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Dec. 18, 1900

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A Paper for Farmers and Stockmen



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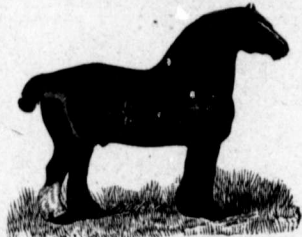
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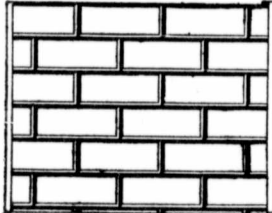
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The Farming World

For Farmers and Stockmen

VOL XVIII

DECEMBER 18th, 1900.

No. 16

Christmas Greeting



It is our privilege again to extend Christmas greetings to the many readers of this journal. As we grow older this most joyous season of the year comes quicker. In earlier years Christmas was looked forward to with the greatest expectancy, and the days followed one another very slowly for a month or two previous. But now all this has changed. The days go by only too soon, and the festive season is upon us before we have accomplished the half of what we laid out to do. Still Christmas brings its joys and pleasures as of old.

Christmas in rural Canada is one of the most pleasant seasons of the year. The Canadian farmer and his family know how to enjoy and make the most out of this festive time. What with the family gatherings and the long sleigh drives to the old home, to the tune of jingling bells and the creaking of the sleigh on the frosty snow, Christmas in the country is a merry time indeed. Let us then, whate'er be our surroundings make the most of this festive season. One way to do so is to make others happy, especially the children. The years will fly by all too soon as they grow older, therefore let as much of the joys and pleasures as possible be strewn in their pathway this merry Christmas time.

This issue is not intended as a special Christmas number. Our big effort of the year is our annual exhibition number. We have, however, provided some extra reading matter suited to the season, which we trust will be enjoyed by our friends along with their Christmas turkey. We wish you one and all a Merry, Merry Christmas.

Live Stock is King

The management of the Provincial Winter Fair is to be congratulated on the success of last week's show. Truly live stock is king, and its throne is in the Royal city of Guelph. The new buildings are well adapted for the purposes of a show of this kind. They are none too large, however, and if the show continues to grow as it has done during the past few years the building may have to be greatly enlarged. As it was the room where the discussions took place on the dressed carcasses, etc., did not begin to hold all the people who desired to get information on the subjects taken up. An improvement might be made with this room if the entrance were at the back of the room instead of at the front where the animals were placed and where the speakers

stood. The killing and cooling rooms were all that could be desired, and the accommodation for stock was good. The dairy cattle wing was the only department that was not well filled there being room for as many more cows as entered for the test last week. If an elevated walk could be arranged for in the aisles between the fat cattle it would be a great improvement. As it was visitors had to wend their way through the bedding and litter for the cattle, not a very pleasant task for ladies who desired to examine the stock. This might be remedied another year. The poultry department, which had the whole upper story to itself, was well provided for the only thing lacking being sufficient light. This might be remedied in the building by increasing the size and number of the windows. An improvement might be made another year by putting a sky-light or two in. With these exceptions the building is all that could be desired and the breeders of this country are greatly indebted to the citizens of Guelph and the surrounding country for providing them with such comfortable quarters for their stock.

From an educational point of view the show was an immense success. The lectures on judging cattle, sheep and swine and on their adaptability to meet the needs of the market were intensely practical. And from the eagerness shown by the people to hear these lectures, we must conclude that the information given was just what the country needs. The only regret in connection with this work is that only so few farmers were able to hear and see it all. The fact, however, that the Institute delegates were present, means that a portion of it at least will be given at the January meetings, which farmers who could not attend the show should avail themselves of. We will try and give the gist of what was said in these columns from week to week.

Before leaving this subject it may not be amiss to refer to the hotel accommodation provided for visitors. It did not begin to meet the needs of the case. Hundreds of people bunked in cots in the halls and corridors of the hotels, being glad to get a shake-down of any kind. We know of several who were compelled to come to Toronto and return in the morning, in order to get accommodation. The influx of visitors from outside places was so large that on the first day every room was taken, and those who came later had great difficulty in securing accommodation. If the interest and attendance at the fair grows as it is expected to, proper hotel accommodation will prove a serious matter. There is an opportunity here for some influential Guelphite to do something for his country.

The Tuberculin Test

Cattle Breeders Strongly Condemn It and Ask for Its Removal

An important meeting of the Dominion Cattle Breeders' Association was held in the Council Chamber, Guelph, on Dec. 13, to discuss the tuberculin test and the regulations affecting the importation of pure-bred cattle into Canada. The new regulation, whereby an American inspector was appointed to test Canadian cattle destined for the United States, was also discussed. Mr. Richard Gibson, president of the association, Presided. There were present: Hon. Sydney Fisher, Hon. John Dryden, Hon. Thomas Greenway, Dr. Mills, W. E. H. Massey, Prof. Harrison, Arthur Johnston, Robert Miller, A. W. Smith, Col. McCrae, J. Lockie Wilson, and a large number of the breeders in attendance at the show.

The following resolution was presented to the meeting by Mr. Johnston, seconded by Mr. Smith, which carried without a dissenting voice: "Resolved, that in the opinion of the cattle breeders of Canada, here assembled, the regulations relating to the importation of pure-bred animals, which require the injection of tuberculin as a sure indication of the presence of tuberculosis, are unsatisfactory and likely to bring serious injury to the cattle-breeding industry of Canada; that while the test may be used as an aid in the detection of the disease, it is not sufficiently exact to be relied upon; that the disease may exist in such parts of the animal which make it impossible to be transmitted by contagion or otherwise; and that no real service to the country is being rendered by its use in that connection. Therefore we earnestly request the Hon. the Minister of Agriculture to take such steps as may seem desirable in order to discontinue its use in that connection."

The discussion which followed the presentation of this resolution, and in which nearly all the gentlemen named above took part, conveyed no uncertain sound as to the attitude of the breeders of Canada in relation to the tuberculin test and its application to animals imported from Great Britain. The test was discredited and could not be relied upon to diagnose exactly cases of tuberculosis. Everyone of the beef cattle breeders stated that unless some remedy was forthcoming they would have to go out of business. Dr. McEachran, Superintendent of the Dominion Quarantine Station, came in for much criticism, several large importers declaring that they were in fear of him and did not think he was a friend of the cattle breeders of the country.

The feeling of the meeting was well expressed in the remarks of Mr. Dryden, who said that he considered the test a fraud and a humbug. It had come to this, that we must now tell our breeders to go out of the business or to cease trying to raise better animals. He himself would not go on with the business. He would never raise cattle under the control of a veterinary. He did not try to tell people that tuberculosis is not a serious disease, but the test was not going to effect the end desired. It was useless, because an animal in an advanced stage of the disease would not react to the test, while an animal with a germ somewhere it could not be dangerous, would react. Moreover, the law, while forbidding us to buy diseased animals from a foreign market, did not prevent us from buying all disease we like in our own country.

Mr. Fisher, in his reply to the discussion, stated that there was considerable misunderstanding as to the administration of the Department of Agriculture at Ottawa. In only one regard, that of importation, was there any compulsory testing. All other testing

by the Government was done at the request of the parties in the hope of assisting them in the detection and eradication of the disease. As to importation, when he went to Washington some time ago to discuss the removal of the quarantine between the two countries, this removal had been obtained on the distinct understanding that the test should be imposed. And he ventured to say that any Government which permitted diseased cattle to be imported would be hauled from power by an indignant people. The experiments which had been carried on at Ottawa had given results from which no conclusion could be drawn. Speaking of the new United States law, he stated that he was not at Ottawa when the notice was sent, but that it was in direct contravention of the agreement upon which the removal of quarantine had been effected. In reply to a question from Col. D. McCrae as to which country had asked the test, Mr. Dryden, on behalf of Mr. Fisher, stated that it had been the Canadian Government which had asked for the test, long before Mr. Fisher's time. As to the test itself, Mr. Fisher said that there was no law of relation between the amount of reaction to test and the extent of the disease.

Another resolution moved by Col. McCrae was carried instructing the Directors of the Association to take the necessary steps to confer with the Government of the day with a view to obtaining the free entry into Great Britain of Canadian cattle, provided that in every case the cattle were free from disease. A further motion was passed making the meeting the annual meeting and adjourning at the call of the President.

Presentation to Dr. Mills

On Thursday morning a most pleasing ceremony took place when Dr. Mills, President of the Ontario Agricultural College was, on behalf of the Farmers' Institutes of the Province, the Institute works and the officers of the Winter Fair presented with the cost of his recent trip to Europe. The presentation was made by Mr. F. W. Hodson, Dominion Live Stock Commissioner and late Superintendent of Institutes. A number of the Institute delegates spoke of the good work done by Dr. Mills in behalf of the Institutes of Ontario.

It will be remembered by our readers that Dr. Mills left on his trip early in the summer having leave of absence for three months. He visited many of the agricultural centres of the Old Land.

New Ontario

By Thos. Southworth, Director of Colonization, Toronto

From the large number of letters received at the Department of Crown Lands inquiring as to the cost of a railway ticket to "New Ontario," I am forced to the conclusion that there exists some misapprehension as to what is included in this now familiar term.

For the benefit of those who do not fully realize what is meant by the term "New Ontario," it may be said it is not a railway station nor is it some particular settlement. I do not know just how or when the term "New Ontario" originated, but am of the opinion that it was originally applied to the territory formerly under the sway of the Hudson's Bay Company and not long since the subject of litigation between the Provincial and Dominion Governments, but finally allotted to Ontario under the "Boundary Award" of the Privy Council.

That territory was very extensive, comprising all the land lying north of the "Height of Land" dividing the streams flowing north into Hudson's Bay from those flowing south, but in present use of the term it includes practically all that immense territory lying north and west of Lake Nipissing, Mattawa and the French Rivers, northward to the shores of Hudson's Bay, and westward from the Province of Quebec to the boundary of Manitoba, a territory more than two-thirds of the total area of the Province which comprises over one hundred and forty million acres.

Eight hundred miles from east to west, and in the Eastern section four hundred from south to north, it can readily be understood that the Province of Ontario offers a great variety of climate, soil and natural productions. Most of your readers will appreciate the difference between the Ottawa Valley and the counties bordering on Lake Erie. There are as great diversities in the various parts of "New Ontario," and also just as fertile soil as ever existed in the older counties or anywhere else on the continent.

That settlement has, until recently, been proceeding at a comparatively slow rate is true, but that has been

loss of valuable timber by the fires which usually follow any considerable influx of population into a pine-growing country. The lack of means of transportation and the consequent distance apart of some of the new settlements have also tended to retard colonization in a region large areas of which are still unexplored. These obstacles are now being overcome. The lumberman here, as elsewhere, is acting as the pioneer of settlement, opening up the country and enabling settlers to obtain the temporary employment which they need to maintain themselves until their farms become remunerative, and furnishing a near market for farm produce. In addition to the aid from this source, the agricultural settler in many parts of Northern Ontario finds the hardships of taking up wild lands in a new country much mitigated by the important industrial development which is going forward in connection with the mineral, wood pulp, and other industries. Hitherto in the history of the development of the Province the industrial activities of newly-developed districts have been entirely confined to those immediately connected with the lumber trade, and it has only been at a much later period that other forms of industrial pursuits have been



PIPER'S FARM, IN THE SLATE RIVER VALLEY, THUNDER BAY.

largely because the character of much of the new country was not understood by the people of the older part of the Province.

The reason why the advantages of the new country for agricultural settlement have not been more readily appreciated is the unfavorable impression created by the appearance of the region through which the Canadian Pacific Railway passes during the greater portion of its route. The forbidding aspect, from an agricultural point of view, of much of the country lying to the north of Lake Superior, combined with popular ignorance as to the extent and varied resources of the country, has no doubt detracted greatly from the estimation in which New Ontario has hitherto been held. Consequently the tide of immigration and settlement has largely swept westward to the prairie regions of Manitoba and the Northwest, where settlement has been going forward at a comparatively rapid rate—while millions of equally fertile acres possessing greater advantages in the important items of wood and water, and favored by a more temperate climate, have been left undeveloped. The policy of the Ontario Government, moreover, has been to allow the lumberman to precede the settler and remove most of the pine before throwing new districts open for settlement, thereby preventing the

slowly introduced—giving to the farmer the benefits of the home markets and a plentiful circulation of money. In New Ontario the great mineral wealth of seemingly barren and worthless rocks, and the revolution in the paper trade caused by the extensive use of spruce and other woods for paper have given an impetus to the establishment of extensive and varied industries in advance of any considerable agricultural development. In many localities pulp and paper mills are being established, and at Sault Ste. Marie and elsewhere a large number of interdependent industries in which the raw material furnished by the minerals and timber of the region is worked up, have been set on foot—so that at many points labor finds steady and remunerative employment either directly in connection with these enterprises or with the numerous subsidiary undertakings promoted by their presence. This rapid industrial development so unprecedented in its character, renders the conditions of life in New Ontario especially favorable to men of limited resources who wish to establish themselves in a homestead. A settler must possess the means to supply food and clothing for himself and family until his farm becomes productive, or failing this it is necessary for him to obtain some employment in the vicinity. The ease with which he can do this, in

most parts of New Ontario, enables many poor men to take up land who would have no opportunity of doing so in a purely agricultural country.

The area of the entire region of New Ontario is so vast that the tracts of fertile land which are now being opened for settlement look comparatively small, although they are really of very considerable extent. Explorations so far as they have been carried on have shown that there are about one million of acres of good arable soil in the Rainy River district, a large area in the Wabigoon district and around Thunder Bay, and many millions at the head of Lake Temiscamingue and also in the region beyond Lake Abitibi and extending westward.

Western Nipissing and Eastern Algoma also include extensive tracts well fitted for cultivation. These localities differ widely in their characteristics and situation with regard to markets and transportation. Some two years since the Ontario Government employed Mr. Duncan Anderson of Rugby, Ont., to prepare a report on New Ontario as a field for settlement from a farmer's standpoint, his report being printed for free distribution. He noted the considerable difference in soil and rock formation of the various districts and also the variation in the local demands for labor in accordance with the character of the industries carried on. Labor is extensively in requisition in Rainy River in connection with both the lumbering and mining industries, and at Wabigoon the mines and the taking out of fuel for the Winnipeg market constitute a steady source of employment. In the Thunder Bay district the opportunities offered to labor are more extensive and varied, as in addition to lumbering and mining the work of railroad construction is being pushed forward, and other industries in connection with these enterprises are established in the towns of Fort William and Port Arthur. Further east the lavish expenditures of the Clergue syndicate in the industries carried on at Sault Ste. Marie have created an enormous demand for mechanics and laborers. While the man who goes there with the view of ultimately taking up land should bear in mind that the farm land in the neighborhood of Sault Ste. Marie, owing to the broken surface of the soil, is perhaps scarcely equal to that in some other districts, the extra attractions offered by the demand for labor and the local market for timber and farm produce fairly balance any advantages that may be possessed by other districts in the way of soil.

The sons of Ontario farmers desiring to obtain land of their own have frequently been deterred from taking up bush lots by the experience of the hardships endured by the early settlers under former conditions. The labor of clearing thickly-wooded land in those days was not only severe, but the immediate results were unremunerative, as many years had to elapse before the products of the soil offered the farmer more than a mere subsistence. The growing demand for timber of all kinds has wrought a great change in this respect. In the New Ontario districts above mentioned the timber cut from the land can be disposed of for railroad ties, telegraph poles, saw logs, pulp wood, fuel, etc., so that in most cases the settler can secure a fair return for the value of his labor in clearing the land from the sale of the wood instead of having to pile it in heaps and burn it in order to get rid of it. While the early pioneers of settlement in Ontario were often obliged to transport their families and supplies from twenty to fifty miles through the wilderness, and were subjected to many privations from the want of the necessaries of life, having to grind their own wheat imperfectly in hand-made mills, etc., the settler in New Ontario need fear none of these hardships and inconveniences. The dis-

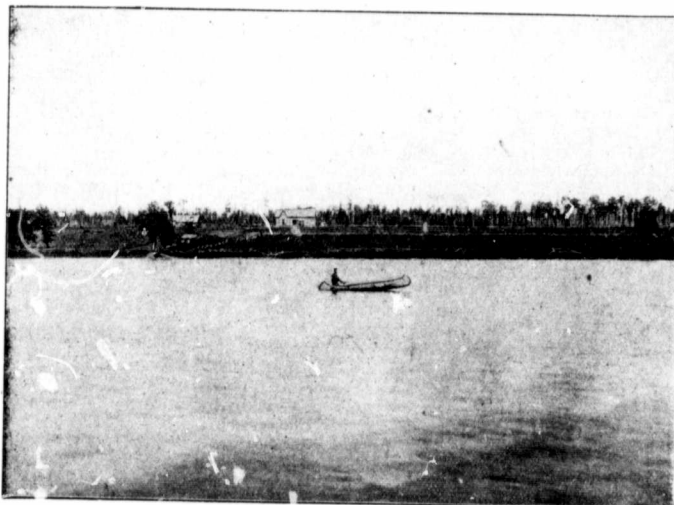
tricts now being opened up for settlement are none of them more than twenty miles from the railroad or steamboat landing, and flour mills, stores and other requirements of agricultural civilization are within comparatively easy access. While it is wise to remember that all these modern mitigations of the difficulties of the settler's lot exist, the labor of establishing a farm in the bush is still great, and requires energy, patience and persistence. The returns come much more rapidly than in the old days, owing to the proximity of the market for all produce, including the wood which the settler had formerly to destroy, and also the adoption of mixed farming, the profits of which are not merely larger but much more certain than those of wheat-growing.

In making a new home in our new districts very little capital beyond health and strength and energy are required. No expensive outfit of implements and horses necessary in a prairie country is needed at first. A standing joke in one of the new settlements I visited this summer was furnished by a young married man who included in his equipment a brand-new top buggy. It will come in use some day, but is not earning interest on the investment as yet.

In one settlement, only four years old, I met several people, now comfortably off, who reached there with a few household goods, the absolutely necessary tools, a cow and from nothing to \$5.00 in cash. While it is possible to do this, owing to the ability to secure work off his lot, a man will of course have his farm in productive condition, have better buildings and larger clearings if he has enough cash for food and clothing to enable him to spend all his time on his own place. The cost of reaching the new districts is not great as reductions in rates for actual settlers or land seekers have been made by the railways at the solicitation of the Commissioner of Crown Lands. These special rates are given on certificates furnished by the Bureau of Colonization and it is perhaps unnecessary for me to add that inquiries addressed to the Bureau of Colonization, Parliament Buildings, Toronto, as to the railway rates or other information concerning the various districts now open for settlement will be cheerfully answered.

So far the Bureau of Colonization as directed by the Commissioner of Crown Lands has not pursued an active immigration propaganda with the hope of inducing a large influx of settlers from abroad to occupy the waste places of Ontario. That work has been left largely in the hands of the Dominion Immigration officials. While the people of this Province are glad to welcome the settlers from Great Britain, the United States and elsewhere and to afford them equal chances with Canadians in building up prosperous homes here, it is only right that the first and main efforts of the Provincial Government should be in the direction of acquainting the Canadian public with the extent and character of the resources of our undeveloped territory and assisting those of our own people who are in search of homes to establish themselves there. The advantages which New Ontario offers cannot be equalled in any other part of the American continent, and with the opening up of the means of communication in many directions the very considerable influx of settlers during the past few years is likely to be greatly increased.

Farewell, old year, we walk no more together ;
I catch the sweetness of thy latest breath ;
And, crowned with yellow brake and withered heather,
I see thee stand beneath this cloudy sky.



WILFRED LOWE'S FARM ON RAINY RIVER, NEAR FORT FRANCES.

The Ontario Agricultural and Experimental Union

The twenty-second annual meeting of the Ontario Agricultural and Experimental Union opened at the Ontario Agricultural College at 1.30 on the afternoon of Dec. 10. This organization was formed by a few ex-students and students of the college in '78, for the purpose of keeping up a spirit of union between all who had attended the college from time to time. In the course of a few years the experimental work undertaken by this Union was quite extensive, but it was not until Mr. C. A. Zavitz, the present secretary, took charge in 1892 that the experimental work became such a prominent feature of the organization. During the past year there were experiments conducted as follows:

AGRICULTURE—31 experiments, in which 3,354 experimenters took part.

HORTICULTURE—6 experiments, 225 experimenters.

SOIL PHYSICS—One experiment, conducted in four sections of the Province where the conditions as to soil, climate, etc., are varied.

ECONOMIC ENTOMOLOGY—One experiment, 12 experimenters.

ECONOMIC BOTANY—One experiment, 20 experimenters.

POULTRY—Preservation of eggs, 18 experimenters.

PRESIDENT'S ADDRESS.

After an expression of satisfaction at the presence of so many practical men at the Union—Institute workers, ex-students, students, instructors, etc., the President

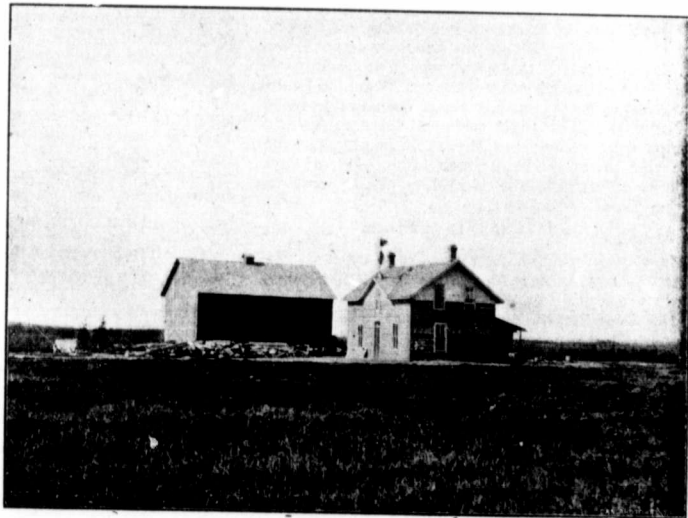
stated that the day of the "all-round" farmer had passed; in agriculture as in other callings, the time of specialization had come. He attributed the failure of a great many farmers to the fact that they have not taken advantage of the openings in their respective localities. The greater success of Ontario as compared with the other provinces of the Dominion was due, he thought, to the fact that the farmers are now keeping more and a better class of stock and are paying more attention to the keeping up of a proper balance in their soils.

After commenting upon the ravages of the pea weevil during the past season and referring

to the gradual increase in the membership and the work being done by the Union, special attention was drawn to the new lines of work undertaken this year: Botany, offering of mounted weed seeds and plants for use in public schools, experiments in egg preservation. Many lines of most valuable work are now well established, and the only thing required for valuable expansion is more funds.

Regret was expressed at the gradual reduction of our forest area and the detrimental influence which this depletion has upon the uniform supply of moisture. It was thought by the President that work in this line could well be taken up by the Union and recommendations as to methods were asked for.

The address was concluded by feeling references to the death of Private Findlay in South Africa and to the recent demise of John I. Hobson, who always took much interest in the union and the work of the college.



GOVERNMENT PIONEER FARM BUILDINGS AT WABIGOON, RAINY RIVER DISTRICT.

GRAIN AND ROOT EXPERIMENTS.

After referring to the gradual increase in the number of experimenters, the results in detail were gone into by Mr. Zavitz. In each case the best variety is given a percentage of 100, and the others are given percentages in comparison to this variety.

OATS. The Siberian reached the 100 per cent., with 53.4 bushels of grain and 1.4 tons of straw per acre; the Joaquette was second with 74 per cent., and the Danberry third with 56 per cent. The Siberian variety was introduced from Russia 11 years ago. The American Banner, a much exploited oat during the past season gave $2\frac{1}{2}$ bushels less per acre than the Joaquette.

BARLEY. 1st, Oderbrucher, 37.1 bus.; 2nd, Mandshcheurl (Russian), 35.3 bus. Success, a variety which has been much advertised of late, gave a yield of only 28.7 bus. per acre.

HULLLESS BARLEY. 68 tests with three varieties—Black Hullless, 20.2 bus. per acre, and bald and bearded white Hullless, 18 and 18.1 bus. respectively. In buckwheat the Silver Bell proved to be the best.

The results of tests with peas is shown by the following table:

	Yield.	Weevilly.
Early Britain	25 bus.	13%
Prussian Blue	24.8 bus.	7%
Golden Vine	23.6 bus.	8%

There are two varieties which are known to be weevil proof, Grass and Egyptian. The Egyptian and the Oddfellow were compared in 99 tests, with the result that the former gave a yield of 22.7 bushels per acre with no weevils whatever, while the Oddfellow gave a yield of 19.5 bushels, and in some cases 45 per cent. were weevilly.

The Japanese or Soya bean, which is practically a new crop in Ontario, produces a somewhat similar fodder to cotton-seed meal. They have been grown to some extent, but only a few varieties have been found to ripen here, the American coffee berry giving the best results, 23.3 bushels of grain and 1.1 tons of straw being produced. These beans are better than the horse beans to mix with corn, and are more relished by stock.

In corn, the North Star and Yellow Dent gave the largest percentages.

MANGELS.—The Evans Improved Mammoth Saw Log gave the best returns. The question as to whether smaller mangels were not richer was asked, and Mr. Zavitz replied that such was undoubtedly the case, but the extra yield and the additional food value of the larger beets certainly placed them first in value.

Two varieties of sugar beets and three varieties of turnips were tested, but the experiments were not extensive enough to be of much value. Out of eight varieties of carrots, the Half Log White gave the largest yield.

THE FARMERS' INSTITUTES.

Mr. G. C. Creelman, Secretary of Farmers' Institutes for Ontario, gave an address on "The Farmers' Institute as an Educator." After referring to the acknowledged merits of Canadians and the increased demand for the practical, Mr. Creelman stated that although the School of Practical Science in Toronto and the Ontario Agricultural College were outcomes of the desire for practical instruction, yet some 98 per cent. of the farmers' sons of the province were not reached by these institutions; and the Farmers' Institute system was providing a means of reaching this important class. The difficulties which Institute workers have to contend with were enumerated, and the aim of the Institutes was clearly set forth. At the conclusion of Mr. Creelman's address a number of

Institute workers were called upon. Mr. Glendenning regretted the fact that in some sections it is difficult to get the people to come to the meetings. Mr. A. Elliott stated that he thought the Institutes had done about all they could under the present arrangements. "The farmers have learned a great deal, and they absolutely demand higher information. We used to have the professors from the college; but now that the farmers are in a position to profit by their talks, they have not the men." Mr. Elliott noticed a great increase in the number of the inquiries from farmers regarding advanced methods of farming. The old days have passed, and we must follow a more intense system of cultivation. Great faith is placed in the corn plant by Mr. Elliott, and he is certain that if this plant is handled properly on the farms in sections where it is suited to the climate the output of the farms will be doubled.

Mr. Caston referred to Institute meetings as "Agricultural Experience Meetings," and thought that the speakers should make an effort to bring out more questioning and conversation.

Mr. Raynor expressed great faith in the future of the Institutes. He thought it would be well, however, to have the instruction given more practical if possible, having animals representing the different classes and breeds brought to the meetings and used as illustrations in lectures and talks. The demand for nature study in the public schools was an outcome to a great extent of the work of the Institutes. The increased attendance at the college was partly due to the work of the Institutes.

Mr. A. W. Peart said, "If I were asked what the benefits which have arisen from the Farmers' Institute system are, I would answer: The establishment of the silo throughout the length and breadth of the province; the development of better factories; the solution of the bacon hog problem; and the development of the fruit industry." "What problems have we to solve yet?" said Mr. Peart, and he replied, "I believe we are only on the threshold of the solution, and I think agricultural education lies along three lines: 1. practical; 2. scientific; and 3. business." If we have the first two but have not the business ability, we are greatly handicapped.

Mr. Alex. McNeill, of Walkerville, said that he thought the institutes had really outgrown themselves and it is necessary now that the younger men, with new thoughts and new ideas, take the burden from the shoulders of the older men. The institute work had been the means of saving and making money for the farmers.

Messrs. Simpson Rennie, C. W. Nash, T. H. Manson, J. G. Orr, and Major Sheppard expressed some valuable hints as to the needs of the work, and Superintendent Creelman closed the session by making some remarks upon the discussion which had taken place.

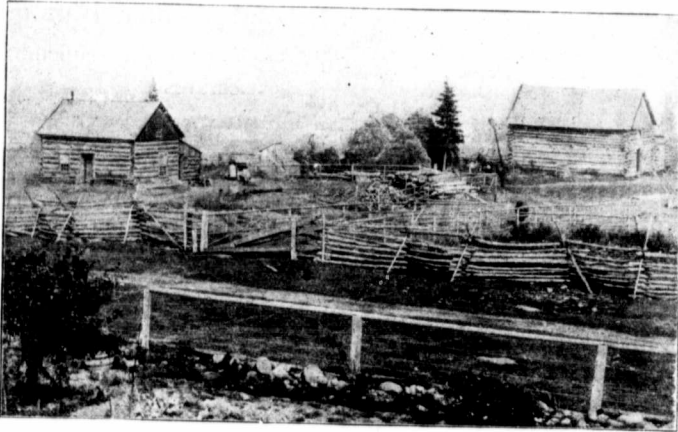
AFTERNOON SESSION FOR LADIES.

The afternoon session for ladies was most interesting and was attended by a large number from the city. Dr. Mills, after welcoming those present, stated that persons who have undertaken to establish domestic science schools in other countries have found more opposition from the ladies themselves than from the men. The doctor said that no school could hope to be self-sustaining in a country like ours, where it was not the rule to demand high tuition fees.

Most interesting addresses were delivered by Miss Rose, Miss Maddock and Mrs. Richards.

EVENING SESSION.

The Hon. John Dryden in the course of his remarks as Chairman stated, "In my opinion there is no more



AN ALGOMA DISTRICT FARM.

important agricultural work being carried on than that of the Experimental Union." Prof. Roberts, of Cornell University, was the speaker of the evening, and his remarks were most encouraging regarding the work which had been done in the way of nature study among the children of the State of New York; and the Professor has well grounded hopes for the future work in this line. The individual work is what counts, and the aim is now to supply information as direct as possible to the pupils. In 1898, they reached 35,000 children with a total expenditure of \$35,000, and the Professor asked if his audience did not think the boys and girls education along this line was worth one dollar per year.

Dr. Mills, Dr. Shuttleworth, and Prof. F. C. Harrison gave descriptive addresses regarding the agriculture of the European countries.

On Tuesday morning, Mr. Zavitz gave results of experiments with varieties of fodder crops, commercial fertilizers, and methods of cultivation. The information given upon these subjects was most valuable and every agriculturist should get a full report of these experiments and make a close study of the same.

Prof. Lochhead gave valuable information regarding experiments in destroying insects and fungus diseases, while Prof. Reynolds reported that he was not prepared to draw definite conclusions from experiments in preservation of moisture, germination of seed, etc., as affected by cultivation.

The election of officers resulted as follows:

OFFICERS ELECTED

The officers of the Union for the ensuing year are as follows:

- President, T. H. Mason, Staffordville.
- Vice-President, T. G. Raynor, Rosehall.
- Secretary, C. A. Zavitz, O.A.C.
- Treasurer, Prof. H. L. Hutt, O.A.C.

Directors, Dr. Mills, Messrs. Hallman, J. C. McDonald, Creelman and Harcourt.

Auditors—Messrs. Peigham and Price.

EGG PRESERVATIVES.

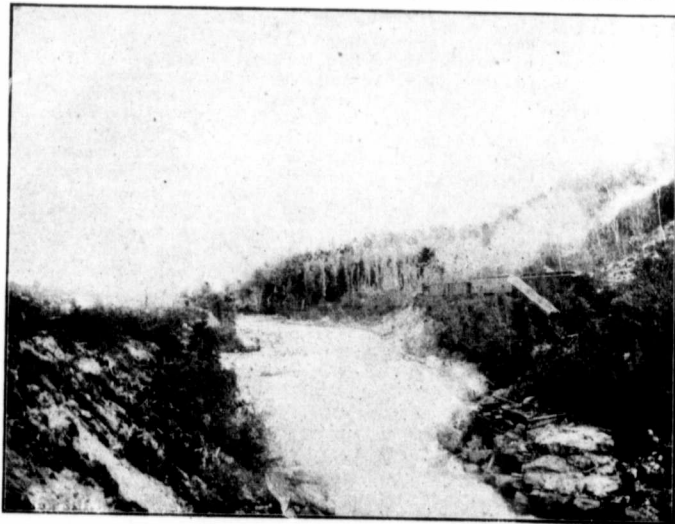
The Tuesday afternoon session opened with President Ross in the chair. He called first for the report of the experiments with egg preservatives, which was given by W. R. Graham, manager of the Poultry Department at the college. Mr. Graham said that the object of these experiments was to try to get a good preservative for eggs for family use. He did not believe it

wise for private persons to preserve eggs to be sold later to large packing concerns, but it would be an advantage to most persons having eggs to be able to put some away when they were plentiful and cheap for use privately later on. It is not safe to sell preserved eggs to packers for export purposes. In Mr. Graham's opinion no preserved egg is as good as a fresh one. The experiments carried on in the department, along with those conducted in co-operation, show, however, that certain preservatives described below are capable of preserving eggs with a reasonable amount of success. In all cases only fresh eggs should be used.

Three classes of preservatives were experimented with, the first class being sub-divided into three strengths of solution, and were described as follows:

- 1st. Waterglass, 1 part to 5 water.
- 2nd. " I " " 8 "
- 3rd. " I " " 10 "
- 4th. Lime preparation.
- 5th. Dry salt.

The dry salt was proved by the results to be the



C.P.R. ON THE WAY FROM MATTAWA TO TEMISCAMING.

least effective. It was found that a large percentage of the eggs were stale, and that 25 per cent. of the contents of the eggs had evaporated. The weakest water-glass solution was somewhat better, but did not equal the lime preparation or the stronger solutions of water-glass. So far as the quality of the preserved eggs was concerned, the one to five solution of water-glass gave the best results, in some cases the eggs being reported to be equal to fresh eggs. The lime solution caused the white of the eggs in the bottom of the vessel to be partially cooked or hardened, the eggs at the top being in a better condition. A weaker solution of lime, however, would not be strong enough to preserve the upper layers of eggs, since it is the tendency in this preparation for the lime and salt to precipitate to the bottom of the vessel. The water-glass, although a good preservative, had the fault of being unpleasant to handle. It takes a honey-like consistency after standing some time which makes the removal of the eggs disagreeable. Taken on the whole the strong solution of water-glass was recommended.

SMALL FRUITS.

Prof. Hutt next reported the experiments with small fruits. He reported a steady increase in the extent of the work over the province. Six years ago the work commenced with 60 experimenters and now there are 709 names on the list. The varieties leading last year were as follows: Strawberries, Clyde; black raspberries, Gregg; red or white raspberries, Shaffer; blackberry, Taylor; currants, Ruby Castle; gooseberries, Houghton.

IMPROVED METHODS OF FARMING.

Prof. J. P. Roberts, Cornell University, Ithaca, N.Y., followed with an address on "Improved Methods in Farming." He made his address so simple and lucid, and mixed up with it such wit and humor, that the audience was not only greatly enlightened but charmingly entertained. He pointed out that the profession of agriculture is the most difficult practised to-day. The farmer works with the soil, but his knowledge of that soil is yet so limited that he has great difficulty in managing it so as to get the most profitable results. A farmer pays for three things; first, location and the right to occupy the land to the exclusion of all others; second, plant food in the soil; and third, things on the soil, such as trees, buildings, fences, etc. The first and third he did not touch upon, but upon the second he based his address. By quoting analyses of average soils he showed that the native plant food in the upper sixteen inches of soil is sufficient for hundreds of crops of wheat or other grains. The average crop of wheat in the United States is 14 bushels per acre. This is so much below the possibility of the soil that he concluded that the problem for the farmers to solve was how to get at the plant food in the soil and make it available for the crops in such quantities that the crops of wheat would be 40 to 50 bushels instead of 14. Nature, he said, has locked up the plant food in the soil. The fool and the lazy man do not know how to get it out. While the knowledge of how to unlock it gives success. The Professor then proceeded to elucidate the conditions necessary for the best growth of plants, and showed that these were largely under the control of the farmer.

After the discussion which ensued a vote of thanks was tendered to Prof. Roberts, and the regular sessions of the Experimental Union for 1900 came to a close.

Be sure to look up our premium offers in this number.

Provincial Winter Fair

Big Crowds—Good Stock—Splendid Lectures

The wisdom of selecting permanent quarters and erecting a building suitable for the Provincial Winter Show was clearly demonstrated last week. Never in the history of this country has a more successful winter fair been held in Canada. Both in the quality and quantity of the exhibits and in the attendance of farmers and breeders did it excel. While there were not as many American visitors as at previous shows, there were large delegations of breeders from the other provinces of the Dominion. From the Maritime Provinces came a delegation of about fifty breeders and others interested in the development of the live stock interests down by the sea. These came in special car on the I.C.R. and C.P.R., and were the most interested visitors at the show. In addition, the Canadian West was well represented, so that, while the show is designated as a Provincial show, its influence reaches out to all parts of the Dominion. Truly, it was a great gathering of the best farmers and breeders in the Dominion and their greatest benefactor, good live stock.

A predominant and most important feature of the show was its educational side. Special arrangements had been made for promoting this feature, and that it proved a great success is shown by the crowds of intelligent and eager farmers who crowded the large lecture hall. In this hall, which will have to be enlarged before another year, lectures were given by the judges in the different classes and others on methods of judging and feeding live stock. The points of the bacon hog were explained by competent judges from live specimens in the lecture hall, and now to feed this animal so as to produce the best quality of bacon was fully discussed. The same work was taken up with beef cattle, dairy cattle and sheep and poultry, all the lectures being illustrated by animals brought into the room. In addition, there were lectures by the judges on the dressed carcasses, all along the line of educating the farmer as to the best type of animal to breed and feed in the different classes and the quality of meat required for the market. A more instructive lot of lectures we have never listened to. In later issues we will endeavor to give as fully as possible the most salient points brought out. Space will not allow us to do so in this issue. They formed the most interesting and attractive features of the show, and might well be copied by our larger fall fairs.

As to the exhibits they may be classed as among the finest that this country produces. All the various departments were well filled, and the quality in some respects ahead of other years. A person visiting this fair from year to year must recognize a great improvement in the quality of the exhibits and their adaptability to meet the needs of the trade from a consumer's standpoint. While there is much to be done in this direction, this year's winter fair shows that our breeders and feeders are working along the right line and with a determination that must bring about a great improvement in the near future. As the official report of the show will appear from week to week in the *Gazette* Department of THE FARMING WORLD, it will not be necessary for us to go into detail as to the merits and quality of the various exhibits. The official report is being prepared with special care this year, and will be well worth reading when it appears. All that we can do here is give a few of the general characteristics of the different classes shown.

There was a much larger exhibit of the beef breeds and fat cattle than at London last year, the numbers being 65 cattle at London and 86 at Guelph. Shorthorns predominated and made a most excellent exhibit. The sweepstakes animal, a Shorthorn grade, almost pure bred, just lacking a little of being eligible for registration, was about as perfect a fat animal as could be had. He was owned by Jas. Leask, Greenbank, Ont., and sired by the noted bull Moneyfuffel Lad. This animal was the equal of anything shown at Chicago or at Guelph in previous years. A curiosity was shown in one of the old types of steers, heavy and large. He was a grade Shorthorn owned by A. Weichter, Walkerton, Ont., and was four years old and said to weigh 3,000 lbs. The Herefords were not out in large numbers, but were of good quality and evened up the prizes pretty well with the Polled-Angus with which they were classed. Some fine types of the latter were shown. A heifer got by a Polled-Angus bull on a Shorthorn cow, shown by James Bowman, standing first in one of the grade classes. Galloways were out in stronger force than usual and with the quality very much improved over other years. They were classed with the Devons and came in for all the firsts. There was a very fine display of grades and crosses, Shorthorn blood being largely to the front. This type of cattle, which are within the reach of every farmer to raise were of very fair quality throughout with strong competition in most of the classes.

There was a fine show of sheep, many of the exhibitors being fresh from laurels won at Chicago. All breeds were well represented with good quality predominating, there being, perhaps, the strongest competition in the Shropshire, Leicester, Oxford and Southdown classes. Quite a few new exhibitors were noticeable in some of the classes. The quality throughout was said to be equal to and in some respects ahead of Chicago, and why should it not be? It was the Canadian breeders who made the exhibit at Chicago, and consequently a good show might be looked for at home. A first-prize Southdown wether under one year at Chicago only secured fourth place at Guelph. There was a good showing of grades and crosses, many being entered for the block tests.

In the swine classes the large show of bacon hogs was the leading feature. Evidently the education of our breeders and feeders in the production of the right type of hog for the bacon trade is bearing good fruit. The improvement in this direction was most marked. Berkshires, Yorkshires and Tamworths were out in large numbers with very strong competition in all classes. Yorkshires and Tamworths were more largely shown. No better exhibit of hogs suitable for the bacon trade has ever been seen in Canada.

The number of animals entered for the block tests shows a large increase over last year. There were 55 hogs, over 45 sheep and eight cattle. This was the first show at which cattle were killed and only purebred animals were slaughtered, made up of two Galloways, one Polled Angus, two Devons and three Shorthorns. Animals of about all the sheep breeds were entered, consisting of three Lincolns, three Leicesters, three Cotswolds, three Suffolks, five Dorsets, six Shropshires, five Oxfords, seven Southdowns and 12 grades. The swine carcasses were made up of 12 Yorkshires, 20 Tamworths, four Duroc-Jerseys, four Berkshires, four Poland Chinas, four Essex, six Chester Whites and eight grades. The official report should, therefore, contain a large fund of valuable information as to the adaptability of the different breeds to meet the needs of the butcher's and export trade.

The poultry exhibit was the very best that has ever been held in Canada both as regards the quality and

number of exhibits in the more useful classes. There was a fine display of dressed birds. Considerable interest was shown in a pair of Belgian hares, animals that are attracting much attention in the United States. A fuller report of the poultry will appear next week.

The dairy competition aroused a lot of interest. The number of cows which entered was much smaller than last year. The taking of the food consumed into account had, no doubt, something to do with this falling off. What was somewhat surprising was that some of the breeds, whose owners clamored for a food test were conspicuous by their absence. The test was concluded at 9 a.m. on Tuesday morning. The food had been weighed out from the Tuesday previous and each cow was charged for the food consumed during the two days' test on the average for the seven and one-third days. The prizes were awarded on cost of producing 100 points in the two days of the actual test. The Holsteins came out on top. The cow which gained 2nd place made her owners, Rettle Bros., Norwich, Ont., a profit of forty-three cents per day over the cost of feed, while the first prize cow a Holstein owned by the same parties made a profit of over thirty cents per day over the cost of feed. She made 100 points at a cost of twenty cents, the second cow making the 100 points at a cost of 22.6 cents. A complete and tabulated report of the test will appear in a later issue.

We give below the list of prize winners in the different classes. Readers would do well to preserve this for use in connection with the official reports which will appear later:

CATTLE.

Shorthorns—Steer, two years and under three—1, J. Fried & Sons, Roseville. Steer, one year and under two—1, Israel Groff, Alma; 2, Peter Stewart, Everton. Cow or heifer, three years and over—1, W. J. Biggins, Clinton; 2, Daniel Talbot, Everton; 3, John Campbell, Woodville. Heifer, two years and under three—1, J. Fried & Sons. Heifer, one year—1, H. Smith, Hay; 2, J. Fried & Sons. Sweepstake, best steer—1, Israel Groff. Sweepstake, best cow or heifer—1, H. Smith.

Herefords and Polled Angus—Steer or heifer, two years and under three—1, F. W. Stone Stock Company, Guelph; 2, James Bowman, Guelph. Steer or heifer, one year and under two—1, F. W. Stone Stock Company; 2, James Bowman; 3, A. McDougall. Steer or heifer under one year—1, Samuel Young, Binkham; 2, F. W. Stone Stock Company; 3, James Bowman. Cow or heifer, three years and over—1 and 3, James Bowman; 2, F. W. Stone Stock Company. Dressed carcass—James Bowman.

Galloways and Devons—Steer or heifer, two years and under three—1, D. McCrae, Guelph; 2 and 3, W. J. Rudd, Eden Mills. Steer or heifer under one year—1 and 2, D. McCrae. Steer or heifer under one year—1, D. McCrae; 2, T. Lloyd-Jones & Sons, Burford. Cow or heifer, three years and over—1 and 2, D. McCrae.

Grades or crosses—Steer, two years and under three—1, James Leask, Greenbank; 2, J. Fried & Sons; 3, R. J. Robinson, Ailsa Craig. Steer, one year and under two—1, James Leask; 2, Andrew Richardson, Peepabun; 3, J. H. Dingle, Hamilton. Steer under one year—1, A. Hales, Guelph; 2, Andrew Richardson; 3, James Leask. Cow or heifer, three years and over—1, James Bowman; 2, Wm. Argo, Eden Mills; 3, John Brown, Galt. Heifer, two years and under three—1 and 2, James Leask; 3, James Scott, Abesfoyle. Heifer under two years—1, J. Fried & Sons; 2, James Leask; 3, Robert Dawson, Guelph.

Sweepstakes—Special, best grade steer sired by pure-bred Shorthorn bull—James Leask. Special, best pair fat animals, any age or breed—1, silver cup donated by Bell Organ Co., James Leask, Greenbank. Special, best animal any age or breed—1, Holiday cup, James Leask.

SHEEP.

Cotswolds—Ewe under one year—1 and 2, John Park & Sons, Burgessville. Wether, one year and under two—1, 2 and 3, John Park & Sons. Wether, under one year—1, 2 and 3, John Park & Sons. Three wethers, under one year—1, John Park & Sons. Three ewes under one year—1, John Park & Sons.

Lincolns—Ewe, under one year—1, 2 and 3, J. T. Gibson, Denfield. Wether, one year and under two—1 and 2, J. T. Gibson. Wether, under one year—1 and 3, J. T. Gibson; 2, L. Parkinson, Eramosa. Three wethers, under one year—1, J. T. Gibson; 2, L. Parkinson. Three ewes, under one year—1, J. T. Gibson; 2 and 3, L. Parkinson.

Leicesters—Ewe, under one year—1 and 3, A. & W. Whitelaw, Guelph; 2 and 4, John Kelly, Shakespeare. Wether, one year and under two—1 and 2, Orr & Lillico, Galt. Wether, under one year—1, 4 and 5, Orr & Lillico; 2 and 3, John Kelly. Three wethers, under one year—1 and 3, Orr & Lillico; 2, John Kelly. Three ewes, under one year—1, A. & W. Whitelaw; 2 and 3, John Kelly.

Oxfo d.—Ewe, under one year—1 and 5, Kenneth Finlayson, Campbellton; 2, Smith Evans, Gourcock; Andrew Elliott, Pond Mills; 4, J. H. Jull, Mt. Vernon. Wether, one year and under two—1 and 2, Andrew Elliott. Wether, under one year—1, 2 and 3, Smith Evans; 4, Andrew Elliott. Three wethers, under one year—1, Smith Evans; 2, Andrew Elliott. Three ewes, under one year—1, Kenneth Finlayson; 2 and 4, Smith Evans; 3, J. H. Jull; 5, Andrew Elliott.

Shropshires.—Ewe, under one year—1 and 2, John Campbell, Woodville; 3, D. G. & J. G. Hamner, Mount Vernon. Wether, one year and under two—1 and 2, John Campbell; 3, D. G. & J. G. Hamner. Wether, under one year—1 and 2, R. Gibson, Delaware; 3, John Campbell. Three wethers, under one year—1 and 2, R. Gibson; 3, W. E. Wright, Glanworth. Three ewes, under one year—1, John Campbell; 2, D. G. & J. G. Hamner; 3, Abram Rudell, Hespeler.

Southdowns.—Ewes under one year—1 and 2, John Jackson & Sons, Abingdon; 3, Robert McEwan, Byron. Wether, one year and under two—1, W. E. Wright; 2, Teller Bros., Paris; 3, Hon. Geo. A. Drummond, Beaconsfield, Que. Wether, under one year—1, F. C. Douglas, Galt; 2 and 3, John Jackson & Sons. Wethers, under one year—1, T. C. Douglas; 2, John Jackson & Sons; 3, Teller Bros., Paris. Three ewes, under one year—1, John Jackson & Sons; 2, Robert McEwan; 3, Wm. Martin, Binbrook.

Hampshires and Suffolks.—Ewe, under one year—1, John Kelly, Wether, one year and under two—1 and 3, W. J. Rudd; 2, James Bowman.

Dorset Horned and Merinos.—Ewe, under one year—1 and 2, R. H. Harding, Thorndale. Wether, one year and under two—1, W. E. Wright; 2 and 3, R. H. Harding. Wether, under one year—1, 2 and 3, R. H. Harding. Sweepstakes—Dorset Horned and Merinos—R. H. Harding.

Specials.—Shropshire—Wether one year and under two—1 and 2, John Campbell. Wether under one year—1 and 2, R. Gibson. Three ram lambs—1 and 2, John Campbell; 3, D. G. & J. G. Hamner. Wether sired by registered Shropshire ram out of grade ewe, one year and under two—1, John Campbell; 2, T. Lloyd-Jones & Sons. Wether sired by registered Shropshire ram out of grade ewe under one year—1, R. Gibson; 2, John Campbell. Leices'er pen of three lambs—1, A. & W. Whitelaw; 2, John Kelly; 3, Orr & Lillico. Oxford yearling wether—Andrew Elliott. Oxford lamb, ewe or wether—1, Kenneth Finlayson.

Sweepstakes.—Cotswolds—John Park & Sons; Lincolns, J. T. Gibson; Leicesters, A. & W. Whitelaw; Oxfords, Kenneth Finlayson; Shropshires, R. Gibson; Southdowns, W. E. Wright; Hampshires and Suffolks, John Kelly.

Grades and Crosses.—Ewe, one year and under two—1 John Campbell; 2, T. C. Douglas; 3, James Scott. Wether one year and under two—1, John Campbell; 2, W. E. Wright; 3, T. Lloyd-Jones. Three wethers under one year—1, John Campbell; 2, R. Gibson; 3, Orr & Lillico. Wether under one year—1, J. T. Gibson; 2, John Campbell; 3, W. E. Wright. Ewe under one year—1, R. H. Harding; 2, John Campbell; 3, I. T. Gibson. Ewe or wether under two years—1, W. E. Wright; 2, John Campbell.

SWINE.

Berkshires.—Barrow, six months and under nine—1 and 3, George Green, Fairview; 2, Durham & Cavan, East Toronto. Barrow, under six months—1 and 2, George Green; 3 and 4, Snell & Lyons, Snelgrove. Sow, nine months and under fifteen—1, Snell & Lyons; 2 and 3, George Green; 4, George Kitching, Corwin. Sow, six months and under nine—1, 4 and 5, George Green; 2 and 3, Snell & Lyons. Sow, under six months—1 and 2, Snell & Lyons; 3, Jas. A. Russell, Previous Corners; 4, George Green. Three pigs, the offspring of one sow bred by exhibitor—1, Snell & Lyons; 2, George Green.

Yorkshires.—Barrow, six months and under nine—1 and 3, Brethour & Saunders, Burford; 2, H. Dedels, Breslau. Yorkshire barrow under six months—1 and 3, Brethour & Saunders; 2, J. Featherston. Streetsville; 4 and 5, H. Dedels. Sow, nine months and under fifteen—1, Brethour & Saunders; 2, J. Featherston & Son; 3, H. Dedels. Sow, six months and under nine—1, J. B. Macdonald, Muirkirk; 2, 3 and 4, Brethour & Saunders. Sow, under six months 1 and 3, Brethour & Saunders; 2, 4 and 5, H. Dedels. Three pigs, the offspring of one sow bred by exhibitor—1 and 2, Brethour & Saunders.

Chester White—Barrow, 6 months and under 9—1 and 2, Bennett & Pardo, Charing Cross; 3, D. DeCourcy, Bornholm. Barrow, under 6 months—1 and 2, D. DeCourcy; 3 and 4, Bennett & Pardo; Sow, 9 months and under 15—1 and 5, H. George & Sons, Crampton; 2, D. DeCourcy; 3, Bennett & Pardo; 4, John Silverthorn, Scotland. Sow, 6 months and under 9—1, H. George & Sons; 2 and 5, D. DeCourcy; 3 and 4, John Silverthorn. Sow, under 6 months—1, 4 and 5, Bennett & Pardo; 2, H. George & Sons; 3, D. DeCourcy. Three pigs, the offspring of 1 sow bred by exhibitor—1, D. DeCourcy; 2, Bennett & Pardo.

Poland Chinas—W. M. & J. C. Smith, Fairfield Plains, were the only exhibitors of this breed and, therefore, won all the prizes.

Essex—Barrow, 6 months and under 9—1, T. A. McClure, Meadowvale; 2 and 3, J. Featherston & Son. Barrow, under 6 months—1 and 2, J. Featherston; 3, T. A. McClure. Sow, 9 months and under 15—1, T. A. McClure; 2 and 3, J. Featherston & Son. Sow, 6 months and under 9—1 and 2, J. Featherston & Son; 3, T. A. McClure. Sow, under 6 months—1, T. A. McClure; 2 and 3, J. Featherston & Son.

Tamworth—Barrow, 6 months and under 9—1, Norman M. Blain, St. George; 2, Andrew Elliott, Pond Mills; 3, David Douglas & Sons, Mitchell; 4, A. C. Hallman, New Dundee; 5, H. George & Sons. Barrow, under six months—1, A. C. Hallman; 2 and 4, W. R. McDonald, Ridgetown; 3, Norman M. Blain; 5, A. Elliott & Son. Sow, nine months and under fifteen—1, Norman M. Blain; 2 and 4, A. Elliott & Son, Galt; 3, W. M. & J. C. Smith. Sow, six months and under nine—1, A. Elliott & Son; 2, A. Elliott; 3 and 5, David Douglas & Sons; 4, W. R. McDonald. Sow, under six months—1 and 2, Norman M. Blain; 3, J. R. Newell & Sons, Crampton; 4, A. Elliott & Son; 5, W. R. McDonald. Three pigs, the offspring of one sow, bred by exhibitor—1, David Douglas & Son; 2, Andrew Elliott; 3, Norman M. Blain; 4, A. C. Hallman.

Duroc Jersey—Barrow, six months and under nine—1, 2 and 3, W. N. Tape, Bentpath. Barrow, under six months—1, W. N. Tape. Sow, nine months and under fifteen—1 and 2, W. N. Tape; 3, W. M. & J. C. Smith. Sow, six months and under nine—1, 2 and 3, W. N. Tape. Sow, under six months—1, 2 and 3, W. N. Tape. Three pigs, the offspring of one sow bred by exhibitor—1 and 2, W. N. Tape. Sweepstakes—Best Berkshire—1, George Green; Best Yorkshire—1, Brethour & Saunders; Best Chester White—1, H. George & Sons; Best Poland China—1, W. M. & J. C. Smith; Best Essex—J. Featherston & Son; Best Tamworth—1, Norman M. Blain; Best Duroc Jersey—W. N. Tape.

Grades and Crosses—Barrow, six months and under nine—Robert Agnew & Son, Acton; Barrow, under six months—1 and 4, Robert Agnew & Son; 2, A. Elliott & Sons; 3, Norman M. Blain; 4, Rettie Bros. & Sons, Norwich; Sow, six months and under nine—1, Norman M. Blain; 2, W. R. McDonald; 3, A. Elliott & Son; Sow, under six months—1, Snell & Lyons; 2, Robert Agnew & Son; 3, A. Elliott & Son; 4, Rettie Bros.; 5, Norman M. Blain.

Export Bacon Hogs—Two Berkshires—1, Geo. Green; 2, W. J. Rudd; 3, Jas. A. Russell; 4, Snell & Lyons. Two Yorkshires—1 and 4, Brethour & Saunders; 2 and 5, G. B. Hood; 3, J. Featherston & Son. Two Tamworths—1 and 5, Norman M. Blain; 2 and 4, A. Elliott & Son; 3, H. George & Sons. Two Chester Whites—1, W. E. Wright; 2, R. H. Harding; 3, D. DeCourcy. Two Poland Chinas—1 and 2, W. N. & J. C. Smith. Two Duroc Jerseys—1 and 2, W. N. Tape; Two Essex—1 and 2nd, J. Featherston & Son. Two Grades or Crosses—1, A. Elliott & Son; 2 and 4, Rettie Bros., Norwich; 3, Robert Agnew & Son; 5, Norman M. Blain.

Sweepstakes.—Two best Export Bacon Hogs—1, Brethour & Saunders; 2, G. B. Hood; 3, J. Featherston & Son; 4, Norman M. Blain; 5, A. Elliott & Son.

The winners in the dressed carcass class will appear next week.

Feeding Cattle for Export*

Answers by Simpson Rennie, Milliken, Ont.

Q. Where do you buy your feeders?

A. Of late years I usually buy on Toronto market.

Q. What breeds do you prefer?

A. The Shorthorn, Shorthorn grade or Polled Angus.

Q. What do you think of the Holsteins for feeding?

A. They are not suitable; they are hard to feed, are not of a fleshy make, and I am informed the beef is not of good quality.

Q. At what age do you prefer them?

A. The younger the better, providing they weigh over 1,000 pounds.

Q. What time do you begin to feed?

A. Usually by the 1st of December.

Q. What do you do to kill lice?

A. As soon as the cattle are put in the stable, shear the long hair of their tails, along the back and around the horns, then apply a mixture of spirits of turpentine and oil, one-half pint to the gallon of oil.

Q. What kind of oil do you use?

A. I use the Champion black oil an account of it being cheap, but nearly any kind will answer the purpose.

Q. Do you turn your feeding cattle out in winter for exercise and water?

A. I do not. They should be kept quiet and get water in the stable.

Q. What ration do you feed?

A. I usually feed on an average nine pounds mixed meal, thirty pounds roots and twelve pounds clover hay.

Q. Do you cut hay and pulp roots?

A. I do not. When all the food is of good quality it is not necessary.

Q. How often do you feed?

A. I feed three times a day, and divide the above ration

*From a discussion on the feeding of cattle in the Farmers' Institute Report for 1899-1900, just ready for distribution.

into three parts. First put in the roots, then put in the meal, which should be mixed with a little clean wheat chaff on top. Put the hay along in the rack, and the work is done.

Q. How long do you feed?

A. Usually about 170 days.

Q. What would you consider a fair gain in that time?

A. About 300 pounds, although we frequently get a greater gain from well-bred animals.

CORRESPONDENCE

A Suggestion re Fertilizer Experiments

EDITOR THE FARMING WORLD:

SIR,—With the reports of the Experimental Union of Ontario still before our minds, allow me through these columns to make a suggestion. While trying to come to a definite conclusion regarding the use of commercial fertilizers, I ask myself what has been the object of the experiment and what inference has been drawn from the result?

To begin with, we decide that on certain soils given fertilizers give no result; does that prove that the said fertilizer will be useless on all similar soils? Not by any means. Then what is the value of that experiment?

Again, if a fertilizer is tested with a given crop with a good result, is it safe to say that remunerative results will always follow its use on a similar crop? Not at all. Then the experiment loses, to a great extent, its value unless we know that the conditions of the soil, the requirements of the crop are the same when next we want to apply the same plant food, and this, to my mind, gives the proper starting for our experiments. We must first know the crop we are concerned about. That crop by its manner of growth, by its perfection of maturity or otherwise, will indicate the lack in the soil in an available form of those constituents of plant food that correspond to the parts of the plant itself which are deficient.

For instance, we will assume that an excessive growth of straw and a tendency to lodge, usually accompanied by light or unfilled grain, indicates an abundance of nitrogen and potash. Is it too much nitrogen that spoils that crop or the lack of some other constituent?

Now, sir, let me suggest that this be made the starting point of our experiments, find out what the crop shows of its needs, what are the symptoms, so to speak, what do these symptoms indicate. Then we can intelligently apply a remedy.

Recognizing the splendid work done by our Experimental Union and by our Farmers' Institute workers it seems to me that they are the most fitting agents to point out to the farmer the relations between the plants themselves and the foods as contained in the soil, always bearing in mind that the principle is the main thing to be understood and not merely a local condition.

Eramosa, Ont., Dec. 13, 1900.

ELIAS RIVE.

Experiments With Fertilizers

Dr. Saunders Replies to Mr. Wallace

EDITOR THE FARMING WORLD:

My attention has been called to a communication from Mr. T. C. Wallace in your issue of December 4 on "Experiments with Fertilizers," in which he criticizes the results of the experiments with fertilizers published in the last annual Report, which have been

carried on at the Central Experimental Farm for the past twelve years.

While thanking Mr. Wallace for his criticisms, which serve a good purpose in calling attention to such matters, I am unable at present to enter into a lengthy discussion with him on this subject. The experiments he refers to and which he asserts "are of very little or a negative value," in "the whole batch" of which Mr. Wallace thinks the director "is altogether out of his element," were planned on similar lines to the celebrated Rothamstead experiments, instituted by the late Sir John Lawes, but modified to suit Canadian conditions. The value of these experiments as throwing light on the action of fertilizers has been recognized and appreciated by those best able to judge, the world over. The subject as a whole is one altogether too complex to admit of its being presented in detail in a single letter. I may, however, in defence of the importance of the work done at Ottawa cite one or two particulars out of a number which might be given. The results of these experiments, carried on for twelve years, have shown that manure taken fresh from the barnyard is equal ton for ton in crop-producing power to manure which has been composted and rotted, while during the process of rotting as shown by another series of experiments at Ottawa the manure loses 60 per cent. of its weight. This has been so thoroughly established by the experiments which Mr. Wallace criticizes that the using of manure fresh on the fields has become a common practice among the most advanced Canadian farmers, who find it attended by the best results. This one item of information, if generally acted on by the farmers of this country, will lead to the saving of some millions of dollars' worth of fertilizing constituents every year. Public attention has been called by prominent agriculturists in other countries to the great importance of this work done at Ottawa, and it has been held that in its far-reaching significance to farmers everywhere it is one of the most important lines of work which has ever been taken up.

Another instance is the effect of the use of common salt (sodium chloride) on a barley crop. The use of salt as a fertilizer for barley has been advocated by many practical men, while others have doubted its efficacy. The experiments conducted at Ottawa have shown that a plot treated with salt only, on which barley has been grown for eleven years in succession, has given more than double the crop when compared with a similar plot grown alongside on which no salt was used.

Mr. Wallace deprecates the publication of the particulars gained from these experiments "broadcast among farmers, whose education and training does not fit them to draw proper conclusions therefrom." The writer has a high opinion of the general intelligence of Canadian farmers, formed from a most extensive correspondence with them for the past ten years, and thinks it wise and judicious to take every opportunity of placing before them the fullest particulars on all the important lines of work carried on for their benefit at the experimental farms.

In his closing sentence Mr. Wallace says "Those engaged in the business of fertilizing" by which he no doubt means the sale of fertilizers, "have tolled to break down existing prejudices, and I am sorry to say that the assistance so far received from Government institutions has been of a decidedly negative, and in some isolated cases, actually hostile nature." I beg to assure Mr. Wallace that there is no feeling of hostility on the part of any of the Experimental Farm staff towards those whose business it is to advocate the use of artificial fertilizers, but when we reflect on the results of their use we cannot go beyond the facts.

WM. SAUNDERS,
Director Experimental Farms.

CHRISTMAS

R. S. G. A. in THE WESTMINSTER

Where Summer came to His birth
 Sat winter dark and grim ;
 Black night had the world by the girth
 When the light broke over its rim ;
 The wolf barked death from the cover,
 Unknowing the Life begun ;
 But a star from the high worlds over
 Swung low to greet the Sun.

By the fire the Shepherds drew,
 Dreaming of fold and pen ;
 Heedless that Heaven grew
 Nearer to Earth than men ;
 That all of Paradise
 Were making holy day ;
 And, massing in the skies,
 Were passing by that way ;
 Going on pilgrimage,
 Going to Bethlehem town,
 Where the Lord had flung His gage,
 And the Sun of God came down.

Surely the night grew tense
 Till the watchers feared with its pain,
 Spirit intruded on sense
 Till the veil was rent in twain.
 And Death and Hell back hurled
 Gave path to Love and Bliss ;
 And the Blest of a better world
 Swept suddenly into this.

Not the whitest saint may brook
 The light of the other side ;
 And the sinner dare not look
 Though Heaven were opened wide ;
 So, there where the fire-flame shook
 Crouched the Shepherds terrified.

"Fear not," the angels sing ;
 "It is no hour for fear ;
 The tidings that we bring
 Are tidings of good cheer.
 Yonder in Bethlehem's way
 Is a place of holy tryst,
 For to you is born this day
 A Saviour who is Christ."

"Glory to God," they cry,
 "Sorrow shall have surcease ;
 Glory to God on high ;
 To men of good-will, peace."

It is said they re-appear
 When it is Christmas day,
 Whom listening hearts may hear
 Rehearse their Advent lay ;
 But never more they tryst
 The Watch for Bethlehem's way ;
 If you would find the Christ
 You must go by Calvary.

Further and further above,
 Through fields no man has trod,
 The luminous tide of Love
 Drew back to the deeps of God.
 And snow fell fast on the hills ;
 Black night closed in amain ;
 And the call of the wolf that kills
 Was blent in the cry of the slain.
 For the Lord of Life and Light
 Had a perilous road to tread,
 Ere night should flee from the fight,
 And Death itself be dead.



The Agricultural Gazette

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

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

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

BENEFITS OF MEMBERSHIP.

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

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

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

The name and address of each member, and the stock he has for sale, are published once a month. Over 10,000 copies of this directory are mailed monthly. Copies are sent to each Agricultural College and each Experiment Station in Canada and the United States, also to prominent breeders and probable buyers resident in Canada, the United States and elsewhere.

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

The list of cattle, sheep, and swine for sale will be published in the third issue of each month. Members having stock for sale, in order that they may be included in the Gazette, are required to notify the undersigned by letter on or before the 15th 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 Associations. In the case of persons wishing to employ help, the following should be given: particulars as to the kind of work to be done, probable length of engagement, wages, etc. In the case of persons wishing employment, the following should be given: experience and references, age, particular department of farm work in which a position is desired, wages expected, and where last employed.

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

Every effort will be made to give all possible assistance, to the end that suitable workers, male or female, may be obtained. Every unemployed person within a range of this opportunity.

Situations Wanted.

Single man, 30 years of age, used to farming all his life, and an expert ploughman, wants a place as foreman on a farm. Good references given. No. 462. 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 us he will be put in direct communication with the Institution that has carried on the work.

G. C. CHELTMAN,
Superintendent Farmers' Institutes.

Pointers on the Bacon Trade for Farmers' Institute Workers.

THE BACON TRADE.

Mr. F. W. Hodson, Dominion Live Stock Commissioner, after summing up the whole bacon situa-

tion at present, says: "The Canadian market demands a long, lean singer, therefore it is in the interest of Canadian farmers to supply the best pigs for that purpose. First-class goods mean a growing market at home and abroad; anything else means a stationary or receding market. At the present time 25 per cent. of the pigs marketed in Canada are what is known as "softs," 25 per cent. are fats, and at least 10 per cent. unsizeables. Or in other words 60 per cent. of Canadian pigs grade as No. 2 or lower, which is 40 per cent. more than might be expected if breeding and feeding were carefully done.

FARMERS LOSE 20 PER CENT.

"Canadian farmers lose at least 20 cents per hundred on all pigs sold because of this condition, packers fixing their buying price according to their average receipt from sales. The man who insists on breeding the wrong type not only loses 20 cents per hundred, but he causes his neighbor, to do so as well; not only this but he injures the home and foreign trade. Therefore, it is to the interest of every citizen that the right sort of pigs be bred on every Canadian farm, and that they be properly fed. Pigs of the wrong type cannot be made good by any kind of feeding, yet bad feeding will spoil a good pig."

WHAT THE PACKERS SAY.

Mr. J. W. Flavelle, manager of the Wm. Davies Co., Toronto, says: "You will be pleased to know that there is a steady improvement in the size, general character and quality of the hogs marketed since you prepared your report for 1898-1899. The average weight of hogs has been heavier, not because there were more heavy

weights, but because less small hogs have been marketed. There has been an improvement as regards the number of short, thick, too-early-finished, small hogs. There has been an improvement in the decrease in the number of immature, thin stores, which every fall have been so troublesome.

A COMPARATIVE STATEMENT.

I hand you a comparative statement showing percentages of fat, soft and bruised bacon shipped by our company from January to November for the years 1899 and 1900. The description No. 2 you will understand as fat sides—the soft and bruised speak for themselves. In the classification "soft" are included, not only the really soft sides but those which are tender, and which because they are tender have had the brand removed from them, and have been shipped as second quality. The improvement in this respect during the past ten months as compared to the same ten months in 1899 is quite marked, although you will observe in the earlier weeks of the year there was a greater percentage of soft than for the corresponding time last year. The same applies for the last few weeks' shipments. This latter, we think, is to be accounted for by a number of cars of hogs from the counties of Essex, Kent, Elgin and Lambton having been delivered to us during this time. You will observe there is no material difference in the quantity of fat bacon. These percentages, however, do not represent all the fat hogs we have received. They only represent the percentages which were put into Wiltshire sides. In addition there were what we put into long clear bacon and other Canadian meats.

FARMERS TO BE COMMENDED.

I think you ought to commend the farmers of Ontario for the very earnest efforts they have made to improve their stock. I do not know how particular you can be in an official document. It is, however, a fact that all the western part of the province bordering on Lake Erie and a considerable portion of it from Woodstock west has still much faulty breeding and faulty feeding. This is to be the more regretted as it is a section which raises a very large quantity of hogs.

CANADIAN BACON ALL RIGHT IN GREAT BRITAIN.

There can be no doubt of the fact that Canadian bacon has a position

of dignity and importance on the English market greater than at any previous period. We are still much behind Danish and Irish. I am not sure but we will continue to be behind. It is clear to me that our best future is not in endeavoring to get the last shilling, but rather in securing a remunerative price which will give to breeders, feeders and curers a fair return, and which will permit of a steady enlargement in quantity through high-grade meats being sold at popular prices. The natural result from this will be that at some later period we ought to crowd the Danish into much smaller compass, as I take it for granted that we can produce hogs cheaper in this country, where we raise our feed, than in Denmark, where they have to import it.

BREEDING AND FEEDING THE ESSENTIAL POINTS.

I am sure you cannot give too much attention and consideration to the two primary points, "Breeding and Feeding." Either one is necessary to the other. There can be nothing but gain to the country by constant agitation along these lines. It will interest you to know that we received some eight or ten loads of hogs from New Brunswick some weeks ago. They were a rough lot. They resembled a good deal the hogs which were marketed in the northwestern part of Ontario twenty years ago; great big frames with plenty of length, coarse hair, heavy heads, and mostly heavy weights, a splendid sort of bacon hog if crossed with more desirable breeds, and fed to market at an earlier date. They were paid for in New Brunswick at \$4.50 to \$5 per 100 lbs. at the time we were paying \$5.75 for heavy and \$6.25 for singers here.

ONE MILLION THREE HUNDRED THOUSAND HOGS LAST YEAR.

I estimate that for the year from April 1, 1899, to March 31, 1900, there were about 1,300,000 hogs put into export bacon. I should say that almost the entire product of these hogs in lard (about 13,000,000 pounds) was sold in Canada.

CANADIANS LIKE BACON.

In reply to your question, "Do you find home consumption increased?" we would say, Yes, and we believe the increase is caused by the packers giving the Canadian people a much better class of bacon than was done formerly. Everyone wants mild cure, and the more you improve the article naturally the more is consumed. The trouble in Canadian trade used to

be that the meats were too salty, and therefore not as palatable as they are now.

ESSEX AND KENT HOGS TOO FAT.

We regret to still have to report that we cannot get satisfactory hogs as a rule from Essex and Kent, especially during the summer season. That is a district on account of our location we would like to get quite a quantity of hogs from, but the meat is not firm enough and runs too fat, and therefore is not suitable for fancy bacon. We wish you could get the farmers in those districts educated up to the proper thing.

For further information regarding this question I respectfully refer you to *The Farmer's Advocate* of November 15, *The Weekly Sun* of October 3, and the forthcoming annual report of the Superintendent of Farmers' Institutes.

G. C. CREELMAN,
Superintendent.

Fruit in China.

Fruits grown here comprise peaches, pears, and apples. A few very fine peaches are raised; but the majority are of the clingstone variety and inferior in quality as compared with the American peaches. The principal enemy to peach growing here is the peach worm that infests the fruit and is similar to the codlin moth in the apple. These worms are not confined in any way by the growers and are so plentiful that it is almost impossible to find any fruit tree free from them.

The pears are of several varieties, but are very inferior and universally infested with codlin moth.

APPLES.

All the apples that I have yet seen in this market are of a small, sweet, tough variety. Those that I have examined, show traces of the codlin moth, but are not as badly affected as are the pears. I was surprised to find the apples in many instances covered with the San Jose scale. I do not know how long this pest has been here, and whether it has any natural enemies or not. As they do nothing to combat the scale, if it has been here long, it must have some natural enemies to hold it in check or it would be in greater evidence.

So far, I have not seen apple scabs or fungus growths on any of the fruit, to the extent of injuring it, and am inclined to think that the climate is not too hot for the growth, although the air contains enough moisture to make it thrive.

As to the matter of a market for Oregon apples, there have been several shipments from Washington

and more are ordered. There will probably be as many as 1,000 boxes imported during this year.

The foreigners consume the imported apples; the Chinese fruit answers all the requirements of the natives. The great cost of apples here materially limits the consumption. They are usually sold at retail at 15 cents Mexican (7½ cents United States) per pound.

Dealers order only in small quantities—from 10 to 100 boxes at a time. These come by steamer either from San Francisco or Vancouver, British Columbia, and usually reach here in bad condition, caused either by poor packing or careless stowing on board ship.

Apples coming to the Orient should be packed just before shipment in standard boxes, with each apple wrapped in paper and a layer of cardboard between each tier of fruit and on top and bottom of box. There are many varieties that should not be shipped here, such as the Baldwin. The best kinds for this market are Ben Davis, Winesap, and Yellow Newtown. There are few varieties that will stand the long ocean trip as well as these.

There will never be a very large market here for such fruits, until some plan is devised to get them into the hands of the consumers at a much less cost than at present. Something might be done to increase the market by introducing the American apple to the tables of the well-to-do Chinese.

PRUNES.

Regarding the market for prunes, I find it equally limited, and confined to the foreigners.

The natives have a plum that they dry and use to a limited extent, but it does not seem to enter into the food consumption of the great mass of Chinese. The standard of living of the ordinary Chinese is so far below ours in the cost and character of food consumed that it seems impossible to us, and a statement of plain facts appears like the most extravagant exaggeration. As an example, the servants in some of the best places in Shanghai club together, and pay a cook to provide and prepare their food for them at a cost of \$2.50 Mexican per month, or about \$1.25 per month in gold, or a fraction over 4 cents per day in our money.

These people live much better than the average. I feel safe in saying that the average cost of food consumed by the Chinese does not exceed two cents gold per day.

HENRY B. MILLER,
U.S. Consul at Chungking.
Shanghai, September 21, 1900.

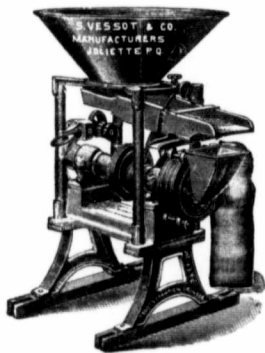
Farm Implement Department

Grain Grinders for Farm Use.

By W. Gillespie.

Probably the most extensive and best known Canadian industry to-day is the production of butter and cheese. Scientific economical feeding has therefore become a study with the average well-informed farmer and the man to-day who gets the largest relative product from his cattle is the man who pays closest attention to the quality of feed and the manner of feeding. Ground grain as a staple feed has been used for a great number of years but never so extensively as now. Every mill of importance is increasing its capacity for grinding provender, with the result that by the use of new and improved machinery, and the gradual doing away with the old buhr stone, never was provender turned out so well ground and so quickly done as it is to-day. The greatest improvement in this regard has only been within the last few years.

For farm use, however, small grinders have been more or less successfully used for twenty years, but rapid strides have lately been made and to-day it is no difficult matter to get a machine driven by tread, sweep or wind power



which will turn out a quality of work in no way inferior to that of the best machines in use in mills and at a speed that well repays the time employed and the expense of purchase. It is no rare thing to see one of these machines, driven by good sweep or wind power, turn out 15 bags per hour of well ground feed. In fact, while the use by mills of machines instead of buhr stones to do their grinding (or chopping) is the evolution of the use of small machines by farmers, this very circumstance has caused the manufacturers of small machines to redouble their efforts towards turning out machines that will with small power give as good relative satisfaction to-day as did former machines during what we might term the "stone" period. In spite of prophecy and the

shaking of wise heads, the use of the grinder by the farmer is on the increase and though at one time regarded as a fad, succeeding years have proved that no machine that a farmer owns, all things considered, pays or saves money so well as does the grinder. There have been objections brought by some as regards the efficiency and working of these machines, but investigation has shown that nine times out of ten the fault lay not so much with the grinder as with the man who ran it. Of course a certain amount of care is necessary in buying in order to get the best value for the money invested and while there are some fifteen different styles of grinders made in Canada to-day for farm use, there are only two or three that can be called first class. Even in these two or three a little study will show which is the best. One thing that will probably interest readers is that Canadian-made grinders are the best and most efficient in the world and while our American cousins hold their own in the manufacture of harvesting tools they are forced to take second place in the line of grinders. At a trial made a short time ago by the agricultural branch of one of the most prominent Western universities, a trial that extended over a year and covered over a thousand different tests, the "Little Champion" grinder, made by S. Vessot & Co., of Joliette, Que., was proved in 75 per cent. of the tests to be the best and most efficient machine on trial, though the five competing machines were those acknowledged to be the very best of their kind made in the States. In competition with the world at Chicago in 1893 and in Paris, 1900, the "Little Champion" took highest award. Doubtless those who are "stuck" on American-made machinery will be surprised at this, but it is a fact nevertheless.

To those who think it does not pay a man to do his own grinding we might say that a little figuring will very probably make him change his mind. When he considers the time it takes first to bag up his grain, bring it to the mill and back (possibly a ten-mile haul), and wear and tear of horses and rigs, not to mention the cost of grinding or tolls, he will very soon find that he is losing money by not having a machine of his own. The interest on a machine that costs from \$40 to \$50 is not more than \$2.75 to \$3.50 per annum, a mere nothing compared to the expense of hauling, etc. Without going into the question of the economy of feeding cracked grain to horses as well as cattle, a point on which nearly every farmer is well informed and agrees to, we might say that nine times out of ten it will pay a farmer to do his own grinding no matter how small his stock. In England, France

and other European countries, where farming is carried out on strictly scientific principles, a large percentage of the farmers do their own grinding even in cases where they have only one horse. In proof of this we might say that there is a considerable demand for grinders to be run by hand for use among those who have only one or two horses and a couple of cows. This will very naturally strike the farmer in this country as rather ridiculous, but any one acquainted with the conditions in Europe and the strict economy with which everything is done will not be so inclined to smile. One of our Canadian firms which manufactures grain grinders exclusively is at present getting out samples of hand power grinders for the European market.

Automobile Mower.

The following reference to the automobile mower shown by the Deering Harvester Co., of Chicago, at the Paris Exposition, taken from the Exposition edition of the *New York Times*, will be found of interest to our readers. This firm made a magnificent display at Paris, and carried off the highest honors. The above journal refers to the early history of the business, and deals specially with the automatic binder and the Marsh harvester, first introduced and manufactured by the Deering people. Of the automobile mower, an illustration of which accompanies this article, it says:

The last important innovation standing to the credit of this great manufacturer is the automobile mower, which has aroused so much interest and enthusiasm at this Exposition. In 1894, convinced that this was fast becoming a horseless age, he began experimenting to find means of applying motors to harvesting machines. He succeeded so well that at this Exposition an automobile mower has been on exhibit in the American Annex, where it has had thousands of admirers. This automobile mower is the regular Deering "Ideal" mower, equipped with roller and ball-bearings, having a gasoline motor of sufficient power mounted thereon to propel it. The driving device is within easy reach of the operator, while the steering device is so arranged that he can drive the machine forwards or backwards, right or left, and turn the corners even more easily than could be done with a team of horses. Not only can this machine be used as a mower, but with the cutter bar detached it can also be made to do duty as a portable farm engine, to be used for grinding food, pumping water, sawing wood, or for the numerous uses on a farm where power is needed. The imitator is here

again at work, but up to this time so hasty have been his attempts that nothing approaching a modern mowing machine has been produced.

THE PLANT.

Deering harvesting machinery has not only become the noted harvesting machinery in America, but its fame has spread abroad so that at present it is sold in every country of the Old and New Worlds wherever grass and grain are grown. Notwithstanding the fact that Deering machines were not sold in Europe previous to 1893, the company nevertheless now occupies an enviable position both as to the amount of business and success of machines in the field. One has only to consult the

leasable, but by midsummer of this year they had outgrown it all. Happily the great apple warehouse of Mr. J. R. Shuttleworth, 403 409 York street, London, was just then placed on the market, and the company snapped it up. They have now refitted this building and equipped it with modern machinery, and find that even its 16,000 feet of floor space will be none too much for their business.

The enterprise of this company in so quickly introducing their goods into every province in the Dominion would be of little avail were it not that the merits of their goods fasten hold wherever they are once introduced.

The stack of mail orders and inquiries which every mail brings them,

market. It will certainly be the death of those cheap man-trap and woman-trap step-ladders which have been in vogue for a few years. People are beginning to realize that a good, safe, durable article is really the cheapest in step-ladders as in other things, and the "Lindenwood" is now and is bound to continue in demand.

This ladder may also be extended and used as a leaning ladder for outdoor use, training up vines, washing windows, etc. Both the "Waggoner" and the "Lindenwood" are greatly in demand for picking apples and other fruits, pruning, etc.

The company is adding other goods from time to time to its list, but it constantly refuses to make any cheap, shoddy goods. If any one wants that sort, some other firm must make them and some other journal must describe them. We wish the Waggoner Ladder Co. every success in their work of introducing first class ladders.

Cooking with Steam.

There never has been a time when the important relation which good cooking bears to good conduct was so thoroughly understood, or when so much attention was paid to the hygiene of the kitchen as now. The woman endowed with the average amount of common sense—the kind of sense which makes home the sweetest place in the world to her particular husband and her children—has no excuse these days for blunders in cooking that end in worse things than indigestion. She knows the intimate connection between liver and living and has a score of patents warranted to produce the best results. "The Ideal Steam Cooker," manufactured by the Toledo Cooker Company, Toledo, O., is the latest addition to her stock. She has found that to use it means: No frosted windows; no crowded stove; no damp walls; no tough meat; no steam in the house; no offensive odors; no heavy kettles; no burned food. It also means a lessening of labor and the reduction of bills for fuel, two very important things in the domestic economy.

A whole dinner can be put in at once, covered up and let alone until ready to serve. A poor cook cannot spoil a meal if she tries. A good cook can cook better with one than without it. No steam or odor escapes into the room. The meal may be kept for hours without spoiling. Everything cooked in it is healthier and more easily digested than when cooked by any other method. It saves nearly one third of the food that is lost by the ordinary methods. All the nutriment, richness and flavor of the food is retained. It saves the labor of watching. Burning, scorching, smoking, or over-cooking is impossible. It never boils over.

Vegetables that always lose much of their flavor and become watery, soggy



Automobile Mower at Work

following figures to realize that no manufacturing plant of its kind in the world has ever enjoyed such phenomenal growth and expansion.

Year.	Number of Emp.oyees.	Space Covered by Works, Acres.
1858.....	2	$\frac{1}{4}$
1868.....	40	1
1878.....	450	3
1888.....	3,750	62
1898.....	8,950	62
1899.....	9,000	85

The Waggoner Ladder.

We are pleased to note that the Waggoner Ladder Co., Limited, of London, Ont., the makers of the celebrated Waggoner Extension Ladder, the "Lindenwood" Extension Step-Ladder, and other wooden goods, have themselves mounted one step higher on the ladder of progress and prosperity.

A year and a half ago they started in leased premises on William street. From time to time they added to their space everything in sight that was

from Halifax to the Pacific ocean, are a welcome testimonial to the popularity of the Waggoner Extension Ladder and the Lindenwood Extension Step-Ladder.

The special features of these goods are more fully described in their illustrated catalogue, which they send free to any address, than we have space here to dwell upon, but we may say that the Waggoner is without doubt the lightest, strongest, safest and most convenient extension ladder yet produced. Its extraordinary strength, combined with lightness, is derived from a strand of heavy steel wire let into a groove on the back of each side rail, and drawn very tight, doubling the ladder's strength. The upper ladder is drawn up with a rope, and held in place by a steel lock, which cannot possibly fail to work and hold the ladder safe.

The Lindenwood is an extension step-ladder. It can be used as an ordinary step-ladder, and as such, with its steel wire reinforcement and steel bracing, is the very best on the

and indigestible, by boiling are made dry, light and healthy.

Meats and poultry, no matter how tough, are made tender and palatable. The usual shrinkage is saved and all the health giving properties are preserved.

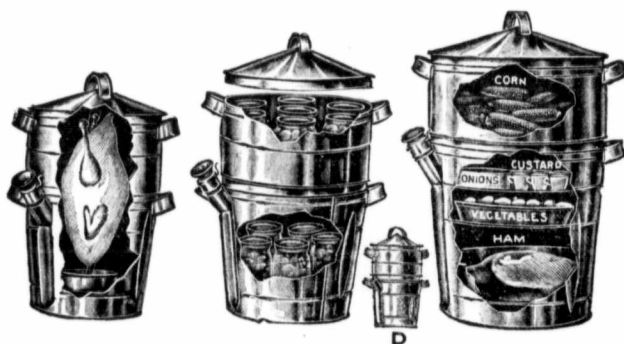
It requires less heat to keep two quarts of water boiling than to heat a kettleful. It occupies only half the room on the stove that is required to cook in water, and with extension one-third that would be required to cook the same quantity in kettles, as it has three or four times the capacity of a kettle, and requires only one-fourth the amount of water to steam food that it does to boil it. Four pounds of meat or poultry cooked in the cooker are equal to five pounds done in the ordinary way, as there is no shrinkage.

Among the toothsome things that can be cooked in the steam cooker are a vegetable dinner, a roast of beef, pork or mutton, a ham, a sparerib, turkey and poultry of all kinds, green corn, green peas, string beans, squash, and all kinds of garden sauce, fish,

It is a well known fact that food cooked by steam is more palatable, easier to digest and more nourishing than by any other method. If this truth was more generally heeded, it would prevent much sickness, and in most families save many dollars every year in medicine and doctors' bills, to say nothing of the amount of food annually saved every day, that either evaporates, boils or burns away by the ordinary methods of cooking. A steam cooker, therefore, is fast becoming a household necessity to all who study economy and value the health and happiness of those committed to their care. This cooker is handled by U.S. Specialty Co., Adelaide St. East, Toronto. Their ad. for agents appears elsewhere.

A Quarter of a Century in Business.

Twenty-five years ago the well-known firm of Tolton Bros., Guelph, began the manufacturing of agricultural implements. The circumstances under which they began are most interesting.



oysters and clams, oatmeal, cracked wheat, barley, rice, hominy, Indian, suet, plum, flour, cottage and all other kinds of puddings; custards, fruits, sauces, canned fruits, beans, and brown bread.

"The one neglected element of economy," says one authority, "is cooking. It is astonishing to think what sort of things we have to eat, and what varieties. I consider the kitchen as the devil's own organized kingdom against the kingdom of health in the human family."

"We do not," said Henry Ward Beecher, "want any French morality, but we should like some French cuisine. The art of rendering the poorest meat and the cheapest, such as are within the reach of all, into tasteful and relishful dishes will avail very much."

"Any system that tends to make cooking more easy and agreeable," says *Scribner's Monthly*, "is a sanitary gain. Much of the food cooked over quick and hot fires, and in uncovered vessels, is lost."

While young men on the farm, having a desire to improve upon the machines then in use, they devised, constructed and built a reaping machine that was, perhaps, the first successful reaper used in Canada. Not having a large amount of capital, they were not able to take out a patent on their first machine, and accordingly other larger manufacturers copied its best parts, and, as they had larger means, were able to push the thing on the market. Messrs. Tolton then began the manufacture of the small lines of farm implements, such as root pulpers, grinders, etc., in which they have been very successful. Their pea harvester today is recognized as the very best implement of its kind on the market. By turning out a good article and by honest and fair dealing their business has grown financially and otherwise to be one of the largest of its kind in the Dominion. The firm enters upon the new century in a position to meet every demand in the way of improved implements in the many lines they manufacture.

Agricultural Machinery at the Pan-American.

Farmers who are wide awake to the possibilities of their calling follow closely the improvements of farm machinery and are more or less familiar with all that is new in the market. Moreover the agents of the manufacturers are generally so active that even the most indifferent cannot remain long in ignorance of what is going on in the world of farm machinery. The improvements of recent years and the new machines that have been put upon the markets are more numerous than ever. The inventor has been the farmer's steadfast friend and has produced a machine of light, strong, durable construction for saving labor; it would seem, in almost every possible way. But still the advance goes on, and surprises come with astonishing frequency.

The exhibit of farm machinery at the Pan-American Exposition in Buffalo next year will be a revelation even to those who consider themselves up-to-date in their knowledge of this line of progress. The wonderful production of steel and decline in price, the improvements of machine tools and the more thorough systemizing of work in factories have had a marked effect upon the prices of farm machines of all kinds. The modern farmer is helpless without a fairly complete equipment of machinery and the difficulty in obtaining satisfactory farm help has been a great stimulus in the adaptation of machinery to the multitude of tasks upon the farm. How completely these demands have been met by investors and manufacturers will be well illustrated at the Pan-American Exposition.

The manufacturers throughout the United States are showing a lively interest in the farm machinery displays which will be sheltered in a special building at the Exposition. The division is under the supervision of Thomas M. Moore, who is well known in the machinery and implement trade. The exhibits will embrace a great variety of new and effective machines ranging from the immense harvesters and threshers used only upon the Pacific coast to the small and simple machines employed by the farmers in New England. The wide range of selection now offered to the American farmer has had much to do with the progress that is to be noted in the industry of farming. It is impossible here to specify the great variety of farm machines and implements that will be on exhibition at Buffalo next year, but a few lines may be mentioned. For example, there will be a great variety of traction engines, portable engines and the small gas, gasoline, oil and steam engines of simple construction, specially built for small power purposes upon the farm and made to be sold at a low price. There will be a special collection of wind-mills, one of the

most ancient machines for developing power employed by the farmer. There has been, however, a surprising development in the efficiency and value of wind-power machines. The exhibits will include types of Old Dutch wind-mills of Holland and the big, strong wind engines of the present day.

The displays of road machinery will be of especial interest in these days of the good-roads movement. To these will be added machinery for the construction of cycle paths which promise eventually to be quite as numerous as the highways. The bicycle has long since passed the stage when it was regarded as a plaything or a vehicle of pleasure and has become useful not alone to the city dweller but to the farmer as a means of getting about both upon the country roads and upon the farm. The machines especially designed for road and cycle path construction have been the means of greatly cheapening the cost of producing excellent highways, and a knowledge of these machines should be a part of every farmer's education. Those exhibits will include graders, ditchers, rollers, stone crushers, excavating and carrying machinery, and contractors' supplies in general. Along with these will be exhibits of roads and streets in various stages of construction. These will illustrate the selection of materials so as to form an object lesson to those who desire to acquire a practical knowledge of road making and to learn the uses and advantages of different road machines.

In the exhibits of farm machinery will of course be included all sorts of new plows, cultivators, wheel-hoes, and other tools demanded by the up-to-date truck gardener; potato planters and diggers, corn planters, cultivators and harvesters, silos and ensilage machinery, mowers, threshers and grain cleaning machinery, and a thousand and one other things of utility intended for use upon the farm. The Pan American Exposition will give to everyone interested in the development of farm machinery an opportunity to study the latest types of machines of every kind. It would attract everyone who is associated in any way with their manufacture or use.

MARK BENNITT.

A Test for Brushes.

The imitation of true bristles by the use of some vegetable fibre is now so perfectly done that it is sometimes almost impossible for the painter to tell by the feel of the brush whether or not he has bought the genuine article. There is, however, one way of testing the bristles which is infallible and that is to pull one out or cut it off and set light to it. If it burns with a clear flame it is of vegetable origin and the brush is inferior; if it shrivels it is true bristle and will throw off a strong smell of burning animal matter. It never pays a painter to buy cheap brushes made of vegetable fibre, no matter what the price may be. The only economical plan is to pay fair value for the real thing and then take care of it. The color of the bristles is no criterion as to the value of the brush; all colors are equally reliable, provided the bristles are of good quality, but best bristles are expensive and cheap brushes cannot be made with them.

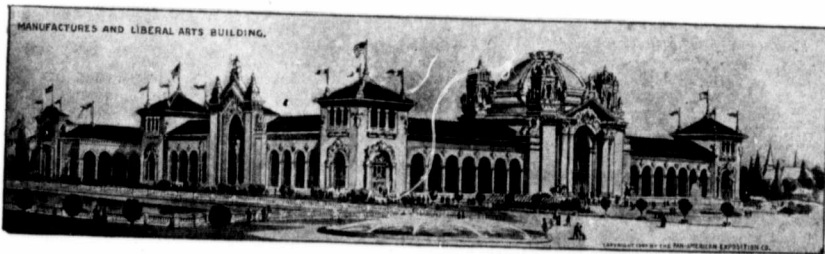
Care of Farm Machinery.

A Practical Farmer's Views and Methods.

John H. Hobbs, in the *Agricultural Epitomist*: Machinery is the farmer's salvation. If it were not for machinery his condition would be deplorable, for it is a fact that farm hands are scarce. If a farmer can pick up farm hands whenever he likes, he may conclude that they are a worthless set. I can go into our county seat and hire a half-dozen men at any time, but not one of them would be worth fifty cents a day, without board. Good hands have jobs. It is only the worthless who are idle; and I and every farmer—even the small farmer—should depend upon machinery, and our farms should be well stocked with it. But a small farmer especially cannot afford to buy a complete equipment of implements and machinery if he is going to damage the outfit more by exposure than he will by legitimate wear. It will bankrupt him. But without machinery and without competent help he will be one of those who will declare that farming does not pay; and with machinery which he does not take care of, he will come to the same discouraging conclusion.

Machinery that I have used for years appears almost like new machinery, while the same kind of machines in the hands of some of my neighbors have worn out with three years' use and exposure. No implement or machine on my farm ever gets a drop of rain or dew on it, or is struck by a ray of sunshine, except when it is in use. It is taken to the tool house at once when its use is ended, cleaned, washed and oiled as soon as practicable, and looks new until it is old enough to have the appearance of age legitimately. I have sometimes been told that I have been painting my implements and machinery. No such thing. I have oiled them, perhaps. Oil is the preservative element in paint, and will give some lustre. Apply linseed oil to a house, and you will furnish all the protection that white lead will furnish. So with its application to farm machinery. But the damage from the exposure of machinery is not confined to the machine. It becomes rusty, the draft becomes heavier, and the wear and tear of horse flesh are many per cent. more than they would be with a clean machine. I have seen machinery which, in consequence of exposure, had such a heavy draft that the team was being literally killed.

A Dutchman addressing his dog said: "My dog, you haf a schnap. You vas only a dog, and I'm a man, but I wish I was you. Effery vay you haf the best of it. Ven you vant to go mit der bed in, you shust durns round three times und lay down. Ven I go mit der bed in, I haf to lock up the brace und vind up der clock und undress mines self, und mine vife vakes up and schols me, und den der baby cries und I haf to vawk him up and down, then bymby when I shust get to sleep its time to get oup again. Ven you get oup you strutch yourself und scratch a couple of times und you are oup. I haf to dress mine self und light the fire, put on the kittle, scrap some mit mine vife already, und den maybe I get some breakfast. You play round all day und half plendy fun. I haf to work hard all day und haf trouble. Ven you die you shust lay still. Ven I die I haf to go to hell yet."



The Farm Home

Christmas Cheer.

Now all our neighbor's chimneys smoke,
And Christmas blocks are burning;
Their ovens they with baked meat choke,
And all their spits are turning,
Without the door let sorrow lie;
And if for cold it hap to die,
We'll bury't in a Christmas pie
And ever more be merry.

Hark! now the wags abroad do call
Each other forth to rambling;
Anon you'll see them in the hall
For nuts and apples scrambling.
Hark! how the roosts with laughter sound
Anon, they'll think the house goes round.
—Christmas Carol.

Santa Claus and Other Stories.

By M. E. Graham.

Now the loving mother is relating to her trusting children the well-known legend of Santa Claus, describing his merry face, his twinkling eyes and his hearty laugh, telling of his antlered steeds, his miraculous speed on Christmas Eve, and his sleigh laden with gifts galore. When some of us were young, and saw the huge mouth of the old-fashioned fireplace, it required little imagination to picture even his portly form coming into the room by the chimney route, but to the child of today, with its inquiring mind, in the house of to-day, with its many registers, slender stovepipes and turning elbows, it is asking too much for the child to believe when we state that Santa is a real and not a legendary personage, and that he enters our securely locked home by the stovepipe. We like to think our children believe everything we tell them, but how very trying it must be to the faith of even the baby when it is shown a picture of Santa Claus, and then to be told his method of going and coming! To be sure his gifts are proof positive that he did really and truly come, but well we remember when it first dawned on our minds in what manner Santa really paid us that loving visit. It was sad to have the illusion dispelled. It is sadder to the child when it realizes that its parents led it to believe what was not really and strictly true.

Let us rather tell the children the story of Santa Claus, read for them the poem of St. Nicholas and his reindeers, the stories of Kris Kringle and then explain to them that these are make-believe stories. By all means have the children "hang up the Christmas stocking," and expect Santa Claus—a make-believe Santa—to come and fill them. Teach them, too, that with the help of mother or sister that they, too, can be Santa's servants and can help to make presents to fill the stockings of some other boy or girl. And let not the boys and girls get too old for the giving and receiving of Christmas gifts, but let us

all refrain from giving for appearances—from giving to mere acquaintances presents which they do not need and which they consider require a return gift. Give if you can afford it, but have the courage to refrain from giving costly presents when the family requires necessities.

I wish to call the attention of grown people to some other stories that are told to children. We all know that there is very much the child mind does not understand, very much it wonders about, and that when it can not see the solution of the puzzle it comes to a grown person with questions, questions which he or she sometimes does not care to answer directly. When a child begins to inquire then it is old enough to understand at least a part of the truth. Then, instead of telling either directly or indirectly what is not true and what a child will have to discard in a few years as unreasonable, were it not better to give a truthful answer in a way that will teach it some of the beauties and wonders of nature with a promise of more information as it grows older? Think of these things before telling children what is not true, declaring at the same time that the stories are true. The story itself will not injure if the child knows it is simply a make-believe.

Experiments.*

By Laura Rose, O.A.C., Guelph.

This is the week of the experimental union in connection with the O. A. C. I have been looking forward to these meetings, and thinking of the pleasure and practical good these experimenters must derive, not merely from their meeting together, but from the fact that they have been personally assisting in arriving at conclusions which cannot fail to add to the agricultural prosperity of Ontario.

Then the thought has presented itself to me of how we, as housekeepers, might benefit from the experience of our sister housekeepers. More and more do we feel the want and see the need of a more common and closer bond among our home-makers and keepers.

This want is to be largely supplied by the women's institutes.

Wherever they are formed and successfully carried on, I predict for that community healthier, happier homes and better trained and nourished families. Does it not stand to reason that where a dozen or more women meet together to talk on some specially assigned branch of house-work, that

*Copy for this article did not arrive in time for last week's issue, in which it should have properly appeared.

in the interchange of their ideas, relating their experiences, their failures and successes, much useful information may be obtained. The occasional meeting together of such a conference of workers would lessen to a large extent individual experiments, and so do away with much of the work and worry and household drudgery, to say nothing of the waste of good material used in unsuccessful trials.

It is a conceded fact that Canadian and American women are not the good cooks the English and French women are. And why? Because each cake, each pie is usually an experiment.

A cup of sugar, a lump of butter, a little milk, two or three eggs, etc., etc., and a cake is stirred up and put into the oven; then follows an anxious half-hour to see how it turns out. "Not quite so nice as my last; a little too stiff; I must have put in too much flour." Or, we may hear: "There, I've spoiled that cake by making it too rich."

I have watched the women in England do their baking and cooking.

They, as a class, never think of making a cake or pie without weighing or measuring the ingredients, and therein lies their success.

If we, as cooks, wish to make a name for ourselves, we must depend less on our ability to guess at quantities and rely more on the measuring cup and scales.

We should get beyond the experimental stage in many lines of our work. We should have some definite rule to follow, the results of which we are certain of. If we do this, our work, instead of making us fretful and tired, will be robbed of much that is perplexing and worrying, and prove more of a pleasure.

Now that domestic help is so hard to procure, and many weak, frail women have of necessity to do the work of the home, they should put as much brain in their work as possible, so as to husband their physical strength. The ability or art of doing this makes it possible for a delicate woman to accomplish far more than a robust, strong woman who has not this mental power to aid her.

The one works quietly with order and system, knowing how to do her work thoroughly and well, with the least expenditure of energy and strength; the other bustles about amid the greatest confusion, still in the experimental stage, with little hope of ever reaching the higher plane of certainty.

Let each of us, as far as possible give to the world not only the results of our successful experiments, but also have courage enough to relate our failures, so as to save others from falling into like error.

The Three Boys' Career.

"Oh, dear! I think it's awful mean,"
Said little Jimmy White,
"A fellow has to spend his time
With lessons day and night.
I hate the very name of school;
I wish there were no such things
As schools, and books, and men em-
ployed

The horrid bells to ring.
I wish that I were Archie Brown,
Who doesn't have to go,
But who can spend his time uptown,
Or anywhere, you know."

"Why, I like school," said Harry Grey;
"I have more fun there every day;
I laugh and talk where I please,
There are some girls I love to tease;
I hide their lunch-bags, pull their hair,
I know it's mean, but I don't care;
I hide the teacher's hats and capes,
I'm always getting into scrapes;
She strapped me once; oh, say! I
yelled;

She threatened to have me expelled,
And, oh! the notes you ought to see
That mother gets concerning me!
And as for study at my home,
I can't point Paris out from Rome.
That's how I spend my school-day life,
Instead of making it a strife."

And while the boys walked through
the town,

They came across poor Archie Brown
Who, owing to a serious fall
Had never been to school at all.
"Oh, there's Arch now," said Harry
Grey,

"Come and let us with him play."
So off they ran to meet their friend,
And with him quite a time did spend.
"Say, tell us Arch," said Harry Grey,
"What do you do the live-long day,
Skate and sleigh-ride, I suppose,
Or with your mother go to shows,
While we poor boys," said Jimmie
White,

"Have to study day and night,
I wish that your mamma were mine,
And then I'd have a fine old time."

"Oh, oh," said Arch, when they were
through,

"You think that I have naught to do,
I tell you, you're mistaken there,
For of hard work I do my share;
I dry the dishes, sweep the floor,
Then go some message to a store,
Bring in the coal and chop the wood,
Mind baby, whether cross or good,
And then my lessons, every day,
I haven't got much time to play."
"Lessons," said they both at once,
"Why Arch, we thought you were a
dunce."

"A dunce I'd be ashamed to be,
If I had no one to teach me
I'd teach myself best way I could
Rather than be a dunce, I would."
And when they all grew up young
men,

One day, by chance, they met again;
And like the day you heard of last
Began to talk of things now past:
Of how they spent their childhood
days,

And of their strange and peculiar
ways,
Of what they learned while at school,
Of how they broke, or kept the rule;
And when they told of what they
knew,

Arch Brown knew more than did the
two,

Who all their lives a good chance had
To know far more than that poor lad
Who taught himself, as he had said,
And of the three had come out head.

IRENE BLACK.

Christmas Candy.

Cream Candy.—Four cups of sugar,
two cups of water, three-fourths of a
cup of vinegar, one cup of cream or
rich milk, a piece of butter according
to one's taste, two teaspoons of vani-
lla, a pinch of soda. Let it boil until
it cracks in water, pour into a flat, well-
buttered dish to cool, then pull till
white.

Old Fashioned Molasses Candy.—
Two cups of molasses, one cup of
sugar, one large teaspoonful of vinegar.
Put in a small piece of butter and a
saltspoonful of soda just before you
take it off. Pull when cool enough to
handle.

Chocolate Caramels.—One cup mo-
lasses, one-half cup sugar, one-half cup
milk, one-four pound chocolate, butter
the size of a walnut. Boil until it will
harden in cold water, pour into buttered
tins and cut in squares before it is
hard.

Two Christmas Dinners.

Cream of Chestnuts	Potato Stuffing
Roast Goose	Broiled Sweet Potatoes
Apple Sauce	Celery Salad
	Plum Pudding
Coffee	Nuts
	Bonbons

Oysters	Oyster Soup	Salad	Nuts
Boiled Turkey	Devilled Chestnuts	Celery Sauce	
Roast Beef	Yorkshire Pudding		
Cauliflower	Mashed Potatoes		
Mince Tarts	Ice Cream		
	Fancy Cakes		
Coffee	Fruit.		

—American Kitchen Magazine.

Hints By May Manton.

Woman's Work Gown. Consisting of
Five-Gored Skirt and Spencer
Waist, No. 3684.

Every woman who is called upon to
perform such household tasks as dusting
and the like recognizes the necessity
for a suitable gown. The design illus-
trated is essentially practicable and is
so completely simple as to commend
itself at a glance. Preferably it is made
of washable stuff, such as percale, in
order that it may be laundered and

made fresh at need; but flannelette is
entirely suitable, when greater warmth
is required, as is inexpensive light-
weight woollen material. With the
gown should be worn the simplest of
neckties and belts.

The waist is in Spencer style, and
differs from a shirt waist in extending
to the waist line only. The back fits
smoothly across the shoulders and is
drawn down at the waist. The fronts
are gathered at the neck and again at
the waist line, and the entire lower
edge of the waist is attached to the
upper edge of the belt. The sleeves
are in bishop style and are finished
with pointed cuff bands that lap over
at the seams and hook invisibly into
place. At the neck is a shapely stand-
ing collar. The waist is closed at the
front with buttons and buttonholes.

The skirt is cut in five gores and



3684-Work Gown.
19 to 20 in. bust.

falls only to the floor. It fits smoothly
across the front and hips and is ar-
ranged in gathers at the back. The
placket is made at the left front seam,
where it closes invisibly, and the up-
per edge of the skirt is attached to the
lower edge of the belt, the left half of
the front gore being attached to the
extra portion and hooked over into
place.

To cut this gown for a woman of
medium size $7\frac{1}{2}$ yards of material 27
inches wide, 7 yards 32 inches wide,
or 6 yards 44 inches wide will be re-
quired.

The pattern No. 3684 is cut in sizes
for a 32, 34, 36, 38, 40 and 42-inch
bust measure.

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Managing Director, . . . D. T. McAINSH
Editor, . . . J. W. WHEATON

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Sheep Worried by Dogs.

Old Subscriber, Valentia, Ont., writes: "The dogs have been making great havoc among some of our flocks. Will you kindly tell me in your next issue if a person can shoot dogs crossing his premises in daylight? Can a person collect pay from the council for losses when the tax on dogs has not been enforced?"

This letter arrived too late for insertion last week. Section 689 of the law relating to dogs and sheep reads as follows, and will apply to first question:

(1) Any person may kill a dog which he sees pursuing or worrying a sheep or lamb; that is, the dog may be killed while in the act; but if he has made his escape, he cannot be followed home and killed there; but in such cases the owner of such dog must be proceeded with according to law, etc.; or:

(2) Any dog without lawful permission found in any enclosed field on a farm, barking at and terrifying any sheep or lamb; or:

(3) Any dog found straying between sunset and sunrise on a farm where sheep or lambs are kept; but a dog from the adjoining farm, or a dog securely muzzled, or being within reasonable call of its owner or other person in charge of such dog, shall not be killed unless there is reasonable ground to believe that such dog is likely to pursue or worry sheep or lambs on the farm.

In regard to the second question, the following may apply:

Section 688 of the law reads in part thus: "Where the council of a municipality has not by by-law declared otherwise, every municipality shall levy annually upon the owner or possessor of each dog therein an annual tax of \$1 for a dog and \$2 for a bitch.

(1) Upon a petition of twenty-five ratepayers the council may pass a by-law that the said tax, or any part of it, shall not be levied in the municipality.

(2) The money collected from such tax shall form a fund to satisfy such damages as may arise in any year from dogs killing or injuring sheep in such municipality, and the balance to go to the general funds.

(3) Councils may also pass by-laws declaring that such tax shall be levied, but that it be not used as a fund for payment of damages as mentioned in preceding paragraph, but to be used as other taxes.

Unless the council of the municipality in which "Old Subscriber" resides has passed the by-laws as indicated in subsections 1 and 4, the law levying a tax on dogs would be in force, and the owners of sheep worried by dogs could collect damages from the municipality, whether the payment

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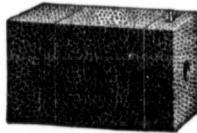
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of the tax has been enforced or not. That is the view we take from the above. It might be well to take legal advice on the matter.

Section 693 in regard to recovering damages reads thus: (1) In case the owner of any sheep or lamb so killed or injured proceeds against the owner of the dog that did the injury before a justice of the peace, and, having secured a conviction, is unable to recover the amount ordered to be paid as compensation for want of sufficient distress, then the council of that municipality shall order to be paid from the treasury two-thirds of the amount ordered to be paid by the justice in addition to the costs.

This would not be done in case such municipality had by by-law declared not to use the dog tax for a fund for payment of such damages.

(2) The owner of any sheep or lamb killed or injured by a dog, the owner of which is not known, may, within three months after the killing or injury, apply to the council of the municipality for the compensation.

(3) If the council has by by-law decided to dispense with the levying of a dog tax, the owner of any sheep or lamb killed or injured by a dog may, notwithstanding, sue the owner or keeper of such dog or dogs for the damage sustained as previously mentioned.

Canadian Jersey Breeders.

The annual meeting of the Canadian Jersey Breeders' Association will be held at the Walker House, Toronto, at 10.30 a.m., on December 28 next. All owners of Jerseys are requested to attend.

R. REID, Secretary,
Berlin, Ont.

Poultrymen.

At the annual meeting of the Ontario Poultry Association, held at Guelph on December 13, the following officers were elected for the ensuing year: Hon. president, F. W. Hodson; president, A. W. Tyson, Guelph; 1st vice-president, Wm. McNeil, London; 2nd vice-president, M. T. Burns;

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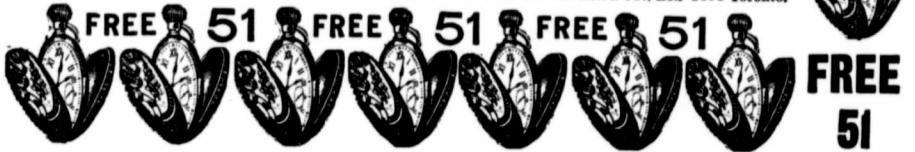
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Barred Rock Club.

An enthusiastic meeting of the Plymouth Rock Club was held at Guelph on December 12 to complete organization. There was a good attendance of the members, now numbering 38. Committees on by-laws and club premises were appointed. It was decided not to admit Buff and White Rock breeders to the club. Messrs. A. P. Westervelt and A. G. Gilbert were elected honorary members.

The following officers were elected: President, J. E. Bennett, Toronto; vice-presidents—Wm. McLeod, London; J. W. Porteous, Galt; W. F. Garland, Hintonburg; secretary-treasurer, Geo. W. Miller, London; board of directors—A. H. Lake, Toronto; J. S. Jeffery, St. Catharines; Newton Cosh, London; J. W. Kedwell, Petrolia; Elias Snyder, Burgessville; W. J. Hill, Wyoming; A. E. Sherrington, Walkerville; Isaac Knight, Guelph; W. R. Graham, Guelph; and A. G. Gilbert, Ottawa.

Leicester Breeders.

The annual meeting of the American Leicester Breeders' Association was held on December 13. There was a good attendance, showing the ever growing popularity of this breed of sheep. The president, Mr. D. C. Graham, Cameron, Ill., occupied the chair. Mr. J. H. Grisdale, Agriculturist Central Experimental Farm, Ottawa, delivered an address on Leicesters, and spoke of them as the blue-bloods of all breeds of sheep. It was decided to hold the next annual meeting at Buffalo late in September, during the sheep show of the Pan-American. A grant of \$100 was made to the Pan-American, and \$25 to the Provincial Winter Fair. The report of the secretary-treasurer, Mr. A. J. Temple, Cameron, Ill., showed a balance on hand of over \$500. There has been a large increase in the number of registration of late years. During 1899 and 1900 25 per cent. of the business of the past twelve years has been transacted. The largest membership of the Association is in Ontario, and hence the holding of the annual meeting in Canada. The old officers were re-elected.

Hereford Breeders.

The annual meeting of the Canadian Hereford Breeders' Association was held during the show at Guelph. The report of the secretary, Mr. H. Wade, showed that the breeders had had another good year, with numerous and satisfactory sales, and the demand for bulls away in advance of the sup-

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Good advice you say, but how can we do it when one remedy after another has been tried without improvement or hope of a cure. Quite true. Scores of sufferers from all kinds of lung troubles have been a mark for unscrupulous medical concerns who never intended to cure you. Dr. Slocum has made the cure of Consumption and Lung Troubles the study of his life, and thousands of men and women in all parts of Canada are ready to testify to the marvelous curative properties of the Slocum system. Dr. Slocum is ready and willing to prove the efficacy of his treatment, and has ABSOLUTELY FREE. This is in order that you may test the Slocum system and judge for yourself regarding its merits.

FREE TREATMENT

You or your sick friends can have a FREE course of treatment. Simply write to THE T. A. SLOCUM CHEMICAL CO., Limited, 179 King St. West, Toronto, giving post office and express office address, and the free medicine (The Slocum Cure) will be promptly sent.

When writing for them always mention this paper. Persons in Canada, seeing Slocum's free offer in American papers, will please send for samples to the Toronto laboratories.

When writing to advertisers please mention The FARMING WORLD.

Cheese and Butter

Makers of these articles, in many instances, do not pay the necessary attention to the quality of the salt they use. Some people think that "salt is salt," and it does not matter where it comes from or who makes it. This is a great mistake, for it is essential that to produce the best Butter or Cheese nothing but the purest salt should be used.

The number of prizes obtained by users of

"RICE'S or COLEMAN'S" DAIRY SALT

at the various exhibitions is conclusive proof that these brands of salt stand unrivalled. For prices, etc., address

R. & J. RANSFORD,
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The Waggoner Patent Extension Ladder which we purchased of you has given us entire satisfaction, and we advise all others doing similar work to use these ladders.

For stacking, or for picking apples, and for general use about the farm the WAGGONER LADDER is unequalled. Made in all lengths. Write for catalogue and price-lists.

Ask your local Hardware Merchant for our goods.

The Waggoner Ladder Co., Limited,
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MORE HOME KNITTERS WANTED



The above cut shows a machine in operation and sample of work done at the home of a shareholder.

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 Application Form for Stock and Machine filled out and remittance, and we will allot you stock and send you machine and outfit to begin work at once.

THE PEOPLE'S KNITTING SYNDICATE

Incorporated by Provincial Charter under the Ontario Companies Act.

LIMITED.

Authorized Capital Stock, - -

\$180,000

HEAD OFFICE, - TORONTO, CANADA

The Syndicate is offering a limited amount of Stock at \$1.00 per share in lots of twenty shares. (Each subscriber of the twenty shares to be furnished a twenty-dollar knitting machine free to work for the Syndicate and to share in the net profits of all goods made.)

The Syndicate has been formed for the purpose of manufacturing knitted goods cheaper than any existing company, to keep down prices, and to oppose the large knitting Combines and Companies which have joined hands to raise prices. To do this successfully it is necessary to get yarn at first cost, and to manufacture goods with the least possible expense. Therefore--

1. The Syndicate supplies its own yarn and machines.
2. The Syndicate has all goods made by shareholders knitting at their own homes.
3. The Syndicate pays for all properly made goods at once upon receipt of same, and besides paying for the work when sent in will semi-annually divide with its working shareholders the net profits from the sale of all goods made by its shareholders.
4. The Syndicate sells all goods made by its working shareholders.
5. To each subscriber of twenty \$1.00 shares the Syndicate gives free a twenty dollar Knitting Machine to keep, and also supplies each working shareholder, free of charge, full directions, samples and yarn to make the goods.

To become a shareholder, a worker, the owner of one of the machines, to be paid for the work you do, and also to participate in the equal division of the net profits, you have only to become a member of the Syndicate and take twenty \$1.00 shares which will cost you twenty dollars.

THE METHOD OF THE SYNDICATE is to supply its own yarns and knitting machines to its shareholders, FREE. By this plan it can readily be seen that the Syndicate not only benefits its shareholders by way of dividends, but is the source of a regular employment and income at their homes. The Syndicate is fully prepared to keep its shareholders supplied with yarns for doing the various kinds of work required, and it is also in a position to dispose of all goods knitted from these yarns through large jobbers and to the general trade as fast as it can be sent in by its shareholders.

It will be seen that to manufacture goods on so large a scale it would be necessary to have a number of knitting factories, which would mean the investment of thousands of dollars, besides taxes, insurance and interest on same. We can, therefore, not only manufacture goods cheaper and in larger quantities, but pay our shareholders dividends semi-annually.

THE MACHINE the Syndicate furnishes is a high speed family seamless knitting machine, and will last a lifetime with ordinary usage, in fact the Syndicate will guarantee the machine for twenty years. It will knit from the finest of imported yarns to the coarsest of Canadian wool yarn the same as hand work, but eighty times faster, in fact a pair of socks or bicycle hose in twenty minutes. With each machine a full outfit is sent together with a supply of yarn to commence at once. The guide accompanying the machines is so plain and the operation so simple that anyone of ordinary intelligence can make any of the knitted goods required by the Syndicate, such as Gents' Socks, Ladies' Stockings, Golf and Bicycle Hose, Knickers, Leggings, and Toques for Children.

THE PRICES the Syndicate pays for knitting these goods are:—Socks, \$5.00 per 100 pairs; Ladies' Stockings, \$10.00 per 100 pairs; Gents' \$5.00 per 100. All these goods are quickly made on the machine and at these prices any person willing to work can make good pay, much more than clerking in store, working in shop or laboring on farm. Shareholders can devote all or part of their time knitting, but at all times they are expected to work for the interests of the Syndicate.

WHO CAN JOIN. All persons willing to accept and honestly knit the yarn entrusted to them, and to return made goods promptly to the Syndicate.

WHAT YOU MUST DO TO JOIN. Each person desiring to become a shareholder of stock, participating in the semi-annual dividends, and to do work for the Syndicate, receiving pay as fast as the work is sent in,—must cut out the following APPLICATION FORM, sign their name to it, fill in address and reference, and enclose it with Express or Post Office Money Order to the Syndicate.

Application Form for Stock and Machine.

THE PEOPLES KNITTING SYNDICATE, LIMITED,

130 YONGE ST., TORONTO, ONT.

I enclose you herewith \$20.00 in FULL PAYMENT for 20 shares of stock (subject to no other call) in The People's Knitting Syndicate, Limited, which I wish allotted to me, and one of your \$20.00 machines free, same as you furnish your shareholders, together with free samples, instructions and yarn, which I wish sent to me as soon as possible to enable me to begin work for the Syndicate at once upon receipt of same. The said stock to entitle me to participate in the semi-annual dividends of the Syndicate in addition to being paid cash on delivery for all the Knitting I do for the Syndicate on my machine.

Name your nearest Express Office: _____

Your name _____

Post Office _____

Toronto Farming _____

Name Reference, Mr. _____

(Please state how much time you can devote to the work and how you wish to be paid—weekly, monthly or as you send in the work.)

ply. The prices obtained for Herefords at the U.S. stock sales this year had been unprecedented, one cow being sold for \$3,150, and an 1899 calf for \$3,500. Three hundred registrations and 188 transfers had been paid for during the year. The Association had \$234.01 on hand. A reference was made to the late president, Mr. Walter Macdonald, Toronto, who of late years has been closely identified with the Hereford interests.

Moved by W. Reid, seconded by W. H. Hammell, "That this association is of the opinion that the existing regulations as to ranging of cattle in the Northwest Territories should be amended, and that the amended regulations should make it obligatory for all parties running cattle on the ranges to lease a range of 20 acres per head for every animal run; that the annual rental of two cents per acre be materially reduced; that all animals run on ranges should be subject to an annual tax of fifty cents per head where the owner of the brand is not a leaseholder; that homesteads be not granted in ranging districts; that any American cattle fit for shipment found on Canadian ranges be shipped to Canadian markets, and that the duty and annual tax be held and deducted from the price obtained; that leaseholders be given liberal privileges of purchasing blocks of land within their leaseholds; that the breeders of cattle on the ranges should be encouraged by granting liberal wolf bounties; that a sufficient part of the revenue derived from the ranching industry be applied to establishing effective fire guards; that running of scrub bulls be limited."

Moved by W. H. Hammell, seconded by Alfred Stone, "That, in the opinion of this association, the cattle breeding industry is seriously menaced by the the tuberculin test, as applied to cattle purchased for importation or sold for export; that the test is misleading, and of no real value in detecting the disease. Therefore, we respectfully ask the Hon. the Minister of Agriculture for the Dominion of Canada to discontinue the use of the test in such cases, so far as is within his power."

The officers for the next year were then elected as follows:—President, W. H. Hunter, Naples. Vice Presidents—Ontario, Alfred Stone; Quebec, H. D. Smith, Compton; Manitoba, A. E. Philp, Brandon; Maritime Provinces, W. W. Black, Amherst, N.S. Directors, A. Rawlings, Forest; W. S. Hunter, Durham; A. H. O'Neil, Southgate; Mossom Boyd, Bobcaygeon; J. A. McDearmid, Stayner; W. H. Hamme, Beeton; H. Reid, Mimosa; Asa Warnick, Painswick.

SOLID Give this beautiful Solid Gold Ring set with a ruby and two pearls, for selling only twelve Parisian Beauty Pins at 10c. a set. These Pins are finished in gold and enamel, prettily engraved and neatly carved, three to a set. They are such splendid value out again sell them in almost every house. Send us this advertisement and we will forward the Pins. Sell them, return the money, and this beautiful Solid Gold Ring will be sent you by return mail, absolutely free. **Dominion Novelty Co., Box 3661 Toronto, Can.**



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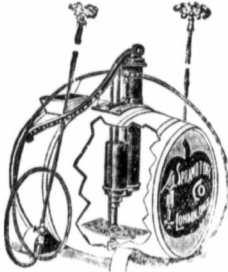
In buying a BELL you make no mistake; there are none better. Made and guaranteed by the largest concern in the business.

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

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If a reliable firm offered to paint your buildings at one-tenth the price your neighbor paid,

It's 10 to 1 you'd have it done. That's the situation exactly.

We'll send you the paint (a dry powder, only requiring the addition of cold water) and a machine with which you can paint your buildings, shingles and all, at one-tenth the old price.

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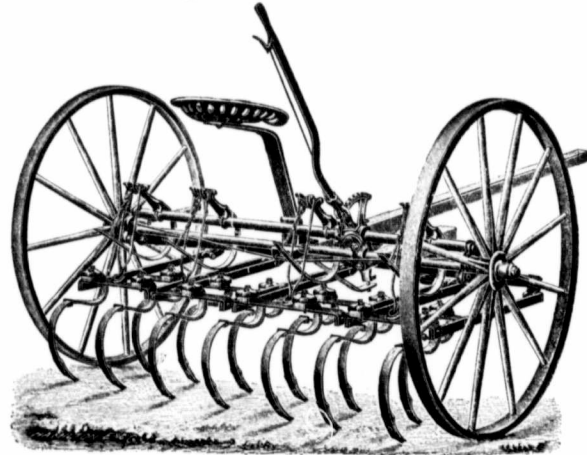
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An invaluable book by Thomas Shaw, Professor of Animal Husbandry at the University of Minnesota, and known to every Canadian farmer. This book is recognized as by far the most original and comprehensive on the subject of which it treats. Publishers'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

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This great work by Thomas Shaw, Professor in the University of Minnesota, is a recognized authority concerning the origin and history of all pedigree breeds of cattle, sheep, and swine now found in America, and deals with the subject in a manner at once brief, comprehensive and in regular sequence. Upwards of 400 pages, nearly 60 full-page plates, published at \$1.50.

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Invaluable book by Thomas Shaw. It has a practical ring about it from beginning to end that begets confidence in the reader as to the value of its contents. It is illustrated, substantially bound in cloth, and consists of about 300 pages. Publishers' price is \$1.00.

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THE FARMER HIS OWN LAWYER

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

A copy of "Be Your Own Lawyer" will be furnished free to any reader of THE FARMING WORLD who will send two new yearly subscriptions.

SUCCESSFUL FARMING

The fact that this book is written by Mr. William Rennie Sr., late Farm Superintendent of the Ontario Agricultural College, is recommendation enough to many. Mr. Rennie always treats his subjects in a practical and useful manner. This is a book that should be in every farmer's library. Publishers' price is \$1.50.

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HOME NURSING

This is a most valuable and practical book for home use on the farm. It is written by Eileen Harrison an experienced trained nurse and in language that makes it easily comprehended by everyone. It brings to the farmer's wife information that will be of greatest value to her in time of need. An important chapter is devoted to preparations for a surgical operation at home and some hints as to the after care of the patient.

A copy of Home Nursing will be sent free to any subscriber of THE FARMING WORLD sending us two new subscriptions giving THE FARMING WORLD from present date to January, 1902; or to any present subscriber, not in arrears, for 50c.

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Any one sending a list of thirty new subscriptions to THE FARMING WORLD will have one of these guns sent to his own address, carefully boxed and packed, the recipient simply paying the express charges, or any subscriber to THE FARMING WORLD, not in arrears, for \$8.50, and thus save the straight \$3.50 on the transaction, express charges being paid by the subscriber.

Address all letters and make cheques, money orders and drafts payable to

THE FARMING WORLD

Confederation Life Building, Toronto

PURE-BRED STOCK

NOTES AND NEWS FROM THE BREEDERS

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

Horses.

I. Devitt & Son, Freeman P.O., Ont., write: We have been very successful with our Clyde mares, Topsy Macpherson and Topsy of Nelson, at the fall fairs, winning at seven fairs eight first prizes for team in harness. Topsy Macpherson and Nelly Macpherson won second at Toronto as Clydesdale team in harness. They have gone into their winter quarters in good condition, and are safely in foal to our stock horse, Grandeur II. We have at present nine brood mares, all in good, healthy condition, and in foal to Grandeur II. and Lord Charming. Have just weaned two filly foals, one by Douglas Macpherson, the other by Grandeur II, which will make good mares. Grandeur II is still at the head of the stud. He is in fine condition for this season of the year, and is as fresh as ever. He is a large, smooth horse, weighed last April over 2,200 lbs., and has excellent limbs and feet. We have also an extra good two-year-old colt by Douglas Macpherson, out of a Grandeur mare, granddam by Boydston Boy, grand granddam by Good Hope. He has the best of feet and pasterns, and plenty of good, hard bone and grand action. Our yearlings have just come in off pasture; they have great bone and muscle, and good feet; they look alike; they might make big ones of the right sort, though they are thin in flesh.

Cattle.

It is claimed by some people in this country that the arrangements made by the Dominion Department of Agriculture with the American authorities for the removal of quarantine regulations on both sides of the international boundary has made it easier for Americans to purchase Canadian cattle to be fed in Iowa and the other corn states, thus preventing Canadian farmers from feeding their own cattle for export to Great Britain. The facts seem scarcely to justify this view, however. It is true that the arrangements have resulted in the sale of a large number of young cattle to the United States, but it is equally true that it has not adversely affected the Canadian cattle trade with England, as the trade returns of the Dominion clearly show. During the four and a half years prior to the time the arrangements for the removal of the cattle quarantine were made, only 3,762 head of cattle were sold into the United States, their aggregate value being only \$2,606. In three and a half years after the removal of the quarantine there were exported to the United States 301,073 head of an aggregate value of \$4,377,852. But the export to Great Britain has not fallen off proportionately as was at first feared, for in the fiscal year ending June 30, 1896, when Canada shipped to the United States only 1,645 head of cattle, there were shipped from this country to Great Britain 87,042 head. In the year 1900, during which Canada shipped to the United States 86,989 head of cattle, there were also shipped to England 115,057 head. That is to say, in 1900, Canada not only shipped 85,000 extra head of young cattle to the United States, but also sent to Great Britain nearly 18,000 head of finished beef cattle more than in 1896. The value of the arrangement in respect to the abolition of the cattle quarantine is shown by the fact that, in 1896, the few cattle sent to the United States brought an average price of \$5.39, while in 1900, for an enormously larger number, Canadian farmers got an average of \$13.09, or an advance of nearly \$8 a head. And in the same period the average value of the cattle shipped to Great Britain increased from

\$70.24 to \$74.43. It will thus be seen that the Canadian farmer has been a very large beneficiary by the arrangements which have opened to him the cattle markets of the United States.—*Chicago Drovers' Journal.*

At the annual autumn joint sale of Shorthorn and Aberdeen-Angus cattle held at Aberdeen, Scotland, the last week of October, 36 Shorthorn bulls averaged £22 14s. 8d. each, 3 cows £30 19s. 6d. each, and 3 two-year-old heifers £25 4s. each, the 42 Shorthorns averaging £23 10s. each. 23 Polled bulls averaged £21 19 7d., 8 cows £21 5s. 3d. each, 1 two-year old heifer £22 1s., 7 yearling heifers £15 each, and 9 heifer calves £12 19s. each, the 48 Aberdeen-Angus cattle averaging £19 3s. each.

Frank Rockefeller, of Cleveland, last week at the combination show and sale of Herefords and Shorthorns paid \$5,050 for Columbus XVI, a yearling bull, owned by Benton Gabbert, of Dearborn, Mo. This is the highest price paid for a single animal so far reported at the show. The bull carried the first prize for the best bull at the sale. The next best price was \$1,030 for Weston Stamp's VXL, a yearling bull owned by Cornish & Patten, of Osborne, Mo. He was bought by Benton Gabbert, of Dearborn, Mo.

Sheep.

Messrs. Alfred Mansell & Co., live stock exporters, of Shrewsbury, shipped per s. s. "Gothic" from the port of London on Tuesday, the 20th inst., a high-class Shropshire shearing ram specially selected by Mr. Tom Mason on account of Mr. S. Wellard from the prize winning flock of Mr. Andrew Mansell, and owning as his sire that successful getter Rose Bush 10104 (sire of Mr. Mansell's 2d prize ram at York sold at 150 guineas) from the same ewe as Fortification, the sire of Mr. Mansell's 1st prize ram at York, recently sold to go to Australia at 240 guineas. In selecting this ram special attention was paid to securing a heavy dense fleece and clear cherry skin, two attributes in high favor with Australian breeders.

On Thursday the 29th Nov. Messrs. Alfred Mansell & Co., the well-known live stock exporters of Shrewsbury, shipped from Liverpool per s. s. "Persic" of the White Star Line 24 of the choicest Shropshire shearing ewes including several prize winners to Mr. James Gibb, of Melbourne. These ewes had all been selected with great care from several leading breeders, and were in lamb to the best sires obtainable. Full particulars will appear in our next issue.

Messrs. Alfred Mansell & Co., of Shrewsbury, have received a letter from Mr. Geo. Sauerbier announcing the safe arrival of seventeen Shropshires and four Southdowns shipped to Adelaide in July last. Mr. Sauerbier adds that the sheep gained flesh on the journey and were greatly admired by all the leading breeders in the district.

Dr. A. W. Bitting, of the Purdue Experiment Station, has of late been investigating a new sheep disease that has carried off quite a good many of the hoosier sheep. Cattle have died as well, and the disease is characterized by a great diversity of symptoms. Pneumonia frequently develops as a fatal complication. Dr. Bitting has not decided what the new trouble is, but will shortly publish a bulletin on the subject.

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CHAMPION EVAPORATOR

For MAPLE SYRUP and SUGAR. Has a corrugated pan over firebox, doubling boiling capacity and saving fuel; small interchangeable syrup pans (connected by siphons), easily handled for cleansing and storing, and a perfect automatic regulator, which secures rapid and shallow evaporation, and produces the best quality of syrup. The Champion is a perfect evaporator for



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No crop can be grown without Potash. Supply enough Potash and your profits will be large; without Potash your crop will be "scrubby."

Our books, telling about composition of fertilizers best adapted for all crops, are free to all farmers.
GERMAN KALI WORKS,
61 Nassau St., New York.

EARN!

This lady's Watch, a beauty, with polished nickel case, ornamented dial, gold hands, stem wind and set movement, by selling only 8 dollars and silver finished Horseshoe Pins at 10c each. They are the easiest sold article an agent ever handled. Everybody wants them, they are so pretty. Mail us this advertisement and we'll send the Horseshoes. Sell them, return the money, and your Watch will be sent you absolutely free. **The Dix Co.,** Box 3890, Toronto.

Market Review and Forecast

Office of THE FARMING WORLD,
Confederation Life Building,
Toronto, Dec. 17, 1900.

The cold weather has had a greatly improved effect upon the retail trade throughout the country. Wholesale trade though quiet is healthy, and when the year closes sales will be found to be very much larger than last year. Money keeps steady, although 5 per cent. is the ruling rate for call loans. Some banks have refused to lend money on stock collaterals under 5 1/2 per cent. Discount rates continue at 6 to 7 per cent.

Wheat

There is nothing new in the wheat situation. Market conditions remain about the same, with very little prospect of a rise in values for sometime. At Chicago last week December wheat was down to 6 1/2c, the lowest price since last spring when it sold down to 6 1/4c. The wheat situation of the week is very well summarized by the Cincinnati Price Current as follows:

"The wheat market the past week has not supported the seeming indications a week ago favoring something of a turn to a higher position of values. The temper of foreign markets has not been helpful in this direction. Nothing new has been available upon which to base speculative confidence in an early advancing tendency. Even the suggestions of a widened range of fly infested areas has had little influence, and the shortages in acreage sown in the Central States appears to have been offset by increases elsewhere, including the prospective gain on the Pacific Coast.

"There is no lack of evidence that milling operations have been maintained actively, absorbing freely of available supplies of wheat which has moved into primary markets and otherwise. Stocks of flour in market channels appear to have moderately increased during November, and are about 6 per cent. larger than a year ago. The decrease in visible supply of wheat this week was not looked for by the trade, but this feature had no particular significance. The indicated world's visible wheat supply is practically the same as a year ago. So far as the immediate outlook is concerned there does not appear much to build hopes of a positive advancing tendency beyond the prevailing conviction that present prices appear to be low."

"The local markets are quiet. Here red and white are quoted at 64c, middle freights, goose at 61 and 60c, west, and spring wheat at 66c. On Toronto farmers' market red and white bring 67 to 67 1/2c, spring fine 68c, and goose wheat 61 1/2c, per bushel.

Oats and Barley

Canadian oats are in better demand in England, with higher prices prevailing. There has been quite a demand for Ontario oats for export, No. 1 being quoted here at 27 to 27 1/2c, east of here and No. 2 at 24 1/2 to 25c, west. On Toronto farmers' market oats bring 29 1/2 to 30c, per bushel.

The barley market is quiet. Prices here range from 37 1/2 to 41c, as to quality and point of shipment. On the farmers' market barley brings 41 to 44c, per bushel.

Peas and Corn

There has been a good demand for export, and the English market is higher. At points west of Toronto 60 to 61c, have been paid, and 62 to 63c, east. On Toronto farmers' market peas bring 65c, per bushel.

The corn market has had a downward tendency in the United States owing to the freer marketing of grain. Car lots of Chicago No. 2 are quoted at Montreal at 46 to 47c. No. 3 new American is quoted at 45c, Toronto.

Bran and Shorts.

At Montreal Ontario bran is quoted at \$14.50 to \$14.75 in car lots and shorts at \$16 to \$17. City mills here sell bran at \$16 and shorts at \$16 in car lots l.o.b. Toronto. At points west of here shorts are quoted at \$14 and bran at \$12.

Eggs and Poultry.

The good export demand for Canadian eggs continues, which keeps the market firm. Fresh gathered stock are quoted at 19 to 20c, at Montreal. The cold weather has stiffened prices here for new-laid eggs. They are very scarce and quoted at 29 to 30c, in large lots. Strictly fresh gathered are scarce at 21 to 23c. On Toronto farmers' market bailing stock bring 30 to 40c, fresh eggs 25 to 30c, and held stock 14 to 17c, per dozen.

Although supplies of dressed poultry have greatly increased, the demand has been good with higher prices at Montreal where quotations are for fresh killed: Turkeys, 9 to 10c; chickens, 6 1/2 to 7 1/2c; geese, 5 to 6c, and ducks 7 1/2 to 8 1/2c, per lb. Offerings are liberal here and fowls are coming forward in good condition. The local demand has been a little light owing to retailers not being very anxious to buy in large quantities. Prices are steady though some are looking for lower prices this week if the supply increases. Turkeys are quoted at 8 1/2 to 9 1/2c, and geese at 6 to 6 1/2c, per lb, and ducks at 50 to 75c, and chickens at 30 to 50c, per pair in large lots. On Toronto farmers' market chickens bring 50 to 75c, and ducks 50 to 80c, per pair, and turkeys 9 to 11c, and geese 6 to 7c, per lb. Live ducks are quoted at 45 to 70c, per pair.

Potatoes

The market keep steady. Car lots are quoted at Montreal at 42 1/2 to 45c. It is reported that lots of potatoes are seeking a market in Ontario at 20c, a bag. The colder weather has strengthened the market here, car lots being quoted at 33 to 34c, per bag. On Toronto farmers' market potatoes bring 30 to 40c, per bag.

Hay and Straw.

A good trade is being done in hay for export. Another steamer is reported to be chartered to take hay from New York to South Africa, about all of which will be Canadian hay. There is some difficulty in getting sufficient cars for shipping hay. Montreal quotations are \$9 to \$10 for No. 2, and \$10.50 to \$11 for No. 1, and \$7.50 to \$8.25 for clover. Farmers are beginning to deliver hay more freely. Offerings are somewhat light here and there is a good demand. No. 1 is steady at \$10 to \$10.25, and No. 2 at \$9 to \$9.50 in car lots on track Toronto. On the farmers' market hay brings \$13 to \$14, sheaf straw \$12 to \$12.50, and loose straw \$7 per ton.

Fruit.

The Trade Bulletin has the following to say on the apple trade: "The demand for apples in the Western States, appears to have had a very material effect upon prices in Ontario, where they are said to be about as high as in this market. American buyers are still operating. A lot of about 700 bbls. of choice spies was reported at \$2.25, and another lot \$2.50 l.o.b. in Ontario stations. Here prices of choice fruit are firm at \$2.50 for round lots. Sales of ordinary to good qualities have been made at \$1.50 to \$2, a lot of 100 bbls. of good sound fruit bringing \$2.25. Small jobbing lots of course bring higher than the above prices." On Toronto farmers' market apples bring \$1 to \$2 per bbl, as to quality.

Cheese.

There is a little warefare on now between holder of stocks and buyers. These are in pretty strong hands and buyers may have to pay up pretty well. There has been a good healthy demand for Octobers which have sold at Montreal at 10 1/4 to 10 1/2c. There are reported to be sales of Septembers under 11c, but holders of these are firm and looking for higher figures. Montreal quotations are 11 to 11 1/4c, for finest Westerns and 10 to 10 1/4c, for finest Easterns and 10 to 10 1/4c, for under-grades. Some factories west are still making cheese with the hope of realizing 10c, for it.

Butter.

There is a good demand for choice creamery which is scarce and there are more cable orders for Canadian butter being received. The Trade Bulletin comments on the market as follows:

"It is very evident we are not going to have a flush of supplies of choice butter, as a considerable portion of the winter creameries is affected with a stably flavor, and all really choice lots are readily disposed of to the local trade, and a few lots of choice have been taken for export. Sales are reported at 21 1/2 to 21 3/4 and 22c, in good sized lots of fine to choice lots. Seconds have sold at 20 to 21 1/4c. The American market is very firm, 20 1/2c, having been made in New York, and 20c, bid at Elgin, Ills., and refused. Shipments are being made from this city to western points, and others are going forward to the English market."

Prices for creamery are active here at 22 to 23c for prints and 20 to 21c, for tubs and boxes. Choice dairy is in good demand at 18 to 19c, in large lots. On Toronto farmers' market butter brings 20 to 22c, per lb.

Cattle.

American cattle markets were slow and weaker at the end of the week, though at Chicago on Friday good to prime steers were quoted at \$5.30 to \$6.20 per cwt. There was a large run on Toronto cattle market on Friday, consisting of 611 cattle, 2,337 hogs, 11,116 sheep and lambs, 10 calves and 21 horses. The quality of the fat cattle offered was not, generally speaking, good, considering the season. Very few choice, well-finished Xmas cattle were offered, and prices for these were firmer. The commoner grades of butchers' cattle, which are all too plentiful, are not in demand, and the market was dull with prices easy. Several export dealers who had secured space on boats could not get what they wanted, owing to the limited supply of shipping cattle. This accounts for the high quotations given for a few shipping cattle. The ordinary shippers that have been coming to this market during the past few months are not worth more than \$4.50 to \$4.60, and at the very outside \$4.75 per cent.

Export Cattle—Choice loads of these are worth \$4.50 to \$4.75 per cwt., and light ones \$4.25 to \$4.50 per cwt. Heavy exports bulls sold at \$4 to \$4.50, and light ones at \$3.50 to \$3.75 per cwt. Loads of good butchers' and exporters sold at \$4.25 to \$4.37 1/2 per cwt.

Butchers' Cattle—Choice picked lots of these equal in quality to the best exporters' weighing 1,000 to 1,100 lbs., each for Xmas trade, sold at \$4.50 to \$5.25 per cwt., good cattle at \$3.90 to \$4.25, medium \$3.50 to \$3.65 and inferior to common at \$2.40 to \$3.

Feeders—Heavy well-bred steers 1,000 to 1500 lbs. each, sold at \$3.60 to \$3.90 and poorer quality at \$3.40 to \$3.60 per cwt. Short keep feeders, 1,100 to 1,200 lbs. each, in good condition, sold for \$4 to \$4.25 and light steers, 800 to 900 lbs. each, sold at \$3 to \$3.25 per cwt. Feeding bulls for the byres, 1,100 to 1,600 each sold at \$2.75 to \$3.25 per cwt.

Stockers—Yearling steers, 500 to 700 lbs. each, sold at \$2.25 to \$3 and off colors and those of inferior quality at \$1.75 to \$2 per cwt. Yearling bulls, 600 to 900 lbs. each, sold at \$2 to \$2.25 per cwt.

Milk Cows—These being from \$30 to \$50 each.

Calves—There is only a moderate demand for calves at Buffalo, where choice to extra are quoted at \$7.50 to \$7.75 per cwt. At Toronto they bring from \$3 to \$8 each.

Sheep and Lambs.

Canada lambs were quoted at Buffalo on Friday at \$5.65 to \$5.85. There was a large delivery of sheep and lambs at Toronto market on Friday but the quality of the latter was

not good. Export sheep are not wanted. Some high prices were quoted for a few choice lambs for the Xmas trade. Several lots of medium lambs were unsold at the close of the market. Sheep were easier at \$3 to \$3.12½ for ewes and \$2.50 to \$2.75 per cwt. for bucks. Spring lambs sold at \$3 to \$4 each each and \$3.50 to \$4.50 per cwt.

Hogs.

There was no change in the prices for hogs. Select bacon hogs sold on Friday at \$6 per cwt. and thick and light fats at \$5.75 per cwt. Unculled car lots sold at \$5.85 to \$5.90 per cwt. Montreal market is reported firm at \$6 to \$6.17½ for light bacon hogs and \$5.75 for heavier grades. The *Trade Bulletin's* London cable of Dec. 13 re Canadian bacon reads thus:

There has been a quieter feeling during the past week, but as stocks are not heavy, holders are not pushing sales.

Dressed hogs are quoted on Toronto farmers' market at \$6.50 to \$7.50 per cwt. and sows at \$5.25 to \$6.25 per cwt.

The Wm. Davies Co., Toronto, will pay \$5.87½ per cwt. for select bacon hogs this week.

Horses.

There have been very few horses offered during the week and trade is slow. At Grand's about 50 sales were made during the week. Some were second-hand general purposes and bought principally by farmers at \$20 to \$60 each. Better ones brought \$75 to \$100 each.

Dog Power Separator.

R. A. Lister & Co., Montreal, had on exhibition at the Provincial Winter Fair a Melotte cream separator using an ordinary dog power. This attracted considerable interest. It is a home-made power, made by their local agent at Guelph. The dog seemed to enjoy his work, which proved the light, easy running of this machine.

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I thank you for the gentlemanly way in which you have dealt with me, and I take great pleasure in recommending your Rapid-Easy Grinder. This is the THIRD SEASON for it, and IT RUNS AS GOOD AS WHEN I FIRST GOT IT. As an example, I started it at 10 o'clock one morning and ran the Grinder until half-past nine at night, and in that time I put through 317 bags, and made FIRST-CLASS WORK.
CHARLES TAYLOR.

Bradford, October 22nd, 1900.
With your Rapid Easy Grinder I have ground FOUR HUNDRED BUSHELS of mixed grain in TEN HOURS, and have ground TWO THOUSAND BUSHELS OF GRAIN with ONE SIDE of the plates, and THEY ARE GOOD YET. The machine runs VERY EASY. It is the only Grinder I ever saw that would grind barley right.
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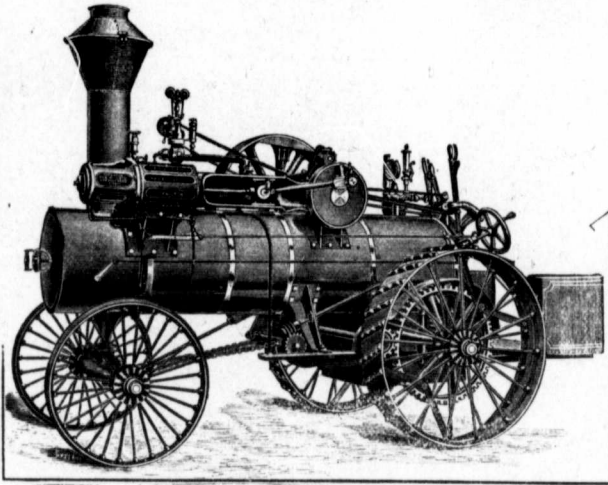
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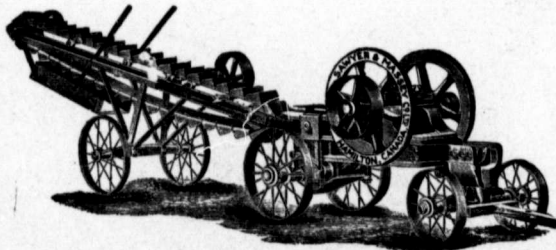
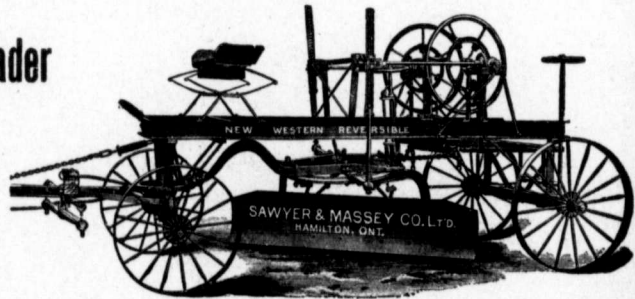
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