various animals. Not more than one quarter of the people who desired to see could be accommodated in the seats at present provided. The space for the animals was also altogether too limited. The work of the judges would be made easier, and the inspection by the public more complete if a larger space could somewhere be provided.

The large room set apart for the lectures was also found inadequate for the accommodation of the large numbers seeking entrance. Quite as many were sometimes found outside as inside, greedily thirsting for the information which was being given. An attempt was made to duplicate the addresses outside, but the acoustic properties of the amphitheatre were not at all satisfactory and only a few persons could hear distinctly.

Those in charge of the building should also remember that there is great need for better ventilation in the present lecture room. To put 600 people in a square box without giving them any air, soon leads to headaches and uncomfortable sensations, not at all conducive to the best results.

We think that too much emphasis should be laid on the special educational features of this exposition. Undoubtedly great good has already been accomplished, and we believe it is largely owing to the information given at this show, and scattered in that way broadcast over the province, that we have seen such a pronounced improvement in the hog product of the country. In the same way, it will be quite possible to stimulate and revolutionize the poultry products of this country. A good beginning has already been made, and if the educational forces are kept at work, inside of three years this province will be the recipient of hundreds of thousands of dollars more than in the past from the poultry industry. A revision of the poultry prize list in one or two particulars, as suggested in another column, would also help.

One point we think should be guarded in the future, and that is that the impression made upon the minds of the farmers and stock breeders by the ideals presented when the animal is alive should correspond in some reasonable degree to the impressions received from the ideals presented after the animals are slaughtered. In bacon hogs, this is usually the same in both instances; that is to say, a

hog that is able to secure the first place alive will probably be among the first competitors for a similar place after it is slaughtered. The same thing cannot be said so far in connection with the beef carcasses. The judges of export cattle award the prize to one class, which they say meets the demand, while the judges on the beef carcasses select an entirely different standard in giving their decision. It will always be easy to produce an inferior article; a thin, lean, poor quality of carcass can always be found anywhere in the country. What is needed is that our farmers should be stimulated to produce that which is better, which evidently, from the speeches of the judges, brings a better price for the export trade. It is these better prices that the farmers desire to obtain, and something must be done to enlighten the public as to the precise quality that is needed, not for the poorest trade, but for the very best trade.

Our Export Cattle.

In a letter to the Globe not long since Mr. John Dyke, for twenty-one years Canadian Government Agent at Liverpool, touches on the somewhat hackneyed subject of the deterioration of Canadian cattle. The following extract shows the grounds he has for again referring to this question:

"In a recent interview with the leading salesman at Liverpool and Deptford I was informed that the live cattle arriving at those ports, not only from United States but Canada, were annually decreasing in size, the reason assigned being the want of new blood."

According to this the United States, as well as Canada, is producing inferior cattle. But does the decreasing in size mean that the cattle are deteriorating in quality? Not necessarily so. Early maturity methods and the advent of the baby beef animal has changed the standard of quality considerably in recent years. If we understand the situation aright, the demand for the large fat animal is falling off every year in England, and his place is being gradually taken by the compact, well-fitted and well-finished animal of smaller size. If so, it is not necessarily a sign of deterioration that the cattle from Canada and the United States are smaller in size than they were fifteen or twenty years ago, as Mr. Dyke points out.

The writer refers to the increasing demand in England for food products of the highest quality. The poor man as well as the rich man demands it and it is well that Canadians should pay special attention to this point. We quite agree with this contention. There should

be no let-up to the efforts now being put forth to improve the quality of our export cattle. The large importations of new blood in recent years is a good sign and cannot but produce a good effect upon the quality of the cattle we export.

ment and at the same time the increase in land values will induce our farmers to go more and more largely into dairying.

The quality of the Manitoba product is excellent, much better than the conditions of manufacture would lead one to expect. This also will improve as better factories are erected and the collecting system perfected. Prices in the Montreal markets were this year a trifle below the quotations for Ontario product. With better and more regular local refrigerator service, this condition will be improved. At the same time we are looking to the west, to British Columbia, for the chief outlet for our goods. While the increasing quantity may force us into competition with Ontario factories we naturally prefer the western markets, whither the bulk of our goods has always gone.

The history of the Western States situated much as we are, shows a transition, with increasing population, from exclusive grain raising, to beef production and dairying. The last named has become in Wisconsin and Illinois the predominant branch of agriculture, while in Iowa and Minnesota the same state of affairs is rapidly approaching. Is it not natural to expect a similar evolution in Manitoba, especially when such good seed has already been sown in such promising soil?

Our Western Letter

Manitoba Dairying—Cheese Production Decreasing

Winnipeg, Dec. 24th, 1901. Of the figures contained in the Government crop report quoted in last week's issue none are of greater interest or afford a better index to the progress of the Province of Manitoba than the summary of its dairy products and their value. It is now only eight or nine years since Manitoba began producing her own butter and cheese with some small margin for export. It was but a short time thereafter, in 1895, that the growth of the industry led the Government to seek its advancement and betterment by the appointment of a provincial dairy superintendent and instructor. Since that date the onward march of the dairy industry has been rapid and uninterrupted. Of this fact the following figures are indisputable evidence.

Value of Dairy Products.			
	Butter	Cheese	Total
1895	\$207,066	\$107,170	\$324,176
1896			
1897	366,318	83,895	450,213
1898	340,088	69,367	409,455
1899	383,579	86,980	470,559
1900	541,661	102,330	643,991
1901	837,966	88,348	926,314

While these statements graphically illustrate the progress of the industry and more especially its advancement during the past three or four years the variation in prices, especially of dairy butter, which is included in the foregoing, have made the increase in value less than the actual increase in quantity produced. Perhaps the figures for the output of creamery butter alone more truly indicate the results attained.

Creamery Butter.	
Pounds	Valued At
1895	\$ 87,653
1896	127,274
1897 ... 987,179	177,692
1898 ... 965,024	179,494
1899 ... 1,002,809	188,026
1900 ... 1,254,511	240,515
1901 ... 2,460,650	442,424

Now while these figures leave us a very long way behind great dairying countries like Ontario, Iowa, Wisconsin and Illinois, yet they are encouraging in view of the newness of the country, the sparseness of settlement, and the many other hindrances, not the least of which is the hypnotic influence of wheat-raising. In 1893 there was one, or perhaps two creameries, in 1901 there are over thirty in operation. Of these one produced this season over half a million pounds and two others about a quarter of a million each. These three continue their

operations throughout the year. The majority operate from May to November only.

The growth has been most satisfactory up to the present. What are the indications for the future? We have no hesitation in saying that they have never been brighter. The people are taking a more intelligent interest in dairying, shown by the improved patronage of the creameries and the increased attendance at the Dairy School. The number of cows in the province is rapidly increasing, as well as the number of hogs, the natural accompaniment of increased dairying operations. The winter creamery, of which there will be five operated during this season, is growing in favor, encouraged by the liberal rates on cream given by the railway companies. This means a better average return to the patron, on the year's business than operation in summer only. The fact that, notwithstanding the lower prices secured this year, farmers netted as good, or in some instances better, returns than in previous years, shows that the management of the creameries is improving. This should be a further inducement for increased patronage. These facts all augur well for the future of Manitoba dairying.

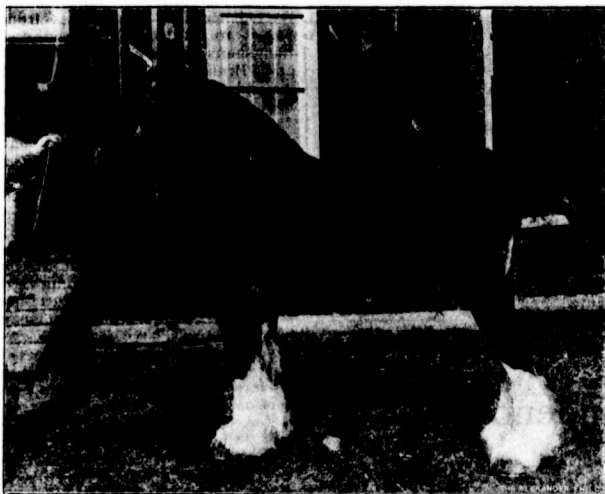
A significant fact developed by the figures given is the decline in cheese production. No year since 1895 has equalled the production of that year. In 1896 at least four large factories (the largest then operating) were converted into creameries. The present season 1,039,392 pounds were made as compared with 1,021,258 in 1900, notwithstanding the fact that this has been a much more favorable season than last year. This seems to indicate an appreciation of the better results secured by the utilization of the skim milk for feeding, rendered possible by the present system of cream-gathering creameries. The cheese factories are almost exclusively confined to the French and German districts. It is extremely doubtful whether the future will see any notable increase in this branch of dairying.

Among the drawbacks to successful creamery operation in Manitoba the most serious is the sparseness of settlement, and consequent expense of collecting cream. The more desirable system of milk gathering is rendered an economic impossibility. Each farmer must have his separator and cream is collected three times weekly. As time goes on this difficulty will be overcome by the advance of settle-

Winter Care of Milk.

The following paragraph from a circular recently issued by the St. Marys Creamery Co. is worth repeating:

"There are a good many of our patrons, both at the central and stations, who still are very careless in regard to their care of milk, bring it in with the cream all frozen to the sides of can and lid, giving a very bad old milk flavor when warmed up, showing that warm milk has been added to the cold, no aeration having taken place, and freezing and thawing according to the condition of the weather. During the fore part of December the weather was very cold and nearly half of the milk was frozen; result—a poorer quality of butter, hence, a poorer price, an improper sample of milk taken, a poorer test. It also took from two to three lbs. more of milk to make a pound of butter, which is also your loss through carelessness. Why not co-operate with us (who try to make the best quality of butter put on the market) and give us the best quality of milk in the best condition you know how, so that you will be gainers and not the losers. We thank those patrons who bring pure clean milk, and which is never frozen, having their cans well covered and with straw underneath. If we only had more of them. We cannot make good butter out of poor ill-cared for milk, and milk kept three or four days until ill-flavors have developed, which are not easily detected when the milk is cold, but which seriously affects the quality of the butter."



Clydesdale Stallion, Burnbrae. [2767] 8378. Champion Pan American Exhibition. Owned by Graham Bros., Claremont, Ont.

Two Notable Canadian Horses

Last year at the Chicago International Show great honor came to Canada from the exhibit of Mr. Geo. Moore's three teams of Clydesdales, which sold for the handsome sum of \$3,000. This year at the show, held only a week or two ago, even more distinguished honors have come our way. The only exhibitors of Canadian horses at Chicago this year were Messrs. Graham Bros., Claremont, Ont., who just about swept the boards, carrying off nearly all the best prizes with the sweepstakes for the best American bred mare. Had full justice been done, so we learn, they would have had the sweepstakes for the best stallion also. This is a good record and well worthy of special mention at this juncture.

We have pleasure this week in presenting the readers of *The Farming World* with illustrations of two of Messrs. Graham's noted prize winners. The stallion Burnbrae is a splendid type of the popular Clydesdale breed. He was foaled on May 17th, 1895. Sire Rosewood (2708) 6775. Dam Young Bloom (2407) 7554. He is a bay with stripe on face and four white legs and has many show ring honors to his credit. He began his record as a two-year-old at the great Chicago horse show of 1897, when he won first in the two-year-old class and the championship for two-year-old, all draught breeds competing. His record for 1901 is: First as stallion three years old and over, and the championship all ages competing at the Pan-American; second in the aged stallion class, Toronto Industrial Exposition, and first as three-year-old and over stallion, and championship, all ages competing, at the Ottawa exhibition.

The second illustration, that of Cherry Startle, shows perhaps a

more notable prize winner. This well bred mare was foaled April 16th, 1898. She was bred by Colonel Holloway, Alexis, Ill. Sire Startle 6127. Dam Cherry Sweet 4192, now one of the greatest, if not the greatest, brood mare living. Cherry Startle is a brown with stripe on face and white hind feet. Her record in the prize ring is a most notable one, especially for 1901, when she had four championships to her credit. In 1900 she won first in the two-year-old class at the Toronto and Ottawa exhibitions. Beginning with the Toronto Industrial in 1901, where she won first and the sweepstakes, she won for her owners first and championship at Ottawa, first in her class and championship at the Pan-American, and at the great Chicago International Show, first in three-year-old class, silver cup for the



Clydesdale mare, Cherry Startle, 8969. Champion over all ages at the Chicago International Show, 1901. Owned by Graham Bros.

best American bred mare, championship over all ages as the best mare at the show, and first in the cart class for the best mare or gelding under 1,750 lbs.

If this is not a record any horse breeder might well be proud of we are very much mistaken. Both at Buffalo and Chicago Graham Bros. have well maintained the honor and prestige of Canada as a land where the very best of horse flesh is to be found and are deserving of the thanks of the horse breeding industry of this country.

The Care of Horses in Winter

Good feeding is not the only requisite in caring for horses during the winter months. The features under what may be termed the care of horses are of importance. There is some difference of opinion as to the advisability of blanketing horses in winter. This will depend largely upon the temperature of the stable. If the stable is cold and drafty as many farmers' stables are, blanketing is advisable. Some claim that to blanket a horse in a stable of ordinary warmth it is more inclined to take cold when taken out in cold weather. However this may be, it is certain that nothing will keep a horse's hair in nice bloom as by blanketing them. Not only is the coat kept cleaner, but it lies closer to the body. When the weather is very cold and the work is not sufficient to keep the horses warm they should be blanketed when outside. A cold, biting wind is one of the most certain sources of inflammation or other lung troubles to which horses are subject. Liberal brushing and currying add greatly to the thrift of the horse, not only because they keep the skin clean but because they contribute toward keeping other organs of the body clean and healthy.

Most of the troubles to which horses are subjected in winter are due to the fact that they are usually idle several days and work intermittently. After a few days

idleness horses usually fret a great deal when put to work and if they are not driven carefully they become overheated, which if not properly looked after when brought into the stable, results in a cough, followed by influenza, etc. A warm horse brought to the stable should be thoroughly rubbed down until it is at least partially dry and in such a glow that it withstands the chill which is likely to follow. If horses have been out in slush or mud their legs should be well rubbed down.

To keep a horse clean in winter its quarters should be clean and well bedded. In the case of colts they should be allowed to run loose at least during the day and

the older ones tied up at night. This accustoms them to handling and facilitates the breaking of them later. But it is a mistake to keep two and three-year-olds tied up in the stable on a wooden floor during this season, for they are very likely to grow wrong in their legs if this is done. The two-year-olds should be halter broken and accustomed to tying, so that in spring they may be made to readily take part in the lighter kinds of spring work. Colts not only need good feeding to mature them in the best form, but they also need liberal exercise to keep their legs in that clean fluted or corded condition which pleases the eye of the horseman.

\$34 of this amount being on the Barred Rocks; Wyandottes from \$1.50 to \$14.00. Leghorns and Langshans remain about stationary. Brahmas have increased, and instead of drawing on the Government grant, as in 1897, for \$12.50, they are now contributing to the general funds over the amount drawn in prizes by \$10.50. The Orpingtons have been added since 1897, and they have contributed \$7.50 more than they received.

Thus you will see that the result has been exactly the reverse. Although the most popular breeds are still further discriminated against in the matter of prizes they have gone ahead, while the fancy bantam breeds have remained stationary. It must be remembered that this show, on account of its Government patronage and its connection with the Winter Fat Stock Show, is not a fancier's show in the sense that Boston and New York are. It is more a farmer's and market poultry man's show. The object is not to attract big box office receipts, as much as to instruct and educate the citizens of this province who are interested in poultry culture. For this reason much less attention should be paid to ornamental stuff. Geo. W. Miller, London, Ont., Dec. 17th, 1901.

Note.—The case which Mr. Miller presents appears to be a pretty strong one. It does seem as if the poultry department of the Provincial Winter Fair were not working in harmony with the other branches of the show where only the practical and useful are recognized. If what are known as the fancy breeds are to go on receiving the same prize money they are now getting, then the number of prizes in the utility classes should be largely increased. In the cockerel class in Barred Rocks at the recent show there were 57 entries and only six prizes given. Therefore there must have been 51 exhibitors who did not win prizes. On the other hand the entries in almost all of the bantams or fancy classes are no larger than are sufficient to take up all the prize money and distributed only among one or two exhibitors at that. In the face of these facts it does seem that Mr. Miller's contention is a fair one and that some readjustment of the prize money as between the fancy and utility breeds should be made before another year. It might not be wise, perhaps, to shut out the fancy breeds altogether, but it does not seem fair that they should get an undue share of the prize money in proportion to the amount of entry fees paid in.—Editor.

"As I reached home last night I saw our cow running off down the road."

"Well?"

"I chased her a mile and a half in a pouring rain."

"Catch her?"

"Yes, but when I got the old thing back to our barn I found out she wasn't our cow."—Indianapolis Journal.

Correspondence

The Poultry Prizes at Guelph.

THE UTILITY BREEDS PAY IN MORE THAN THEY TAKE OUT.

Editor The Farming World:

The manner of the distribution of the Government grant by the Poultry Association of Ontario, amongst the various breeds, was much talked of by exhibitors at the recent show at Guelph and has been the subject of conversation among poultry men for some years, so that it is not a new subject by any means that I am directing the readers of The Farming World to. My object in bringing it up at this time is not to discriminate against any breed, but rather to ascertain if some breeds are not under the present management being discriminated against.

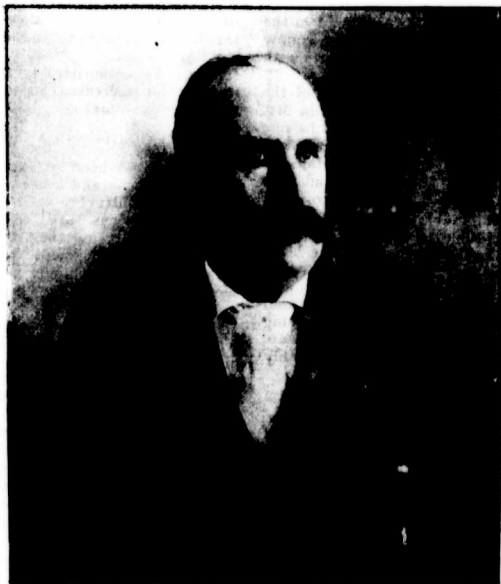
Before proceeding to a discussion of the subject let me ask, what is the Government's object in making the substantial grant it has for many years past to the Ontario Association? I submit that the object the Government has in view is the fostering and improvement of the more useful breeds, those varieties that the farmer and market poultryman find the most profitable, the kinds that are the greatest source of revenue to the poultry raisers of this country. I do not think it is the intention of the Government that so large a proportion of the grant should be devoted to the Bantams and fancy pet stock.

Now let us see how this grant has been distributed. In 1897, when the "Ontario" met in Guelph, the prizes on Brahmas exceeded the entry fees by \$12.50, on Cochins by \$8.50, on Games by \$21.50 and on Bantams by \$106.50, on Hamburgs by \$39.00, on Polands by \$56.00, on Dorkings by \$14.00, on Dominiques by \$8.00, on Javas by \$9.50, on the French breeds by \$16.50, and by Red Caps and A. O. C.'s by \$12.00. The Association received more in fees than it paid in prizes on the following breeds: Plymouth Rocks, \$10.50, Langshans, \$2.50, Wyandottes \$1.50 and Leghorns \$7.50. Thus you

will observe that the association did not have to draw on the Government grant for one cent to pay prizes on the breeds generally recognized as the leading general purpose fowls, Plymouth Rocks, Wyandottes and Leghorns, but realized a small profit from entry fees over the prizes paid, while there was a loss on the other breeds, and the less useful they are the larger was the loss, of \$39 on Hamburgs, \$56 on Polands and \$106.50 on Bantams. On pheasants, pigeons and rabbits there was a loss of \$122.50. There was really a further loss in the ornamental breeds, for in these classes the competition was confined to five or six members, while in the other breeds the competitors were more numerous, and the amount received in members' fees from utility breeders was largely in excess of that of the ornamental men. That was the condition of affairs in 1897.

Now, let us see what changes time has wrought. Let us see if this discrimination in favor of Bantams and pet stock has had the effect of increasing the number of exhibitors in these classes. Let us see if the Government grant is being used to promote the breeding of general purpose stock or ornamental stock. Bantams are again the heaviest load for the association to carry, the loss on them this year being \$75, \$63 of which is on the Ornamentals and \$12 on the Games. The loss on Polands is greater than in 1897, being \$64.50 now. The Hamburg loss is \$39, exactly that of 1897. The loss on Cochins has increased also, being \$22 this year. Other breeds showing a loss are White Langshans, \$8.00, Dominiques \$5.00, Red Caps \$5.50, Games \$17.00, Dorkings \$7.00 and the French breeds \$15.00. On pigeons and pet stock the loss is not as heavy as four years ago.

As in 1897 the great utility breeds, those most generally recognized as the best by the farmers, have contributed more than they received. Plymouth Rocks have increased from \$10.50 to \$39.00,



E. B. Elderkin, President of the Maritime Winter Fair.

Some Maritime Agriculturists

MR. ELDERKIN.

Mr. Elderkin, like a great many other men of ability in Canada and elsewhere, can claim the county of Cumberland, Nova Scotia, as his native place. In his early years he followed the mercantile marine and commanded various vessels of the great Nova Scotia fleet. While still a young man he married and settled upon a fine farm at Maccan. The farm is now managed by two of his sons and he has removed to a farm just upon the edge of the town plot of Amherst. It is a good farm beautifully situated.

As a stock breeder Mr. Elderkin has given most attention to the Jersey breed and has a very nice little herd on his Amherst farm, where he has an excellent barn and good dairy appliances.

When the Nova Scotia Farmers' Association was re-organized in 1895, Mr. Elderkin took an active interest in its work. It is largely due to his untiring efforts that Nova Scotia has had such an excellent provincial exhibition, an institution which was launched at the instance of the Farmer's Association.

In Sept., 1896, Mr. Elderkin was selected by a number of live stock exhibitors at the St. John Exhibition as convener of a meeting which afterwards resulted in the organization of the Maritime Stock Breeders' Association. He was appointed its first president, an office to which he has been unanimously returned each year since. He has proved himself an untiring official and through the Association has done a grand work for the country.

His abilities were early recognized by Mr. F. W. Hodson, and his selection as Canadian Live Stock Commissioner at the Pan-American Exposition last summer showed him to be the right man in the right place. He performed his duties there faithfully and well, and Canadian live stock received additional honors because of his efforts.

Mr. Elderkin is yet a comparatively young man and all our readers will hope that his services may long be spared to the live stock interests of the country.

ROBERT ROBERTSON.

Mr. R. Robertson, Superintendent of the Dominion Experimental Farm at Nappan, N. S., is well and favorably known to every Maritime farmer. When he became superintendent a few years ago we gave the readers of this journal a short account of his life and work. He was especially selected by the Minister of Agriculture for the position because of his skill as a dairy farmer.

Mr. Robertson had been one of the pioneer winter milk producers of the Montreal district, and early learned many valuable lessons in the breeding, developing, feeding and care of cows.

Not only did he build up a grand commercial herd of dairy cattle, but also proved himself to be one of the best Ayreshire breeders in Canada.

At his dispersion sale at Compton, which he conducted after the acceptance of his present position, buyers from far and near were on hand and many of the best herds

in the country were augmented by draughts from his herd.

Since going to the Maritime Provinces, Mr. Robertson has, in season and out of season been preaching the gospel of more and better live stock; and he has not only proved his fitness as a specialist in dairy farming, but is also making a marked success in turning out from the Experimental Farm some of the best beef cattle ever marketed in Eastern Canada.

He also took a great interest in the winter fair, of which he was superintendent, accepting this position with all its worries and duties without any additional remuneration.

In managing the farm at Nappan, he has been very successful in always securing splendid field crops, some of the clover, corn and grain crops being eye-openers to all the visitors who saw them; and that he disposed of these crops to good advantage no one will gainsay when they see the milk yield and beef animals which he is marketing. His work and example on the Experimental Farm are undoubtedly proving a great stimulus to the stock-raising business in these Maritime Provinces.

W. W. HUBBARD.

The subject of this sketch is one of a number of Maritime Province boys who in the early eighties felt an impulse towards improved agricultural methods and took a trip to Ontario, and a course at the Agricultural College. Born and brought up on a St. John River farm, Mr. Hubbard early evinced a great liking for live stock and spent his happiest hours in caring for the herds on his father's farm, where he built up a nice flock of Shropshire sheep.

Soon after his return to New Brunswick he was made corresponding secretary with another O. A. College boy, Mr. H. B. Hall, recording secretary, of the Provincial Farmer's Association of New Brunswick. With the exception of one year Mr. Hubbard has been the secretary of this association ever since.

He early became interested in the Co-operative Dairy movement and after spending some months among the creameries in the New England States was instrumental in starting several factories in New Brunswick. He was then employed by the Provincial Government and also by Prof. J. W. Robertson, Dominion Dairy Commissioner, in organizing dairy associations, in travelling dairy work and for two years was in charge of the Experimental Dairy Stations in New Brunswick. He also took an active part in organizing the Sussex Dairy School, where, up till the past session, he each year, has been a lecturer.

In 1895, associated with R. D. Robinson & Co., of Sussex, he began the publication of the Co-operative Farmer and up till last August was its editor. He is now associated with several other men

in publishing a farm and home paper, from Halifax and St. John, called the Maritime Homestead.

In 1898 he was invited to become secretary of the Maritime Stock Breeders' Association and has since then given considerable of his time to this work. With the other officers of the association, he is to be warmly congratulated upon the large measure of success that attended the Winter Fair at Amherst, held under their auspices.

CHAS. A. ARCHIBALD.

If there is one man in Nova Scotia to-day who deserves the thanks of his fellow farmers, it is the subject of our sketch. Unostentatiously and without government or any other assistance he has done more to improve the live stock of Nova Scotia than any other man within her borders. He is a native of Truro, and by the death of his father was early thrown upon his own resources.

In his work of live stock and agricultural improvement he has shown both enterprise and perseverance. Early seeing the advantage of pure bred stock for improving the common stock of the country he began the importing and breeding of the best animals he could secure. He saw that there were two distinct fields for live stock husbandry, viz: Beef-raising and milk production, so instead of tying up to one breed, he selected the Shorthorn breed as the one best calculated to improve the beefing qualities of the farmers' cattle and the Ayrshire as the best fitted to increase milk production under

Nova Scotia conditions. Experience has confirmed Mr. Archibald in the wisdom of his choice, and he is now working along these two lines with a good measure of success.

In addition to having two of the best herds of cattle in Canada Mr. Archibald can also claim to be one of the best farmers. His farm, under his management, never fails to respond with large crops, and it is always a great pleasure to visit his comfortable homestead, Belle Vue, at Bible Hill, within a mile of Truro, both by reason of the hearty welcome that awaits everyone interested in live stock, and also because of the general thrift and comfort of the place and everything on it. Both house and barns are models of their kind and admirably serves the purposes.

F. L. HAZZARD

Mr. Hazzard, the vice-president of the Maritime Stock Breeders' Association for P. E. Island, is an enthusiastic live stock man. Though he is one of the leading lawyers of Eastern Canada he yet runs a farm—his old home near Charlottetown, and takes the keenest interest in everything calculated to help agricultural live stock conditions. He has taken an active interest in the work of the Maritime Stock Breeders' Association and has been one of the promoters of the Maritime Winter Fair. It is pretty certain that with the exertions of Mr. Hazzard and other officers upon P. E. Island that that province will take a much more prominent position in the next and succeeding winter shows.

ified praise is also due for the very liberal way in which they raised the funds to provide and equip a building.

An active committee is now arranging for increased accommodation for next year.

THE EXHIBITS AND AWARDS.

There were 90 head of cattle, 89 sheep, 30 swine, and a neat display of dressed poultry.

The Shorthorns are the most popular breed in the Maritime Provinces, as evidenced by numbers. They were the only pure-bred section which was placed in a class by itself.

Herefords and Aberdeen-Angus, which were the only representatives of the other beef breeds, were classed together and judged accordingly. All the beef classes, both pure-bred and grades, were judged by Prof. Geo. E. Day, of the Ontario Agricultural College.

In Shorthorns, the principal prize-winner was C. A. Archibald, of Bellevue Farm, Truro, who captured the larger share of the awards. The other exhibitors were, Bliss M. Fawcett, Sackville; F. T. Holmes, Amherst; F. W. Thompson, Fort Lawrence; J. Rupert Coates, Nappan; Oscar Chase, Port Williams, and Wm. A. Trueman, Pointe de Bute.

Steers under 1 year made a fairly good section, containing some smoothly-turned youngsters. First prize went to a well-fleshed, promising steer, owned by F. W. Thompson. Archibald was a good second with a blocky fellow, while third prize went to a likely yearling, owned by Oscar Chase, which was not brought out in quite good enough fit.

In 3-year-old cows, Archibald practically swept the ring, capturing first, third and fourth with three grand matrons. Second prize went to a fine breedy-looking cow, with a good covering of flesh, owned by Oscar Chase. Fifth prize was taken by Wm. A. Trueman.

Two-year-old heifers were a good class. Here again Archibald was the fortunate one, carrying off first, second and fourth. The first prize heifer was a sweet thing, a blocky, mellow roan. Third place was taken by a nice, even heifer, but a trifle coarse in bone, owned by F. T. Holmes.

Yearling heifers were an extra strong class, all the best places being awarded to Archibald's entries, which were easy victors. In the next class, that for heifers under one year, Mr. Archibald was again the winner, capturing first and second. Third prize was taken by a growthy heifer, but a trifle rough in hind quarters, owned by J. Rufus Coates. The Sweepstakes was awarded to the first prize winner in the calf section,—a beautifully moulded heifer of ideal type.

Herefords and Aberdeen-Angus.—In this class the contestants were, W. W. Black, of Amherst, with Herefords; and Herbert Stairs, Hillaton, with Angus. This was

The Maritime Winter Fair

(Specially Reported for The Farming World.)

We give herewith a short synopsis of the first Fat Stock Show of Maritime Canada, and glad we are to announce to our readers its unqualified success; first, as an illustration of the possibilities of the country for beef, mutton and pork production; second, as an educational convention, in showing what the markets demand, with the explanation of how to reach the desired quality; third, in that it attracted a large number of the people whom it was meant to serve, as was illustrated by the interested crowds which constantly thronged the seats before the ring as well as standing ten deep all about the ring-side. It is to be regretted that all who wished could not see and hear the valuable lessons given. However, the Fair this year was an experiment, and now that it is known that the people wish to attend it and use it, the management are not likely to be caught unprepared next year.

The very large attendance and intense interest was most gratifying to Dominion and Provincial Ministers of Agriculture and the officers of their Departments, as well as to the officers and members of the

Maritime Breeders' Association, all of whom had co-operated to make the show a good one.

To the Hon. Sydney Fisher and his Live Stock Commissioner, Mr. F. W. Hodson, is due a large portion of the credit. Shortly after the appointment of Mr. Hodson to his department, Mr. Fisher's keen insight into the agricultural needs of the country led him to suggest that such exhibitions as the Ontario Provincial Winter Fair should be held both East and West in Canada.

Mr. Hodson took up the matter with his well-known energy; then the Governments of New Brunswick and Nova Scotia promised their assistance, and with Mr. Hodson and the officers of the Breeders' Association made the Show possible and successful.

Everyone, from Hon. Sydney Fisher and L. P. Farris and their officers, Mr. B. W. Chipman, of Nova Scotia, and the officers of the Breeders' Association, have each and everyone done their utmost, and all deserve congratulations upon the way in which the show has started on its mission.

To the people of Amherst unequal-



C. A. ARCHIBALD, Truro, N.S.
Vice-Pres. Maritime Breeders Ass'n. for N.S.



F. S. HAZZARD, Charlottetown,
Vice-Pres. Maritime Breeders Ass'n for P.E.I.



W. W. HUBBARD, HALIFAX, N.S.
Secretary Maritime Breeders' Association.

a difficult class to judge owing to the difference in the two breeds.

In 3-year-old cows, first and third went to Black's Herefords, while Stairs got second and fourth with his Angus Cow. All the cows in this section were too fat for the best markets. In 2-year-old heifers the contest was close, Stairs being finally awarded first, with Black second and third. In yearling heifers Black was first and second, with Stairs third. A similar placing was made in the calf class. Sweepstakes was easily won by a handsome, even-fleshed calf, shown by Mr. Black.

Grades formed a large class, and were a very even lot of mostly well-finished animals, and gave abundant evidence that the stigma of our best beef having to be imported from Ontario can easily be, and is fast being, removed. Most of the firsts in this class were taken by W. W. Black, who showed animals with a strong admixture of Hereford blood. Mr. Black got firsts in 2-year-old steers, yearling, yearling heifers, and heifer calves. In the 3-year-old class, however, Bliss M. Fawcett captured first with a model butcher's beast, a Grade Shorthorn. First in steers under 1 year went to J. Rupert Coates, while two firsts were captured by F. W. Thompson in 3-year-old cows and 2-year-old heifers respectively.

W. W. Black won special prize given by Messrs. J. A. Learman & Co. for second best animal, any age or sex in beef class, other than Shorthorns.

C. A. Archibald won special prize offered by Maling & Co., of Halifax, for second best animal, any age or sex, in Shorthorn class.

POULTRY.

The Poultry Show embraced a small but excellent display, and was very highly commended by the judge, Mr. W. R. Graham, of the Ontario Agricultural College, but he said that some of the best stock had been spoiled by bad plucking and by not being properly killed. The fault was shown by the pinkish color of the breast and back,

the bleeding not having been properly done and possibly plucked too soon after killing. The general appearance of so many of the birds might have been improved by trussing, i.e., properly arranging the legs and wings.

Turkeys were a good class, perhaps a little undersized; their weakest point being in the manner in which they had been dressed, as some of the backs were badly torn.

Geese were only a small exhibit. They had apparently been scalded before plucking, thereby injuring their appearance.

Chickens were a strong class. The first prize pair of Rock Cockerels were unusually good, having been well fattened and dressed, and were the best pair of fowls in the Show. They were shown by Craig Bros., of Amherst. The second prize pair were lacking in meat, and the backs had been damaged in plucking. The third prize pair were of a very objectionable yellow color. The fourth prize pair had been badly dressed.

Pullets. Some fine pairs were shown. Some Wyandotte Cockerels had in several cases developed spurs, which is a serious objection in the export market. Some pairs had been scalded, and also had not

been fasted previous to killing. The pullets were nice, plump, well-fattened birds, though lacking somewhat in size, and being of yellow color instead of white.

The interest in the poultry department was further heightened by exhibits made by the Truro Fattening Station, in charge of Jos. P. Landry, connected with the Truro Government Farm, of which Mr. F. L. Fuller is the efficient manager, and a second exhibit made by the Poultry Department of the Ottawa Experimental Farm, which department is managed by Mr. A. G. Gilbert.

The Truro exhibit consisted of an incubator in operation with chickens hatching during the show. This was a novel and interesting feature, and attracted much attention. Crates of live birds in process of fattening with the cramming machine were shown, as also cases of birds packed for export. These latter proved an eye-opener to the public.

The Ottawa Poultry exhibit had a beautiful display of fowls dressed for the table, and also for export, in addition to a display of eggs illustrating the use of an incubator.

Fully 3,000 men and boys attended the show, beside a large number of ladies. An interesting sight was the visit of 600 children from the Amherst schools. The youngsters had a merry time and were for the most part very well behaved, though their desire to ride the woolly sheep and make the pigs laugh, rather interfered with the comfort of these exhibits. No doubt, however, these youngsters will prove 600 excellent advertisements for the next show.

The total gate receipts and entry fees aggregated almost \$500, a very creditable start for an experiment.

THE ADDRESSES.

At the conclusion of the cattle-judging, a very interesting and instructive lecture on "The Desirable and Undesirable Points of a Beef Steer," was delivered by Prof. G. E. Day, of Guelph. This lecture was illustrated by two animals in



R. ROBERTSON, NAPPAN, N.S.
Superintendent Maritime Winter Fair.

the ring, the one showing the ideal beef type, while the other plainly showed the undesirable points of a beef animal.

Prof. Day was followed by Prof. J. H. Grisdale, of Ottawa, who gave a fine address on "The Desirable and Undesirable Points of a Mutton Sheep." This lecture, like the previous one, was illustrated by living types, illustrating what was right and what was wrong in mutton production.

Next came an address on "The Points of a Dairy Cow," also illustrated by two types of living animals in the ring, delivered by Robert Robertson, Superintendent of the Maritime Experimental Farm at Nappan. All three of these lectures were listened to with close attention by a very large audience, and were splendid object-lessons to the farmers and stockmen present.

Short, but practical, addresses on "The Rearing of a Dairy Cow from Callhood Up," were delivered by Messrs. Thos. A. Peters, Deputy Commissioner of Agriculture for New Brunswick, B. W. Chipman, Nova Scotia's Secretary for Agriculture, and S. J. Moore, a practical dairyman of Shubenacadie.

HON. MR. FISHER

Hon. Sydney Fisher, Minister of Agriculture, delivered a splendid practical address, which was listened to with great attention and pleasure by the large audience present—probably the most representative meetings of farmers ever held in the Maritime Provinces. The Minister of Agriculture was greatly pleased and not a little surprised at the extent and quality of this first Fat Stock Show in the Maritime Provinces. He drew a bright picture of the agricultural future of this portion of the Dominion. After referring to the wonderful and varied natural resources in minerals, fisheries and lumber, he predicted that now that greater attention was being turned to agriculture, that ere long the farming industry would become a powerful factor in the Provinces by the Sea. He urged the importance of education, both practical and scientific to the farmer. While it is true that in the eastern portion of Canada there was not the great extent of arable lands as in the West, yet in many respects the Maritime farmer had many advantages. Some of these were the excellent natural pastures, the abundance of pure water, the ability to grow large crops of forage and roots, in fact most that goes to make up an ideal live stock country. With this foundation the Maritime Provinces ought, and is bound to, become an important live stock country. The raising of live stock is the highest branch of agriculture, and demands the greatest amount of skill and intelligence. As a powerful factor in encouraging the live stock business, Hon. Mr. Fisher referred to live stock associations, annual exhibitions and fat stock shows. He urged the people of Amherst to make this first Show the beginning

of an annual institution which shall be the yearly rallying-point of all our stockmen and farmers, and from which shall radiate influences which shall be far-reaching in the advancement of the live stock and farming interests of these provinces.

He outlined the splendid growth of the export trade in Canadian farm products. In this growth the first factor had been cheese. Our butter is now coming to the front in the English markets, and from having exported only six per cent. of the butter consumed in that market five years ago, Canada is at present sending over 14 per cent. As a consequent accompaniment to the growth of dairy products, hog raising has been developed. The Maritime Provinces are now only in the preliminary stages of hog production, at present occupying about the same position as that formerly held by Ontario. Canada, eight years ago, sent about six hundred thousand dollars' worth of pork products to the English market. This trade has so increased that last year we sent over to the Old Country hog products to the value of over twelve million of dollars. This great advancement was accomplished not by producing coarse, fat pork, such as was once wanted in the lumber woods, but by growing pigs of the modern bacon type. To get a share of this great and increasing bacon trade the farmers of the Maritime Provinces must apply the same intelligence and application to this line of work as have the farmers of Ontario.

Speaking of improvement of live stock in the Maritime Provinces, the Minister of Agriculture congratulated the farmers on the great progress which is being accomplished. Not long since all the best beef in Halifax was brought down from Ontario. He was gratified to know that this state of things was rapidly changing. He predicted that before long Halifax butchers would be coming to the Amherst Fat Stock Show for their Xmas beef, instead of going to Guelph, as at present.

Mutton was another product which the Maritime Province farmers were eminently fitted to produce profitably, as the natural conditions of pasturage, water, etc., were almost ideal, but here again the farmer must study the needs of the market.

The Poultry industry was another important branch of our agriculture, but one which very many farmers are apt to look upon as of little consequence. Formerly the United States was our chief export market. This is now closed to us, but we are now turning our attention towards the great markets of the Old World. The Department of Agriculture has been endeavoring to assist in the development of this branch of trade by the establishment throughout Canada of Poultry Fattening Stations. As a result of this, while less than four years ago hardly any poultry was exported to England, there were

shipped last year over one thousand tons.

The honorable minister saw no reason why the export of dressed poultry should not increase in the same ratio as that of bacon and dairy products. The fattening stations at Truro has amply demonstrated the fact that the right kind of poultry for the English market can be profitably produced in these Maritime Provinces.

PUBLIC MEETINGS

Mayor Dickie, who occupied the chair, was glad to preside at a meeting of this kind. He hoped that this Winter Fair was but the forerunner of what shall prove to be an annual institution in the town of Amherst. Hon. W. T. Pipes, of Amherst, welcomed the visiting stockmen to the thriving town of Amherst. He emphasized the importance of the live stock interest. The raising of finished products as cattle, sheep, hogs, etc., brought to the farmer the greatest cash returns and at the same time demanded the greatest amount of skill and intelligence. He then referred to the great and varied resources of the Maritime Provinces, and predicted a large measure of success for agriculture in the near future.

Hon. L. P. Farris, Commissioner of Agriculture for New Brunswick, was then introduced. He said that he was proud of this first Fat Stock Show, and only regretted that his Province had not contributed more largely to its success. He advocated closer inter-provincial brotherhood, and was confident that we had now commenced a new era of a brighter and more prosperous agriculture.

Hon. Benj. Rogers, Commissioner of Agriculture for P.E. Island, spoke of the agricultural interests of his native Province. Formerly the chief products on the Island were potatoes and oats. As a result of this, and particularly from constant grain raising, the land had gradually deteriorated in fertility until the farmers were forced to turn their attention to something which would restore the needed plant food to the soil. As a result, the raising of animal products, particularly hogs, as well as dairy goods, was now becoming of chief importance. Poultry raising is also developing into quite an important industry. With her fertile soil and absence of waste land, P.E. Island can be made, what it is sometimes called, a veritable "Garden of the Gulf."

H. J. Logan, M.P. for Cumberland, in a short and witty speech, extended the glad hand to the visiting stockmen and farmers. He complimented the executive of the Maritime Breeders' Association, and referring especially to the officers who had worked so hard for its success. The association may well be proud of the unqualified success at this inaugural show of fat stock. He hoped that this

(Continued on page 743.)

The Sugar Beet World

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

Edited by JAMES FOWLER

Sugar Beetlets

The raising of sugar beets does not deplete the fertility of the land to any apparent extent.

If you think of cultivating sugar beets on a large scale you must satisfy yourself that the soil possesses all the requisites necessary for their successful growth.

Do not neglect the "Beet Pulp." If the factories will give it to you free for a year or two, by all means take all you can get of it.

Beet pulp makes an excellent ration for stock of all kinds and will keep for months.

In raising sugar beets follow carefully the instructions given you in regard to the preparation of the soil, the seeding and cultivation.

Now is the time to study the subject carefully. You cannot get too much information. Read everything you can get hold of pertaining to sugar beets.

W. H. Gilbert, who has gone into sheep raising at Lansing, Mich., on an extensive scale, states that his flocks are thriving on beet pulp from the sugar factory. He says that the sheep will actually leave choice clover hay to get at the beet refuse and that they prefer it after it has attained a good age. It is believed that the pulp can be used for feed into the middle of the summer.

The Fremont, Ohio, plant has closed down for the season.

Sugar beets are undoubtedly the surest and safest crop.

The beet sugar industry is preeminently one which unites the business interests of an entire community in all phases.

Dresden.

The contract for the factory at this point has been awarded, and work will begin as early as possible. The entire plant will be of the most modern design, and complete in all its details, with a capacity of 600 tons of beets per day, and will cost \$600,000. No expense will be spared in making this a model plant.

The town and surrounding country have already begun to feel a benefit from the industry in the stimulus given to real estate and farm property.

Berlin.

The Ontario Sugar Co. are asking for tenders for the erection of their plant. The different builders have been looking over the location and are preparing estimates and plans.

Business men and farmers are

alive to the advantages accruing from the establishment of the factory and great enthusiasm prevails over the satisfactory conclusion of negotiations for the location of the factory at this point.

A Sugar Course

It will be in order for the management of the Ontario Agricultural College at Guelph to add a "Sugar Beet Course" to their curriculum. So far, with but one exception, parties versed in the art of growing beets have been brought in from the U. S. to instruct the farmers, and secure the acreage contracts for parties contemplating the erection of sugar factories. The demand for experts along that line will grow with the extension of the enterprise and there will be a field for them for some years to come. In no place can the instruction be given to such advantage as at the College. "Beet Sugar Chemists" will also find an opening and it would be well for some of our agricultural friends to take up that line of study.

Beet Sugar in Alberta.

Mr. Jesse Knight, a Utah Mormon, is going to build a sugar plant in Alberta, N. W. T. He is a very eccentric gentleman, and his eccentricity takes the queer and unusual form of helping his fellow-creatures. Five years ago Jesse Knight had a dream. He dreamt that at a certain spot in the mountains he would find a mine of great value, and that he was to use this mine for the good of mankind. In due time the mine was located, and within two years Mr. Knight was a millionaire. Now he has several mines and several millions, and is actively demonstrating the truth of the second portion of the dream. He has established the town of Raymond, going up there to personally superintend the laying of it out. He has ploughed up three thousand acres of irrigated prairie land, which is to be sown with beet so soon as the soil can be prepared by a season of wheat; his energy and determination are manifested by the fact that he had no less than 48 ploughs at work on his land at one time. In addition he will spend \$500,000 in establishing a beet sugar plant at Raymond, where the 3,000 acres are being prepared for beet culture. This land is to be cut into ten-acre lots, and will at once afford a livelihood for 300 families. In addition, such holder may have what additional land he wishes for general farming. The whole of this territory will be included in the irrigated section. The plant will be installed and the land ready in time to start opera-

tions in the season of 1903. When working properly the annual output should be about 1,100,000 pounds. Mr. Knight has no doubt of the success of his gigantic undertaking, although there are many who do not see how it is to be put through finally without some assistance from the Government. As to the quality of the beets, repeated experiments have shown that the beets of the Territories contain from two to three per cent. more of saccharine matter than those of the Western States. The profits are large, running from \$50 to \$75 per acre, but they are particularly large where the beet-raising family includes a large number, which happy conditions are almost invariably found to prevail in a Mormon household. The separating process is done swiftly by the lithe fingers of the children, who frequently make very high wages at this work during the season. This fact and the abundance of children in Utah doubtless account for the large number of beet sugar factories operating successfully in that state, now eight or ten in number, and rapidly increasing. With better beets produced in Alberta, and a similar population at work on them, Mr. Knight seems to have good ground for his conviction that the industry can be successfully established.

Dr. Wiley on Sugar Beets.

At the annual convention of the Ontario Experimental Union at Guelph Dr. Wiley's lecture on the culture of sugar beets and the manufacture of beet sugar was listened to with careful attention, the many farmers present showing their great interest in the "coming industry." Dr. Wiley is the greatest authority upon the subject on this continent, and during the course of his remarks said that the beet sugar industry was one of the leading agricultural industries of the world.

He humorously protested against women working in the fields. The use of sugar and soap and the treatment of women were the great tests of the civilization of a nation. Sugar was no longer a luxury, but the food of the poorest man. The beet was originally an annual, but had changed its physiological condition and become perennial. Sugar in the beet is a reserve product. The beet sugar industry is the result of scientific knowledge applied practically. The English nation was the greatest sugar-eating nation in the world. The United States came next, and then, but at a long distance, France and Germany. The sugar beet grew best where there was the most light

combined with a temperate climate, hence as far north as possible. It was not injured by frost. The best districts in the U. S. were the California coast, the northern states and the arid regions where irrigation was practised. Beets could be made grow on almost any soil, from sand to plant mould, but would not grow on an impervious sub-soil. The land must be plowed deep, about 16 inches, to prevent leaching.

The seeds must be grown scientifically where they were to be used. Home-grown seed did better than imported. Seed production was an industry by itself. The seed must be kept up by continual breeding and selection. There should be a central place in the province where the beets would be grown for seed. The surface of the soil must be in the best possible tilth. Beets must be placed 18 inches apart, with from 20 to 25 lb. seed to the acre.

The thinning of beets should be carefully done. Three to six shoots came from each plant. One plant should be left every eight or nine inches. Twenty ounces was the ideal size for a sugar beet. The cultivation was a surface cultivation.

For fertilizers nitrates were the best as they presented the nitrogen in form ready for assimilation, and with them growth could be regulated. The cost per acre for cultivation would be thirty to forty dollars. Their great difficulty in the U. S. was that the beet demanded intensive agriculture, while they were used to extensive agriculture. The beet required scientific agriculture, and often led the way for scientific agriculture in other crops.

The influence of the environment was recognized in this plant perhaps more than in any other, but in the opinion of Dr. Wiley the kind of soil was only a minor consideration. The farmer of to-day could build up the soil that was necessary. In one locality in Indiana good beets were grown in almost pure sand, while near Chautauqua a reclaimed swamp was utilized.

The countries consuming the greatest amount of sugar per head were the leaders in the world's civilization. The sugar crop of the world this year would be about 10,000,000 tons, of which sugar beet produced about 6,000,000. The growth of the beet sugar industry was the direct result of scientific studies applied in a practical way. He repeated his assertion, that the farther north they can be grown the higher the percentage of sugar in beets. Frost, unless very severe, would not injure the beet, and it could, therefore, grow later than almost any other crop.

The position and conditions in Ontario were practically the same as those in Michigan, in which state sugar beet growing and manufacture had reached great proportions. Soils did not make much difference. Beets would grow in any soil almost, except where the sub-soil was so hard that the beets could not go down, and were warped and dwarfed. The expectation of

many farmers that they could grow beets continually without feeding or fertilization was erroneous. A farmer who could not raise ten or fifteen tons of beets per acre should abandon the business. To raise that amount required the highest kind of scientific agriculture. The cost of beet-raising, taking every detail into consideration, would average between \$30 and \$40 per acre. But with a crop of twelve to fifteen tons to the acre, at \$4 a ton, a good profit was realized. In answer to a question as to the bounty system in Europe, he said if England would join the United States in a countervailing duty on sugar the bounty would not last a month. But Englishmen were getting cheap sugar from France and Germany at the expense of the people of those countries, and were satisfied with present conditions. The cane sugar producing tropical colonies of Britain were not so well pleased, as their industry was practically ruined, and he fancied some of those colonies would like to join the United States in order to get protection for their principal industry. In concluding he thanked the union for inviting him to speak on the subject.

Children for Thinning Beets.

When I decided to put in ten acres of sugar beets, the only question that worried me was the thinning. Could help enough be secured to thin them in time? That was the question, and a great many thoughts I could not. Even my men told me that this year, in particular, no extra help could be secured as there are two electric roads building, one on either side of us, and there was a great demand for men. Believing, however, that thinning beets is a boy's rather than a man's job, I put them in and decided to take my chances. I will admit, though, that all along I have felt a little nervous over the outcome. I decided to offer ten cents per hour for boys or girls, and took some pains to noise it about a little that I had ten acres to weed.

We were to begin on a five-acre plot Monday morning, June 17. Sunday night we had quite a heavy shower, and it was really too wet to thin Monday morning, but some boys came and wanted to try. These were just the kind of fellows I was looking for, and we went at it. In the afternoon more came, and Wednesday we had more help than we had hoes. Two girls came Tuesday and two more Wednesday. We finished this field Wednesday noon, and every boy and girl was sorry it was done. The other five acres were not ready to thin, and will not be for a few days.

I started them all in at ten cents per hour, but soon found that they would work much better by the row, and gradually worked them on to this system. Several boys earned one dollar each Wednesday

before they ate their dinners. Their job was nearly done and they would not stop for dinner until they had finished at 1 o'clock.

It cost me \$30.16 to thin the five acres. We were all green and had to go slow at first. Some of the boys were too small, but I thought I would break them in a little this year, even if it was a little expensive, so I would have them for next year. I understand that it usually costs from \$5 to \$6 per acre, so my first expense is not very bad.

I find boys and girls must have very close supervision (and men must, too, I guess) when thinning, and then they can do the job as well as men, and faster, as they can get along on their hands and knees better. I think that this, the first year, I would have had no trouble in securing help to thin thirty acres of beets on time. I have promised the boys to have a larger acreage for them next year.—Colon C. Lillie, in the Michigan Farmer.

Alcohol Plant

ONE OF THEM TO BE ERRECTED IN CALIFORNIA.

The utilization of the refuse of the beet sugar factories has been a serious problem among the owners of those concerns ever since they were started. This refuse known as "black strap" contains a considerable amount of syrup which in the sugar making it is impossible to extract and is consequently a loss, but in Germany where the beet business is carried on very extensively it has been found that the refuse can be used for distilling neutral spirits or alcohol. Several months ago the problem was first seriously discussed and it resulted in the organization of a company to be known as the Union Distillery Company.

It will be about four months before the company is ready to begin operations, as it will require that time to make the stills, and the necessary building must also be erected. A site has not yet been selected, but several are under consideration, in the Potrero and across the bay at Point Richmond. The buildings must be convenient to water and rail transportation as the material for the distillery has to be brought some distance.

E. H. DYER & CO.
Builders of

SUGAR MACHINERY

Cleveland, Ohio

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

Brussels Sugar Conference.

Owing to the vast economic interests involved the international sugar conference, which began its session in Brussels, has aroused attention throughout Europe. Contrary to general expectation nearly all of the countries in Europe are officially represented. The United States was not invited to take part.

It is hoped that tangible results will be attained by the present conference. At the conference of 1898 the conference did not have the desired result through the difficulty of coming to terms with the French and Russian delegates, and the members separated deputed the Belgian Government to prepare the way for an international treaty on the subject through direct diplomatic negotiations, and it is a result of these negotiations that the present conference is held.

A Wonderful Profit

John Hurtcham of the township of Clinton has received returns from four acres of beets. After paying all expenses and allowing himself \$50 for labor, Mr. Hurtcham has \$300.

Any beet grower can do as well who plants his crop on good land and cares for it.—Mt. Clemens Monitor.

Novel Wedding Ceremony.

The Lee County Journal says a new justice of the peace for Lee county was sworn in by Judge Edwards the other day, and before noon he married a couple to this tune:

"Do you love this woman?"

"Yes, sir!"

"Will you take her, feed and clothe her, and stay at home?"

"Yes, sir, boss!"

"Do you promise to get a divorce and run away in six months?"

"Yes, sir, in one month!"

"Woman, do you love this animal you have?"

"Just met him this morning. Think I do."

"Will you stick to him until you get tired sticking?"

"Yes, sir; sho' will!"

"Then I agree to let you get married. You are one and the same man and woman. Hand over \$1!"—Atlantic Constitution.

Mother—But my dear, it isn't always the prettiest girl who gets the best husband.

Homely Daughter—Perhaps not; but she has the most chances to.—Melbourne Leader.

Pupil—Where is Atoms?

Teacher—You mean Athens, Johnnie. It is in Greece.

Pupil—No, I don't mean Athens. I mean Atoms, the place people get blown to in boiler explosions.—Baltimore World.

"You villagers seem to be a rather deliberate lot of people."
"I s'pose we be. There wuz a feller drowned in the creek a spell ago. He yelled 'Help, help!' afore he went down th' last time, an' the editor of the village paper heard him an' went back to th' office an' put in his paper two 'help wanted' ads an' charged 'em up to th' state."

OTTO WEINSHAUSEN, Pres., Treas. & Mgr.

Authorized Capital \$250,000.

American Copper, Brass and Iron Works

MANUFACTURERS OF COMPLETE EQUIPMENTS FOR
BREWERS, DISTILLERS, BEET SUGAR FACTORIES,
REFINERIES, GLUCOSE WORKS, ETC.

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INCORPORATED 1890

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The American Construction Supply Co.

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

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

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

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

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

Bartlett, Hayward & Co.

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Beet Sugar Factories

RESULTS GUARANTEED

Works and Main Office:
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FOUNDERS AND MACHINISTS

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Cleveland, Ohio

New York Office:
220 Broadway.

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

The Agricultural Gazette

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

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

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

BENEFITS OF MEMBERSHIP.

Each member receives a free copy of each publication issued by the Association to which he belongs during the year in which he is a member. Copies are sent to each Agricultural Gazette and a copy of the Swine Record.

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

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

The name and address of each member, and the stock he has for sale are published once a month. Over 10,000 copies of this directory are mailed monthly. Copies are sent to each Agricultural Gazette 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 the 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, and to advertise swine he must be a member of the Dominion Swine Breeders' Association, and to advertise sheep he must be a member of the Dominion Sheep 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 5th of each month, of the number, breed, age, and sex of the animals. Should a member fail to do this his name will not appear in that issue. The data will be published in the most condensed form.

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

FARM HELP EXCHANGE.

The Farm Help Exchange has been started with the object of bringing together employers of farm and domestic labor and the employees. Any person wishing to obtain a position on a farm or dairy, or any person wishing to employ help for farm or dairy, is requested to forward his or her name and full particulars to A. P. Westervelt, 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.

Situations Wanted.

Wanted—A position by a young man to do teaming or general farm work. Has had considerable experience in the care of stock, is trustworthy and temperate, and can supply good references. No. 965. a.

Wanted—A position by a married man, on a dairy farm as cheese or butter maker, who has had thirteen years of experience, and can give good references. No. 963. b.

Wanted—A position by a young man on a dairy farm as butter maker or taking care of dairy cattle. Has had a great deal of experience both in dairy and general farm work. No. 964. b.

Help Wanted.

Wanted—Two steady men for dairy farm, must be good milkers and temperate. Farm near Ottawa. Wages \$190 a year with board. No. 872. a.

Wanted—A man to work a 100 acre farm on shares, must be experienced and reliable. Farm well stocked and convenient, would give a third of the profits. Position open 1st of Feb., 1902. No. 873. a.

Wanted—A good active man to

work on a farm and drive a flour wagon. Must understand the care of horses and be honest, trustworthy and have no bad habits. Wages for first year \$185 and board. If satisfactory will give an advance the second year. No. 874. a.

Wanted—For one year, a good, reliable man with considerable experience in general farm work and the care of stock. House provided if married. No. 875. a.

Wanted.—A good, trustworthy man, one skilled in the care of horses, cattle, hogs and sheep, and capable of taking charge of the farm in the absence of the employer. Willing and able to do all kinds of farm work. Good moral character. No. 871. b.

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

Farmers' Institutes.

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

G. C. GREENMAN,
Superintendent Farmers' Institutes

The Selection and Breeding of Dairy Cows and How to Feed Them.

By R. S. Stevenson.

(Continued from December 17.)

Q.—Will ensilage taint milk or butter?

A.—No. Good ensilage makes the choicest butter and milk, and is also one of the cheapest foods one can raise.

Q.—How about turnips, mangels and sugar beets?

A.—Turnips are objectionable unless fed in very small quantities, and directly after milking. Mangels and sugar beets are good for milk producing, and do not give any bad flavor.

Q.—Can you by better feeding increase the butter fat of milk?

A. Andrew Elliott, Galt: No, not when cows are in normal condition.

Q.—Is there any early fodder that can be used to supplement pastures when they become dried up in summer?

A.—Silage is the cheapest and best. Mix clover, peas, oats and clover hay.

Q.—How are cow peas as a fodder crop?

A.—The cow pea is entirely too late for this climate.

Q.—What kind of food do potatoes make?

A.—In order to get the best from them, they should be cooked.

Q.—Are apples of any value as food for cows?

A.—A few apples are beneficial, especially if sweet.

Q.—Would you recommend the feeding of turnips to cows when we send the milk to the factory?

A.—Decidedly not.

Q.—Last year it was said that turnips could be quite liberally fed and not taint the milk, either for butter or cheese manufacturing. How do you reconcile your answer with his experience?

A.—Mr. Woodward: I do not attempt to. My experience and the experience of factory men all over the land tell me that it cannot be done.

Q.—What is the best system of paying for milk at the factory?

A.—By butter fat test.

Q.—How would you prepare flax seed for calves?

A.—Pour boiling water over it, and feed with skim milk.

Q.—How would you feed a calf that is scoured?

A.—Remove the cause. If the case is severe, feed new milk for a time, until the digestion system becomes regulated.

Q.—Is rock salt as good or better than ordinary salt?

A.—We prefer rock salt for summer, and the ordinary salt for winter. When rock salt is used, it should be kept in boxes in the field, where the animals can get it at leisure.

Q.—At what age do you castrate young pigs?

A.—About seven weeks old, or just before weaning; at that time the mother's milk will help them along.

Q.—Are sugar beets a good food for hogs?

A.—Very good, and when fed with a small meal ration, will form a good food, especially for cows.

Q.—Would you milk cows before calving?

A.—No, not unless it is absolutely necessary for the preservation of the udder.

Q.—Is there any difference in the churning temperature of the different breeds?

A.—Yes. Cream from Jersey cows may be churned at a lower temperature than cream from Ayrshire cows.

Q.—What is the value of the gravity separator (hydro-lactic)?

A.—By diluting milk with water we increase the difference of the specific gravity between milk and cream, and, in this way, a very complete skimming can be obtained; but it is objectionable on account of the increased bulk of skim milk that must be handled. Thin skim milk, on account of the water added, is not so valuable for feeding calves.

Q.—At what age would you breed your heifers?

A.—So that they will come in about twenty-eight months of age.

Q.—What points would you consider good for choosing a dairy cow?

A.—R. Twiss, Woodburn: A long, deep, capacious body, a long thin neck; legs a little small in proportion to body; a small, tapering tail; small head, with plenty of width between the eyes, and the eye large, with a mild expression; the veins running from the udder to the abdomen large, and the more crooked the better; the more width between the ribs the better, as close ribs denote beef.

Q.—What feed would you recommend to produce milk during the summer months?

A.—I have found grass to be the best and cheapest, but during the months of July, August and part of September I have found it necessary to feed green peas and oats. If sown at different times in the spring you can have it to cut green until quite late. I have found that they do well on this feed in summer, even after it is cut, cured, and in the barn. I have had better satisfaction from this than any other green food, corn included. I have also found it to be a first-class article to feed in winter.

Q.—Do you think turnips can be fed to milk cows, in limited quantities, without flavoring the milk?

A.—H. Glendinning, Manilla: The flavor of feeding turnips is a matter of degree. If feeding ten turnips per day makes a strong flavor, one turnip will give one-tenth of that flavor; and it may not be perceptible to the palate of every person.

Q.—Do you think feeding turnips immediately after milking will give less flavor to the milk than if fed immediately before milking?

A.—No. I do not think it will make any difference, although many people think it does.

Q.—Why do you think it makes no difference?

A.—Many people, from constant use of the milk obtained from cows fed on turnips, become so accustomed to it that they do not detect any turnip flavor. My reasons are

based upon experience, and the construction of the cow's digestive organs. The cow is a ruminant or cud-chewing animal, and when she eats such food as turnips, she stores them up in the rumen, or paunch, which is the first stomach, where it becomes soft and moist. Owing to the large amount of saliva and water that has been passed into it after the food has been softened, and the starchy food has been turned into sugar by the action of the saliva, it is then forced into the second stomach, or reticulum, which is really a part of the paunch. This contains much fluid. From the second stomach some of the food is forced into the oesophagus and returned to the mouth in the form of what is commonly known as "cud." After being chewed fine, it is again swallowed and passed into the third stomach, or manyplies, where maceration goes on. The action of the first three stomachs on food is preparatory, for the most part, for what occurs in the fourth, or rumen, the proper digesting stomach, where its conversion into chyme is completed through the action of the gastric juice. After passing from the fourth stomach into the small intestines, the food is subjected to the action of three other secretions, viz., bile, pancreatic juice, and the testinal secretion, which converts it into chyle, and in which the nutritive material exists in solution. The inner surface of the same intestines is lined with cancellous projections, called "Villi" or "Lacteals," which take up chyle and convey it to the lymphatic system, from which it is poured into the venous system, and on to the heart, where it mingles with the blood current.

As milk is a secretion from the blood, it would take several hours from the time the food is eaten by the cow until the nutriment is taken up by the blood and passed into the milk, and I cannot see how a few minutes' difference in the time of feeding, either before or after milking, can make any difference to the flavor of the milk. Some people will tell you that it is the breath that effects the milk. Well, there is some sense in that, as the breath contains the waste products of the blood, from which the milk is secreted; but it must be remembered that the cow does not throw off any offensive flavors by the breath, while the food is stored in the paunch, or first three stomachs.

Q.—When is the best time to clean the stables, after or before milking?

A.—A. P. Purvis, Maxville: I think after would be better than before.

Q.—What causes so much cream floating on some milk in the morning?

A.—Want of proper care, aeration and stirring while cooling and after.

Q.—Can the can be thoroughly scalded with the cover on?

A.—I don't think it can be done as well as by scalding each separately.

Q.—Why is not Monday's milk as good as any other for making cheese?

A.—It is as good if properly cared for. The trouble is, that the old Sunday morning's milk is cooled before airing.

Q.—Do you think frozen milk is injurious to cheesemaking?

A.—I don't think it spoils it, but it makes it more difficult to generate proper acid, and perhaps causes pasty cheese.

Q.—Do you believe in paying for milk by Babcock Test?

A.—I think by using an addend of 2 or 2½ to the Babcock test reading, there would be more satisfaction than pooling or net Babcock test reading.

Q.—Do you think the animal odor can all be removed from the milk by aeration?

A.—Yes, I am sure of it; but I do not say that you can remove all bad or foul odors by aeration, as I do not think you can.

Q.—Would you advise the cheese maker to refuse all milk that is tainted or that stinks?

A. I certainly would.

Q.—What is the best kind of material to make a whey tank of, wood or galvanized iron?

A. Wood, as the whey very soon eats the iron away.

Q.—Do you approve of whey vats elevated?

A. Yes.

Q.—Who is to blame for the shipment of green cheese?

A. I think the buyer is first to blame.

Q.—Is milk fever more common in cows pastured on grass?

A. Dr. Reed, Guelph: No. The fresh grass acts as a mild purgative, and tends to overcome any unhealthy condition in cows.

(To be continued.)

Some Muskoka Products

"One thing I have noticed," says Professor Hart, "is that every man in Muskoka seems to own his own farm. This is a good country for a man of moderate means. Land is cheap, and it is wonderfully productive. See those vegetables (and Professor Hart pointed to the display in the main building at Gravenhurst, where we were standing at the time)? 'I never saw anything better than that at the Industrial, did you? There are citrons as big as pumpkins. No, not as big as those pumpkins over in the corner. Those were grown in this district, too; but as big as ordinary pumpkins. And see those musk mellons? Big, luscious fellows, as fine as anything you would see in Southern Ontario! For cauliflowers and celery I never saw anything to equal it. And the potatoes! Large, smooth as a peach, and sound as a bell. This should be the seed ground for potatoes for the Province."

And every word that Professor Hart uttered was justified by the display made at the Gravenhurst fair.

The Farm Home

An Unpublished Poem.

By Robbie Burns.

Oh look na, young Lassie, sae softly and sweetly!
 O look na, young Lassie, sae soft-sweetly on me!
 Ther's naught waur to hear than the mild glance of pity
 When grief swells the heart and the tear blins the e'e.
 Just such was the glance of my bonnie lost Nancy,
 Just such was the glance that once brightened her e'e.
 But lost is the smile sae impressed on my fancy,
 And cold is the heart that sae dear was to me.
 Ilka wee flow'ret we grieve to see blighted,
 Cow'ring and with'ring in frost nippet plain;
 The naist turn of Spring shall awaken their beauty,
 But ne'er can Spring wauken my Nancy again.
 And was she less fair than the flow'rs of the garden
 Was she less sweet than the blossoms of May?
 Oh, was na her cheek like the rose and the lily,
 Like the Sun's waving glance at the closing o' day?
 And oh sic a heart, sae gude and sae tender!
 Weel was it fitted for beauty sae leal;
 'Twas as pure as the drop in the bell o' the lily.
 A wee glinting gem wi' nought to conceal.
 But the blush and the smile and the dark e'es' mild glances,
 I prized them the maist, they were love's kind return,
 Yet far less the loss of sic beauty lamented,
 'Twas the love that she bore me that gaes me to mourn.

Note.—The above verses were recently found among some papers belonging to the late Mrs. Berrington, who died in 1885. During a great part of her life Mrs. Berrington lived in Monmouthshire, at no great distance from Itton Court, the home of Mrs. Currie, to whom, according to the indorsement on the manuscript, the verses were addressed by Burns. Mrs. Currie, who died in 1823, was the daughter of John Bushby, Esq., of Tinwald Downs, in Dumfriesshire. The copy from which the verses are printed is in the handwriting of the late Miss Eliza Waddington, whose family also lived in Monmouthshire.

Literature in the Country Home

After hearing him read a few paragraphs aloud, it is easy to make an estimate of the amount of reading that has been done at home

by the young student. In my experience in teaching the English classics I have found that the student who has done only the reading incidental to the ordinary school course is almost invariably a poor reader. He may seem to have a good deal of culture; but it is of the superficial kind, and beneath it all one can easily discover that defect of understanding which comes from the neglect of practice in general reading. To be a good reader is usually to be a good thinker; and, other things being equal, the young person who can read understandingly has a great advantage in life's battle over the one who cannot.

There is a period of about six years—from twelve to eighteen—during which the average young person living on the farm might have a taste for good literature most easily cultivated, and during which there ought to be laid in the home a foundation for the future intellectual career. The proper start in a course of good reading will accomplish this end. But whose duty is it to look after this matter? Manifestly that of the parents. The district school teacher can not be held responsible to any great extent under present conditions; for, in most cases, she is already overburdened with the work that pertains to the school exclusively, and therefore can not teach literature. But many parents who know better are very negligent of their duty in this matter and permit their children to grow up without the wealth of life-giving thought and inspiration that comes only through good reading. It is to this class of parents and to those who may be convinced of this need that I shall direct a few statements presently. First, a word as to the newspaper.

Some years ago it was my pleasure to interview more than six hundred farmers on the subject of newspaper reading in the home. Out of this number it was interesting to notice that less than ten per cent. were reading dailies, about five per cent. semi-weeklies, and the others, excepting three and one-half per cent. the ordinary local weekly only. Three and a half per cent. were not taking any papers at all, notwithstanding the fact that they lived in one of the best farming communities in Kansas. An inquiry on the subject usually brought out the reply, "Too busy," "No time to read," and the like. These were nearly always men who could have afforded a paper but who were so busy overworking themselves that they saw no opportunity for reading. I am sure that out of all these six hundred cases only a small minority were getting any real lasting benefit out of their newspapers.

I will now give some suggestions as to a method of introducing a better class of literature in the

country home. First, mail a postal card to one or two book publishing houses, asking for their catalogues. In these one will find lists of excellent cloth-bound books of every description, ranging in price from fifteen cents up. Call in some one for advice, if need be, and make a list of a dozen or more good volumes. Five or six dollars will pay the bill. When these are received, give them to the boy or girl for a birthday or a Christmas present, together with a bookcase to put them in. The youth will soon begin to take pride in his "library" and gradually learn to use it, soon becoming desirous of adding to it. Once get him started to reading good books and your part of the work is practically done.

I should urge, also, that more attention be paid to the class of newspapers and magazines that come into the country home. Besides the local paper and a good farm paper, there ought to be some such periodical as *The Youth's Companion*, and another such as *The Literary Digest*, or *The Review of Reviews*. These may all equal annually in cash the price of a good-sized shoat, but no porker could possibly be turned to better account. Contribute at least one whole hog per year to the cause of good, clean literature in the home, and thereby save the boy or girl from mental and spiritual degradation. Many a farmer spends more than this sum for his annual supply of tobacco.

Here is a list of a dozen books that would form the nucleus of a first-rate library for the boy or girl: *Evangeline* (Longfellow), *First Jangle Book* (Kipling), *Vicar of Wakefield* (Goldsmith), *Story of the Chosen People* (Guerber), *Book of Golden Deeds* (Yonge), *Green Fields and Running Brooks* (Riley), *David Copperfield* (Dickens), *Wild Animals I Have Known* (Seton-Thompson), *Autobiography* (Franklin), *Enoch Arden* (Tennyson), *The Sketch Book* (Irving), *Tales from Shakespeare* (Lamb).

W. A. McKeever.

Conundrums

What part of speech is a kiss? A noun, because it is both common and proper.

How much ground does a hen occupy at night? A perch.

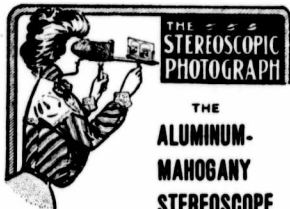
Why does a person who is ill lose his sense of touch? Because he doesn't feel well.

Why is a grain of sand in the eye like a schoolmaster's cane? Because it hurts the pupil.

In what profession is it hardest to make a living? The dentist's, because he lives from hand to mouth.

Why is a vine like a soldier? Because it is listed and trained, has ten drills and then shoots.

Why is a cigar-loving man like a



Profitable and Permanent Employment for intelligent and energetic men.

The Stereoscopic business is not only a very lucrative, but also a very pleasant one, inasmuch, that the views please and interest a customer the moment they are shown.

We furnish our salesmen with the newest and most interesting scenes, our latest being

T. R. H. The Duke and Duchess of Cornwall and York, on their recent visit to Canada,

The South African War, and thousands of other standard subjects.

Our **Aluminum-Mahogany Stereoscope** is entirely new, and forms the most attractive and fascinating feature of our business.

Our salesmen make from **\$100 to \$300** per month, and turners during spare hours can make from **\$10 to \$25** per week.

Full particulars sent on application.

UND:RWOOD & UNDERWOOD

69-62 Adelaide St. East.
Toronto, Ont.

tallow candle? Because he smokes when he is going out.

Why is a good wife always worth five shillings? Because she is a crown to her husband.

What is a mull? Something that holds the lady's hand and doesn't squeeze it.

What is bookkeeping? Forgetting to return borrowed volumes.

Why is dinner on board a steamboat like Easter Day? Because it is a movable feast.

What game does the waves play at? Pitch and toss.

Who is the most tender-hearted man in the world? The town crier, because he will cry if you give him a shilling.

When is a teapot like a kitten? When your teasin' it (tea's in it.)

What animal has the greatest quantity of brains? The hog, because it has a hogshead full.

When is a fruit stalk like a strong swimmer? When it stems the currants.

Advice on Fruit Eating.

The curative value of fruit is becoming more and more insisted upon by those who make a study of dietetics. Grapes are recommended for the dyspeptic, the consumptive, the anaemic and for those with a tendency to gout and liver troubles. Plums, also, are said to be a cure for gouty and rheumatic tendencies. The acid fruits, especially lemons and oranges, are particularly good for stomach troubles and rheumatism.

It is not sufficient, say the advocates of the fruit cure, to eat a small quantity at breakfast or dinner. One should eat from two to eight pounds of grapes a day, or, if oranges are the curative agency, the number to be eaten in a day may vary from three to six.

"A healthy condition of the body depends upon a perfect balance of foods taken. There are many other

factors entering into the question, but this feature must not be forgotten," says the Syracuse Clinic. "Few people there are who can keep healthy without fruit.

"How absurd!" some one says, "to be told to eat fruit when everybody eats it." "Yes, but how do you eat it? Do you take a definite amount of it, the same as you do of meat and potatoes, or do you eat it as you do candy?"

"If you suffer from an acute attack of indigestion after a dinner of soup; meats, pickles, sauces, salad, cakes, pastries, with spices and condiments enough to blister the skin, to say nothing of the delicate lining of the stomach, pray do not aver that indigestion arises from the morsel of fruit taken at the end.

"Be honest with your stomach for a month. Eat no more than you need of simple food, into which the true luxuries of nature, such as apples, oranges, pears or other fruit shall enter. Try, if only as an interesting experiment, to eat sparingly of the cruder articles of diet, and more of those suited to your real needs, and see to it that fruit forms a part of each meal.

"But there are so many kinds of fruit that I cannot eat."

"There it is again. Because you cannot eat seventeen kinds of food at one meal ending with fruit, it, of course, was the apple, or the strawberries that did the harm."

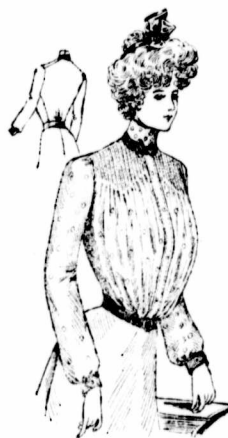
"But doesn't fruit make the blood thin?"

"It certainly does, and we are mighty glad of it. Ask any doctor who has practised medicine for ten years with his eyes open, and he will tell you that the great majority of grown-up folks have blood too thick.

"The minerals and natural acids of the fruit are the very best conceivable remedies for this thickened condition of the blood. Fruit then becomes both a food and a medicine, a necessity and a most delightful luxury."

yoke, below which they fall in soft folds which can be arranged in gathers at the waist line or left free to be adjusted to the figure as preferred. The edge is finished with a regulation box plait, and the neck with a regulation stock. The sleeves are in bishop style with narrow pointed cuffs.

When the waist is unlined, the gathers at the waist line are staid with a band of the material or a casing is applied and tapes inserted by means of which the fullness is



3932 Woman's Shirt Waist, 32 to 47 Bust

regulated. Otherwise the process of making is unchanged.

To cut this waist for a woman of medium size 3 3/4 yards of material 21 inches wide, 3 1/2 yards 27 inches wide, 3 yards 32 inches wide, or 2 1/2 yards 44 inches wide will be required.

The pattern 3932 is cut in sizes for a 32, 34, 36, 38, 40 and 42 inch bust measure.

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

Hints by May Manton.

WOMAN'S SHIRT WAIST, NO. 3932.

TO BE MADE WITH OR WITHOUT THE FITTED LINING.

The tucked shirt waist is, and will continue to be a pronounced favorite. The very pretty model given is made of pale blue challie with strips of white, and is of just the correct weight for cool days, but Saxony and French flannels, silk cashmere, albatross and all soft waist materials are appropriate. The original is made over the fitted lining that closes at the centre front, but heavy materials can be made unlined if preferred.

The foundation fits snugly and closes at the centre front, but separately from the waist. The back proper is plain, drawn down in gathers at the waist line, but the fronts are tucked to form a pointed

Only vegetable oils—and no coarse animal fats—are used in making

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PURE, FRAGRANT, CLEANSING.

Doctors recommend it for Nursery and Toilet use

Beware of Imitations.

Albert Toilet Soap Mfrs., Montreal

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A PAPER FOR FARMERS AND STOCKMEN.

Publisher, - - - D. T. McANISH.
Editor, - - - J. W. WHEATON, B.A.

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CONFEDERATION LIFE BUILDING,
TORONTO.

Shorthorn Breeder's Meetings.

The annual meeting of the Dominion Shorthorn Breeders' Association will be held on February 4th, 1902, in Toronto, and the Directors' meeting on February 3rd. The other cattle and horse breeders' meetings will be held the same week, notice of which will appear later.

Dairy Conventions

The annual dairy conventions begin next week. These are important events for farmers and dairymen, and anyone within reasonable distance of the places of meeting should make an effort to attend. The Eastern Convention will be held at Whitby, on January 8th, 9th, and 10th, and the Western Convention at Woodstock, on January 14th, 15th and 16th. Remember the dates.

Draught Horse Breeders

The 15th annual meeting of the Dominion Draught Horse Breeders' Society was held at Clinton, on Dec. 10th. For the first time in the history of the society the president's chair was vacant, and the kindly greeting and wise counsel of the veteran president, the late Mr. John McMillan, was sadly missed by all.

The annual reports received and discussed were those of the delegates to the Canadian Horse Breeders' Association at Toronto, and the Western Fair, London; reports of the secretary, treasurer and auditors. From these it was shown that the work of registration which for some years had fallen off, was again on the increase and the revenue had met the annual expenditure without impairing the substantial balance of nearly \$800 in the bank. A resolution was car-

ried raising the standard of registration to five crosses of registered sires, to take effect Dec. 1, 1902, and stock imported for breeding purposes from the old country will be registered free.

The election of officers resulted as follows:

President, David McIntosh, V. S., Brucefield; vice-president, S. Smillie, Hensall; secretary, James Mitchell, Goderich; treasurer, P. McGregor, Brucefield; Members of Council—Alex. Innes, Clinton; James Henderson, Belton; John Watt, Harlock; J. E. Blackall, V. S., Clinton; John McDiarmid, Lucknow; D. M. Cole, Lakeside; John Busch, Sebringville; Geo. Stanbury, Clinton; Wm. Sinclair, Chiselhurst; Thomas Green, Mitchell; John Ketchen, Brucefield; C. E. Mason, Brucefield; John Avery, Clinton.

Messrs. Henderson, Innes and the secretary were appointed delegates to the Canadian Horse Breeders' Association, and Messrs. Cole and Blackall to the Western Fair.

Short Horn Herd Book

We are indebted to Mr. Henry Wade, Registrar of Live Stock for Ontario, for volume seven of the Dominion Shorthorn Herd Book containing the pedigrees of Shorthorn cattle, imported and American bred. It contains particulars and information in regard to registering as well as the rules of entry and of the office regarding entering. Part 1 contains the pedigrees of 4045 bulls, from Nos. 32098 to 36132, and Part 2, of 5361 cows, from Nos. 37920 to 43483, making a total of 9406, or 2582 more than was contained in volume sixteen. In addition, the volume contains the list of prize winning Shorthorns at the leading Canadian Fairs in 1900, and also a complete index of the names of breeders and owners. The only thing that seems to be lacking is illustrations of some of the splendid types of Shorthorns that this country can produce. However, Mr. Wade is to be congratulated upon the production of a volume of so much importance to the breeders of this country.

The Champions at Smithfield

The Aberdeen-Angus are again the winners at the great Smithfield show, held at London, England, early in December. The champion of the show, Lord Strathmore's Brunhilde, was a pure bred Polled-Angus, while the reserve, Mr. Learner's Madeline, was an Angus cross, and the champion steer, Mr. Crillan's Cock of the North, was, like the champion, a pure bred Poll. This illustrious trio of winners were bred in Scotland.

The judging for the long wool

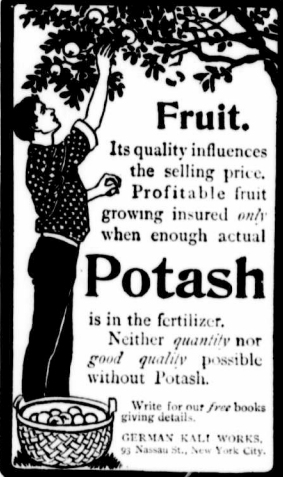
AT ALL TIMES OF YEAR Pain-Killer will be found a useful household remedy. Cures cuts, sprains and bruises. Internally for cramps and diarrhoea. Avoid substitutes, there's only one Pain-Killer 'Ferry Davis'.

sheep also resulted in a great triumph for Scotch. The championship in this section going to Mr. McDowall's fine pen of Cheviots and the reserve to the same owner's black faces although both pens were matched against a very fine pen of Lincolns.

Norfolk Poultry Show

The first winter show of the Norfolk Poultry Association will be held in Simcoe, Ont., Jan. 23rd, 24th and 25th, 1902.

Mr. Butterfield, who judged at



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GERMAN KALI WORKS,
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Poultry and Eggs.

Advertisements under this head are sent a word. Cash must accompany all orders under \$2.00. No display type or cut is allowed. Each initial and number counts as one word.

BROWN Leghorns, Prolific early layers; Strain won at Pan-American. Stock for sale—Minorcas, Barred Rocks, Chicks Straits, Eggs in season. JOHN PETTIT, Fruitland, Ont.

TURKEY MAMMOTH bronze turkeys for sale, of good quality and size, have a fine tom at head of flock bred from Imp. Leg. and also some fine hens, have one that won 1st prize three years in succession, and at West Durham and Darlington Fall Fair 1st won 1st and 3rd on turkeys. Chick now will crate safe and ensure safe delivery for \$2.50 for toms and \$2.00 for hens. Samuel Snowden, Box 205, Bowmanville.

ALL Prize-Winning Strains—Bronze Turkeys, bred by Imported Tom, that won second at Pan American—Narra Ansett Turkey and Pekin Ducks. A. L. HOTT, Ford Mills, Ont., London Exp.

BUFF Rocks, White, Golden, Wyandotts, Brahmas, Ardanais, Brown Leghorns, Run n Ducks Toulouse Geese, White Turkeys; A L stock; \$1 to \$3. JAMES MATHERAL, Drums, Ont.

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

MAMMOTH BRONZE Turkeys and Toulouse M. Geese. For Sale—Forty head of turkeys and thirty Toulouse geese, bred from the greatest prize winning strains in America. On our first exhibit at the great Toronto Industrial Exposition, Sept. 1901, we won on Bronze turkeys first and second Cockerel, and first and second Pullet. No old birds exhibited, they were in moult. Satisfaction guaranteed and correspondence cheerfully answered. Please enclose stamp for reply. Jas. Ford & Sons, Drumquin, Ont. P.S.—All turkeys bred from a grand imported tom.

FOR IMMEDIATE SALE.
Ten pair English King Neck Pheasants and a number of Barred Rock Cockerels.
R. M. LEF,
Box 323, Galt.

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the Pan-American, as well as at nearly all the leading poultry shows throughout the United States and Canada will place the awards.

Mr. Creelman, superintendent of the Ontario Farmers' Institute, has consented to send a representative of the Ontario Institute to address the poultry raisers and those interested on some subject pertaining to the poultry interests. This address will be given the first night of the show, Jan. 23rd.

All parties interested can obtain a prize list and get further information by applying to W. B. Tomlinson, sec-treas., drawer "C," Simcoe, Ont.

Maritime Winter Fair.

(Continued from page 734.)

show would be made an annual institution, and believed that it would prove of almost incalculable value in awakening an interest in this most important branch of farm industry.

Mr. Logan made an earnest plea for the appointment of a Minister of Agriculture in Nova Scotia. The time has come when farmers should have a special representative in the government of the country.

Hon. T. R. Black, M.P.P. for Cumberland, was proposed to see such a representative audience, composed of the best class of farmers in the Maritime Provinces. He was proud that he was a farmer, as well as the son of a farmer. His only regret was that he was not a younger man in order that he might begin farming over again, surrounded with the more favor-

able and advanced conditions, such as obtain at the present time. He referred to the Hon. Mr. Fisher's remarks on Beef Production. He (Mr. Black) believed that the farmers in these Provinces can produce beef cheaper than can be done in Ontario. He advocated the proper fitting of our live stock for the markets, and deprecated the common system of selling half-finished animals. He concluded his address with some stirring words of advice to the young men of the farm, urging them to avail themselves of the many opportunities which surround them to-day of improving their condition.

At the meetings held the two succeeding evenings, stirring addresses were given by Dr. Mills on Agricultural Education, an address calculated to make a deep impression on the minds of thinking people than any evidence hitherto given on this subject in these Provinces; by G. C. Creelman, the efficient and official Superintendent of Ontario Farmers' Institutes; by F. W. Hodson, our able and far-seeing Live Stock Commissioner; by Thos. A. Peters, New Brunswick's Deputy Commissioner of Agriculture; and B. W. Chipman, Secretary for Agriculture of Nova Scotia. Most of these addresses were followed by discussions in which the various members of the audience took part. Although the Opera House, in which the meetings were held, was capable of seating a thousand people, large numbers had to be turned away for want of space each evening. The people of Amherst and the surrounding country have been quick to appreciate the efforts of the management of the Stock Breeders' Association in holding public meetings of so interesting and educative a character.

Dairy School Work at Guelph.

The dairy school in connection with the Ontario Agricultural College has evidently entered upon this season's work under brighter prospects than ever.

The creamery class, which was nearly double the number who took the Creamery Course last year, finished their work on Saturday, the 21st. The work has been most valuable, as it combined both the whole milk and the cream-gathering systems of conducting creameries. Students have had an opportunity of comparing these two methods working side by side, and they have seen that it is a very difficult matter to make first-class butter from cream separated on the farm in winter. The power oil-test churn has given practical lessons in the operation of this method of testing cream and dividing proceeds among patrons.

The regular session of the dairy

school begins on January 3rd, 1902. Applications have already been received from Nova Scotia, Quebec, and the State of Vermont in the east to the Northwest Territories and British Columbia in the west. The prospects are for a large attendance next term.

The lectures and demonstrations in Home Economics, by Mrs. Jean Joy of Toronto, are proving to be an attractive feature for the ladies. As the class will be limited to 50, any who think of attending these lectures should make application at once, as more than half the number of applicants who will be admitted have been accepted. These lectures will be on either Thursday or Saturday afternoon of each week, beginning the week of January 12th and continuing for ten weeks.

It is also proposed to have a special opening day in connection with the Dairy School on January

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The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. (In movement) Discharges all humors from Horses and CATTLE. **PREVENTS ALL CAUTERY or BURNING.** Impossible to produce scurf or blainch. Every bottle is warranted to give satisfaction. Price \$1.50 per bottle. Sold by Druggists, or sent by express, charges paid, with full directions for its use. Send for free descriptive circulars.
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The worst possible spavin can be cured in 45 minutes. Curbs, Splints and Kingboms: just a quick. Not painful and never has failed. Detailed information about this new method sent free to horse owners.
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SLIDING - ADJUSTABLE
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 Simple - Effective - Durable
 No springs - Eggs cannot break. The inclined nest gathers them safely in lower section. Prevents fleas, or parasites, etc. Everlasting, never failing, comfortable. Thousands now in use. Ask your dealer for it or write to L. F. Morin, Inventor, Mfr., 13 Antoine St., St. Hyacinthe, Que.
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INDIGESTION
TORPID LIVER

These are the great curses which afflict three-quarters of the present generation. Sufferers from either one or all of them must always feel miserable, and sooner or later become chronic invalids, useless to themselves and a burden and nuisance to friends and family. There is one safe, sure and absolute cure which you can test without any expense. Our remedy is **Egyptian Regulator Tea**, a trial package of which we will send you **free and prepaid** on request. Unless you find our claims untrue, we must be the losers by this liberal act. Shall we send you the trial package, and lead you to perfect health and happiness? Address,
THE EGYPTIAN DRUG CO., New York.

Catarrh and Consumption

I have spent nearly 30 years in the treatment of the above named troubles and believe I have effected more permanent cures than any specialist in the history of medicine. As I had soon retire from active life I will, from this time on, send the means of treatment and cure as regular of this practice, **free and post-paid** to every individual who suffers from these loathsome, dangerous and disgusting diseases. My treatment will positively give prompt relief and cure in the worst cases. This is a sincere offer which anyone is free to accept. Address, **PROFESSOR J. A. Lawrence, 114 West 32d St., New York.**

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

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13th. The following gentlemen have agreed to be present: Dr. Van Slyke, Chief Chemist, Experiment Station, Geneva, N. Y.; Prof. J. W. Robertson, Canadian Dairy Commissioner, Ottawa; D. Derbyshire, Pres. Eastern Dairymen's Association, Brockville; R. M. Ballantyne, President Western Dairymen's Association, Montreal; A. W. Woodward, official referee, Montreal; Ex-Gov. Hoard of Wisconsin is also expected to be present, but has not yet been heard from definitely.

All friends of dairying and the Dairy School are cordially invited to be present on that date. Prospective students are urged to be on hand at the beginning of the term, in order that they may be present for "opening day."

American Live Stock

Census live stock statistics show that in cattle Texas leads all the states with 9,546,970 head. Iowa is second with 5,587,311 and Kansas third with 4,495,043. In hogs Iowa leads with 4,691,995 head, Illinois comes next with 5,904,103 head, and Missouri is third with 4,571,234 head. In sheep Montana heads the procession with 6,170,486 head and Wyoming follows with 5,099,613 head, New Mexico being third with 4,398,787 head. Iowa heads the list in horses with 1,401,427 head, Illinois comes next with 1,344,784 head, and Texas third with 1,266,000 head. These being the census figures, they of course relate to the live stock conditions in the states named on the first of June, 1900. In the combined supplies of horses, cattle, sheep and swine, Iowa is first with 17,516,983 head, Texas is second with upwards of 15,000,000, Illinois third with upwards of 11,000,000, Ohio fourth with 10,000,000, Missouri fifth with over 9,000,000, Kansas sixth with 9,000,000, Nebraska seventh with between 8,000,000 and 9,000,000, Indiana eighth with nearly 8,000,000, Montana ninth with 7,500,000 and Michigan tenth with nearly 6,000,000.

A Valuable Production.

The English Live Stock Journal Almanac for 1902 contains a large number of special articles and many illustrations, in addition to the breeders' tables, lists of societies, fairs, statistics, &c., well known features of this popular book of reference, which has become almost indispensable to the rapidly increasing constituency of breeders of live stock throughout the world. This year the articles number forty-five. Several practical articles deal with important features of the horse,

PAIN-KILLER is more of a household remedy than any other medicine. It meets the requirements of every home. Cures cramps and dysentery and is the best liniment made. Avoid substitutes, there is but one Pain-Killer, Perry Davis'. 25c. and 50c.

cattle, sheep, swine and poultry industries.

The Breeders' Directory and the section entitled "Studs, Herds and Flocks, Illustrated," add to the value of the book for purpose of reference. The price remains One Shilling. Messrs. Vinton & Co., Ltd., 9 New Bridge Street, London, E. C., are the publishers.

THERE HAS BEEN MUCH TALK about Perry-Balsam, the greatest modern remedy for coughs and colds. It cures quickly and certainly. 25c. Of all dealers. Made by proprietors of Perry Davis' Pain-Killer.

AGENTS WANTED

for the **NEW PICTORIAL STOCK DOCTOR AND LIVE STOCK CYCLOPEDIA**, revised to 1901 with the assistance of the Professors of the Ontario Agriculture College, Guelph. The finest illustrated, cheapest and best book of its kind ever published. Large wages for agents. Particulars mailed free. Address—

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

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

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Good Animals of Both Sexes for Sale

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JOHN DRYDEN

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10 Young Bulls from one month to four months, bred from Winnie K's De Kol.

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

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

Market Review and Forecast

Office of The Farming World,
Confederation Life Building,
Toronto, Dec. 30th, 1901.

The year closes with a good report on the general trade of the country. In most lines trade has been good during the year. The yearly balance sheets of many of Canada's large business establishments show better results than for some years past and the outlook is good for 1902. Money seems plentiful and steady at 5 per cent. on time and call and discounts remain unchanged at 6 to 7 per cent.

Wheat.
This week, the last half of the cereal year, will begin and there is some difficulty in forecasting just what the market will be. There are some who forecast lower prices than the first half has given, while there are others of the opposite opinion who are strengthened in their belief in higher rather than lower ones. These latter claim that the winter wheat reserves in the South Western States are not as large as they have been estimated at, as there has been considerable inquiry from millers in that district for supplies. Then the continent has recently been a large buyer. Regular trading from American ports has been larger of late than at this time a year ago, so that there is a fair export trade in progress. In the Northwest States there has been a falling off in receipts. On the other side of the market, however, a decided depression in the flour trade is reported from Minneapolis, where several mills have shut down.

The English market keeps firm, and Manitoba wheat is in good demand. The market is steady but firm here at 76c middle freights, red and white 66c to 67c for goose and 75c for spring east. No. 1 Manitoba hard is quoted at 89c, No. 1 Northern at 85c and No. 2 at 81c, grinding in transit. On Toronto farmers' market red and white bring from 76c to 79c, goose 66½c to 67c and spring life 70c per bushel.

Oats and Barley.

The boom in the oat market continues and a big business is being done. It is stated now that the price of oats in England has come up to a point that will admit of the shipment of Canadian oats at a profit. Sale of Ontario oats are reported for export at 46c f. o. b. at country points. The market both at Montreal and Toronto is dull and lower. Here No. 2 white is quoted at 43½c, middle freights. On the farmers' market oats bring 45c to 46½c per bushel.

Both feed and malt barley keep firm. Prices here are steady at 52c to 57c as to quality and point of shipment. On Toronto farmers' market malt barley brings 53c to 63c per bushel.

**The Canada Permanent & Western Canada
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Head Office, Toronto St., Toronto

SAVINGS DEPARTMENT

\$1 and upwards received on deposit
Interest paid or compounded half yearly at..... **3½%**

\$100 and upwards received for which de-
bentures are issued with cou-
pons attached for half yearly interest at..... **4%**

Invested Funds \$23,000,000

Peas and Corn.

The pea market keeps firm at from 84c to 85c, middle freights. On the farmers' market here small peas bring 70c per bushel.

Corn continues firm and the outlook is strong. Canadian yellow is quoted here at 60c to 61c, west.

Wheat and Shorts.

Ontario bran is quoted at Montreal at \$21 and shorts at \$22 to 23 per ton in car lots. City mills here sell bran at \$20 and shorts at \$22 in car lots, f. o. b., Toronto.

Potatoes and Beans.

Choice car lots of Early Rose potatoes sell at Montreal at 90c per bag, and other quality at 80c to 85c. Offerings are not very plentiful here and the strong demand keeps the market firm. Cars on track are quoted at 70c per bag. On Toronto farmers' market potatoes bring 75c to 80c per bag. Beans in jobbing lots are quoted at Montreal at 21.40 to 21.45 per bushel.

Hay and Straw.

The English market for Canadian hay keeps steady and holders are not pushing sales. On this side business continues brisk at country points. At Eastern Ontario points \$8.25 to \$8.50, f. o. b., is being paid for No. 2; some really choice car lots bringing \$9. Montreal quotations for baled hay in car lots are: No. 1. Timothy \$10.25 to \$11, No. 2 \$9.25 to \$10, clover mixture \$8.25 to \$9, and clover \$7.50 to \$8 per ton. Baled oat straw is quoted here at \$5 to \$6. The demand here is steady, and good cars on track are quoted at \$9.50 for No. 1 Timothy and \$8 to \$8.25 for No. 2. Baled straw sells readily at \$5 to \$5.50 in car lots.

On Toronto farmers' market Timothy brings \$10 to \$11, clover \$7 to \$9 and sheaf straw \$9 per ton.

Eggs and Poultry.

There is a big shortage in Canada's egg supply, which is just now beginning to be fully realized. One reason of this shortage is the much larger home consumption than usual this season. The English market has also taken more than was expected at the beginning of the season and it is now pretty certain that before the new season opens up old stock will be well worked off. Good cold storage stock is selling at Montreal at 22c to 24c; selected fresh at 30c and new laid at a very much higher price in a jobbing way. There is a good demand here for strictly new laid, but the bulk of the offerings are held stock. Strictly new laid bring 25c in large lots. On Toronto farmers' market new laid bring 30c to 40c per dozen.

The holiday trade in dressed poultry has been very good this year and a big lot of stuff was disposed of. At Montreal choice turkeys sold at 10½c to 11½c; geese at 7c to 7½c; ducks 8c to 9c, and chickens at 8½c to 9c per lb. Other than choice quality, though selling fairly well brought much less money. Prices are steady here at 9c to 9½c per lb for turkeys and 7c to 8½c for geese, and 50c to 75c per pair for ducks, and 20c to 50c per pair for chickens in jobbing lots. On Toronto farmers' market live chickens bring 40c to 80c, dressed 25c to 50c and ducks 45c to 60c per pair, and turkeys 9c to 13c and geese 8c to 11c per lb.

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

OUR PRICE FOR CHICKENS HAS GONE UP

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

THE CANADIAN PRODUCE CO., TORONTO

ALWAYS MENTION THE FARMING WORLD WHEN WRITING ADVERTISERS.

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

Seeds

Though there is a good demand in England for Canadian red clover seed, prices on this side are claimed to be too high for export. At Montreal red clover is quoted at \$8.50 to \$9.75; alsike at \$10.75 to \$12.75 and timothy at \$6 to \$6.50 per cwt. On Toronto farmers' market alsike brings \$7 to \$8, red clover \$5 to \$5.25 and timothy \$2.50 to \$3.25 per bushel.

Cheese

The brighter outlook for cheese continues, and though business is a little quiet during the holiday season the market is strong. Interest now centres in the probable estimate of stock on both sides of the Atlantic at the end of the year. There is quite a lot to dispose of, but if a fair average demand keeps up there will be none too much for requirements. Finest Western Septembers are quoted at Montreal at 10c to 10½c and finest Eastern at 9½c to 9¾c per lb.

Butter

The butter market is steady and as stocks are by no means large, the outlook seems favorable for brisk trade. The Trade Bulletin, in regard to last week's trade, says:

"Notwithstanding the recent dullness in the English market exporters have been picking up a few lots of choice winter creamery; but this quality is scarce, and takes a lot of selecting and hunting around to secure the "just right" article. When found, however, 20½c to 20¾c and even 21c has been paid. Local buyers have also been picking up a few lots in tubs at 20c to 20½c, about 1,200 packages of this class being reported at these figures, the quality being classed as fine. The market, therefore, is fairly steady. The market for dairy butter is very dull, the only business reported to us being a few orders filled for shipment east, and for local account as quoted in our regular market report. Stocks here are light with no prospect of any accumulations in the near future."

Choice creamery is in good demand here and prices are steady at 20c to 22c for prints and 20c to 21c for solids. There is too much poor dairy coming forward, and which is hard to sell. Choice dairy pound prints bring 17c to 18c and large rolls 16c to 17c in jobbing lots. On Toronto farmers' market pound rolls bring 16c to 19c and crocks 15c to 18c per lb.

Cattle

The cattle trade has ruled steady at all the leading American markets though at Buffalo and New York at the end of the week choice heaves were higher, notwithstanding the fact that cables were lower. There was a light run of cattle on Toronto market on Friday, com-

prising 193 cattle, 202 hogs, 417 sheep and lambs, and a few calves. The bulk of the cattle were butchers' and exporters. All the best butchers were bought up for export. Trade was good and prices firm in nearly all lines:

Export Cattle—Choice loads of these are worth from \$4.70 to \$5.25 per cwt., and light ones \$4.25 to \$4.65 per cwt. Heavy export bulls sold at \$4.12 to \$4.40 and light ones at \$3.50 to \$3.70 per cwt., choice export cows sold at \$3.25 to \$3.75 per cwt.

Butchers' Cattle—Choice picked lots of these, equal in quality to the best exporters, weighing 1,150 to 1,260 lbs. each, sold at \$4.25 to \$4.40 per cwt., good cattle at \$3.75 to \$4.00, medium at \$3.40 to \$3.55 and inferior to common at \$2.25 to \$3.25 per cwt.

Feeders—Heavy, well bred steers from 1,100 to 1,200 lbs. each, sold at \$3.50 to \$3.75, and other quality at \$3.25 to \$3.50 per cwt. Light steers, 900 to 1,000 lbs. each sold at \$3.00 to \$3.20 per cwt.

Stockers—Yearling steers weighing 500 to 800 lbs. each sold at \$2.50 to \$3.00, and off colors and those of inferior quality at \$1.75 to \$2.00 per cwt.

Calves—These are in good demand at Buffalo. Good to choice veals bring \$6.00 to \$8.25 per cwt. At Toronto market ordinary calves bring \$2 to \$10 each.

Milch Cows—These sold at \$30 to \$45 each.

Sheep and Lambs.

Prices for sheep are firm at \$3 to \$3.25 per cwt for ewes and \$2 to \$2.50 for bucks. Spring lambs sold at \$3 to \$3.50 each and \$3 to \$4 per cwt.

Eirick Bros., East Buffalo, N. Y., wrote us on Saturday last as follows: "The supply of lambs to-day was very light, only about five loads, and market ruled strong and 10 higher. What lambs are coming now are quite heavy; still on account of the extraordinary advance on the native lambs the buyers are forced to buy the heavier weight Canadas, and they are selling on the basis of 5.75 to 5.85 with the bucks and poor thin lambs at 5c. A strictly fat handy-weight load of Canada lambs weighing around 90 lbs. or less would bring right close up to the 6 cent mark, but we are not getting this weight lambs fat. What lambs are coming now are in numerous cases those that have gone back in flesh and these are selling rather slowly. Still there is a good demand for all grades at present."

Hogs

Bacon hogs again show a slight advance, select bacons selling at \$6.40, lights at \$6.12½ and fats at \$6 per cwt. Unculled car lots sold at \$6.15 to \$6.25 per cwt.

For the week ending January 4th, the Wm. Davies Co., Toronto, will pay \$6.62½ per cwt. for select bacon hogs, \$6.37½ for lights and \$6.15 for fats.

Montreal packers are paying \$6.37½ for select bacon hogs.

The Trade Bulletin's London

cable of Dec. 26 re Canadian bacon reads thus: "The market is quiet and will probably remain so until after the holidays. No. 1 Canadian sides 46s to 50s."

HOGS.

The general horse trade continues dull and there is little doing outside of buying remounts for the army. A few heavy draught horses have been sold at Montreal at Western quotations, but outside of that very little is doing. Quotations there are as follows:

Carriage horses	\$175—\$350
Heavy draughts	125— 225
Light roadsters, drivers and saddles	100— 250
Remounts	110— 145
Common stock	50— 80

There is nothing doing in the regular horse trade here excepting in a few second grade horses, and it is not likely that there will be any extensive movement in horses till about March. The last shipment of horses for the second Mounted Rifles leaves this week for Halifax. 996 have been purchased in all. Of these 80 were secured at Brandon, about 100 in Quebec and the Maritime Provinces and the balance in Ontario.

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 relieves 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 25c. 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.

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Machine weighs 17 pounds. It is more wonderful than a sewing machine, just as durable, and higher speed.

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Under the Direction of
The GLASGOW WOOLLEN CO.
37 MELINDA ST., TORONTO,
To Fill Large Contracts—Good Wages Easily Earned.

A Pair in 30 Minutes

We want a few more workers in this locality, at once, and in order to secure your co-operation without the delay of correspondence, we herewith explain our full plan in this advertisement. The work is simple, and the Machine is easily operated, and with the Guide, requires no teacher. If you wish to join our staff of Workers let us hear from you promptly with the Contract, order form, and remittance, as a guarantee, and we will send machine and outfit to begin work at once.



OUR METHOD OF DOING BUSINESS

We wish to secure the services of families to do knitting for us in their homes. Our method is the same as adopted in England. We are the introducers of this plan and the largest knitting concern in Canada.

After long experience, we have been able to produce an Automatic Machine by which all kinds of seamless knitting is now done by our Family Machine, thereby enabling anyone of ordinary intelligence to quickly learn to do the work from the instruction Guide. All we require is that you use the machine according to directions. The machine being made expressly for this purpose, and the operation so simple, it cannot possibly make a mistake in its work.

The great demand now is for Bicycle Stockings, Woodmen's Socks, and Motormen's Mittens, and as we are unable to supply the demand, have taken this method of advertising for more help.

The large export trade to the North-west Territories, British Columbia, and the British Colonies, furnishes an unlimited demand for our goods, and, with the combined co-operation of the many families we are employing, together with the large amount of knitting we are able to turn out, by which we save rents, insurance, interest on capital, etc., enables us to undersell any manufacturers of this class of goods, and we have sale for all the knitting we can have turned out.

The price we pay for finished bicycle stockings is \$10.00 per hundred, or at the rate of 10c per pair; woodmen's socks, 5c, and motormen's mittens, 12c a pair. All other work in proportion to size.

The machine can be operated by any one of a family, and at our prices any energetic family should be able to sustain themselves comfortably, and in time be a source of independent comfort.

Our plan is to send out each machine to beginners with a sock or stocking partially knitted, and remaining in the machine ready to be continued, and also enough yarn to knit one pair of sample socks or stockings and a simple and complete instruction Guide, showing how the work is to be done. When the samples have been finished and returned to us satisfactory, we send a quantity of yarn, which you knit and return. Likewise when finished. We prepay charges on all work one way, and our workers pay return charges. The work, as we have stated, is simple and rapidly done, the machine having a capacity of ten thousand stitches a minute. We have many persons now in our employ who can knit from twenty-five to thirty pairs of socks or stockings a day, and where the time of a family is devoted to the work, you can readily see that \$15.00 or \$20.00 per week can be easily earned.

We furnish our workers all the materials, yarn, etc., free, and everything that is necessary for the work. We are furnishing the machines only for the exclusive use of those desiring to take employment with us, who must, in order to become a member, send us this Contract Order Form, properly signed by them, and at least one good reference, and remittance accordingly, to give us the necessary assurance that the quantities of valuable yarn we may send from time to time will not be wasted or misappropriated. Our interests are mutual, and this confidence must be established if we are to succeed. We guarantee fair dealing and prompt payment for work, so do not ask us to deviate from our terms, as we cannot make a distinction with one and not another; besides, we are acting as extensive business, and must be governed by business principles. The manufactured price of the machine is \$15, and positively will not be sold to any others than those who will agree to do knitting for us. If at any time after you commence, and have done an amount of work equal to the purchase price, and wish to discontinue, we will take back machine and refund the amount paid for same, after deducting cost of our expense only.

There is a Large Demand by the Trade for this class of work. Our workers can depend upon it year after year, and if you engage with us (whole or spare time) we will keep you supplied with work as long as you do it satisfactorily for us and return it promptly. We entrust our workers with large quantities of valuable yarn, and as we give

references as to our honesty and integrity, we must ask you to do the same, in order that we may know with whom we are dealing.

We have, in as brief a manner as possible, endeavored to show you what our work is, and we simply say as to the machine, it is just what we represent it to be, and will positively do everything we claim for it, or refund the money. Each machine, securely packed with an outfit, is set up for work, thoroughly tested, and a sock or stocking partially knitted before boxing and shipping. Should you decide to contract Order Form, properly signed by you, and at least one good reference, together with the remittance, accordingly, ready receipt of which we will forward machine and outfit ready to commence. Respectfully yours,

GLASGOW WOOLLEN CO., 37 Melinda Street, Toronto

Our References—Express Companies, Banks, or Toronto Business Houses.

If you wish to examine the machine and see the material before undertaking the work, you can do so by sending \$3.00 as a guarantee of good faith, and to defray expense of shipping, and we will send everything to your nearest express company, leaving a balance of twelve dollars to pay the agent and 25 cents for the return charges on the money to us.

We are so frequently and unnecessarily asked if one can learn to knit without a teacher. We say: Yes; it requires no teacher; any person of ordinary intelligence who can read the instruction Guide can learn to knit at once.

ORDER FORM

\$15.00 Cash Contract Order Form.

To the Glasgow Woolen Co., 37 Melinda St., Toronto. Gentlemen,—I desire to do the work as described in this advertisement, and enclose \$15 to pay for one Automatic Knitting Machine, together with material, instructions, and everything necessary for the work, the same to be sent to me by Express, CHARGES PREPAID.

It is understood and agreed that any time after I have done an amount of work equal to the purchase price, \$15, and wish to discontinue, that the Glasgow Woolen Co. will take back the machine and outfit, and after deducting their expense, refund me the amount paid for same.

Sender or head of family (if possible) must sign here:

Full name

P. O. Street

County .. Prov.

Nearest Express Office is at

For reference I name the following person:

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