

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE. *

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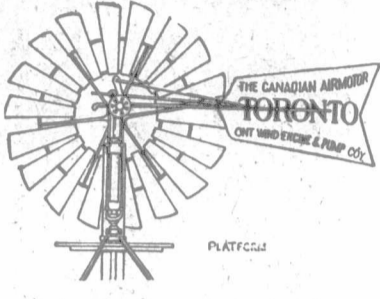
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VOL. XXXVI.

LONDON, ONT., AND WINNIPEG, MAN., NOVEMBER 15, 1901.

No. 538

EDITORIAL.

The Pan-American Over.

The beautiful Pan-American Exposition at Buffalo closed at midnight on Thursday, October 31st. As a display of art, industry and agriculture, it was a success, the attractiveness of the grounds and buildings and the magnificence of the electrical illuminations being unique. So far as the "Farmer's Advocate" staff could judge—and for the purpose of reviewing the various livestock departments, etc., the Exhibition was visited half a dozen times—it was splendidly managed, nothing being left undone to ensure satisfactory results. The management, from Hon. Mr. Buchanan down, and the special representatives of Canadian interests are to be congratulated. The attendance does not appear to have been commensurate with the outlay involved, a couple of millions at least of shortage being reported. Almost without exception, Canadians speak in the highest terms of the courtesy and fairness with which they were received and entertained by the Buffalo people. Up to the very last Canadians patronized the Exhibition loyally; in fact, many expressed the belief that, numbers considered, our people attended the show better than the Americans; and Canada, in live stock, dairy products, etc., certainly captured the lion's share of the honors, and as an agricultural country won fresh distinction before the world. A most instructive and interesting feature of the show was the "Model Dairy" in which ten breeds of cows were under trial for six months. From first to last the "Advocate" had a representative in that department, who has kept our readers posted as to progress and results of the tests. Probably the one blot on the entire Exhibition was the dastardly assassination, in the Palace of Music, of President McKinley, on Sept. 6th, an event which horrified and shocked the entire civilized world and cast a most depressing shadow over the remainder of the Exhibition, and to which its non-success financially may doubtless be in large measure ascribed.

A Model Life.

Walter Massey was a young man of useful life. He was boyish in appearance and way; simple in attitude; inspired with a high sense of duty owed to those about him. He was working at something all the time, and with a good end always in view. Only thirty-seven years of age, he had spent at least twelve of them in a strenuous effort to discharge the many duties he conceived went with the privileges which his wealth, his position, his business, gave him. He was of the rare and useful lot who find the wages that make the wheels go round. But besides this he was an earnest Christian, a philanthropist, a worker for the public good, a grower of two blades where only one was wont to spring. He desired to see our farmers better farmers; he strove to improve the public health; he lent a ready hand in many business propositions. If he had a large income he spent it all in a public way rather than in any personal direction. He wished to have all the concerns with which he was identified model concerns, and to have his life a model life. This latter was his supreme motive, and this he achieved. He lived a model life, and all his fellow citizens will accord him that chiefest honor.—(Toronto World.)

The Forest Wealth of Canada.

We have received the Report of the second annual meeting of the Canadian Forestry Association, lately held at Ottawa. This Association seems to be organized for the purpose of gathering information on the subject of "forestry" and disseminating it among the people generally, in order that an interest in the question may be awakened sufficient to influence the Governments to take the necessary steps for the renewal or preservation of our forests before it is too late. A laudable object certainly. The membership is not large, but is select, every Province and Territory being represented. The honored Sir Henri Joly, now Lieutenant-Governor of British Columbia, who has for many years been a persistent advocate of the preservation of our forests, and who has always been more of a patriot than a politician, is the president. The secretary is Mr. E. Stewart, Dominion Superintendent of Forestry, Ottawa. The Report itself is finely gotten up and well illustrated.

One speaker deplors the disappearance of the magnificent Ontario forests, and attributes to that cause change of climate, high winds, drying up of what were supposed to be spring creeks, and floods on rivers. But as Canadians we ought to be interested in what may continue to be a source of great wealth to our country and of revenue to our Government for many generations. We will be interested if we bear in mind, for example, that the revenues of the Province of Ontario are derived not from taxes, but mainly from the great forests in the north, and that there are possibilities of the Dominion Government in time imitating the Provincial one in that respect. That is, if in the meantime the vast timber limits under the control of the Dominion, the heritage of the people, are not destroyed by fire or squandered upon political pets.

The timber resources of British Columbia were well brought out at the meeting. From one acre 508,000 feet of lumber was cut, and no trees under two feet or over seven feet in diameter were taken. There are trees that run up to twelve feet in diameter. One speaker said that British Columbia is timbered beyond the estimate of any individual. Another: "No other word than magnificent seems to me to convey a proper idea of a virgin forest in the West. Picture to yourselves thousands of trees (Douglas fir predominating), of prodigious size, so close together that it is difficult and often impossible for an animal to go between, limbless except the tops (through which the rays of the sun scarcely penetrate), the ground carpeted with mosses and ferns, and the hush of nature all around you, and you can perhaps form some idea of a forest in British Columbia."

South of the Arctic ocean there is a great width of country which is treeless, but between this treeless waste and the northern boundaries of Quebec, Ontario, Manitoba and the N.-W. Territories, there is a vast timbered country, reaching from Alaska to the coast of Labrador, under the control of the Dominion. The timber on this land is mostly spruce, the most sought-after for pulp wood. Each of the older Provinces also has great timber areas.

Forests have, often been recklessly cut down by lumbermen, but the greatest destruction has always been by fire. It is estimated that fully one half of the interior forests of Quebec have been burnt in the last twenty-five years. These

fires were mostly started by Indians, though lumbermen, campers and others are also responsible. The problem before the country is how to prevent forest fires, how to renew denuded districts, and how to have lumbering conducted so as to leave young timber to take the place of what is cut.

Ontario has the most stringent fire laws. Lumbermen have to bear part of the cost of fire rangers, and results have been excellent. The Dominion is initiating a fire-ranger system also. The Dominion also specially encourages tree-planting on the prairies. Any farmer applying to the Government at Ottawa will be supplied with young trees for planting free of cost. The Government exercises some supervision over the place and manner of planting, and reserves the right to take from the plantation any seedling trees the settler does not need for further planting.

Most encouraging instances were given of what can be done by a rational system of forest protection. The forests of Maine, once considered practically exhausted, still yield largely and continuously. Public sentiment has made possible their protection. In the County of Westmoreland, New Brunswick, there are several large holders who take the greatest possible care of their property. To-day it is many times more valuable than it was ten or twelve years ago. One property which sold some time ago for \$20,000, a few years later, after having been continuously operated, sold for \$40,000, and the present owner holds it at \$80,000. Fears have been expressed that the new industry of making paper pulp would soon clear off the forests of North America. One speaker went into figures in detail to show that these fears are groundless. A spruce forest, when operations are carried on wisely, renews itself in fifteen to twenty years at most, and the area of such forests in Canada is so great that, allowing for all probable increase of the trade, the supply is practically inexhaustible.

Dr. Shenck, a scientific forester in the employ of the U. S. Government (trained in Germany), in the course of his address said: "The development of Canada's gigantic forest reserve must be necessarily slow. When it is accomplished, after the lapse of another century, Canada may supply the entire world with timber. In Germany, in the year 1750, square miles of forest could be bought at the price now fetched from the sale of a single oak tree standing on it. Such prices may prevail here in this century. If such are the prospects, Canada will be the richest country on earth before the dawn of the next century, provided she continues to conservatively manage her forest resources. Again, if such are the possibilities, we should proceed at once to reforest every acre of ground unfit for the plow but fit for timber production."

The people of St. Louis are now busily planning to astonish the world with the completeness and beauty of the Louisiana Purchase Exposition in 1903. They have decided the total outlay on the buildings and the Midway shall be \$30,000,000, whereas the construction cost of the Chicago World's Fair was only \$18,322,622, and that of the Pan-American Exposition only \$9,000,000. As to the extent of the ground which the Exposition will cover, 1,100 acres of park have been set aside. The Paris Exposition occupied only 173 acres; the Pan-American, 350. It is natural to suspect that at the bottom of this large plan lies the determination to "go Chicago one better."

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WESTERN OFFICE:
MCINTYRE BLOCK, MAIN STREET, WINNIPEG, MAN.

LONDON, ENGLAND, OFFICE:
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13. WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch printed matter. Criticisms of Articles, Suggestions How to Improve the Advocate, Descriptions of New Grains, Roots or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation, are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.
14. ALL COMMUNICATIONS in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.

Address—THE FARMER'S ADVOCATE, OF
THE WILLIAM WELD COMPANY (LIMITED),
LONDON, CANADA.

Britain's Minister of Agriculture on Agricultural Education.

The British Minister of Agriculture, the Right Hon. R. W. Hanbury, speaking recently before a meeting of representative agriculturists in Scotland, thus referred to agricultural education:

"It had been the fashion too much in the past to treat agriculture and farming as a very easy business. When they came to look at the matter seriously, it was seen to be the most difficult and most complicated of all operations. There were not only so many different kinds of farms scattered all over the country, but, taking any individual farm, if a man was to do justice to that farm, he required an amount of knowledge which was hardly required in any other man following any other occupation. Therefore the farmer was not too proud to gather knowledge from others. Of course, his own practical experience was an immense help; but he wanted to know the experience of other men on other farms under other conditions in other parts of the country, and in other countries. That was why the Board of Agriculture encouraged the pursuit of this scientific knowledge, and he did not think the grants made by the State on behalf of agricultural education amounted to anything like what should be. He had said so in the House of Commons, and he had said so on the platform, and he repeated the statement again. When he thought of the enormous grants made by the Board of Education for technical education, nearly the whole of which went to town populations, and which had a mischievous effect in the country populations—when out of every £500 spent by the Board of Education in England only £1 went to rural populations, he thought it was time there should be a change. He went further, and admitted that they had to go on step by step, but as these colleges sprang up in Scotland and England, they could depend upon it that more and more appeals would be made to the Exchequer to find money to assist those colleges. * * * * * In England he should like to see more pressure brought to bear by the Education Department, on having a little more useful knowledge, which would give children a taste for country life."

What Should be Taught in an Agricultural College.

The establishment of a Maritime Agricultural College has been under consideration and sites have been looked at, but nothing definite done towards purchase or building. According to legislation passed, the relations of the three Provinces are to the effect that Nova Scotia purchase land and erect buildings costing say \$50,000; and assuming running expenses at \$10,000 per year, Nova Scotia would pay \$5,000, New Brunswick \$4,000, and Prince Edward Island \$1,000, Nova Scotia to own the property, and maintenance agreement to run for ten years.

As an investment, a two-term course of four months each at an agricultural college would pay bigger interest than if invested in any other profession. It is well known that the so-called learned professions are overcrowded. We assert that to a farmer, given a practical course at an agricultural college, farm life would not only become more congenial, but more remunerative; it has proved so in other provinces and states, and would do so here. The cost of a course, as outlined, would be about \$70.00 to \$80.00 for a winter, exclusive of train fare. The items would be about as follows: Room rent for the term, \$14.00-\$15.00; board, 16 weeks, \$48.00; books, \$8.00; incidental fees, \$5.00. Tuition should be free. It will thus be seen that the wages earned in a single summer would more than pay for a winter's attendance at college.

The following schedule of studies is made of subjects about which every young farmer should have definite and clear knowledge. To simplify and illustrate the method of teaching followed, and the subjects taught, let us follow a student from class-room to class-room, laboratory to workshop, workshop to live-stock barns or creamery, so as to see the kind of instruction given, in order that we may estimate the value of the instruction given.

HOW THE STUDENT'S TIME IS OCCUPIED. At the beginning, the term is divided into two halves, the mornings of the first half being devoted to lectures on veterinary science, 8 to 9 a.

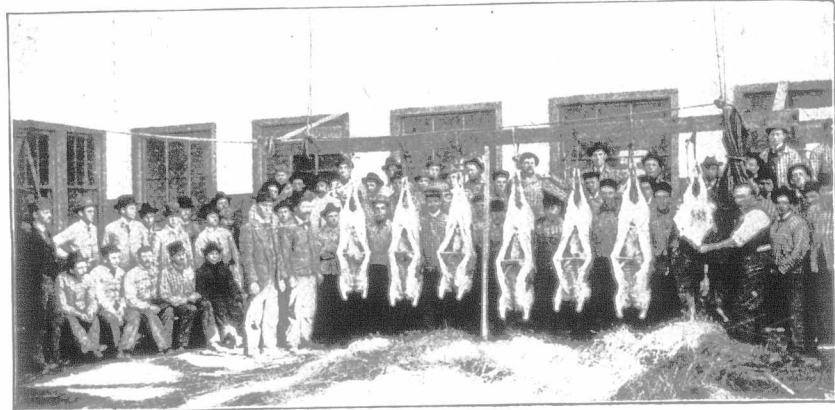
m.; feeding of animals, 9 to 10 a. m.; lecture and laboratory work in agricultural physics, 10 to 12. Twelve to one, lectures on plant life. At 2 p. m., Mondays and Wednesdays, the student goes to the stock barns and is drilled for two hours in the handling and judging of live stock by means of the score card. Tuesdays and Thursdays, from 2 until 4 p. m. he spends in the dairy building; while Fridays, from 2 to 4, and Saturdays, from 10 to 12, the time is spent in the blacksmith or carpenter shops. From 4.15 to 5.15 on three afternoons a week the time is taken up with parliamentary practice. During the second half of the term, a similar round is taken, 8 to 9 being given to a lecture on breeds of animals, 9 to 10 to dairy lectures, plant life and agricultural physics filling in from 10 until 1 p. m. The afternoons are used the same as in the first half of the term.

THE WORK OF THE SENIOR YEAR.

The following December the student returns and is classed as a second-year man. After having put the lessons of the first year into practice, he has probably made more money during the summer than he otherwise would have done, and is now an enthusiastic student. In the first half of his second winter term he follows a routine differing only slightly from his first year, save that the work is more advanced. The first half brings him to a veterinary lecture at 9 a. m.

the hour previous being spent at a lecture on the feeding of animals. From 10 to 12 on Mondays and Wednesdays, and 10 to 1, Tuesdays and Thursdays, is spent in live-stock judging, competitive work, the score card having been dropped. Mondays and Thursdays, from 12 to 1 p. m., find him taking lectures on farm economics. The afternoon, from 2 until 4, is spent in practical work, in horticultural or agricultural physics. The student also spends from 4 until 5.30 every afternoon for two weeks at farm mechanics and stable management. Friday mornings, from 8 until 12.30, are devoted to carpentry or blacksmithing. In the second half of the term, lectures in bacteriology, breeding of animals and agricultural chemistry are given, stock judging going on from 11 until 1 p. m., the afternoons being used as in the first part.

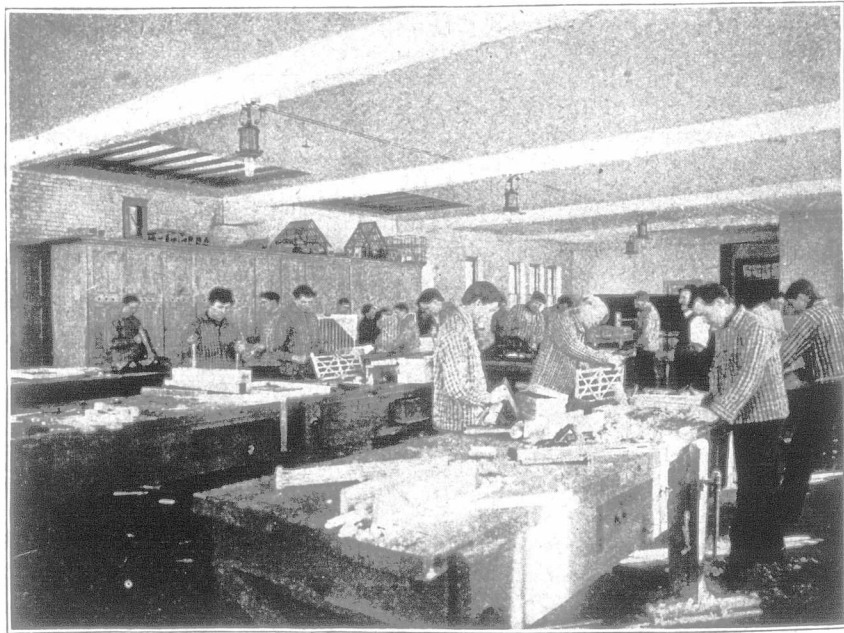
The subjects and hours given to them having been mentioned, what is taught under the several subjects will now be described:



THE BLOCK TEST—THE COURT OF LAST RESORT IN THE JUDGING OF MEAT-PRODUCING ANIMALS.

ANIMAL HUSBANDRY, BREEDS AND BREEDING.

In the first year each student is taught how to examine, handle and judge live stock by the score card, and is helped to get a knowledge of the different breeds of animals by means of lectures illustrated with a stereopticon. In the second year similar lectures are given, treating of the origin, utility and characteristics of the various animals; competitive judging is done, and each student placed in the position of a single judge. Not only has he to judge the stock, but also write his reasons for the awards made. He is taught to



IN THE WORKSHOP.

handle live stock for the show-ring and market, learn to braid horse's manes and tails, make rope halters and splices, is shown the feeding of live stock and how the breeding and feeding records of the College live stock are kept; in addition, he studies pedigrees and becomes familiar with the herdbooks, besides being drilled in the laws of breeding, such topics as line breeding, heredity and inbreeding being discussed. In feeds and feeding, the first-year student is given instruction in feeding standards and drilled in the compounding of rations for farm stock to give the best results, economy considered; the second-year man taking up the laws of nutrition and re-

viewing various instructions of being given and how to become AGRICULTURE FARMER In this waste and chemical



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viewing the experiments in feeding done at various places. In veterinary science, elementary instruction is given in the construction and functions of the animal body, the second-year man being given lectures on the more simple diseases and how to treat them; is shown how to tell the age of horses, to throw horses, cattle, sheep and swine; how to give medicines; is, in fact, fitted to become an animal nurse.

AGRICULTURAL PHYSICS—SOIL PHYSICS, FARM ARCHITECTURE, FARM MACHINERY, AND WEATHER FORECASTS.

In this part of the course, the origin, nature, waste and uses of the soil are taken up. The chemical and mineral nature of soils, including

are affected by heat, cold, moisture, parasites, soil, climate and fertilizers. Practical work in seed-testing under varying conditions of heat, moisture and oxygen; the study of the formation of roots, leaves, fruits, flowers, etc. Elementary work in cross-pollination, transplanting and pruning; use of the spraying pump, mixing of insecticides; winter protection of plants, making of hotbeds and cold frames, together round out a very practical and useful course and keep the students well employed. The advanced work takes up the identification of weeds and weed seeds and the suppression of weeds, practical work in grafting, budding, and forcing vegetables, growing of plants from cuttings, culture of flowers, garden plants and vegetables.

AGRICULTURAL CHEMISTRY.

Under this title are discussed the chemical elements of the soil, air, crops and manures as a source of plant food; the atmosphere, its formation and classification, as a source of plant food; the plant, how it grows, feeds, matures, and the animal food product it yields.

MANURES.—Necessity for, kind of, value of and how affected by food eaten; commercial fertilizers; rotation of crops; tillage.

PRACTICAL MECHANICS.

This subject takes up the care of edged tools, framing buildings, splicing timbers, making of gates, and ordinary farm carpentry. In blacksmithing, the making and repairing of clevises, trace chains, welding, dressing and tempering plowshares, axes, grub hoes, all of which are valuable acquisitions to any farmer's knowledge.

BACTERIOLOGY.

While heretofore considered the province of the medical and veterinary profession, this science is of use in agriculture. The relations of bacteria to soil processes, ripening changes in manure, formation of nitrates, soil and fixation of free nitrogen by clover bacteria, bacteria as affecting dairy products, and the disease-producing germs, show conclusively how germs affect the farmer in a great many ways.

FARM ECONOMICS.

Under the above title the farmer becomes acquainted with the mutual relation of agriculture to other industries; values and prices, with especial reference to land and agricultural products; money, its functions and varieties; banks and their functions; industrial and monetary crises and panics; systems of land tenure, and the theory of transportation.

PARLIAMENTARY PRACTICE.

In this course the students are drilled in conducting meetings, acting as chairmen and thus become posted in the rules of order. The young farmer thus educated is enabled to preside with dignity at any meeting, and does not have to step aside for members of the

learned professions, on the plea of their being better qualified for such work.

If any person thinks, after reading this bill-of-fare, that there is nothing to learn in agriculture, or that there is no field for an agricultural college, they must be hard to please, or if the young man taking this course cannot make more money on the farm and enjoy life better than he did before, he must be dull indeed. Although taking up the study of such a great science, the course above outlined is possible to any farmer's son with a public-school education who will put energy into his work.

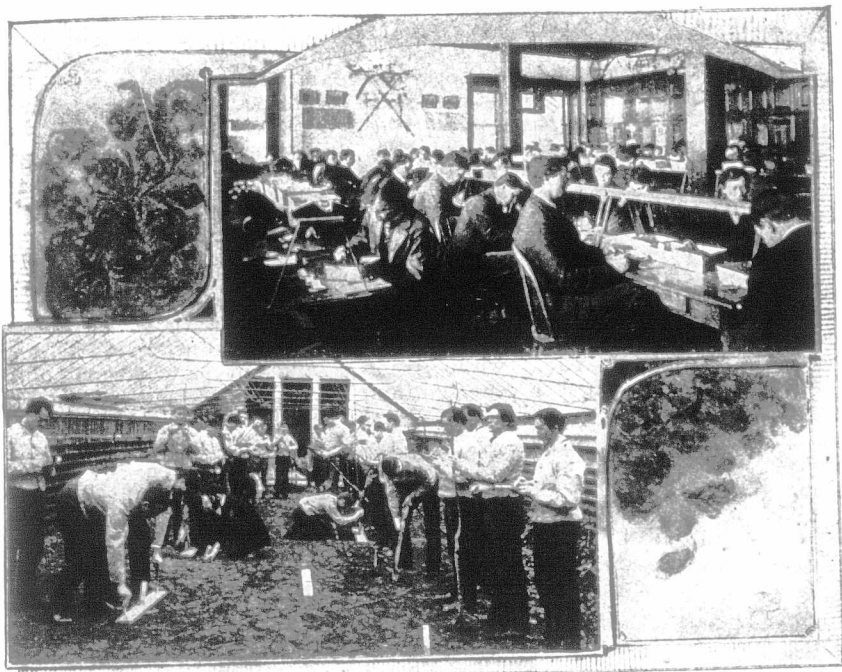
Thanksgiving.

The recurrence of our annual national Thanksgiving Day, fixed this year for Nov. 28th, recalls to the farmer, as to us all, our obligations to a beneficent Providence for the many mercies and blessings which as a people have been ours to enjoy during the year now drawing to a close. The cycling seasons have completed their processes in harmony with nature in producing the supplies necessary to the sustenance of man and beast. The sower, great exemplar of faith, has again been rewarded for his labor and trust by the appearance of the blade, the leaf, the full corn in the ear, and the bountiful harvest, yielding enough and to spare. Canada has been favored through nearly the whole of its history with harvests more than sufficient for the wants of its people. Famine has been to its people an unknown experience, while with scarcely an exception the years have brought generous surpluses for export and revenue. The vast extent of our national heritage and the richness of its resources, which we are but just commencing to realize, when rightly viewed, inspires to acknowledgment of wisdom, forethought and benevolence more than human, and points to a destiny of distinction greater than we can imagine. The variety of soil and difference in climatic conditions prevailing in the various provinces of the Dominion are such that failure of any one or more of the staple food products in one section is generally compensated by an overplus in others, thus making the country, under Providence, practically self-sustaining, while the records of our trade returns show a constantly expanding volume of exports, bringing to the people the means whereby, with industry and reasonable economy and prudence, practically all may enjoy the comforts of the highest civilization. And it is probably safe to say that in no country in the world do the masses more generally experience the comfort that comes with being well fed and well clothed, and in no country do a larger proportion of the people live in comparative luxury.

The grain crop of the present year, though a variable one in the Provinces, will yet average well on the whole. In the Eastern Provinces the shortage in the wheat crop is being compensated for by a fair yield of coarse grains which command a good price, while the supplies of feed for stock in the form of hay, roots and corn are quite above the average and have been secured in fine condition. The abundance of rough fodder for the feeding of live stock is, we believe, a prominent feature of the situation throughout the Dominion, and one that augurs well for future years, as it will enable farmers to keep their breeding stock intact and to raise a larger proportion than usual of the young things in order to replenish their herds and flocks which have been reduced in numbers by the active demand and improved prices of the last few years. And although the high price of coarse grain may make the feeding of fat stock and dairy cows somewhat expensive, the prospect for good prices in these lines will doubtless make the outcome satisfactory to those who venture to feed liberally and do it with good judgment.

The proceeds from the bountiful wheat crop of Manitoba and the Northwest Provinces will go far towards enabling the farmers to square themselves with the situation following the light crop of last year, and despite the exceptional disabilities experienced in the threshing this year, owing to excessive rainfall since the harvest, the enormous shipments of grain that are going out, averaging over 350,000 bushels daily over one railway, besides the various other outlets, must go far towards placing the farmers in comfortable circumstances, while their provision for stock feeding is probably better than at any former period.

British Columbia has had a good year in all lines of agriculture, the crops of grain and fruit having been well up to the standard in yield and quality and the trade in live stock better than ever before. The ranchmen of all the West have had a prosperous year in the sale of horses and cattle, and the trade in pure-bred stock, as well as in commercial animals, has been buoyant to a high degree, and the outlook is full of the promise of a continuance of the good times we have enjoyed in the last few years. The success of the farmer in the future will more than ever depend upon his studying the trend of the times, adapting himself to the changing conditions, and adopting the means and methods found to best fit the prevailing conditions.



PRACTICAL INSTRUCTION IN PLANT LIFE AND HORTICULTURE.

the sources of soil nitrogen and the movement of nitrates and soluble salts in the soil; soil moisture, the movements of and the conserving of, for the use of crops; the objects, methods and implements of tillage; farm wells and farm drainage, including practical work in levelling and laying of tile, are taken up in first year's work. The advanced work takes up Rural Architecture, under which the principles of lighting, ventilation and warming buildings are discussed; the construction of barns, stables and silos, including the drawing of plans, calculating the cost and making out bills of material. Under Farm Mechanics, the principles of draft are considered, the con-



PRACTICAL WORK IN FARM DAIRYING.

struction and maintenance of roads, the use and construction of farm motors, including practical work in the handling of gasoline and steam engines, windmills and tread-powers, and application of the brake test; tests are also made of the draft power of horses and the influence of different hitches thereon. Under weather forecasting, the student learns the laws of storm movements and is enabled to forecast probable weather conditions 24 hours.

PLANT LIFE AND HORTICULTURE.

Under this heading is embraced the germination of seeds, nutrition of the plant, how plants

STOCK.

Our Scottish Letter.

The season is rapidly advancing, and farmers are now able in some degree to estimate what they are to get for their labor and expenditure. For those dependent on cattle-feeding the result will be very poor, and many have fed cattle for less than nothing. There is not likely to be much profit or revenue on that account; and naturally one turns to cropping to see what it can do for them. The harvest was one of the best on record, and farmers never housed their grain in better order. The stack-yards did not bulk very largely, and, so far, threshings have turned out better than was anticipated. The quality of the grain is superb, and the bulk in excess of anticipations. This applies generally, and although exceptional cases of hardship may be known, on the whole 1901 in this respect has not been a deplorably bad year. Turnips are yielding well. Swedes are sound and healthy, but yellows are in some places badly mildewed. Potatoes are a "bumper" crop, disease is practically unknown, and prices are very low. There is no greater speculation than the potato crop. When the yield is limited and diseased the price is high, and when there is a big yield of sound tubers the opposite holds good. In which case the farmer comes the better off it would be hard to tell. Some actually prefer the diseased crop, and speak as if more money could be made from it than the other. This does not tally with sound economics, and the big crop of sound tubers, even at a low price, should be best for all parties.

Flockmasters do not think they are likely to make fortunes this year. Prices for lambs and rams have not been up to the highest figure, but they might surely have been worse; and while the season may not yield the profits of past years, it does not seem likely that it will yield a loss. The substitution of Blackface for Cheviot stocks on the higher grazings continues. One has to wait a long time before he gets his money out of the Cheviots, they are so small, and the price of wool is almost past speaking about. Perhaps of all farming products, wool is the cheapest and it contributes very little to the revenue of the farm. In the north of Scotland, great stretches of land are being transformed into deer forests, and the supplanting of sheep by deer is causing searchings of heart in many quarters. How long this may continue or how far it may extend it would be difficult to decide at the present time. Economically, now that the people have so largely been displaced by sheep, the displacement of the sheep by deer does not seem to make much difference to the people. The deer forest employs almost if not quite as many people as a sheep walk, and perhaps during the height of the season in autumn more money will be circulated in a district through the huntsmen and their followers than could have been got from the sheep-farmer. When this is said the best has been said for the transformation that has been going on in the Scottish Highlands for about a century. Its first phase was the depopulation of Highland straths to make way for sheep: its latest is the dispersion of the sheep to make way for deer. Wealth may have accumulated under this system in the north, but men have decayed, and that is not good for the land.

Sheep-farming has many evils to contend against, and not the least are certain mysterious diseases which on certain lands affect the stock. Two of the worst of these are known as brasy and louping-ill, and inquiries into the origin and nature of both are not new features in agricultural affairs. Professor Hamilton, of Aberdeen, is at present grappling with the former, and Mr. Hanbury, the President of the Board of Agriculture, has promised that if anything can be done to put an end to the latter it will be done. Brasy is confined to certain areas on the west coast. It seems to follow the more genial latitudes affected by the Gulf Stream, and is unknown in colder regions where the rainfall is less. It attacks the best-favored of the flock, and they die off apparently after a few hours' illness. The carcasses contain comparatively little blood, and if found at once are eaten by the shepherds. The death rate on some farms is put down at as high as 50 per cent. of the lambs born, and in consequence the hogs or yearlings have to be wintered away from their native grazings on low-country farms. The rents paid for these winter grazings amount sometimes to three times the rent paid for the Highland farm on which the sheep were bred. This, with the low price of wool, has so reduced the value of land in the Highlands that before long much of

it will be valueless. The system of sheep valuations has also something to do with this unfortunate state of matters. The incoming tenant or the landlord is compelled to buy the sheep stock from the outgoing tenant at a valuation; and this is put at a purely fictitious figure, because the man who is going out was similarly mulcted when he was going in. Louping-ill is a curious form of disease, found chiefly on the Teviotdale hills in the south of Scotland. It has baffled many investigators, the theory that at present holds the field being that it is due to a "tick" or parasite harbored in the long, bent grass, and that no cure can be found short of the removal of the stock from the infected areas, and burning the grass and other herbage. This seems a policy of despair, and unless the Government come to the rescue with something more reasonable, the disease seems likely to hold on its way.

Horse business here is brisk. A big order for 150 Clydesdale mares has been executed by Messrs. A. & W. Montgomery, for Cape Colony. The order is unique in the history of the breed, and it is to be hoped the results may lead to further trade in the same direction. The demand from Russia also continues. The Messrs. Montgomery have lately sold 18 head of pedigreed horses to go there. As this is a continuation of former orders, there is reason to believe that the Clydesdale is giving satisfaction in these countries. Hiring of stallions for the season 1902 continues brisk, and quite a large number of horses are already under engagement. At the sales of pedigreed horses held about the beginning of October, good prices were realized, and



BONNIE LAD.

Shorthorn bull, calved September 21st, 1900.
PROPERTY OF H. SMITH, HAY, ONTARIO. (SEE GOSSIP, PAGE 756.)

everything points to a healthy tone pervading all ranks. At the West of Scotland Union Show, held at Barrhead a week ago, Mr. Wm. Park, Brunstane, Portobello, exhibited successfully his fine horse, Prince of Brunstane 9977, one of the best specimens of the breed in this country, and two of his produce, the two-year-old entire colt, Marmion, which won in his class—beating Mr. Kilpatrick's Lord Dundonald, which won at Glasgow and Kilmarnock, and at the former show beat Marmion—and a yearling gray gelding, which also won in his class and was sold to Messrs. Hastie & Sons, Blantyre, for £100, certainly the highest price ever paid for an animal of his kind and age in this country.

Cheese and butter are still great sources of revenue to farmers here, and this week we are having the great produce show at Kilmarnock. The three outstanding dairying counties for cheese and butter are Ayrshire, Kirkcudbright, and Wigtown, but at this show the last named has fairly swept the boards. Of the prize money offered for cheese, Wigtownshire takes £152, Kirkcudbright £33 16s. 8d., Ayrshire £17, and Dumfries £5. The champion cheese was made by Mr. John Murray, Kilfillan, Glenbuc.

"SCOTLAND YET."

M. Bourez, a Paris (France) canary-breeder, has found a method of producing red canaries by feeding the parent birds on finely-ground cayenne pepper, which gradually changes the color of the feathers. M. Bourez has already produced a reddish, orange-colored bird, and hopes in time to get a brilliantly red bird.

Cheap Wool.

A sore subject with not only Canadian but also with British farmers is the prevailing low price of wool. In fact, at no period has the price of all grades touched so low a point as at present.

The causes of this are not difficult to ascertain. In South America, in former years, sheep were kept for the sake of the wool—a small-bodied sheep and fine wool. Of late years, since the introduction of cold storage, the demand for mutton for the European market has induced the sheep ranchers to introduce large-bodied sheep. The result is that sheep are now raised for the sake of the mutton, and the wool seems almost to have become a secondary matter. Land there being practically valueless as compared to our land, and the climate such that the sheep can pasture the year 'round, it is easily seen that wool can be grown at a very low cost. Millions of pounds of this wool is similar in quality to a soft Leicester—say a cross of quarter Southdown and three-quarters Leicester. While similar in quality, it lacks the luster of our wools. It is, however, skirted and graded to the requirements of the worsted trade of Europe and the States. These wools are exported in an unwashed condition. To-day they can be laid down on the Boston market at a price so low that, with a duty of 12c. per lb. and a scouring shrinkage of 40 per cent., the actual clean cost is 30½c. Taking Canada combing fleece at 13c., the duty is 12c., while freight and other charges add another cent, making a cost of 26c., delivered at

Boston. The scouring shrinkage of our wool averages 20 per cent., thus making a clear cost of 32½c. The result is a falling off in the demand for our wool, except when luster is required. Another cause is the decreased demand of the largest Canadian users, viz., the worsted manufacturers. The large and increasing importation of worsted yarns and other worsted fabrics has seriously interfered with our home demand. The bad condition in which a good deal of the wool is brought to market tells materially against it, but, as Kipling says, "That is another tale."

To give an idea of the low price of wools in Britain, it is only necessary to say that a "top" made from wool similar to a strong Leicester is offered now in the Bradford market at 7½d., or 15½c., while a top made from our wool at 13c. would cost 21½c. At the last London wool sales, fine and fine-medium wools advanced a trifle, while the lower cross-breeds barely held their own. Since the sales, the prices have remained flat, while the coarse carpet and Mediterranean wools have actually dropped a trifle. The impression prevails that there will be a slow but steady advance in the finer wools, while the coarser grades will just hold their own.

In a future letter an effort will be made to see what we in Canada can do to obtain a higher price than now prevails. These letters are intended to benefit the wool-growers of our country, so that Canadian wools will be profitable to grow and will hold a higher position than they do at present. "PITREAVIE."

Toronto, Nov. 11th, 1901.

Since considerable gree cattl as the m the Scot by your c sale that Dickinson Messrs. C 17th Oct Lincolnsh presided a breeders in grand tion, and tabulated the price the best been offer Space being giv of the hig

Cows— 36 gns. 47 gns. Lord He W. J. A and 30 g to Mr. M Yearling Mr. W. 35 gns. 27 gns. and J. E The f and high it was a whole o cluded t head w averagin £42 14s

The of Here and one for the There v sold, ar the high Pulley; to Co was 12 who wa being s College a purch secured gns.; gns.; S Lucilla bertha, Mr. P. Thoma Sunbea Tudge one fo Mr. Pu year-o being D. Fal John twice the U. and a also fe twenty their 7 and 7

The thirt P. Co whole head Mr sidera high, corres mares Charr Aurea Hitch gns. Lord gave lions 1,550 mans Freer gns. and 2 fillies the t gns. Brow 2s. 6 9s. forty of £ M has celeb is su

English Notes.

Since my last notes there have taken place a considerable number of important sales of pedigree cattle, of which the following may be taken as the more important. I make no reference to the Scotch sales, as these have been dealt with by your correspondent in that country. The first sale that calls for notice is that which Messrs. Dickinson and Riggall conducted on behalf of Messrs. Chatterton, at Stenigot, Lincoln, on the 17th October, of a portion of their noted herd of Lincolnshire Red Shorthorn cattle. Lord Heneage presided at the luncheon, when about 300 or 400 breeders sat down. The herd, which was shown in grand condition, excited very strong competition, and the average disclosed in the prepared tabulated form will give a good general idea of the prices realized for what was certainly one of the best lots of this breed of cattle that have been offered for sale this season.

Space will not permit full details of each lot being given, therefore we give the buyers of some of the higher-priced lots:

Cows—45 gns. to Mr. J. Searby, 33 gns. and 36 gns. to Mr. A. Smith. Three-year-old heifers—47 gns. and 30 gns. to Mr. Blow and 31 gns. to Lord Heneage. Two-year-old heifers—52 gns. to W. J. Atkinson, 45 and 38 gns. to Lord Heneage and 30 gns. to Mr. Blow. Heifer calves—37 gns. to Mr. Marriott and 20 gns. to W. J. Atkinson. Yearling bulls—110 gns. to T. Bett, 55 gns. to Mr. W. Nainby, 36 gns. to Mr. J. C. Mountain, 35 gns. to J. W. Davy, 30 gns. to J. Byron and 27 gns. to Sir W. Cooke and Messrs. Needham and J. Evans, respectively.

The feature of the sale was the great demand and high values realized for the young stock, and it was a notable feature of the sale that the whole of this year's crop of bull calves were included therein, and were all sold. Eighty-nine head were sold at an average of £34 6s., 15 bulls averaging £36, and 39 cows and calves together, £42 14s. each.

The dispersion sale of Mr. John Price's herd of Hereford cattle was another very notable sale and one that clearly shows how high the values for the pick of pedigree herds of England are. There were sixty-nine cows and sixty-five calves sold, and the average of these was £72 19s. 8d., the highest-priced cow being £220 10s., to Mr. C. Pulley; the top price for heifer calves, £50 8s., to Col. Dicie; and the top price for bull calves was 126 gns., for the bull calf out of Lavender, who was purchased by Mr. Faber, this grand calf being secured by Mr. Lawton for the Agricultural College, Canada. Mr. G. Leigh, of the U. S., was a purchaser of several cows, amongst those he secured being: Gretchen, at 37 gns.; Alix, at 45 gns.; Laburnham, at 36 gns.; Apology, at 65 gns.; Siren, at 27 gns.; Augusta, at 40 gns., and Lucilla, at 36 gns. Other notable prices were Albertha, at 120 gns., to Mr. Foster, and Leila, to Mr. P. Coates, for 100 gns.; Pinafore, to W. Thomas, 74 gns.; Frolic, to Mr. Foster, 72 gns.; Sunbeam, the same buyer, at 75 gns. Mr. J. Tudge got a fine bull calf for 105 gns., W. Dew one for 95 gns., Dr. Williams one for 62 gns., Mr. Purdon one for 48 gns., etc. The thirty-two-year-old heifers averaged £64 1s., the best prices being 210 gns. to Mr. P. Coates, 180 gns. to G. D. Faber, 100 gns. to C. Pulley, 95 gns. to Sir John Cotterill, 66 gns. to Mr. C. Pulley, 65 gns. twice to H. M. the King; and Mr. G. Leigh, of the U. S., who also got another one at 55 gns., and another at 58 gns.; Mr. H. Yeld got two, also for the States, at 60 gns. and 40 gns. The twenty-six yearling heifers averaged £37 8s. 8d., their best prices being 100 gns., to Mr. C. Pulley, and 70 gns., to the same buyer.

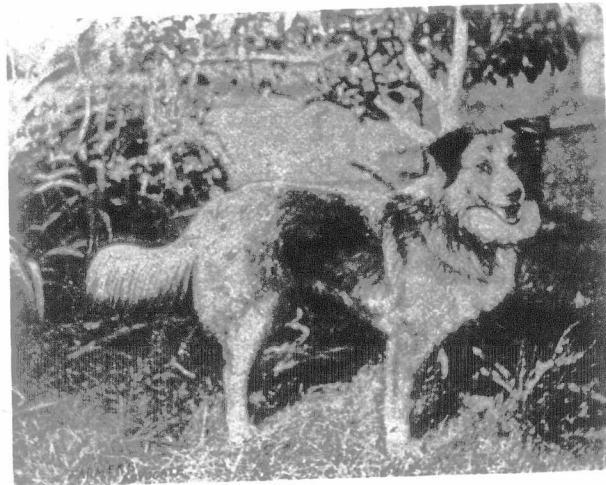
The bulls made an average of £94 3s. for thirteen, their best prices being 400 gns. to Mr. P. Coates and 260 gns. to Mr. G. D. Faber. The whole of the animals offered in the sale, 203 head, made the remarkable average of £41 5s.

Mr. F. Crisp's Shire horse sale was one of considerable importance, and the prices made were high, but it must be stated that the quality was correspondingly good. The twenty-seven brood mares and foals averaged £130. Southgate Charm, to Mr. Victor Cavendish, made 875 gns.; Aurea, 550 gns., to Mr. A. Henderson, M. P.; Hitchin Buttercup, to Lord Llangattock, for 110 gns. For the colt foal out of Southgate Charm, Lord Rothschild gave 240 gns., and Mr. Phillips gave 105 gns. for a filly foal. The eight stallions averaged £372 1s. 10d., the top price being 1,550 gns. for Hendre Champion, to Mr. Salomans; 380 gns. for Mormear of Batsford, to Mr. Freeman Mitford; 280 gns. for Marmion 2nd, 350 gns. for Girton Chieftain, to Messrs. Thompson, and 120 gns. for Girton Chief. The three-year-old fillies averaged £182 14s., the prices being for the three: 210 gns. for Girton Starlight; 150 gns. for Wilcott Bounce, and 62 gns. for Bonny Brown. The two-year-olds for two averaged £118 2s. 6d., the three yearling fillies averaged £135 9s., £185 being paid for Moulton Una. The forty-five head made an average for the whole lot of £174 11s.

Mr. A. Hiscock, of Manor Farm, Motcombe, has during the past month held a sale of the celebrated Berkshire and Large White pigs that he is such a noted breeder of, with the most satis-

factory results. Of both breeds, there were offered 105 head, and the average of the whole lot works out well over £10 per head, a remarkable average and one that has not been equalled for some considerable time past. There were 60 head of Berkshires, and these averaged £9 14s. 6d. each, the best prices being 31 gns. for Manor Sunflower, to Lord Canarvon; 29 gns. for Manor Faithful, to R. W. Hudson; 25 gns. for First Frank F., to Hon. C. Portman; 22 gns. for Manor Grand Duke, to S. Hill, and 20 gns. for Barbara 3rd, to Lord Arlington. The Large Yorkshires and other white breeds numbered 45 head, and these averaged £10, the best prices being 31 gns. for Smithfield Queen, to Mr. E. J. Morant, who also took Manor Betsy at 19 gns. At 20 gns. Manor Countess went to the Hon. C. Portman, Manor Patchwork making one guinea more to Mr. Lywood.

The general result of the ram sale season is one that brings little comfort to the breeder, for there has not been a worse season than the one that has just concluded for some long time past. The main reason for this unsatisfactory state of affairs has been the stoppage of the South American demand and the consequent large supply thrown on the home market. Mr. Henry Dudding has, however, about cleared out, though he has some real good rams left, waiting for the expected opening of the Argentine ports; for whenever this does come there will be a strong reaction, and we may probably see prices rushed up to even a higher level, for it is quite certain that the supply for the ensuing season will be very much smaller than was the case with that one just concluded. It is very satisfactory to be able to note that the country is once again clear of foot-and-mouth disease, and also that the infernal pest, sheep scab, has been got into the narrowest limits it has been in for many years past.



DONALD.
A Scotch Collie.

Collie Dog Trials at New Cumnock.

For the eighth successive year competitive working trials of collie dogs were held on Brocklochhill, about four miles from New Cumnock, Scotland, on Oct. 5th. The day was a tempestuous one. Rain fell heavily, with only short intervals, and varied by several smart hail-showers; and it was driven along the hillside by a keen, biting wind. It was indeed a matter for serious consideration whether the trials should proceed in view of conditions which made it very difficult for the shepherds properly to direct their dogs working at a distance. The shepherd whose dog was under trial took his stand on the hillside at a point marked by a couple of flags, having the dog at heel. On the opposite hillside, at a slightly greater altitude, and half a mile distant, was a pen of Blackface ewes, of which, at a flag signal, four were turned out. The shepherd then directed his dog, which could not see them, to go for the sheep and to bring them to him along a course marked by occasional flag posts. Driving the sheep along the face of the hill, the dog had to keep them on the upper side of a flag; to drive them between a pair of poles set 15 yards apart, through a second similar set of poles; then to take them in a diagonal line down the hill through a set of poles rather wider apart, through a small burn, and up to the second hill, to the point where his master was standing; to pass them there through a fourth pair of poles; finally to help his master to "shed" them into two lots of two each, and bring them together again to be penned. Twelve minutes were allowed for the whole performance, from the time the dog left his master's heel until he had the sheep ready for penning. The wind made it often very difficult to hear the whistle or word of command, and at times the driving rain obscured the directing wave of the arm. It was not surprising, therefore, that seven failed in the earlier stages of the trial. It was, indeed, in the circumstances, a small proportion out of the twenty-four entries. It was surprising to observe the alacrity with which, as a rule, the dogs obeyed the whistle

which called them to halt and attention; and the shouted directions—"Away yont them!" "Come to me!" "Come near them!" and other phrases of dog language—or answered to the wave of the arm like a ship to her helm. The judging proceeded on a scale of points, the total number being 50. Eight points were assigned for "running out," preference being given, of course, to the dog which goes off most speedily and finds the sheep most promptly, needing least directions. Much importance is attached to the manner in which the dog approaches the sheep and takes possession of them, as it were. He should make a judicious circuit, and get on good terms with his charge, avoiding frightening and hustling them at the start. So 12 points were assigned for a good "first turn." For "bringing" them through the posts a maximum of 10 points was allowed; for excellence of "general work" 8. Readiness in obeying command, of course, was placed high in the scale of good qualities, 12 marks being allotted to it. Twelve cash prizes, running from £6 for the first down to 5 shillings for the twelfth, were paid, and, notwithstanding the inclement weather, about 200 people witnessed the trials.—(Scottish Farmer.)

Buying Feeding Cattle.

In reply to an enquiry, by "A Beginner," published in the Nov. 1st issue of the "Farmer's Advocate," page 713, the appended answers from experienced feeders have been received. The question reads: "Providing fat cattle are sold for May 1st delivery at 5 cents per pound, live weight, at what price should they be bought in November to make the transaction fairly profitable to the feeder, it being understood that cattle of a good beef type are purchased and fed according to approved methods?"

Feeding cattle should be bought in November for 4 cents per pound, and would have to be a good beef type to make fairly good profit.
Ontario Co., Ont. JAMES LEASK.

Stockers costing from 2½ to 3 cents per pound, live weight, in feeder's stable should show him a profit, after feeding for 150 days, of from \$3.00 to \$5.00 per head if they put on an average gain of 300 pounds each. This does not include manure. It costs from \$28.00 to \$30.00 per head to fatten a steer in 150 days—that is, to put an average gain of 300 pounds on 100-head lots and when labor is reduced to the minimum and concentrated food is bought by the car-load.
Glengarry Co., Ont. A. S. McBEAN.

A farmer having plenty of coarse grain and roots, etc., might pay as high as 4 cents per pound for thrifty cattle. A feeder having to buy a quantity of his feed should not pay more than 3½ cents per pound.
Middlesex Co., Ont. L. J. SHIPLEY.

Cattle to be sold at 5 cents the first of May should be bought for 4 cents in November, and we think 1,100-lb. cattle of right quality is about right weight to buy. They should make a gain of 300 pounds or over, which makes a difference between the buying and selling price of \$26.00. The manure they leave would amply repay labor of feeding and interest on stock.
Elgin Co., Ont. A. & D. BROWN.

I have found, in my experience, that cattle fed till the 1st of May should be bought at from 3½ to 3¾ cents to be sold at 5 cents per pound on the 1st of May. Of course, it depends a good deal on the price of coarse grain, but it is rather long to feed cattle from November till May. I generally sell in February or March, with good results. I do not think that there is any margin left for the feeder in feeding cattle till May for less than 1¼ or 1½ cents per pound over the cost price. Some years when grain is very low in price one can feed cheaper, but I certainly would not recommend any one to go into cattle feeding very extensively for any smaller margin than I have mentioned. This is all based on good quality of cattle and good practical feeding—as nothing else pays. My method of feeding cattle has generally been to buy a load of good 1,200-lb. steers; stable on November 1st and sell in February, and make a gain of 200 lbs per head; cost price, 4½ cents; selling price, 5½ cents. This is only a short time to feed, and quick returns are most satisfactory.
Wellington Co., Ont. ISRAEL GROFF.

Lieut.-Col. Dent, whose Canada headquarters are at Montreal, states that up to November 4, 6,697 horses had been shipped from Canada for the use of the British troops in South Africa. Of this number, 6,048 went from Montreal. Last year 3,785 mounts were shipped. He states that it is becoming very difficult to purchase suitable mounts in this country.

Pigs and Pork for Local Markets.

I have had good success for several years raising pigs and pork in connection with an "all-year-round" dairy. I try to have my spring litters come in March and April, when prices are higher than for later pigs. If there is a demand, when the pigs are four weeks old I sell to neighboring farmers for from two to three dollars each; if not, I wean the pigs at that age in order to breed the sows again, and have never been able to catch them in season until the pigs have been off from three days to a week. Wheat middlings with milk is the best food to start young pigs, and should be fed often and little at a time, just what they will eat up clean each time. There is usually a good demand for them when from four to six months old, both as breeders and feeders, as many farmers, if they can find good thrifty shoats, will buy them when they have extra feed. I keep high-grade Chesters, with full-blood boar, and as soon as the grass is well started in spring, ring the sows and put them in a pasture where there is running water, aiming only to keep them in good flesh, as the grass will nearly support them.

A few days before the pigs are due, the sows are placed in a pen (a box stall, or temporary shed with board or slab roof will do), where they will be dry and confined. Old sows will usually get along farrowing all right alone in warm weather, but young sows should be tamed and kept watch of, as they are apt to injure their pigs. I have saved a whole litter by staying with the sow and as fast as the pigs arrived, putting them in a basket until she was through; then by rubbing her bag she would lie down so I could place the pigs on her, and after they have once sucked there is very little danger of losing any.

Last spring many of my neighbors lost their young pigs and some their sows as well, due, I think, to their being kept too fat and in cold quarters. I always try to keep their bowels loose by feeding something laxative, such as small potatoes, cull apples, bran mash, or roots, but as labor is expensive, very few in this section raise many roots. I also give the sows charcoal and fresh earth, and have stopped a litter of two or three weeks old from scouring by giving them a few fresh sods.

When sows eat their pigs, it is because they are feverish and suffering, the fault being with the farmer in not providing the preventive agencies mentioned above.

This has not been a banner year with me, as some of my sows failed to breed, but I have saved fifty-three out of fifty-four, two litters being from young sows. One old sow gave me eleven in March, which sold at \$3.00 each; eleven in September, at \$2.00; making \$55.00. This week I bred her again, so she is due the last of February. I expect to winter seven mature sows (three of which are due to farrow in December), as I shall have milk all winter.

Missisquoi Co., Que.

L. F. STREIT.

Prof. R. Harcourt, Chemist O. A. C.

Prof. R. Harcourt, who succeeds Dr. A. E. Shuttleworth as Chemist at the Ontario Agricultural College, Guelph, is a Canadian, born in 1866, in the County of Huron, Ont. His mother was of Scotch descent and his father (who is farming south of Beamsville) is an Englishman by birth. He completed his course at the O.A.C. in the spring of 1893, and the same fall was appointed Assistant to Dr. Shuttleworth, which position he held until last spring, when he was appointed Associate Professor, with special charge of the Dairy Chemistry. In 1896, he took a special course of study at Harvard University, and in 1900 spent two months in Dr. Wiley's laboratory in the Department of Agriculture, Washington, D. C. At different times, he has visited most of the agricultural-chemistry laboratories of the Eastern States. During Dr. Shuttleworth's absence of 20 months in Germany, he had full charge of the work in this Department, and gave entire satisfaction. During the time Dr. Shuttleworth was away, he conducted the first "Digestion Experiments" made in Ontario, in connection with a bulletin which was afterwards issued, on "Lucerne, Its Composition and Digestibility." Lately, he has been doing, at odd times, a little on "Wheat, and Flour, and Its Relation to Breadmaking." A small bulletin was issued recently by the Department on this subject. From the foregoing it will be seen that Prof. Harcourt has already demonstrated his fitness for the important duties with which he is now permanently entrusted.

Alix, fastest of trotting mares and from Sept. 19, 1894, to Sept. 25, 1900, trotting champion of the world, died at the Mariposa Farm, property of Hon. F. C. Sayles, Pawtucket, R. I., Saturday, Oct. 19, from paralysis. Alix was bred by Daniel Hayes, at Muscatine, Ia., and was foaled in 1888. She was a daughter of Patronage and Atlanta, by Attorney (son of Harold).

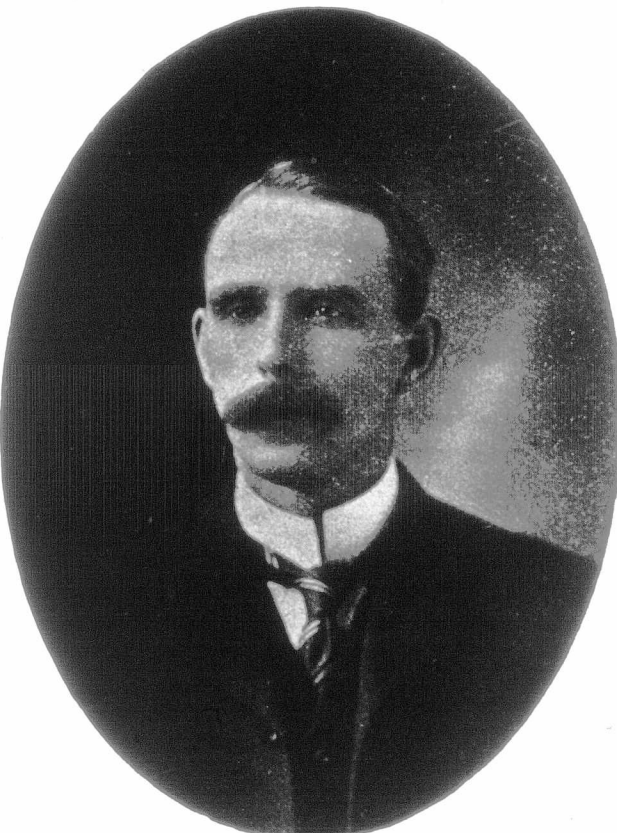
Feeding Steers.

The excellent editorial in the "Advocate" of Nov. 1st covers the question of feeding steers so thoroughly that there is comparatively little left for further discussion. In this paper, therefore, all that will be attempted is to throw out a few hints here and there along the line, which may be useful to some beginner. This is not intended for those who are old in the business, and may safely be labelled "for beginners only."

In buying steers, the purchaser must look ahead to the time of selling, and aim to obtain a class which, when finished, will tempt buyers so that they come of their own accord and compete for possession. It is not always the steer that can be bought for the least money that returns the largest profit. The desirable type of steer has already been well described in the editorial referred to above, but a word regarding weight. As a rule, 1,100-lb. to 1,200-lb. steers command a premium over lighter cattle. The main reason for this is that they can be marketed earlier, and thus the feeding period is shortened. Whether it is more profitable to feed light or heavy cattle, when the cost per pound, the selling price per pound, the gain in weight, and the length of the feeding period are the same for each, depends upon circumstances. For illustration, we will suppose that two steers, one weighing 1,000 lbs. and the other 1,200 lbs., are bought at 4c. per pound; that they each gain 300 lbs. and are sold at 5c. per lb. The statement for the two steers would be as follows:

	Cost price.	Selling price.	Return above cost.	Return for \$1.00 invested.
1,000-lb. steer ..	\$40.00	\$65.00	\$25.00	62.5 cents.
1,200-lb. steer ..	48.00	75.00	27.00	56.2 cents.

So far, then, the lighter steer appears to have the advantage, inasmuch as return for money in-



PROF. R. HARCOURT, B. S. A.
Chemist Ontario Ag'l College.

vested is concerned. But if the cost of producing a pound of gain is the same in each case, it makes a different story. Let us assume that the cost of a pound of gain is 7c. in each case, or \$21.00 for each steer, and we have the following:

	Total cost.	Selling price	Net profit.
1,000-lb. steer ..	\$61.00	\$65.00	\$4.00
1,200-lb. steer ..	69.00	75.00	6.00

From the above it will be seen that the whole question depends upon whether the lighter steer takes less food for a pound of gain than the heavier steer. Reliable investigations show quite conclusively that young animals make more economical gains than older ones, so that if the difference in weight of the two steers under consideration were due entirely to a difference in age, it is safe to assume that the 1,000-lb. steer would make cheaper gains than the other, and would probably prove just as profitable at the same cost per pound, quality being equal. On the other hand, a stunted animal is always unsatisfactory to feed, and if the steers were the same age (or practically so), it is a pretty safe assumption that the heavier steer is to be preferred, though there is a lack of experimental evidence on this point. The question of heavy weight must not, however, be pushed too far, because the very heavy steers are likely to be too old for the most economical gains.

If steers are bought late in the fall, it is safer to buy such as are in good condition. If, however, they are bought early in September, and the purchaser has a field of rape, with water handy, and an adjacent patch of grass to give variety, comparatively thin steers are preferable. They cost less money, and will make better gains on the rape than fatter steers, going into the sta-

ble in good condition for feeding. This does not mean that extremely thin, half-starved animals are to be preferred. In all cases, the thrifty-looking steer is the safest to buy.

Another point in buying steers is worthy of careful notice. When the farmer has finished steers to sell, the buyer is particular about the question of fasting, and usually takes good care to have them stand for a time before going on the scales. This is perfectly legitimate business; but the farmer who buys by weight must look out that he does not buy full steers and sell fasted ones. It is a comparatively easy matter to increase the weight of a steer anywhere from 50 to 100 lbs. by filling his stomach with grass and water, and the man who buys full steers by weight is probably paying the equivalent of a quarter of a cent per pound more than the same steers would have cost had they been weighed in proper condition. A little lack of shrewdness just here may swamp all possible chance of profit.

The question of how much difference per pound there should be between the buying and selling price in order to insure a profit, is a difficult one to answer. In our experiments at the College we find that when steers are weighed in good condition when purchased—that is to say, when they have had a reasonable fast—we can obtain fair prices for the feed used if the selling price exceeds the buying price by one cent per pound. This applies to cases where the feeding period is about six months, and implies very careful feeding. To be really safe, however, one should have at least 1½c. per pound of a difference. It must be borne in mind, however, that the man who sells his grain, hay, etc., in the form of beef, can afford to sell these products for a lower price than the man who teams them out and sells them in their original form, because the former can produce them at a lower cost. Suppose that A is a farmer who sells most of his products on the market and feeds very few animals, and that B is a farmer who feeds nearly all he grows, or possibly a little more. A teams out his oats and sells them at 35 cents a bushel. B feeds his oats to cattle, and when he reckons up finds that he received only 30 cents per bushel. But A's farm has become so impoverished that his oats yielded only 40 bushels per acre; while B's farm, owing to the liberal treatment it has received for years, gave 70 bushels per acre. Which man has the greater profit? The mere selling price of an article gives no idea of the profit obtained. The cost price must always be taken into the reckoning.

The question of feeding has been pretty fully dealt with in the last issue, so that it is not necessary to dwell upon it here. However, since meal is the most expensive part of a steer's ration, a summary of four years' experiments at the College may not be without interest.

1. In the average of four trials, a comparatively heavy meal ration gave slightly larger but more expensive gains than those obtained with lighter rations.

2. In the average of four trials, the most economical gains were obtained by commencing with about one-third of a pound of meal per day per hundred pounds live weight of the animals, and gradually increasing; the rate of increase being such that on the average of the whole feeding period, the steers received one-half of a pound of meal per day per hundred pounds of their live weight.

3. A finished steer is fed at a loss; therefore, in economical feeding, an effort should be made not to have the animals finished for any considerable time before they can be disposed of.

4. The method of feeding recommended is suitable for somewhat long feeding periods. Shorter feeding periods would call for a more rapid increase in the meal ration.

G. E. DAVY.
Ontario Agricultural College.

Pulping Roots for Fattening Stock.

Some of the most successful fat-stock feeders—the men who make a special feature of bringing out highly-finished heaves for the Christmas fat-stock shows—seem to be gradually reverting to the old-time practice of giving their animals the roots fed to them whole instead of being pulped or sliced. One of the most extensive, and also one of the most successful, exhibitors in Ireland has of late years been adopting this practice and we believe, with better results than he obtained when he followed the more general plan of pulping the roots before giving them to the animals. The reason advanced for the superiority of the former plan is that when the roots are fed in this manner the animals have to spend a longer time in eating them, and this induces a freer and larger flow of saliva than if the roots were given in a prepared state. The result of this increased secretion of saliva is that the animals digest their food better and maintain better appetites. For a similar reason the gentleman above referred to approves of giving a certain proportion of the hay or straw used in the feeding of his fat stock in a long and unchaffed condition, his argument being that when given in that condition it is less liable to cause impaction of the third stomach or manplies than when given in a finely-cut or chaffed condition.—(Farmers' Gazette.)

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Bacon Hogs for Profit.

In raising bacon hogs for profit, as well as in all kinds of stock-breeding, there are two prime essentials: judicious selection, and careful feeding and management. The females should be either pure-bred or got by pure-bred sires, and should in every case be bred to pure-bred sires.

Two years ago we purchased a cross-bred Yorkshire-Chester sow pig from pure-bred stock on both sides, and in turn bred her to pure-bred Yorkshire and Berkshire sires, with equally good results. We are using Tamworth now. We have reared several litters and sold them at from 5½ to 6 months old, averaging from 195 lbs. to nearly 215 lbs. each, receiving current rates, 5½c. to 7c. per lb., live weight. The last load, sold about two weeks ago, averaged nearly 215 lbs. at about 5½ months old, and were, consequently, too heavy for highest rates.

We always give our pigs, and especially our breeders, plenty of yard room for exercise, and, when practicable, allow them to run in the fields. We keep the breeders in fair condition, giving a very little pea and oat chop and water, and during the winter a liberal supply of mangels. About a week after farrowing, the feed is increased and strengthened by adding more chop. The feed is usually steeped for 12 hours. The pigs are weaned at from 7 to 8 weeks old, having by that time begun to feed well at a separate trough placed for the purpose, so that when removed from the sow they continue to improve right along. They are then given whatever milk is available, with a little chop, and plenty of opportunity for exercise. They are kept in a good growing condition until from 3½ to 4 months old, when the feed is gradually increased and strengthened to the utmost limit. We grind peas, corn and wheat with oats, and vary the ration by giving potatoes boiled with peas or wheat, and sometimes give peas or corn whole. The rule is to give three meals a day, and as much as they can possibly eat, so that there is no room for a "squeal."

During the winter season we keep the pens quite warm and dry, and have the sleeping quarters raised a few inches higher than the floor, and are as careful to keep them clean as we would be in the case of horses or cattle. We are also particularly careful that pigs of all ages have proper exercise during the severe weather.

Now, similar results can be obtained by any farmer who goes about it in a businesslike way. He must start off with properly selected stock, and good well-bred stock can be had at reasonable rates, and none but pure-bred sires should be used. Then, having the proper stock and abundance of feed, the secret of success lies entirely with the feeder, and in our case he deserves all the credit. We have only kept strict account of feed used long enough to know that we were formerly selling our coarse grains at an exceedingly low rate. D. MACKENZIE. Middlesex Co., Ont., Nov. 2nd, 1901.

The Death of John McMillan.

(Born 1824; died Oct. 31st, 1901)

A peer among agriculturists has fallen. John McMillan is dead. Born in the parish of Kirkconnell, Dumfriesshire, Scotland, he came to Canada in 1843, settling in the township of Hullett, Huron Co., Ont., where he since lived, having acquired a competence and making his mark in municipal, provincial and Dominion affairs. He assessed the township of Morris when it contained only nine settlers, and was assessor of the township of Hullett for nine years, and also reeve of Hullett for about fifteen years. He was first elected to the Parliament of Canada in 1882, representing what was then Centre Huron for one session, when he retired. After a redistribution of the constituencies, he was again elected for South Huron in 1887, and continued to represent that constituency until 1900. His thorough knowledge of agricultural subjects, coupled with his sound judgment and superior ability as a debater, soon brought him to the front, and he was recognized by men of both parties as one of the very foremost agricultural members in the House, and for several years he occupied the important position of chairman of the Agricultural Committee, one of the largest and most important committees of Parliament. In order to keep himself posted for his duties as a representative of the people, he travelled frequently among farmers, going through Manitoba and the Northwest carefully with that object in view. In 1880 he was appointed a member of the Ontario Agricultural Commission, and was also a member of the Advisory Board of the Ontario Agricultural College, and at one time, during the absence of Prof. Brown, delivered with great acceptance, a course of lectures to the College students. President Mills has often said that had it not been for the aid he received from the late John I. Hobson and John McMillan, the Farmers' Institutes of Ontario in their inception might have proved a failure and the College itself would have had much more trying experiences. John McMillan's career furnishes a striking

example of what Theodore Roosevelt calls the "strenuous life." Whatever degree of eminence he attained was without any of the favoring advantages with which so many start out. He never attended school a single year in his life, and yet his knowledge and attainments were remarkably varied and profound, showing how widely and thoroughly he had read. In his early youth, and owing to his father's poor health, he was rocked in the lap of poverty, and before coming to Canada, although only a lad, he worked in the New Mains Iron Works, Lanarkshire, Scotland, for a period of 18 months, every day in the week from 4 o'clock in the morning till 10 o'clock at night, in order to provide himself with sufficient funds to cross the Atlantic. For years in the wilderness of Huron he struggled under most straitened circumstances, finally becoming, as our readers well know, one of the most extensive and successful farmers and stockmen of the country, carrying on a large business as a feeder and exporter of beef cattle. His contributions to our columns on agricultural and live-stock subjects were vigorous, practical, and greatly appreciated by the farming community. So far as we remember, the last article of importance from his pen was published in the "Farmer's Advocate" for January 15th of the present year, dealing with "The Need for an Efficient Railway Commission," which was extensively quoted and commented upon in the newspaper press at the time.

Genial and social in disposition, he was a most entertaining conversationalist. Coupled with great natural ability were positive convictions and a high sense of rectitude that left behind an unstained record of 77 years, and an honored



THE LATE JOHN McMILLAN, ex-M. P.

name. Twice married, a widow, two sons (Robert and Thomas, of Huron) and one daughter residing in Reed City, Mich., survive him. The achievements of such a life in the face of all its obstacles should be a tremendous incentive to every young man upon the farm who has within him a spark of ambition to make a success of his chosen avocation.

Horses for Great Britain.

To the Editor "Farmer's Advocate":

Sir,—Canada has temporarily lost the footing she once held in the British market, through not using more English Thoroughbred or Hackney sires. That noted authority, Sir Walter Gilbey, Bart., says: "Practically all the best of the 15 hands 3 inches and 16 hands horses to be seen in the West End of London, in the park and the streets, are imported from the Continent, and are descended from English sires. Matched pairs of such horses would cost from \$1,500 to \$3,000, and are always in demand. From 1877 to 1880, Canadian horses sired by English Thoroughbreds found ready customers at the auction sales held in London, Liverpool and Glasgow. Matched pairs of carriage horses fetched up to 300 gs. (\$1,600). One pair sold to go to Paris for 250 gs. A pair of cobs fetched 320 gs. (\$1,900) at Glasgow; Hunters, \$500 to \$750 each. An officer's black charger, undocked and raised in the Eastern townships, reached \$1,500, and very few sales were then made under \$300. They could breed such horses in large numbers in Canada now, but they don't. JOHN DYKE, Twenty-one years Canadian Government Agent at the Port of Liverpool, England. London N., England.

HORSES.

Ranch Horses from the Western States.

During the past few months large numbers of ranch horses (often called bronchos, although they are not really such) have been imported into Canada and sold at public auction. It has been the writer's privilege to see quite a number of these animals, both during the time of sale and afterwards, when the happy (?) but anxious owners were waiting around with yards of new rope until the experts with the lasso would capture and throw their purchases in order that a halter or rope might be put on. A person wonders how it is that buyers for such things can be caught. Large crowds of men from the country and town collect at these auctions. We are again surprised to know that there are so many idle men in the vicinity. I think very few go there with the intention of buying—rather from curiosity. We find that prices range from a few dollars for a sucker up to \$70 or \$80 or even higher for a two, three or four year old or over. Most of them are undersized, many being not more than 14 hands, and few reaching 15; they have never been handled in any way, except during the operation of branding in early life. They are very wild, and not a few vicious. The vendor of these horses knows exactly how to go about his business. He advertises that a certain number of horses from a certain State will be sold at public auction on a certain day at a certain place, he enlarges on the breeding and individuality of the animals and the excellent opportunity for farmers and others to secure some well-bred stock at reasonable prices. The day and hour of sale arrives, the owner of the horses, with one or more assistants, and the oily-tongued auctioneer, are present, and a crowd of men and boys. The auctioneer delivers an oration, enlarging to a greater or less degree, according to his powers of oratory, upon the merits of the horses he is about to sell. In some cases he says that they are all to be sold as sound, and that if a veterinarian should pronounce any unsound he is returnable. The vendor will probably also favor the crowd with a sample of his eloquence, impressing upon his hearers the wonderful opportunity he is giving the Canadians of securing well-bred young animals and brood mares, thereby infusing a little good blood into the future stock of the country. He will enlarge upon the breeding of these "critters," and name some of the best "blood" in America without definitely committing himself to any particular individual as a sire. The auctioneer and vendor having, to their own satisfaction, by their eloquence, infused a desire to buy into the many breasts of those present, one of the horses is driven out of the enclosure into a yard of considerable size. The auctioneer stands in the center, the crowd around him, with a few scattered about the paddock. The owner and assistants are in different parts of the grounds, each with a big whip, driving the frightened animal around the outside and shouting out what a fine animal it is and how well bred, being Hambletonian and Morgan or Clay and Hambletonian, Hambletonian blood always being present. He has probably never been under such conditions before; he is in a strange place; he is excited, and the cracking of the whips and shouts of the cowboys keep the excitement up; his head is held high, his ears pointed, eye full and bright, and his action light, high and elastic. He shows his best style and action, and looks much higher than he really is. If he break into the canter or gallop, the owner will shout at the crowd to let him trot. After the frightened animal has shown himself off to the satisfaction of the auctioneer, he asks for bids. By this time there are generally a few present—who probably had no intention of buying, and have no use for the animal—almost as much excited as the horse; they admire his style and action, think he will make a trotter, probably a race-horse that will win a fortune on the turf; else there may be a colt at home that this one will mate; but with different ideas of a brilliant future, they become filled with an ardent desire to own him, and bidding commences. The aspirants to ownership stand up and bid like little men until at last he is knocked down to the bidder with the longest purse or greatest staying powers. This animal is now turned out of the paddock and another driven in, when the programme is repeated. If at any time the ardor of the buyers should cool and the owner thinks that the horse is not fetching as much money as he should, he will tell those present what he thinks of them, using, in most cases, language more expressive than eloquent, deploring the fact that they have not got enough sense to recognize a good horse when they see him. At last they are all sold. Some are sorry they did not buy, others are sorry they did, but the greatest sorrow is yet to be known. An hour is fixed at which the operation of catching and haltering the horses is to commence, it being one of the conditions of the sale that the vendor catch and halter each animal. At the appointed

time, the purchasers (having in the meantime secured long and strong ropes and halters) are on hand and the fun commences. An animal is driven into a small paddock. If there be a post in the ground about six or eight feet from the fence all the better. The vendor and assistants are in the paddock, each with a lasso; the crowd standing on fences, wagons or anything that keeps them out of danger and gives them a view of the ring. The purchaser of the animal under immediate consideration is on hand with



MAYFLOWER.
First-prize Roadster at Winnipeg Industrial, 1901. Half-sister to Ellis Medium.
PROPERTY OF W. H. GALBRAITH, HARTNEY, MAN.

his rope. As soon as the horse reaches the paddock he is forced into a corner and a lasso is thrown and his fore feet caught; he at once commences to buck, the rope comes in contact with the post mentioned and the animal goes head-long, with great violence, to the ground, he is held there, or if he should regain his feet, another lasso is thrown over his head and tightened around his throat; one man pulls one way on this lasso and the other the opposite way on the other, and between choking and pulling the feet from under him, the poor beast is again thrown and a halter put on. In addition to the halter, there must be a long, stout rope tied around the neck. The new owner, with two or more assistants, then takes the rope. The vendor has now fulfilled his contract, gets his money, and the animal is allowed or forced to rise, and away he goes. The amount of bucking, kicking, plunging, sulking, lying down and refusing to move indulged in by the horse, and the amount of time spent, perspiration lost, clothes torn and soiled and profanity indulged in by those in charge, depends to a great extent upon the individual peculiarities of horse and men. Each animal, while under these trying circumstances, manifests peculiarities not noticed in others. The same may be said of the men who undertake to lead one home. A performance like this gives a spectator an excellent opportunity of studying equine and human nature. The usage these animals are subjected to both during and after the lassoing act causes greater or less injury in the way of bruises, burns from ropes, sprains, etc. In case of pregnant mares it usually causes abortion. In some cases an animal, if intelligently handled, is got home without great difficulty, but the most of them give a lot of trouble, and some are killed, either from injury received from falling, over-exertion and excitement, or other causes, before they reach their new owners' premises. After getting an animal home, the owner must exercise a great deal of patience, time and skill before his purchase can, with any degree of comfort or safety, be either driven or ridden, and in the meantime he may have broken harness and rigs to nearly as much value as his original cost, and possibly some of the owner's bones. After more or less trouble and expense, we will suppose he has become safe to drive (many of them never do), and then the owner may ask himself the question, "Well, after all, what have I got?" He is a little bit of a fellow, fit only for drawing a light load over good roads, and not very fast, after all; he is no use for farm work; no use as a delivery horse; not of sufficient size to sell well as a gentleman's driver. What is he good for, any way? Some of these animals are bought for brood mares. What sensible man would want to propagate the species? Our country has already too many inferior mares in the stud, and the addition of any of this class cannot be too greatly deplored. In mostly all cases the purchasers of

these animals have been sorry, and in many cases would be glad to sell out at a sacrifice. If a reputable local dealer were to collect a number of animals of different ages, advertise a sale and offer them at public auction, he could not get as much money for good serviceable animals, broken to harness and saddle, as these Western men do for their worthless trash. He would be asked all manner of questions about soundness, breeding, habits, vices, etc. Nothing in this case would be chanced, fault would be found with color, while with the Western lot it makes little difference what color the thing is, or whether it has any hair on its tail or any mane—everything goes. So long as those Western ranchmen, or the enterprising Yankee who buys up ranch horses and imports them into Canada, can find enough innocents among Canadians to buy his stuff at a profitable price, so long will the trade continue. But just so soon as Canadians wake up and refuse to be caught with such truck by these Western men will the trade cease. The sooner farmers, breeders and owners of horses in our Eastern Provinces realize that either as a work horse, driver, saddle horse or brood mare, most of these cross-bred prairie-reared Western horses are failures, the better it will be for our horse interests.

"WHIP."

Clipping Horses.

This is the season when a large number of horses are clipped. The practice is becoming more common every year, and while in many cases it is followed by good results, in others the contrary is the case. In the majority of cases where a horse has been well cared for, well groomed and blanketed early in the season, his coat does not become long and heavy enough to make clipping advisable. On the other hand, there are cases in which, notwithstanding the best of care, the coat grows so heavy that the

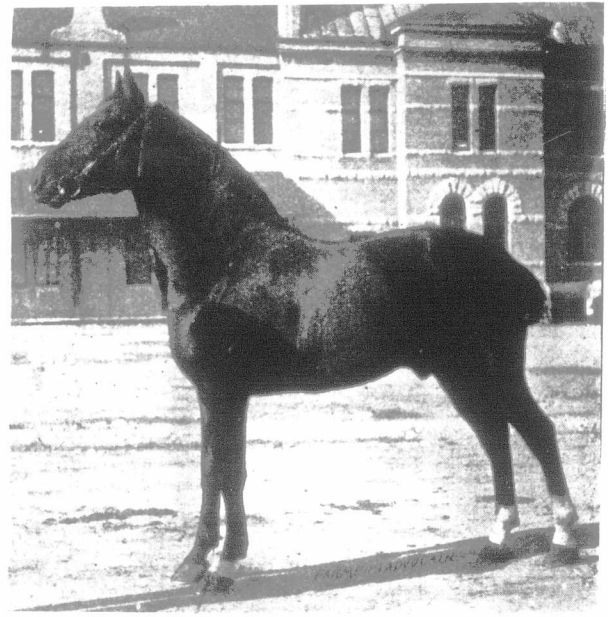


RIDING A BRONCHO.

animal perspires freely under moderate exertion and the hair becomes wet, it takes a long time to rub him dry, and if allowed to stand either with or without a blanket, he will remain wet for hours, in many cases all night, when he certainly cannot rest comfortably, will not thrive as he should and always looks rough; hence, it certainly pays to clip him, provided conditions are such that he can and will be kept comfortable both in and out of harness. A horse that has naturally a fine coat and with care exercised to keep it in good condition looks better than a clipped horse, quickly dries off after having perspired, and does not feel the effects of wind or cold nearly so keenly as if clipped, and will do his work just as satisfactorily on the same amount of feed. A clipped horse, provided the operation be well performed, looks very nice and smooth for a certain time after the operation, but after a few weeks, when the hair has grown some, it is uneven, dry, standing on end, and there is an absence of the gloss noticed on his unclipped brother. For horses that are used for driving purposes, unless the coat be short, clipping is probably advisable, but for horses for slower work, especially when short periods of standing frequently occur—so short that the driver does not think it necessary to throw a blanket on—the advisability of clipping is more doubtful. A clipped horse, to be comfortable and avoid risks of chill, etc., must be more carefully looked after as regards blanketing, avoiding standing in a draft or exposure of any kind, than an unclipped one. I think the average livery horse, for instance, would do his work better and look better on the same amount of feed if he were clipped, provided, of course, that he always was let out to a careful man; but, unfortunately, it is not always possible for the proprietor of a livery-

stable to choose his customers, and the man who hires a horse for a drive in cold or wet weather, may not intentionally neglect his comfort, but he in many cases is either ignorant or thoughtless, does not take the necessary precautions, and as a consequence the poor animal is the sufferer, and in such cases the effects are not merely temporary, but the cause of disease. It is claimed by those who advocate the clipping of all horses, that suppose two horses, one clipped and the other unclipped, be driven hard for a long distance in cold weather and then allowed to stand tied out in the cold, there is greater danger of the unclipped horse becoming chilled or being attacked by disease of some of the internal organs than of the clipped animal, claiming that the unclipped horse will have perspired much more freely and his coat have become wet with the perspiration, and when allowed to stand the cold and wind acting upon the wet coat chills more quickly than the same influences acting upon the clipped horse, which they claim is not perspiring. While it must be admitted that the unclipped animal perspires more than the clipped, it must not be supposed that clipping checks perspiration entirely, and although the absence of hair to hold the perspiration and the consequent apparent absence of moisture be noticeable, at the same time the horse is perspiring, the circulation is increased as in the unclipped horse, and consequently the general temperature of the body is increased. The cold and wind striking upon the practically unprotected skin has a much more injurious effect than upon the wet hair of the unclipped animal, for even though the hair be wet, the surface of the body is protected by it from the direct action of the elements.

The proper season for fall clipping is between about the 20th of October and the middle or at the latest the 20th of November. If clipped earlier than about the third week in October, the flies, on fine days, torment the animal greatly and the hair is growing so fast that by the time the cold weather comes he has nearly as much coat as though he had not been clipped at all. Then, again, if the operation be deferred beyond the third week in November, the growth of hair will not be sufficient to afford any material protection during the whole winter. In some cases clipping is not done until the extremely cold weather has set in, when the result is often serious. The violent change from a heavy coat of hair to practically a bare skin renders the animal very susceptible to cold and chill, and unless extreme care be taken to avoid this there is great danger of diseases of the respiratory organs. Even though this should be avoided, we notice that the legs of animals clipped at this season usually suffer from severe attacks of scratches, often extending well up the limbs; the legs swell and break out in cracks and sores, which cause more or less lameness and are very hard to treat. This condition is caused by the extreme change in covering during severe



HACKNEY STALLION, PROMETHEUS.
Sire, Rufus Jr. 325. Second prize, Madison Square Garden, New York. First prize, Wisconsin State Fair. One of the Galbraith importations to Manitoba.

weather; the same protection cannot be given to the legs as to the body, the cold checks the circulation, with the above-mentioned results. Horses that have been clipped early in the fall can be again clipped during the winter without suffering as described. Hence, if a person decides upon clipping his horse, he should have it done before the season is too far advanced.

Elsewhere in this issue, "Scotland Yet" reports a unique and encouraging order recently received in Scotland for 150 pure-bred Clydesdales to go to Cape Colony, South Africa.

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FARM.

A Sugar Beet Excursion.

(By a "Farmer's Advocate" representative.)

Sugar Beets! Sugar Beets!! Sugar Beets!!!—were the words to be heard on all sides on a special excursion train which left Berlin, Ont., Nov. 5th, for Bay City, Saginaw, and Caro, Michigan. There were about one hundred passengers on board, all bound to learn what they could at these places about the growing of sugar beets and the manufacture of beet sugar. The bulk of the excursionists were farmers from the neighborhood of Berlin, but in addition to these were several citizens of that busy town, besides delegations from Walkerton, Clinton, Baden, Guelph, Galt, and London (including a representative of the "Farmer's Advocate"). Mingling very sociably with those of less note, among others were Dr. Mills (President of the Ontario Agricultural College), Professor Shuttleworth, L. J. Breithaupt (M. P. P.), G. H. Bowlby (M. D., mayor of Berlin), and the Editor of the Walkerton Telescope. Mr. Hagedorn, of the Berlin Board of Trade, looked after train arrangements, and Mr. De Bus, representing the Berlin News-Record, a very jovial member of the company, saw to it that all were decorated with a badge,

country takes high rank and is well adapted to the raising of sugar beets. The question is, will it pay? Is there money in it? That is just what the delegation went over to Michigan to get information on.

AT THE MICHIGAN FACTORIES.

They visited three factories in Bay City, one in Saginaw, and one in Caro. Several miles before reaching Bay City, however, signs of the industry were noticed in heaps of beets covered with tops in the fields, some pitted, and in train-loads of them on the sidings. In the neighborhood of Bay City and Saginaw, also, the land is very flat, the soil deep clay loam. Many farmers were interviewed and information got at first hand. Unusually good opportunity was given for this from the fact that the beet sheds were nearly full, so that only a few teams could unload at once; and as the roads were good, the beets ready, and everybody wanted to haul, the jam and consequent waiting was considerable. At one factory 150 loads were counted on the street waiting their turn to get weighed and unloaded. The usual question of the Canadians, with utter disregard of grammar, was, "Well! how's sugar beets?" And the invariable answer, equally regardless, "Sugar beets is all right." The rise in the value of farm lands has been very marked. On any good road within three or four miles of a factory land now sells at \$100 per acre. It has advanced in price from 50 to 75 per cent., say some. One prosperous-looking, intelligent farmer said he thought 33 per cent. would be nearer the

who owns neither land, horses nor implements, and yet had 1,160 acres of beets this season. He rents the land, hires all the labor, and pockets the overplus received, which is said to be very considerable. His ambition is said to be to have 3,000 acres in beets.

SOIL PREPARATION AND CULTIVATION.

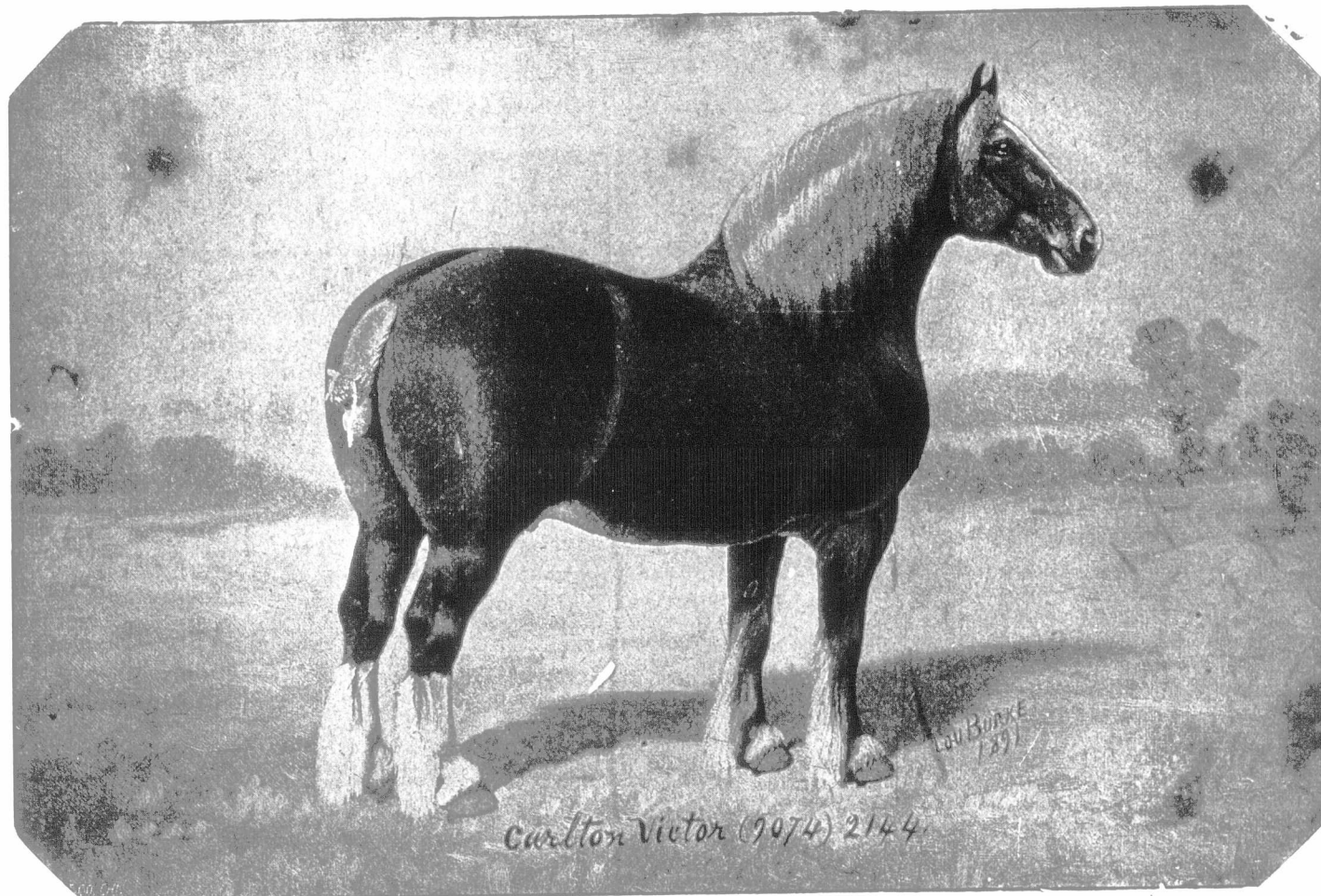
In preparation for the crop, deep fall plowing, with spring cultivating, is recommended and generally practised. Some, however, say they have the best results by plowing in the spring only. The ground is well worked and sown as early as possible after grain seeding. From 10 to 15 lbs. of seed per acre is sown. Some sow with ordinary drills, some with seeders made specially for sowing beets, sowing four rows at a time. The rows are from 20 to 22 inches apart, and are always sown on the flat. Cultivation is begun when the plants are quite small, and the thinners are set to work. Near Bay City, Polish women do the most of this work, earning \$1 per day. Boys and girls, who can do the work quite as well as men, are also employed. As one fellow said, "You can't get men to go down on their knees and pull with their fingers all day." In thinning, the rows are first blocked out with a hoe from 6 to 8 inches wide, a bunch of plants about an inch long being left at each stroke, and these have to be thinned with the fingers. One man said the hoe was never used again, another said he had part of his crop hoed once after thinning and he could tell to the very row where it had been done. He said: "I don't believe

there is a crop grown that responds so quickly to cultivation—I could notice improvement every time I cultivated." This was at Bay City, where the farmers seemed to us behind the times. They are coming up fast, however, under the spur of the beet industry. At Caro, where farming seemed much further advanced, it is the rule to hoe twice after thinning. Cultivating is done three or four times, the more times the better, they said. At the last cultivating a shovel is put on to slightly hill up the beets so that there may be as little above the ground as possible. Some use a one-horse cultivator doing one row at a time. Others a one-horse cultivator doing two rows. Others, still, a two-horse cultivator doing four rows at once. Where the beets have been sown with a 4-row seeder, this last named implement is easily worked, the operator needing to watch only one row. In harvesting, the rows are first loosened with a beet puller, an implement which goes down deep on either side of the row and loosens without touching the beets. Many use and some prefer an ordinary subsoil plow, going right under the row. The beets are then gathered, no pulling being required, knocked together to clean the dirt off, and thrown into heaps, where they are topped. In topping, quite a slice is taken off, no green surface being wanted. In regard to hauling to the factory, the bargain generally is that one third of the crop can be hauled in each of the months of October, November, and December. A great many are sent

by train, the farmer paying 40 to 50 cents per ton, according to distance, the factory unloading free. In pitting, tops may be put on, but no straw, as straw cannot be separated from the beets at the factory.

DELIVERING AND SAMPLING THE BEETS.

When a farmer brings a load of beets to the factory it is first weighed: then during the unloading, a basket holding rather less than half a bushel is brought to him and he fills it, not with his hands, but with the fork with which he does the unloading. This sample basket of beets is then taken to the laboratory, where it is weighed. The beets are then trimmed properly, all the space on which leaves have grown being cut off, also all green surface, if any; then washed, again weighed, and the tare determined. This varies from 2 to 20 per cent. The average tare at the Bay City factory last year on 80,000 tons was 9 12-100 per cent. The sample beets are then ground up, the juice expressed and the per cent. of sugar found, a skilful chemist being employed. The average of sugar in those 80,000 tons was 14 per cent. The price given was \$5.15 per ton. That is on a basis of \$4.50 per ton for 12-per-cent. standard. The very best soil for beets is said to be clay loam. In the country about Caro, through which a number of the party took a drive, and which much more resembled Ontario than any other place we saw in Michigan, there was a variety of soils, varying from light sand to stiff clay, and the beets were superior to those seen at Bay City and Saginaw, where the soil seemed to be ideal. One farmer said that some of the very best crops he knew of



CLYDESDALE STALLION, CARLTON VICTOR.
PROPERTY OF ALEXANDER GALBRAITH, JANESVILLE, WISCONSIN.

in the exuberance of his generosity not omitting conductors, brakemen, bell-boys and others. As was to be expected, a large proportion were Germans, who talked to each other in what to most of us was unintelligible speech, except that frequently could be heard in plain English the words "Sugar Beet."

FACTORIES PROJECTED IN ONTARIO.

The idea of having beet-sugar factories in Canada is spreading very fast. One of large capacity is at the present time being built at Wallaceburg, and a great future is being confidently predicted for it. The Ontario Sugar Company is already organized and will build a factory at Berlin in time for work next season, if the by-law to be voted on this month in town and township is carried; if not, they will build elsewhere. Their plant will cost \$575,000, with a capacity of 600 tons of beets per day. It was to enter the employ of this company as chief agriculturist and chemist that Professor Shuttleworth resigned his position at the Ontario Agricultural College. Besides these, companies are organized or being organized, acreages contracted for, sites selected for sugar factories, and in some cases charters applied for, at Walkerton, Baden, Galt, and Dresden. The three first-named places had energetic representatives in the delegation, as had also Guelph, which has a company and factory as yet in intention only. These projects may not all materialize, but some of them almost certainly will. The results obtained from test plots throughout Ontario (analyses not quite completed) so far as known show that both in yield per acre and percentage of sugar this

truth. He said, moreover, that times had completely changed. Mortgages were now being paid off, and farmers were getting good waggons, harness and implements. Another voiced what seemed to be the general opinion of the situation when he said: "You can't just tell about prices. Three or four years ago land could hardly be sold at any price, now it can hardly be bought."

THE CASH RETURNS PER ACRE.

The average yield per acre is 10 to 12 tons. Some crops have yielded as high as 24 tons. On the other hand, one farmer had in one load all he had grown on 1½ acres. His land had been flooded with water. The actual entries in last year's accounts of the company operating at Caro showed the acreage and money paid to 70 farmers. While independent testimony was given to the effect that these were not picked entries, but were given in the order in which they appeared in the books, one could not but think that they must be above the average. Number of acres in beets varied from one to ninety-three, with an average of seven acres each. The money paid was from \$40 to \$120 per acre, with an average of \$83.35. About \$55 per acre, according to other sources of information, is about the average return.

Many varying opinions were given as to the cost of producing an acre of beets. So much depends on the man who is in charge and also on the amount of labor done. The average, counting everything, including rent, which is from \$6 to \$8 per acre, would be about \$35. There is a Mr. Gilbert in Bay City, called the "beet king,"

were grown on sandy land well manured. Not much manure is used. Michigan is no stock country. The pulp from the factory, which is said by the very few who use it to be splendid stock food, is piled up, spread over acres, and rotting.

The whole delegation returned home very much impressed with the possibilities of the sugar-beet industry. The homeward-bound train, before getting away from Caro, was stopped, and a photo of passengers, train and sugar factory was taken. As we scrambled on board again, one of the high officials of the factory—a fine-looking man, energetic, clean-cut, exceedingly friendly—called out: "Good-bye! Good-bye, Canucks! I'm a Canuck myself."
(To be continued in next issue.)

Corn Growing in England.

The cultivation of Indian corn as a fodder crop in a country so well adapted to its growth as is Canada for the most part need no longer be considered problematical when we learn that in England it is not only being grown by market gardeners to meet the wants of American visitors for "roasting ears," at the large hotels in the metropolis, but also to an increasing extent by dairy farmers for keeping up the flow of milk in their cows in times when the pastures fail, and also for ensilage purposes. A writer in a recent number of the *Agricultural Gazette*, of London, has this to say of its use in this connection:

"Concerning maize as a food for live stock, I find this year, instead of experimental lots in

Building a Corn Crib.

Would you kindly give me the dimensions for a corn crib that will hold 500 or 600 bushels of corn: length, width at bottom, width at plate, across the end, and height from sill to plate, etc., amount of lumber required, and estimated cost complete, etc., and any further information that would be of benefit. There was a very large amount of corn raised here this year, and the question arose about corn cribs. If you have any cuts and explanatory notes on the subject I would be much pleased to receive them.

W. H. C. ROBLIN,

Sec.-Treas. Tp. Ameliasburg Ag'l Society,
Prince Edward Co., Ont.

Corn cribs should not be made too wide. Make sides of strips about 3 inches wide and one inch apart. A crib 2 ft. 9 ins. wide at bottom, 4 ft. wide at plates, 6 ft. high and 45 ft. long, filled level with plates, would hold 573 bushels. If rounded above plates as a bushel is heaped it would hold about 700 bushels. Your lumber dealer could tell what lumber it would take, and the cost, better than we could. Put on a good roof to shed the wet. Cribs are usually set on cedar posts so that bottom is a couple of feet above ground. Do not connect it with other buildings, on account of rats and mice. Some invert tin pans on top of posts to prevent the ingress of these pests.

A Portable Live Stock Loader.

The illustration given herewith of the stock-loading truck shows a very useful and handy loader for farmers in loading hogs, sheep or cattle out of pens or yards. The bed pieces are 2 by 6 inch scantling, 11 feet long; crosspieces

each side, should be 5 feet long, made similar to a pump-handle, fastened by a bolt passing through the center of the middle uprights and a piece of iron 6 inches long bolted to the bed pieces. The levers are fastened to the axle by a bent iron bolted to under part of levers about 11 inches from where the bolt passes through end of lever. Two hooks are required in the bed pieces for holding the levers down when wheeling the truck from one place to another in the farm-yard.

DAIRY.

Good Butter Under Adverse Conditions.

To the Editor "Farmer's Advocate":

Replying to your inquiry as to the methods employed in making my butter which obtained a high score at the July exhibit at the Pan-American Exposition, I will say that I followed my usual method, which is as follows:

Milk is separated by centrifugal separator, as soon as drawn from the cows, and is all the product of my own herd. As soon as the milking and separating is finished, the cream is taken in an ordinary shotgun can and placed in a tank of well water with a temperature of about 60 degrees F., where it is stirred with a long-handled dipper to air and cool it. It is held at about this temperature until enough for a churning is obtained, usually about three days. It is then mixed in a large can and held until the next day, when it is churned at a temperature of 60 to 62 degrees F.

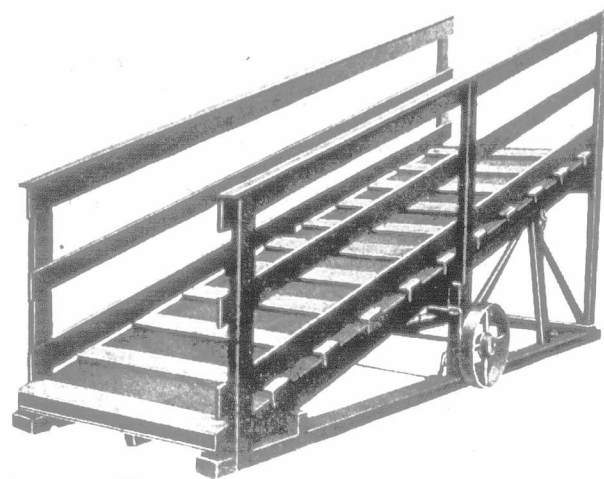
I use no starter at all, but by holding the



RANGE CATTLE AT SANDHILL, CORRAL LAKE, CANADIAN NORTHWEST. GENERAL ROUND-UP, 1901.

different parts of the country, fields cultivated with maize similar to the regular crops for use as green fodder, and its value for this purpose has been clearly demonstrated this season on a farm owned by Mr. F. Skinner at Norton, near Evesham, Worcestershire, where it has grown to a height of six feet, and taking the whole area sown, its average height is about five and a half feet. On account of the drought affecting the feed, cows in this part of England, as in other districts, gave a greatly diminished flow of milk, to the great loss of dairy farmers and others that by contract have to supply a given quantity of milk for town consumption, but we learn from Mr. Skinner that the cows that he fed on green maize food that he cut from his field in August showed no falling off in their supply of milk. During the past summer, dairy farmers in England have known to their cost how greatly the nutritive value in the grasses they had sown and the pasture has varied on account of the drought, and in making the ration for their cows they have been greatly put about to obtain at a reasonable price such artificial foods as will tend to correct their deficiencies. In the main, this supplementary process has been accomplished by concentrated foods rich in albuminoids, but we should not be blind to the value of maize as a green crop. Moreover, it admits of being sown much later than most other crops: from May 15th to May 31st are the usual dates, and once the growth is started, it develops very fast. It can be cut green at any time during August and September that may suit the farmer, so that it is very profitable in case of a season in which the drought has materially affected the pastures and other grasses. Unlike the white crops, maize fodder can be harvested in wet weather, and takes little or no harm if promptly ensilaged."

2 by 4, 3 feet long, bolted on top of bed pieces, one at each end. The upright pieces at front end are 2 by 4 in., 3 feet 6 inches high; center uprights 57 inches high, back 6 feet high, each being bolted to the bed pieces, also bolted to the 2 x 4 scantling which supports the floor. The lower end of scantling resting on the bed pieces and back end on 1 1/2 by 6 inch board nailed across the uprights 3 feet 6 inches from the bed pieces. There is also a board nailed across the center. The floor is made of two-inch plank, with strips nailed across to prevent stock from slipping. Four boards 1 x 6 on each side are nailed to the uprights. The wheels should be from 12 to 14 inches in diameter; 1 1/2-inch gas pipe would answer for the axle. The two levers, one on



A LIVE STOCK LOADER.

temperature right can usually have it well ripened at the proper time.

Used no butter color, as it was not needed. The time occupied in churning, which is done in a square box churn, is usually from 30 to 60 minutes.

As soon as the butter comes to granules, the buttermilk is drawn off and about twice as much water at 58 degrees as we had buttermilk is poured into the churn. After washing, this water, which usually runs quite milky, is drawn off and the butter allowed to drain for perhaps ten minutes. It is then salted in the churn, with Moulton's Cadillac Dairy Salt, an ounce or a trifle over to the pound. The churn is revolved a number of times until the butter is thoroughly massed, when it is taken out onto a lever butter-worker and lightly worked and immediately packed in tubs, the tub used for the exhibit being a 20-lb. spruce. My storage room is an ordinary cellar, which in July in this latitude is pretty warm, so the butter was shipped the afternoon after it was made, and was, I suppose, something over a week old when scored.

The July butter was made under very adverse circumstances. The weather was the hottest ever known here, ranging from 100 degrees to 110 degrees in the shade. Pasture was dried up and gone. Water supply was, a portion of it, very bad.

Owing to scarcity of water, part of the cream was hung in the well to cool after being separated. No ice was used except to cool the cream to churning temperature and to pack tub of butter in for shipment. Butter was shipped 200 miles, by express to St. Louis, where it was placed in refrigerator car and sent through to Buffalo.

Calhoun, Mo.

H. C. GOODRICH.

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The Dairy and the Cow.

The following eloquent tribute to the twin benedictions, the dairy and the cow, from the pen of Mrs. W. B. Hunt, of Georgia, appears in a recent contribution to the Jersey Bulletin:

What is a dairy? Answering from my own experience, I should say, a place to make butter and poetry in. In the dairy is that occurrence of daily miracle—the transmitting of golden sunshine, through the blossom and the grass, into golden butter—and in this transmission is involved all the mysterious, subtle forces in the air above, the earth beneath, and the waters under the earth, whose sum total we call "nature," and whose understanding, "science."

In that invisible laboratory where the clod turns to a violet and the worm to a butterfly, and the egg to a thrush's song, and the dawn is painted on a seashell, there the glint of a sunbeam and perfume of a flower are caught and held in an envelope of silk. This is a butter granule. And it comprehends all things from star dust to flower dew. Its shape is that of the whirling worlds around the sun, and, like them, it obeys the concords of astronomy that hold and binds the universe. The scientist's microscope will tell you of "sugar of milk," of "casein," and of tangible solids; but only the poet's subtle sense will discover that, caught in that tiny gossamer envelope, is the song of the lark, the glow of the dawn, the ripple of streams, the balm of twilight, the breath of blossoms—all the mystery and melody of nature's rhythmic pulse-beats from buds of May to tawny leaves of autumn.

And in the making and conserving of these silken-covered atoms is comprehended, what? Agriculture, botany, chemistry, bacteriology, and all laws governing plant and animal life. And back of all, and involved in all, lies infinite human thought and labor that is allied to all science.

The cow herself—what is she? The deity of the dairy! Nature's own symbol! She is the Greek Astarte and the Syrian Ashtareth, and the Babylonian Mylitta, and the Egyptian Osiris and Isis. In every age and clime the personification of maternity, the object of man's adoration. Deified and worshipped by all priests and peoples, carved in stone in all pagan temples, with eyes of the same unfathomable calm she looks at us, as once she gazed on kneeling worshippers in Egypt.

With her from Asia into Europe came arts and science, letters, language and religion. Look at her and read the history of humanity! Every age and every clime have left their stamp upon her. From Rome to Gaul, from Gaul to Normandy, from Normandy to the Island of Jersey, thence to America, where modern science has perfected her. Thus has the cow become the exponent of man's highest civilization. "Measure it not by the height of his church steeples, or number of his schoolhouses, but look at the butter he eats!"

A Cheesemaker on the Stand.

With four or five vats of overripe milk, it is not easy to make first-class prizewinning cheese. Our biggest drawback is having to draw our milk so far. We have a good country, but a number send their cream to the butter factory, wanting to have milk at home for calves. The utmost care must be exercised, in the weighing-in of the milk, not to accept any tainted or overripe milk. In some cases we make up the second-class milk by itself, and let the senders take what it is sold for. We find we get the best satisfaction by setting our milk as soon as possible and heating to 94 degrees, until acid begins to develop, then cook to 98 degrees. By so doing, your curd is sure to be evenly cooked all through—not just tough cooked on outside and soft in center. You can also give more acid before dipping and not injure your cheese. We always use the rennet test to ascertain at what stage our milk is in. If it is too ripe, of course we cook to 98 degrees at once. We have used no starter so far, as we find the milk works plenty fast enough without it. We wash all curds after milling, with clean water at a temperature of 98 degrees; give plenty of stirring; do not pile too much except in cold weather; salt when it has a nice, mellow, silky feel. There is no fear of getting it to press too warm, unless you use too warm water for washing. Give lots of power. We have the old upright press; therefore, cannot make as nice a shaped cheese as the gang. The cheese should be turned in press every morning and pressed 17 hours, also turned in curing room twice a day in hot weather. Our curing room is not up-to-date; therefore, we cannot control the temperature as it should be. The grease was frying out of our cheese when we shipped them. We think the cheese at Buffalo scored extra well, considering the weather they were made in. We would advise every maker to have the inspector visit his factory, as it would pay supposing he had to foot the bill out of his own pocket.

Huron Co., Ont.

ALBERT MILLSON.

Sour Cream Tests.

It is not an uncommon practice for creamery patrons who own hand separators to deliver their cream but once in two or four days, or for creameries practicing the cream-gathering system to collect but two or three times a week. The cream which thus accumulates is often kept without attempt at cooling, and becomes more or less sour. It is well understood that cream which has partly soured in the hands of the producer is less apt to make a high grade of butter than is a cream which is kept cold and reaches the factory in a sweet condition. The producer, however, frequently argues that it does not make any particular difference to his pocketbook whether the cream sours or not.

The Vermont Experiment Station officers say that there is not only a chance that the sour cream may injure the entire lot of butter, but there is almost certain to be a direct financial loss to the dairyman in another way.

It is difficult and almost impossible to sample sour cream accurately, and it is difficult for the creamery receiving it to test it properly. Gas bubbles and increased viscosity or gumminess are at the bottom of the trouble. The error of sampling and testing will nine times out of ten be in the direction of a low result. In other words, the creamery patron who keeps and delivers his cream in a sweet condition will ordinarily get a higher test and a larger check than he who allows his cream to sour, even though both creams be really of exactly the same grade.

Testing Test Bottles.

Prof. Farrington thus describes a new method of calibrating test bottles. It is called the Trowbridge method, after a Wisconsin buttermaker of that name who introduced the method.

For several years he (Trowbridge) has been testing graduations of milk test bottles by means of a thirty-penny nail, which he filed so that it would displace exactly two cubic centimeters of water. He attached a small wire to one end of this nail, and, after filling the test bottle to the zero mark of the graduation with water, he dropped this nail into the neck of the bottle by means of the wire. If the water rose in the neck to the 10-per-cent. mark on the scale, when the nail was entirely submerged, then he knew that the zero and the 10 mark on the scale, or the two extreme points, were correctly placed. The intermediate graduations are easily tested by means of a strip of paper on which lines are marked corresponding to the graduations of one per cent. of the scale. This strip of paper is then slid along and compared with the lines in each of the one-per-cent. sections of the scale.

We accidentally ran across this method, and Trowbridge sent me one of his standards for testing the graduations of the test bottles. I have given it a thorough trial, and found it to be very accurate and a very simple method of inspecting the graduations of Babcock milk-test bottles. These standard measures are now made by an instrument-maker in Chicago. The instrument they make costs 75c., and is just the thing



COUNTRY HOME OF J. N. WELLS.

On the banks of the River St. Clair, between Corunna and Moorestown, Lambton Co., Ont.

The chances are always in favor of an inaccurate test. It is doubtful whether it is wise to urge a creamery to make any special efforts to test sour cream properly. It ought not, in the first place, to receive it, and, in the second place, if the patrons cannot see how much it is to their interests, as well as to the interests of the creamery to keep the cream sweet, an indirect fine may be laid upon them in this way by giving them the low test which sour cream is likely to receive.—(Vermont Experimental Station.)

"Off" Flavored Cheese.

Prof. Harrison, Bacteriologist at the Ontario Agricultural College, who has been investigating the causes of "off"-flavored cheese at several Ontario cheese factories, reports that there was "a combined bitter and somewhat aromatic smell in the curds, giving the cheese a bitter taste and somewhat bad flavor." He has found certain species of yeasts, bacteria and moulds, which he thinks are the causes, and will now proceed to a more scientific analysis. There was an infection of the cheese cloths, which gives them a red color. These yeasts were found on maple trees and fruit trees, and by some means, probably the wind and dust, they found their way into the cans, which probably stood under or near the trees. The whey being returned in the cans in which the milk was taken away helped to aggravate the spread of the infection. Infection was also caused, the professor says, by leaving the empty cans on the roadside exposed to the dust and dirt. Gas-producing germs were very numerous in the barns, "most of those examined being dirty, dusty and full of cobwebs."

that we have needed for a long time. With it every man who uses test bottles can test the accuracy of the graduations quickly and in a very satisfactory way.

Flavor in Dairy Products.

It is a known fact that the smallest particles, scientifically termed molecules, of substances are not in contact and that they are in motion, which makes it possible for milk when in an atmosphere containing odors to become charged with them. If the odors of manure, of urine, of ammonia, or any of those associated with the decay of organic matter, are in the air above the milk, the rapid motion of those molecules will cause some of them to descend into the milk and accumulate there, until they become so numerous that just as many tend to escape per minute as tend to enter. The milk is then saturated with the odor in question.

The warmer the air surrounding the milk the more quickly will the condition of saturation be reached, simply because the rapidity of the motion of the molecules increases with the temperature. For when the molecules of a foul odor are once inside the warm milk they travel or diffuse downward more rapidly because it is warm.

It is well known that odors and flavors result from the introduction of solids into milk, and that unless great care is taken, both in keeping stables and cows clean and free from dust, the fine dirt particles falling into milk, even though that amount be small, may readily dissolve and impart a strong flavor to it; thus, one careless milker may easily injure very materially the quality of that of a whole herd. It should ever be

kept in mind that a very little dirt is capable of being divided to an extreme degree, and that by means of the senses, taste and smell, extremely small amounts may readily be detected. Many flavors, however, are developed in milk after having been drawn and placed in the receiving can. Milk is a very nutritious fluid, and contains the necessary food elements for almost all life, from germs up to man; hence, not only must dirt be kept out, but also those germs which have the power of reproducing themselves in milk and producing undesirable odors and flavors, thus injuring the quality of the milk. The objectionable germs are liable to fall into the milk along with the dust particles, as well as by means of dirty milk cans or other receiving vessels. Hence, we see that the brushing of the udders and flanks and the wiping with a dampened cloth before milking is backed up by scientific reasons as well as practical experience. In this connection, dusty feed, such as hay or straw, or bedding, should not be handled in the stable within half an hour of milking, so as to allow the dust particles to have settled before the milk is drawn.

Final Report of Pan-American Model Dairy Test.

The dairy tests at the Pan-American Exposition do much toward establishing the fact that for economical butter production the Channel Island breeds stand first. The paltry sum of \$4.66 between the profits of the Guernseys and Jerseys for the five cows in a six-months test leaves no room for claiming all the merit by either breed. A more thorough canvas for cows to enter the test or wiser selections by either breed might have turned the tide or widened this difference materially.

On the other hand, more evidence was brought forward giving the Holstein first place as the milkman's cow. Whether the inflexible rule of 9c. per pound for total solids in all milk was a just one seems to be a question; 9c. per pound, or \$1.08 for the 12 lbs. total solids in 100 lbs. of average Holstein milk 3 1/4 of which is fat, seems a little out of proportion in value to the 13.9 lbs. credited to Guernsey and Polled Jersey milk 4.6 lbs. of which is fat. At 9c. per pound for total solids the Guernsey milk was worth \$1.25 per 100 lbs., or only 17c. more than the Holstein. Figuring fat at 29.4c. per pound (butter at 25c.) and solids not fat at 2c. per pound (the price usually figured in calculating value of skim milk for feeding), the Holstein milk would be worth \$1.13 and the Guernsey and Polled Jersey \$1.54, a difference of 41c.

However this may be, according to the rules governing the test the Holsteins came out ahead by a margin of \$26.44, the Ayrshires came second and the Brown Swiss third in profit on total solids.

The Shorthorns have again demonstrated their ability to make milk and butter-fat and at the same time put on flesh. The five cows gained 882 lbs. during the test, which when credited at 3c. per pound brings them third in profit on total milk solids plus gain in live weight. The Shorthorns as a breed, however, made a profit on butter-fat of only \$172.84, as compared with \$210 to \$230 for the four special dairy breeds; while in total solids their profit was \$205, as compared with \$262 and \$235, respectively, for the Holsteins and Ayrshires.

The Shorthorn showing the greatest beef tendency (Daisy D.) put on 219 lbs. gain in weight, and made a profit on butter of only \$28.80, as compared with \$40 to \$59 for twenty-three out of the fifty cows tested. If this cow is worth keeping for dairy purposes, how are you going to market that 219 lbs. of beef and get the \$6.57 due?

The tabulation published herewith, and placing the fifty cows in the order of their net profit on estimated butter, makes an interesting study, and many valuable lessons may be worked out from it.

One of the most valuable things to be learned from it is the very wide difference in the performance of individuals of the same breed. If five individuals of each of these breeds, gotten together in most cases after considerable search and pretty careful selection among the available animals by men supposed to be good judges, show such a great range in earning capacity as we find here, what must be the case in the herds of even our most intelligent farmers who have been too busy or too indifferent to apply the test and scales to the individuals of their herds.

The following tabulation gives the best and

poorest cow, from the standpoint of profit on butter-fat, in each breed, with the number of position, average fat test, cost of feed, and net profit:

BREED.	Cow.	No.	Test.	Cost feed.	Profit.
Guernsey	Mary M.	1	5.36	\$29.16	\$59.40
	Medora F.	43	4.36	24.36	29.36
Jersey	Primrose	4	5.64	26.81	50.25
	Rexina	29	3.98	25.48	38.52
Ayrshire	Betsy 1st.	8	3.59	28.57	46.07
	Lady Flora	28	3.4	27.68	38.70
Holstein	Beauty	6	3.42	32.65	49.35
	Meg	33	3.25	34.11	36.60
Red Polled	Mayflower	2	4.45	28.69	52.10
	Tryste	40	3.68	27.15	31.59
Brown Swiss	Belle T.	19	4.09	28.38	41.23
	Nicola	42	3.25	29.18	30.35
French-Can.	Denise	21	4.03	23.52	40.64
	La Bouchette	47	3.67	18.65	22.94
Shorthorn	Miss Molly	15	3.71	32.36	43.01
	Daisy D.	44	3.43	32.38	28.80
Polled Jersey	Queen	16	5.63	23.60	42.89
	Phyllis	37	4.38	23.83	33.20
Dutch Belted	(Justina left out)	31	4.15	26.93	38.02
	Belle of W.	50	3.09	24.11	11.49

It is interesting to notice that in every instance the most profitable cow tested high (for her breed) and the least profitable one low. Is not this significant?

In several breeds the richness in milk in fat for the five cows is graded just in order to their position in point of profit. Notice the Jerseys in the order of their profit from highest to lowest. The tests run: 5.64; 4.74; 4.4; 4.27; 3.98. The

Procris (Guernsey); Rouen (French-Canadian); Ova (Polled Jersey); Liens Flora (French-Canadian); etc. This brings three French-Canadians and two Polled Jerseys within the first eleven places, the balance being Jerseys, Guernseys, and one Red Polled.

Of course, this question of per cent. of profit may be carried beyond reasonable limits. Take the French-Canadian cow La Bouchette, making 123 per cent. profit, and weighing 650 lbs.; add to her profit of \$22.94 the profits of Phyllis, a small Polled Jersey, and Luna, another French-Canadian; both these last-named cows made a per-cent. profit of 139. The combined profit of these three small cows is \$88.88, and the cost of feed for all three \$66.00. Compare this with the work of the two Holsteins, Tidy Abberkerk and Inka Mercedes. The cost of feed for these two large cows was \$65.42, or practically the same as the three small ones. They made a profit of \$81.38, or \$7.50 less than the three small cows made on the same feed. The question here resolves itself into one of whether the \$7.50 greater profit on the three small cows will pay for the extra labor in caring for and milking the third?

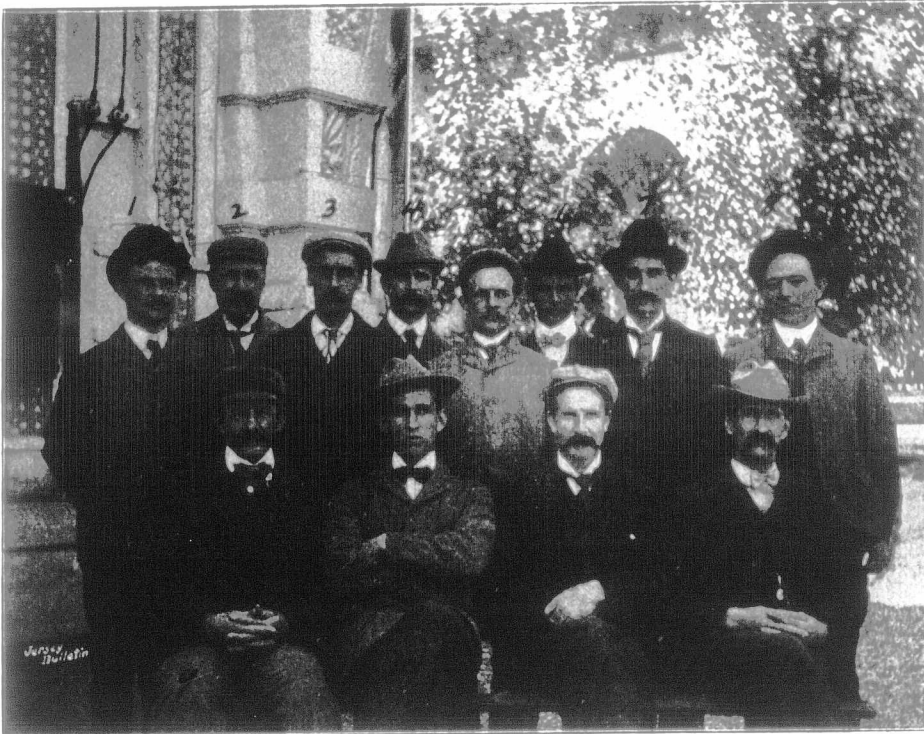
DE WITT GOODRICH.

MODEL DAIRY OFFICIAL AWARDS.

Following is a copy of the official announcement of awards in Model Dairy test.

"The Men Behind the Cows."

"THE BOYS" AT THE MODEL DAIRY BARN, PAN-AMERICAN EXPOSITION, WHO HAD CHARGE OF THE COWS UNDER TEST.



1. H. E. Crouch, Polled Jerseys. 2. J. Stonehouse, official tester. 3. Eugene Bacon, French-Canadians. 4. P. H. Davis, Brown Swiss. 5. F. R. Sanders, Dutch Belted. 6. S. I. Murphy, Guernseys. 7. Ronald Sager, Canadian Shorthorns. 8. R. E. Krider, Red Polled. 9. G. W. Clemons, over-seeer Canadian herds. 10. Robt. Donaldson, Canadian Jerseys. 11. Thos. Bradshaw, Canadian Ayrshires. 12. Jas. Cooper, Canadian Holsteins.

(From the Jersey Bulletin.)

Brown Swiss: 4.09; 3.8; 3.61; 3.45; 3.25. In nearly all the breeds this same uniform progression in richness corresponding with profit holds good, with slight irregularities in some.

Considered from a standpoint of per cent. of profit, or profit on each dollar's worth of food consumed, we find some surprises, and cows which stand well down in the list in point of total cash profit make a very good showing when it comes to per cent. of profit. This is especially true of the smaller cows, particularly the French-Canadians and Polled Jerseys. While the total yield of butter with them was comparatively small, the cost of feed was correspondingly low, so that the per cent. of profit was high. Applying this rule to the breeds as a whole is rather rough on the Holsteins, bringing them down to seventh place in per cent. of profit on feed consumed for butter; while, on the other hand, the French-Canadians come up to third place, and Polled Jerseys fourth.

In the tabulation of the fifty cows, I have added a column showing the profit made on each dollar invested in feed. This column changes the order of the cows to quite an extent, but none of this kind of figuring can move Mary Marshall from her secure position of first in profit. The column showing per cent. of profit puts the order of the cows like this: Mary Marshall, Primrose (Jersey); Queen (Polled Jersey); Mayflower (Red Polled); Cassionia (Guernsey); Queen May (Jersey); Denise Champlonne (French-Canadian);

I hereby announce the awards in the breed test in the Model Dairy, as follows:

The prize for net profit in butter-fat is won by the Guernseys by a net profit of \$4.66.

The prize for net profit in churned butter is won by the Guernseys by a net profit of \$5.86.

The prize for net profit in total solids is won by the Holsteins by a net profit of \$26.44.

The prize for net profit in total solids and gain in live weight is won by the Holsteins by a net profit of \$31.63. SUPT. LIVE STOCK. Buffalo, Nov. 3rd, 1901.

RESULTS OF MODEL DAIRY BREED TEST.

The following statement shows the standing of the ten breeds competing in the Model Dairy breed test in the different classes. All awards of prizes are based on the net profit, determined by the value of the product after deducting cost of feed.

BREED.	PRODUCTION OF BUTTER-FAT.		Cost feed.	Net profit.	
	Lbs.	Value.			
Guernsey	1248.69	\$367.09	\$136.99	\$230.10	\$1.68
Jersey	1234.96	363.22	137.78	225.44	1.63
Ayrshire	1219.44	358.66	140.98	217.68	1.54
Holstein	1275.85	375.25	164.69	210.56	1.28
Red Polled	1141.81	335.83	138.03	197.80	1.43
Brown Swiss	1123.15	330.34	147.26	183.08	1.24
French-Canadian	934.11	289.44	113.10	176.34	1.56
Shorthorn	1138.85	334.96	162.12	172.84	1.06
Polled Jersey	918.31	278.91	109.47	169.44	1.55
Dutch Belted	87.49	249.26	132.32	116.94	.88

PRODUCTION OF CHURNED BUTTER.

The yield of churned butter is computed from the actual results of one day's churning of each breed's cream from the milk of one day each week, and the yield for the week determined from this churning in proportion to the total milk yield of the breed for the week.

Owing to the lack of machinery during the first three weeks, no churnings were made. The amount of butter credited for the period was determined in a similar manner from the actual churning during the following weeks.

BREED.	Churned butter. Lbs.	Value.	Cost feed.	Net profit.
Guernsey.....	1429.43	\$357.36	\$136.99	\$220.37
Ayrshire.....	1409.15	352.29	137.73	214.51
Jersey.....	1415.57	353.89	140.98	212.91
Ayrshire.....	1430.28	357.57	164.69	292.88
Holstein.....	1319.45	329.86	138.03	191.83
Red Polled.....	1179.65	294.91	113.10	181.81
French-Canadian.....	1296.36	324.09	147.26	176.83
Brown Swiss.....	1307.55	326.89	162.12	164.77
Shorthorn.....	1080.25	270.06	109.47	160.59
Polled Jersey.....	977.10	244.28	132.32	111.96

PRODUCTION OF MILK SOLIDS AND LIVE WEIGHT.

BREED.	Total solids. Lbs.	Value.	Live weights. Gain.	Total cost feed.	Net profit.
Holstein.....	4742.57	\$126.83	391	\$11.73	\$438.56
Ayrshire.....	4183.30	376.68	218	6.54	383.22
Jersey.....	4086.58	367.79	802	24.06	391.85
Shorthorn.....	3943.92	354.95	198	5.94	390.89
Brown Swiss.....	3773.73	339.64	349	10.47	350.11
Red Polled.....	3774.93	339.74	195	5.85	345.59
Guernsey.....	3769.98	339.30	189	5.67	344.97
Jersey.....	3287.36	295.86	288	8.64	304.50
French-Canadian.....	3066.47	275.98	376	11.28	287.26
Dutch Belted.....	2831.67	254.85	275	8.25	263.10
Polled Jersey.....					109.47

The Christmas Number.

Judging from the progress already made, we feel safe in saying that our readers will be delighted with the Christmas "Farmer's Advocate" for 1901, to be issued on December 16th. Popular as these numbers have been in the past, the one now in course of preparation will by far surpass them in the variety, value and interest of its articles and the profusion and artistic excellence of its engravings. The unique colored cover now before us is a triumph in design and lithography. All new subscribers will be entitled to a Christmas number in addition to all the issues of 1902. Persons desiring advertising space, or present advertisers requiring larger space, would do well to arrange for same as soon as possible in order to avoid disappointment.

A Month's Days.

I hired a man for three months, specifying months: August, September, and October. August has 27 working days, September 25, and October 27. He thinks in this case each month supposed to count 26 days as for one month. Is he right, or not?

SUBSCRIBER.

Perth Co., Ont.
Ans.—No.

I do not feed them all they will eat during the day, as I wish them to exercise, and at night I give them all they want. This brings contentment and quiet roosting until morning. Feeding of layers to produce eggs is a very delicate matter. I do not mean the production of an ordinary number of eggs, but the greatest number.

I consider that green food of some sort fed every day in the year is really more important in a continuous egg yield than a choice of grains. Of course, in the spring and summer nature in the fields produces green feed enough and of sufficient variety, but during the late fall and through the winter this green food should be kept up. Cabbages, mangels and steamed clover, together with boiled beets, carrots and turnips, fill the bill almost as well.

The hardest task in maintaining a constant and continuous egg yield is keeping the laying stock in prime condition. This should be such a condition of perfect health that the eggs will be laid regularly and be uniform in size as well, according to the breed laying them. Layers should always be kept active, and activity is induced by short feeding. A hungry hen is usually a good layer.

Some breeds, such as Leghorns, Minorcas, Andalusians, etc., are by nature active, but still they can be overfed. Other breeds, such as Brahmas or Cochins, being naturally slow in their movements, are less active and can be easily overfed. As a rule, lazy hens are poor layers, and must be induced to exercise. Hunger will compel activity more or less. Some breeds are called good foragers. If hens are inclined to forage, they can do this in a pen as well as in the fields, but they must find something after a diligent search. Scattering grain in deep litter will compel a great deal of exercise to find it. A hen that seeks and finds will seek again. But if after great efforts in scratching she finds nothing, she becomes discouraged and waits for feed time and then eats too much, contracting lazy habits.

A very successful egg-farmer once told me that in winter he always had something in his coops for his hens to pick at—scattered grain, a cabbage hung up, or even bones with a little meat on them—always something to find in order that his flock should not contract lazy habits. In this he was humoring the natural instinct of the animal. A hen let run at large is almost always hunting, scratching and picking, first at a blade of grass, then a bug, then a worm, and next a seed. I think garden fowls lay more eggs than fowls which run at large. They cost more to keep, but the returns in eggs are larger. The fact is that hens shut in yards are fed on food which is chosen because it will make eggs, as it is intended they should, whereas if let run and fed the same way they are apt to convert the food into flesh and muscle rather than eggs. Water may help layers, but it is not as necessary as one may think. Fowls shut up drink more water than those with free range. In winter always warm the water, or just take the chill off. Drinking becomes a habit, the same as in us humans, and when fowls are idle they take a drink, not knowing what else to do. This is because the water is near by. In winter fowls should be watered once a day. The best time is about ten o'clock in the morning, and let the pan remain full until after their evening feed, when it should be emptied for the night and cleaned for the next day. Watering too early in winter simply induces fowls to fill their crops with ice water, and this process will in time check laying.

Feeding for a continuous egg yield requires good judgment and a great deal of careful watching in order to keep the flock in prime condition. A good laying strain of any breed will, when in prime condition, lay eggs regularly like clockwork, but it requires care and constant watching to keep the machine in order. Neglect and shiftlessness will upset the whole flock and ruin what might have been made a good paying investment.

It seems strange that nearly all who look for lice do not go beyond the small mites with which persons are familiar. The most destructive louse is the one that preys upon the head and neck of the fowl, and which cannot be detected without examination, as such lice do not leave the bird and cleave to the hands of the persons handling them as do the mites. They are whitish, and resemble in shape the lice on the human head. When the birds are attacked by these lice, great prostration is the result and the debility causes diarrhea, with symptoms strangely resembling cholera. When the birds show by their actions that something is wrong, I look along the side of the neck and on the heads close down to the roots of the feathers, where I generally find the lice. I fix a mixture of one gill of melted lard, one tablespoon of crude petroleum and five drops of carbolic acid. This mixture kills them instantly. Put very little grease on the naked body under the wings, and use it very sparingly on chicks. Repeat the operation as often as may be necessary to rid the place of vermin. All remedies will avail nothing unless the poultry house is clean, as the hens will soon become overrun again with lice. Just as soon as the mites leave the poultry house, then the hens can clean their bodies by dusting in ashes or dry earth conveniently provided for them by the thoughtful poultryman.

"OLD MAID."

Final Report of the Six Months' Dairy Test at Pan-American.

PLACING THE FIFTY COWS IN THE ORDER OF THEIR NET PROFIT ON ESTIMATED BUTTER.

No. of position.	Name of Cow.	Breed.	Lbs. of Milk.	% fat.	Lbs. of estimated butter.	Value of butter at 25c.	Cost of hay fed at \$7 per ton.	Cost of silage fed at \$2 ton.	Cost of grain fed.	Total cost of feed.	Profit on butter at 25c. lb.	Wt. of cow, May 1st.	Gain in wt. during test.	Profit on \$1 invested in Remarks.
1	Mary Marshall.....	Guernsey (1)	5611.0	5.36	354.26	\$88.56	\$6.63	\$4.34	\$18.19	\$29.16	\$59.40	987	64	\$2.04
2	Mayflower.....	R. Polled (1)	6161.5	4.45	323.15	80.79	5.70	4.73	18.26	28.69	52.10	1,134	66	1.81
3	Cassiopia.....	Guernsey (2)	6270.1	4.26	315.01	78.75	6.66	4.14	17.60	28.40	50.35	1,019	24	1.77
4	Primrose.....	Jersey (1)	4639.4	5.64	308.24	77.06	5.41	5.09	16.31	26.81	60.25	992	54	1.87
5	Procris of P.....	Guernsey (3)	5992.6	4.43	313.10	78.27	6.60	4.47	18.71	28.78	49.49	869	1	1.72
6	Beauty of N.....	Holstein (1)	8146.7	3.42	328.01	82.00	6.63	5.88	20.14	32.65	49.35	1,017	64	1.51
7	Queen May.....	Ayrshire (2)	5343.1	4.74	298.54	74.63	5.56	5.08	16.53	27.17	47.46	974	42	1.74
8	Pearly Ist.....	Ayrshire (2)	7041.5	3.59	298.57	74.64	6.18	5.44	16.95	28.57	46.07	973	25	1.61
9	Bears of W.....	Ayrshire (2)	6730.8	3.74	296.07	74.02	6.18	5.44	16.94	28.56	45.46	912	80	1.59
10	Kirsty Wallace.....	Ayrshire (3)	6169.7	3.83	292.31	73.08	5.89	4.96	16.89	27.74	45.34	966	44	1.63
11	Gipsy.....	Jersey (3)	5790.3	4.4	300.21	75.05	5.54	5.09	19.64	30.27	44.78	1,004	loss 7	1.48
12	Mossy of H.....	Jersey (4)	5762.4	4.27	290.00	72.50	5.48	5.09	17.53	28.01	44.49	822	67	1.59
13	Hulda Wayne.....	Holstein (2)	8040.7	3.23	305.79	76.45	6.02	5.58	20.20	32.40	44.05	989	55	1.36
14	Susie.....	R. Polled (2)	6430.1	3.8	287.5	71.87	5.95	5.10	17.01	28.07	43.80	1,187	38	1.53
15	Miss Molly.....	Shorthorn (1)	6894.1	3.71	301.47	75.37	7.23	4.96	20.17	32.36	43.01	1,075	134	1.36
16	Queen.....	Pol. Jersey (1)	4010.	5.63	255.98	66.49	6.27	3.80	13.63	23.60	42.89	648	101	1.82
17	Alice 2nd.....	Ayrshire (1)	6127.9	4.3	298.57	70.54	6.18	5.43	16.68	28.29	42.25	1,054	76	1.49
18	Vega.....	Guernsey (4)	5029.1	4.59	271.64	67.91	6.95	4.60	14.61	26.16	41.75	1,094	76	1.45
19	Belle T.....	Br. Swiss (1)	5789.6	4.09	278.45	69.61	7.76	4.32	16.30	28.38	41.28	1,089	loss 7	1.24
20	Tidy Abbekerk.....	Holstein (3)	7659.1	3.28	296.00	74.00	6.63	5.96	20.38	32.97	41.03	1,008	101	1.73
21	Rouen.....	Fr. Can. (1)	5404.2	4.03	256.63	64.16	5.08	4.79	13.65	23.68	40.64	750	64	1.71
22	Denise Champine.....	Fr. Can. (2)	4896.1	4.46	257.20	64.30	5.07	4.91	13.70	23.52	40.64	750	64	1.73
23	Eliza.....	Br. Swiss (2)	6407.9	3.8	286.89	71.72	6.36	5.29	19.47	31.12	40.60	1,273	2	1.30
24	Inka Mercedes.....	Br. Swiss (2)	6028.3	3.95	288.34	72.08	6.63	5.60	20.22	32.45	39.63	915	72	1.22
25	Liena Flory.....	Fr. Can. (3)	5458.0	3.92	252.54	62.34	6.28	4.01	12.86	23.17	39.17	1,013	loss 17	1.69*
26	Ova.....	Pol. Jersey (2)	4894.8	4.4	247.71	61.93	7.02	3.57	13.38	22.97	38.96	665	71	1.61
27	Pride's Favorite.....	Pol. Jersey (3)	4599.1	4.6	247.71	66.38	5.86	5.13	16.69	27.68	38.70	1,105	loss 13	1.39
28	Lady Flora.....	Ayrshire (5)	6626.3	3.4	265.51	66.38	5.86	5.13	14.79	25.48	38.52	933	33	Did not calve till May 7.
29	Rexina.....	Jersey (5)	5451.9	3.98	256.01	64.00	5.50	5.19	14.79	25.48	38.52	933	33	Arrived 18 days late.
30	Easter.....	R. Polled (3)	6058.7	3.70	263.96	65.99	5.81	5.05	17.83	27.83	38.16	834	99	Arrived 18 days late.
31	Belle of Warwick.....	D. Belted (1)	5313.2	4.15	259.80	64.95	5.60	3.93	17.40	26.93	38.02	.935	83	Arrived 18 days late.
32	Hope of Minn.....	Br. Swiss (3)	6117.0	3.61	259.85	64.96	8.10	2.52	16.98	27.60	37.36	1,015	54	1.92
33	Meg.....	Holstein (5)	7391.0	3.25	282.84	70.71	6.62	5.97	21.52	34.11	36.60	1,314	99	1.92
34	Queen Bess.....	Shorthorn (2)	6547.9	3.57	275.21	68.80	7.21	5.30	19.98	32.49	36.31	1,105	1	1.32
35	Princess of Thule.....	Shorthorn (3)	5885.7	3.82	264.79	66.20	7.20	5.31	19.88	32.49	33.71	1,261	1	1.32
36	Lucy B.....	Br. Swiss (4)	6356.2	3.45	258.13	64.53	7.80	5.12	18.09	31.01	33.52	1,193	84	1.39
37	Phyllis.....	Pol. Jersey (4)	4430.	4.38	228.12	57.03	6.31	3.75	13.77	23.83	33.20	759	59	1.02
38	Luna.....	Fr. Can. (4)	5049.5	3.79	225.03	56.26	5.20	4.89	13.43	23.28	32.74	750	59	1.02
39	Flora.....	R. Polled (4)	4628.4	4.29	233.55	58.39	5.70	4.77	15.79	26.28	32.11	1,068	1	1.02
40	Tryste.....	R. Polled (5)	5416.2	3.68	234.97	58.74	5.75	4.86	16.54	27.15	31.59	1,036	44	1.25
41	Rose 3rd.....	Shorthorn (4)	6492.8	3.31	253.35	63.34	7.21	5.17	13.70	25.98	30.35	1,208	65	1.30
42	Nicola.....	Br. Swiss (5)	6220.8	3.25	238.12	59.33	7.80	5.13	16.25	29.18	30.35	1,208	65	1.30
43	Medora Fern.....	Guernsey (5)	4224.8	4.36	214.87	53.72	6.92	4.61	12.83	24.36	29.86	958	30	2.19
44	Daisy D.....	D. Belted (2)	6054.4	3.43	244.74	61.18	7.21	5.05	20.12	32.38	28.80	1,161	2	Arrived 18 days late.
45	Madeline.....	Shorthorn (5)	5661.0	3.23	215.26	53.81	5.52	3.96	17.10	26.66	27.15	1,028	77	Arrived 18 days late.
46	Holland C.....	D. Belted (3)	5287.3	3.36	209.51	52.38	6.26	3.36	16.59	27.21	24.17	806	97	1.23
47	La Bouchette.....	Fr. Can. (5)	3819.6	3.67	166.38	41.59	5.05	4.79	8.81	18.65	22.94	647	32	Last calf October, 1900.
48	Justina.....	Pol. Jersey (5)	2465.0	4.31	124.95	31.24	6.17	3.99	5.68	15.84	15.40	913	61	1.14
49	Merletta.....	D. Belted (4)	4715.4	3.2	170.03	42.51	7.27	4.47	16.71	27.45	15.06	948	1	1.12
50	Alberta.....	D. Belted (5)	3916.6	3.09	142.42	35.60	6.21	4.46	13.39	24.11	11.49	1,147	12	

*Did not calve for two weeks after test began.

POULTRY.

Care

Canadians do Well at the Pan-American.
WITH A TRIFLE OVER 20 PER CENT. OF
THE ENTRY, THEY WIN NEARLY
50 PER CENT. OF THE PRIZE-
MONEY FOR FOWLS.

The display of fowls at Buffalo was certainly very fine. The number of birds present was equal to any show that has ever been held on the American continent. Speaking in round numbers, there were five thousand birds and two thousand five hundred pigeons and pet stock. Of the latter, your correspondent did not take any particulars, confining his attention chiefly to the fowls.

The buildings were anything but suitable for a poultry show. The barns used for the previous display of horses, cattle, sheep, and swine, were again made use of for the poultry. They may have been all right during the warmer months for the above purposes, but certainly were not suitable for housing fowls. To begin with, the lighting was very poor, the buildings were cold and very drafty, especially those coops in line with the doors. Where birds are obliged to be cooped for nearly two weeks, such condition means in many cases ruination to the birds' health, and not a few were sick during the last days of the show, and a few died.

There were breeders from the East, West, North, and South, making a fine general display. We noticed in particular that the fowls from southern New York and the States adjoining were in better feather than our Canadian birds, having moulted earlier; also that the chicks were larger. As the season is earlier, this is quite natural.

The show of Rocks and Wyandottes was grand. In Barred Rocks, Newton Cosh & Co., London, Ont., secured 3rd on cock birds, which was an excellent win, considering there were 21 birds competing, including some of the Boston winners. They also secured 6th on breeding pen. In White Rocks, Oke & Andrews, of London, won 2nd on cock in a class of 23; and A. G. Brown, of Watford, Ont., 8th on cockerel in a large class. In Wyandottes, we did somewhat better than in Rocks. In Silver-laced Wyandottes, Jas. Arthur, of London, and Geo. Bogue, of Stratford, were prominent among the winners. In Golden-laced Wyandottes, C. J. Daniels, of Toronto, and W. J. Saunders, of London, won their share of the prizes. In Blacks, R. Oke, of London, and Geo. Bogue, of Stratford, were prominent. The White Wyandottes were one of the finest exhibits. The competition was very keen in this class. T. F. Kingsmill, of London, secured 3rd on cock, and J. S. Jeffrey, St. Catharines, won 8th on cockerel. In the Buff varieties, Cosh & Co. won well.

We were pleased that the Canadians did so well in these classes, as the Rocks and Wyandottes are purely American breeds, and when it is considered that the show was held in a section of the country where probably as fine birds as are in the world in these classes were found, the Canadians are to be congratulated upon their winnings.

The prizes for Javas were largely taken by Messrs. Oke and Daniels. In the Light Brahmas, Frontier & Mantell, from Quebec, were the happy men, as were also Thorpe & Scott, of London. In Dark Brahmas, every first prize came to Canada. Lewis Sage, Thorpe & Scott, London, and Gus A. Langelier, from Quebec, were the lucky ones. In Cochins, Canada again won the majority of the prizes, in some classes all the firsts. Here, Chas. Stewart, Hugh Wyatt, Mrs. Sharp Butterfield, as well as Latta Bros., all of London, were the prominent winners. Holmstead Poultry Yards, of Whitby, Ont., and Frontier & Mantell, were among the winners also.

In Langshans, McCurdy, of London; Dewey, of Toronto; Burns, of Tilsonburg, and Paff, of Guelph, were the fortunate winners. The Leghorn class was well represented from Canada, also in White we did well for the number of entries, and in the Buff we surprised the Americans not only in winning largely of the money prizes, but also the Cup Prize, which went to Jas. Dundas, of Toronto. J. Ramsay, Owen Sound, won on Whites, and is reported to have sold the first cock bird for \$50. Spry & Mick, G. Burns, and Jas. Dundas, all of Toronto, were the fortunate men among the Buff breeders. Black Leghorns were out in force, and here again Canada wins, Mr. Daniels getting two firsts and two seconds on four entries. In Rose-comb Whites, Messrs. Oke, and Bell (of Angus) were among the winners.

We again surprised the Americans in Minorcas, Minshall, of Brantford, winning well in Black; while O'Neil, of Toronto, won all the firsts but one in Whites; also the Cup.

We had expected the young Wm. McNeil, of London, to win in Hamburgs and Polands, and were not disappointed. He was ably assisted by Allan Bogue, of London, and R. Oke. It is needless to comment on these birds, or winnings, as they always win the major portion of the prizes, as does Cosh & Co. in Andalusians. In the Game varieties, we were again to the front, Messrs. Morley, of Milton; Crowe, of Guelph, and Barber, of Toronto, being the prominent winners.

We have no reason to be ashamed of our dis-

play of turkeys, ducks, and geese; indeed, quite otherwise, as Canada certainly won extra well.

In Bronze turkeys, W. H. Beattie, of Wilton Grove, won three 2nds and a 3rd, and Bell, of Angus, won one 1st, one 2nd, and one 3rd. In Whites, Beattie secured two 1sts, three 2nds, and a 3rd; while in Slaters, Beattie won everything.

Pekin ducks were out in force, Geo. Colwell, of Paris, winning a 1st and a 2nd on two entries, and Allan Bogue a 4th, the first drake being an extra choice one. In Aylesburys, Colwell, Bogue, Burns, and Wm. Teale, of Guelph, won the most of the money. In Cayugas, Teale won all the 1sts. In Rouens, Colwell and Bogue did well; and in Indian-Runners, Burns, and Fuminger (of St. Catharines) divided the honors.

In geese, Colwell, A. Bogue and Burns were very successful.

In conclusion, we may add that there was a fine display of Orpingtons, a breed similar to our Rocks in shape, but being larger and having white legs and skin. These fowls are very popular in England, and will no doubt find a place here. In these, Daniels and Fuminger were among the winners.

We were also favorably impressed with the display of Favorelles made by Valley Farm, Simsbury, Conn. These fowls are said to be a cross between the Dorking, Brahma, and Houdan. They certainly have the appearance of a fine table bird, having white flesh and legs.

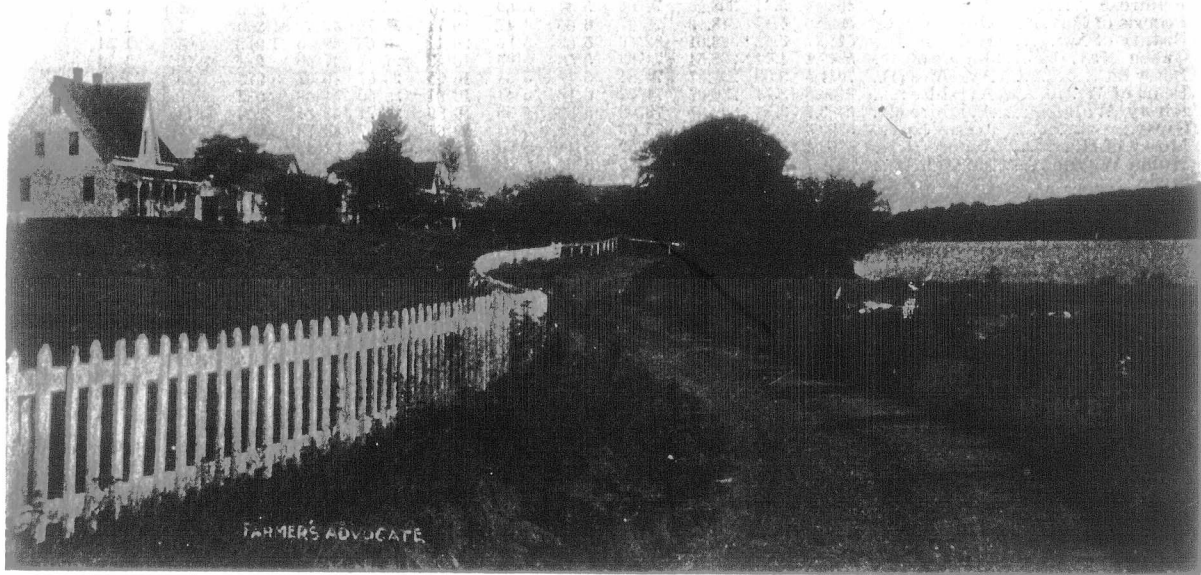
Plymouth Rocks.

With the encouragement that the poultry industry is receiving at the hands of our Governments—both Provincial and Dominion—and the success that is attending the efforts being put forth at the Experimental Farms at Guelph and Ottawa, and also at the new fattening stations, it is quite evident that the industry will take a

hundred feet long. These hens were pure-bred and of the famous "Ringlet" strain. The yard was stiff sod, being an old fence line. With these fifteen hens was one cock. After they had been in this yard a week, I began to keep count of the eggs laid, and in one month these hens produced 260 eggs. This may not be an enormous yield—it is not—but when it is taken into consideration that the hens were not on trial, but were being fed for fertile eggs for hatching purposes, and were stunted a little at times to hinder fatness, it must be allowed that they did well. They were fed meat but once during the whole time, but nearly every day got the leavings from a small table. The bulk of the grain fed was oats and wheat, and they always had plenty of fresh, clean water and sometimes skimmed milk.

And now about the sitting part of it. Those hens were in the yard twenty-eight days before there was a sign of a single one of them wanting to sit. They were all large, two-year-old hens, and had been laying right along through the former part of the spring. I find that Rocks are easily "broken up" from sitting if they are taken in hand as soon as noticed. Put them in a cool coop and in about three days the fever is over and it will not be many days before they are at work again helping fill the egg-basket. All summer through our Rocks layed very regularly, and we question if, with proper care, they would not quite equal the Leghorns which we also keep. JOHN B. PETTIT.

Note.—The above concise statement as to the management and actual performance of the Plymouth Rocks should encourage the admirers of Wyandottes, Brahmas, and other "all-round" birds, as well as the special-purpose egg-producer, to look up their records and jot down their methods of care and feeding for the edification of "Farmer's Advocate" readers.—Editor.



VIEW OF WILLOW POINT, NEAR BROWN'S FLATS, LONG REACH, NEW BRUNSWICK.

boom, and in the future "biddy" will have a little more attention and care paid her than has been the case in the past. For some time, owing to the demand in England, beef and other meats have ruled high, and if the trade is properly looked after it is likely our meats will always be in demand there. This has had and will continue to have a decided effect upon poultry and eggs. Dressed poultry and fresh eggs have been selling freely and at good prices, and the Canadian farmer is being greatly benefited therefrom. As a consequence of these good prices, many are contemplating going more extensively into raising fowls and producing fresh eggs.

One of the most perplexing questions to many is the breed or breeds that shall be made use of. Of course, every down-to-date farmer will agree that nothing but thoroughbred fowls should be kept. There are many reasons for this that cannot be mentioned in this article. It is generally conceded that the farmer should not dabble with too many varieties, and many are of the opinion that he should be contented with but one, and as a result he would be more successful, and they generally recommend Leghorns for eggs and Plymouth Rocks as "all-round" fowls. And I think when they are dubbed "all-round" fowls the truth is about told, for we believe they are at the top as dressed birds, and it is just a question if a "laying strain" of Rocks cannot go "all round" the famous Leghorns when it comes to egg production, taking the whole year through.

Thousands agree that the Rocks are good winter layers, but complain about them wanting to sit all spring and summer. I firmly believe that the keeper is greatly responsible for the "sitting" habit, and I will give a month's experience of the past summer to show that all Plymouth Rocks are not sitters only.

On the 7th of April last, I put fifteen Barred Rock hens in a yard twelve feet wide and one

GARDEN AND ORCHARD.

Late Fall Work in the Garden.

The clearing up of the rubbish in the garden, the work done for the protection of the fruit trees and bushes, is a subject that is quite prominent in the fall issues of garden and farm papers, but so far I have not seen the system described that I have practiced the two previous autumns, after a trial of the usual methods. The general advice is to rake up and burn the tops, stalks and dry leaves that have accumulated. These accumulations I rake up into small piles, and pick out any stalks of weed seed, woody matter, etc., that will not readily decompose. I take three wheelbarrow loads of this stuff, the most of which ought to be rather green, as squash vines, carrot and parsnip tops, and dump in a pit or fence corner. To every three loads (well tramped down) I add a peck of lime sprinkled over the heap, on which, if very dry, a bucket or two of water is poured. Then over the lime I put a wheelbarrow load of turf, half-rotted sods, or swamp muck; then three more loads of rubbish; and so on, alternately, till the pile is finished.

By the following spring or, better still, the late fall this pile is converted into excellent fertilizer, free from lumps and well pulverized by the action of the lime. This mixture gives wonderful results on beans and carrots; especially on the flower garden. In this way the soil gets back part of what was taken from it. By burning, it only gets the potash, and nitrogen, the most valuable element, is lost. But by properly composting, these elements are saved and are made available for the next crop.

For the protection of young fruit trees and bushes and plants such as rhubarb and asparagus, I take a forkful of fresh barn manure—the more the better—and put it around the neck in

the form of a flattened heap; then take a shovel of loose soil and cover over the manure. This plan I have proved, the past three years, keeps the frost from the roots, fertilizes the bush, and if left through the summer greatly improves the berry crop by keeping the roots moist, thus preventing the berries dropping off in droughty weather; the bushes come into leaf earlier and get ahead of the worm, besides making a splendid growth.

In young fruit trees, this plan of protection has something the same effect, especially in helping to prevent them becoming winter-killed, which they are very liable to do in the open winter we have in this locality.

Rhubarb, asparagus and perennial bedding plants I find stand the winter better if cornstalks or straw is put over the manure and kept in place by pieces of board or poles. I find that fresh manure put around bushes, etc., or spread on the surface in the fall, is in good condition by the spring, the hard frosts killing the grubs, etc., in it, and the freezing and thawing breaking it up, although it may lose some fertility by being exposed. Wherever old manure cannot well be procured, this plan is a good substitute. The foregoing items I have learnt by experience, which, though slow, is the best teacher.

Halifax Co., N. S.

E. M.

The Canadian apple crop of this year, although the lightest in many years, was, generally speaking, of excellent quality, and the unusually good price realized for those that have been sold for export will make the financial returns by no means as unsatisfactory as was at one time anticipated. We have heard of instances where farmers have sold apples this year to the value of \$100 to \$150 after retaining what is needed for home use. One Middlesex Co. farmer sold 70 barrels at \$2.50 per barrel.

a powder every night and morning, in damp food. If she will not eat it this way, it must be shaken up with a little water and given as a drench. Dampen all she eats with lime water, feed a limited amount of hay of first-class quality. Do not exercise too soon after giving a full feed. See that the water she drinks is of good quality.

J. H. REED, V. S.

DISLOCATION OF THE PATELLA.

I have a three-year-old colt that slips stifle in the left hind leg and is calloused. Is there any cure for it? If so, what is it, and do you think it would pay to put any time to it?

DANIEL H. CULP.

Ans.—I infer, from what you say, that your colt occasionally has dislocation of the patella (usually called stifed). If the bone persists in coming out, tie a strap around the fetlock and attach a rope to the strap; put a collar on the colt, and pass the rope between the fore legs and tie to the collar, sufficiently tight to keep the foot about 18 inches in front of its fellow; then place a box, about a foot high, upon which to rest the foot. Blister the front and inside of the joint with a blister of 2 drs. each cantharides and bromide of mercury well rubbed in. In 24 hours rub well again, and in 24 hours wash off and apply a little vaseline. Let him run in a box stall and apply vaseline every day until the scale comes off, when it will be wise to blister again.

J. H. REED, V. S.

RINGBONE AND SPAVIN.

Have a young, fine-limbed mare; very clean and firm legs until May last, when a slight enlargement started on right hind pastern, about an inch in length, from hoof upwards, but not around. Soon after became lame in left leg, with small bone spavin. Tried a patent spavin cure and blister without effect. Got a veterinary to fire with pointed iron and then blister, which has

LYMPHANGITIS IN MARE.
I have a heavy draft mare, six years old, which is troubled with swelling in hind leg. At night she is all right and in the morning it is swollen almost twice its natural size, and when I touch it to rub it in the upper part of the leg she raises it so high as to almost fall over. She is raising a colt, now eight weeks old.

D. D.

Huron Co., Ont.

Ans.—Your mare has lymphangitis, commonly called weed. We generally purge in cases of this kind, but that would be dangerous in a mare rearing a colt. Give her ½ oz. saltpeter in a bran mash night and morning for four doses. Bathe the swollen limb from the stifle down (especially on the inside) well with warm water. The more bathing you give it the better until the acute soreness disappears. After bathing, rub dry, apply a little liniment made as follows: Oil of turpentine and spirits of camphor, of each 1 oz.; alcohol, 4 ozs.; water, 7 ozs. Exclude drafts. When the acute soreness has disappeared, give regular exercise. If you can manage to allow her some exercise every day it is probable you will prevent attacks of this kind.

J. H. REED, V. S.

THUMPS IN PIGS.

I noticed in your valuable "Advocate," the disease "thumps in hogs" mentioned. Will you kindly describe symptoms, cause, and treatment?

W. PARKE.

Wentworth Co., Ont.

Ans.—A condition known as thumps in pigs is a form of indigestion and usually due to over-feeding. The pig becomes dull and stupid, and in many cases the brain becomes congested, when there will be symptoms of delirium. The bowels are constipated and appetite impaired or wholly gone. Want of exercise and high feeding is the cause. If the brain be affected, throw cold water on the head or bleed from the jugular vein or cut the ear or tail. Give a purgative of linseed oil, and injections of warm water with a little soap per rectum. Give nothing to eat until the bowels act freely.

J. H. REED, V. S.

CEREBRAL TROUBLE IN COW.

I have a cow which is subject to a fit. When the fit is coming on she commences to breathe very heavily, and in a short time she appears to become rigid and falls down. At this stage respiration seems to almost cease, and she lies as though dead for perhaps ten minutes. After the first effects of the fit are over she rises to her feet and appears to be blind, and is very stupid for some time. Can you say what is the cause, and give me any cure?

Simcoe Co., Ont. ARCHIBALD MALCOLM.

Ans.—Your cow has some brain affection. Probably there is a growth upon the brain, and possibly only an occasional engorgement of the blood vessels. If the latter, purging and bleeding will give relief. If the former, nothing can be done, and it is probable it will kill her.

J. H. REED, V. S.

Miscellaneous.

COW STALL.

Please give a good plan for mangers for a cow stable.

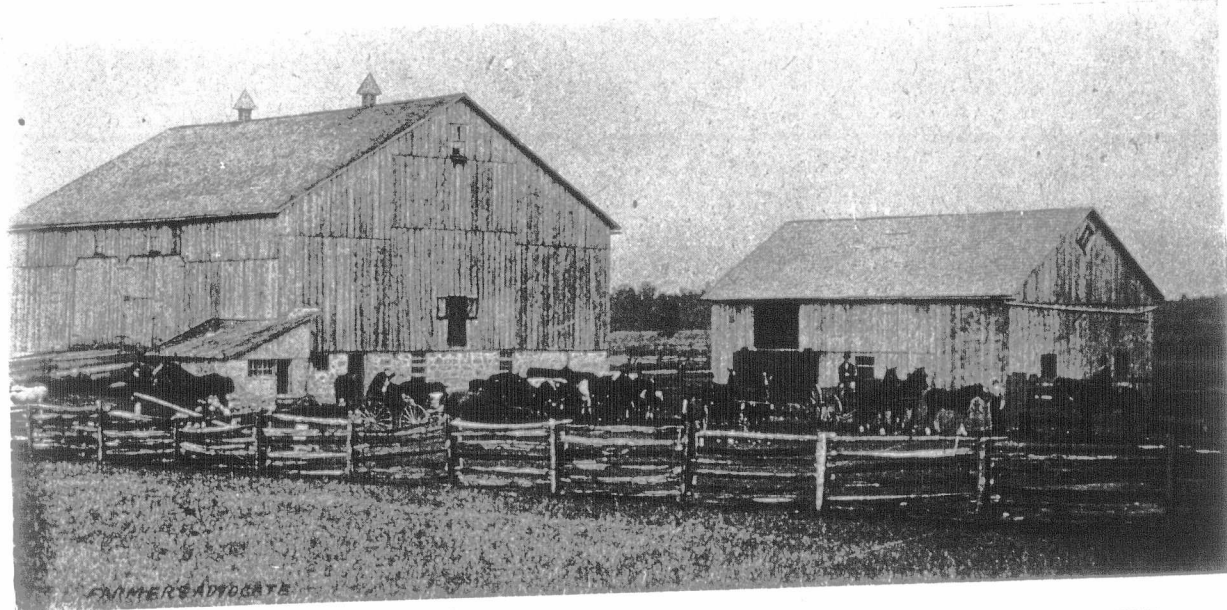
FARMER.

Huron Co., Ont.

Ans.—Ideas vary as to what constitutes a "good" manger for cows, and the plan of watering in the stable may make a difference. Some like a manger to tilt or swing on a sort of hinge on bottom into the feed alley, where the feed is placed in it and then tilted back for the cows to eat. Others would have it stationary and close-boarded in front. If "Farmer" wants simplicity and economy, this plan the writer has used with great satisfaction: No boarded-up front, but simply a drop of 6 or 7 inches (plank) from level of feed-alley floor, which will be that much higher than bottom of manger; the latter 18 inches wide, and a sloping board one foot high next the cows. Water is run before cows in an open V or square plank trough, the bottom of which is 1½ feet clear above edge of drop from feed-alley floor into manger. Through that space hay and other fodder is pushed to the cows; no lifting. Ensilage or grain is emptied over the trough into manger. If no water-trough were there, a 2 x 6 inch plank would need to be spiked in front of manger posts next alley as a barrier to keep cows back.

WHITE PIGWEED (AMARUTUS ALBUS).

There was left with one of the editors of the "Farmer's Advocate," by a North Dorchester farmer, a sample of weed that is making quite a conspicuous appearance in at least one locality. It is about two feet long, very much branched, has numerous small leaves from a half to one inch long, and laden the greater length of its branches with small black shiny seeds, the same, to all appearances, as the seed of the common pigweed (Amarutus). On examination, we find it to be Amarutus albus, white pigweed, closely akin to what is known in the Western States as tumble weed, that ripens in the fall, breaks off with the wind and rolls over and over, being thus carried for miles, distributing its seed as it goes. It is rather common in Ontario, but does not prove troublesome in well-cultivated fields, cereals or hay crops. In all cases it should be prevented from maturing seed.



FARM BUILDINGS AND STOCK ON FARM OF CHALMERS BROS., PALMERSTON, ONT.

QUESTIONS AND ANSWERS.

- 1st.—Questions asked by bona-fide subscribers to the Farmer's Advocate are answered in this department free.
- 2nd.—Our purpose is to give help in real difficulties; therefore, we reserve the right to discard enquiries not of general interest or which appear to be asked out of mere curiosity.
- 3rd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer, as a guarantee of good faith, though the name is not necessarily for publication.
- 4th.—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

Veterinary. CHRONIC COUGH.

I have a mare, eleven years old, that has a cough. The symptoms do not appear to be like heaves. She sometimes coughs after being watered, as if there was a piece of hay or something in her throat. She generally coughs in the morning before being fed. Her sides do not appear to roll like a horse having heaves. Her cough appears to be more like a sneeze. She has always been worked at general farm work, and fed on timothy and clover hay and grain, oats being the principal grain food; sometimes a little bran and corn. Her wind is as good as ever it was. She does not wheeze. She has had cough for more than a year. What is your opinion—can I do anything for it?

Cumberland Co., N. S.

ENQUIRER.

Ans.—Your mare has a chronic cough; whether or not she is slightly affected with emphysema of the lungs (heaves) is hard to say. If so, a cure cannot be effected after a year's standing. If simply a chronic cough, it may be cured. In either case, the following treatment will be followed by benefit. Get your druggist to make up the following prescription: Take pulverized gum opium, 3 ozs.; pulverized digitalis, 4 drs.; pulverized liquorice root, 6 ozs.; arsenic, 4 drs.; mix, and make into 24 powders, and give

cured lameness but left the enlargements. Am very anxious to get a complete cure, if possible.

Frontenac Co., Ont.

F. M.

Ans.—The enlargement mentioned on right hind pastern is probably ringbone, although it does not extend around the bone. It may never cause lameness, and if not I would advise you to leave it alone. In cases of either ringbone or spavin, we consider we have effected a cure when the lameness ceases. We do not profess to remove the enlargement—it cannot be done. The man who professes to do so, or advertises a preparation that will do so, is simply trying to deceive the public. I can understand your anxiety to get a sure and complete cure for spavin. When you discover one your fortune will be made.

J. H. REED, V. S.

CRIPPLED HOG.

I have a hog, about two years old, weight about four hundred pounds. A month and a half ago he went lame on the left front foot, and sometimes would walk on his knee. Two weeks ago he got lame on the other front foot, and became so lame he could hardly get to the trough to eat. Now he is going the same way on the hind legs. He has been mostly fed on peas and refuse from the house. You will oblige me if you would let me know what is causing his lameness, and if there is any cure for him?

SAMUEL CRUIKSHANK.

Wellington Co., Ont.

Ans.—The trouble is probably caused by too strong food. Peas are heating to the blood and are liable to cause founder and lameness. Change the feed to a mixture of bran or shorts and ground oats. Give some Epsom salts in his feed to cool his blood. Let him run out on mild days for exercise in a grass plot or in the barnyard. Examine his feet, and if the hoofs are overgrown, trim them shorter, but be careful not to cut too close to the quick.

HIGHEST BUTTER RECORDS.

Will you kindly answer the following questions: (1) What cow holds the highest butter record in Canada; (2) in the United States; to which of the breeds does she belong? What is the highest official seven-day butter record in Canada and (2nd) in the United States? I was told the other day that a certain Jersey cow made 36 pounds of butter in one week. Is this probable?
J. D. H.

P. E. Island.

Ans.—The highest butter record of a Canadian cow in seven days in the volume entitled, "Butter Tests of Registered Jersey Cows," is that of Mary Ann of St. Lambert 9770, which is 36 lbs. 12½ ozs. The highest seven-days record of a cow in the United States, in the same volume, is that of Princess 2nd, 46 lbs. 12½ ozs. These tests are marked (official), and a note in the preface of the volume states that the tests designated "official" were made under the supervision of committees appointed by the President of the Club. Pauline Paul, a Holstein cow, was credited a few years ago with making over 1,100 lbs. of butter in a year. Since public tests began to be made at exhibitions (though certainly the conditions for large productions are not there so favorable) a good deal less stock is taken in some of the enormous butter yields that used to be reported.

In regard to the highest official butter record made by a Holstein cow in Canada, Mr. Geo. Rice writes us as follows: "The highest record yet made in Canada was that made by Calamity Jane, 1898, of 572 lbs. milk, 25 lbs. 9 ozs. butter, in seven days. This has recently been exceeded. The highest records for the different ages are as follows:

AGE.	COW.	RECORD.	OWNER.
Under 2 years	Alta Posch.	16 lbs. 135 butter.	Jas. Rettie, Norwich, Ont.
2 years and under 3 years	Minnie Sandas 2nd.	19 lbs. 6 ozs. butter.	W. A. Matteson, Utica, N. Y.
3 years and under 4 years	Katie Spofford's Corona.	26 lbs. 0.4 ozs. butter.	E. H. Knapp, Fabius, N. Y.
4 years and under 5 years	Lilith Pauline De Kol.	28 lbs. 3.8 ozs. butter.	H. D. Roe, Augusta, N. J.
Over 4 years	Beryl Wayne.	27 lbs. 14 ozs. butter.	H. D. Roe, Augusta, N. J.

"These are the highest records yet made by any cows of any breed in official test. There are so-called private and semi-private records much higher. But such records no longer 'go down' with our breeders. In public show-ground records, Canadian cows lead the world. The highest milk record is that made by Calamity Jane, viz., 85 lbs. in 24 hours and 166½ lbs. in 48 hours. The highest butter-fat record in public test is that made by Aaltje Posch 4th, at London (Provincial Winter Fair), 1899. The highest public record in class under 36 months was made by Daisy Texal 2nd, viz.: milk, 68 lbs. in 24 hours, 134½ lbs. in 48 hours, and 4.30 lbs. of butter-fat in 48 hours. All the records here given are exceedingly creditable, and were made from great cows, that were feeling very 'fit' at the time."
"GEO. RICE."

HOW TO BUILD A CRABB FENCE.

In looking over back numbers of "Advocate," I see in Dec. 1st, 1899, that D. L., in Oxford Co., says that farmers around there are building what is called Crabb fence. As I have a lot of fencing to do with rails, I wish you would describe how it is done. I have taken the "Farmer's" friend for a number of years, and find it well-spent money.
WILLIAM GRIGG.

Algoma, Ont.

Ans.—In taking down the old rail fence we lay the rails at right angles to the fence, so that we can select what we want. Now we have a sharp bucksaw and a light sawhorse, a hand adz, a sledge and a crowbar, wire pinchers and a supply of No. 12 galvanized wire. We make a measure stick of a piece of thin board, or a broad sliver off a cedar rail will do. Make it thus:
5 ft. 2 ft. 5 ft. long, and should be heavier than the side stakes, which are 7 ft. long. The stakes should be of cedar, oak or cherry; the 5-ft. stakes should be chamfered on the one side, and both short and long stakes are pointed at the thickest end. Sometimes we get an extra long rail that will make a short and long stake, and often a thick rail will split for two stakes. Set up light stakes one at each end and two or more between, according to the length of the fence to be built; sight them and have them in a perfect line. Now commence at the one end to drive the stakes, and sight and see that they run in a line, as they can be made perfectly straight this way; drive them down so that the top of stake stands about 3 ft. 4 in. above the general



EDEN VALLEY RANCH, HIGH RIVER, ALBERTA.

ground level. The spring is the best time; when the ground is soft the stakes are easier driven. In wiring on the rails, select the straightest for the bottom and leave the roughest and heaviest for the riders. The wire goes around the two ends of the rails and each stake, and the wire should be put around the opposite way on each alternate stake, or the fence is apt to go endways in course of time. We begin wiring the rails at the bottom, and when 3 rails have been put on, take the smallest rails (which should have been laid aside for that purpose) for the fourth, laying the smallest end on the top of the stake, which does not require wiring; then wire the other end by itself to the stake. See that all the wires are pulled and twisted tight. Sometimes we take a slab off a large, unshapely rail, to make it lie closer to the stake. It takes practice to be able to know just how tight to pull and twist the wires without breaking. Now we set up the side stakes, not too straight up, otherwise there will be too much of an opening between the fourth rail and the rider. After the side stakes have been driven, put on the riders and wire round the rider and stakes to keep rider from getting knocked off; then put the wire under the fourth rail and around each side stake and pull tight; and when this fence is properly put up a good horse cannot pull it over. Before commencing to drive center stakes we lay down the bottom rail all along, giving about 8 inches of a lap and taking care that we do not select the longest rails, because the riders should be a little longer than the lower rails. We have men here who take down an old rail fence, furnish their own wire and complete the Crabb fence for 15 cents per rod. There was formerly a patent on this fence, and \$5 to \$10 was required for the right to build it, but I think the patent expired some time ago.
D. LAWRENCE.
Oxford Co.

DAIRY HERD WITH BEEFING COMPLEMENT.

On a farm of 150 acres of cultivated land, where the soiling system might be adopted, and within three-quarters of a mile of a cheese factory, as "the milking" would involve rather too much labor under the circumstances to have the entire herd dairy animals, please state what you think of managing the herd along the lines given below—advantages, disadvantages, objections, etc.—taking Holstein grades as a foundation:

Keep two bulls, one a Holstein, and the other say a Shorthorn. Have each heifer in calf by Holstein (as the first impregnation seems to have an influence on the future calves), and should she prove to be a superior milker, then her calves could be used to replenish the dairy herd. If, on the other hand, she should prove to be only an average milker, then in future get her in calf by the Shorthorn bull, and feed the calf resulting for beef. As a rule, we may expect that the older cows will drop calves each year of the opposite sex to the preceding one (?). Then breed the cows that have male calves to Holstein bull for heifer calves to replenish and improve the dairy herd. On the other hand, the cows that have heifer calves to be bred to Shorthorn bull to secure animals for beefing purposes.

Prescott Co., Ont. D. P. L. CAMPBELL.

Ans.—The purpose of the plan proposed is to secure part of the progeny of the dairy and the remainder of the beef type by using two sets of bulls. Obviously, extra outlay and care in management would be involved and the experiment would require patience and the genius of a Bakewell. Is the rule to be depended upon that the cows would drop alternate male and female calves? If not, a large element of uncertainty

enters. Starting with Holstein grades, their color and type (dairy) will likely assert itself strongly for some years, even in the beef contingent of the herd. As an alternate plan, a portion of the present females might be disposed of and replaced with those of a beef type, and two herds be carried on, one for beef and the other for milk out-and-out. Or, again, by the use of Shorthorn bulls (if that be the breed preferred), out of good milking cows build up a general or two-purpose herd of cows, thus securing more acceptable beefing animals with a fair average flow of milk. If "the milking" continues an objection, then let the male calves strongly Holstein in character suckle cows and dispose of them for veal, for which they are well adapted, making rapid growth and weight. Rear those for feeding of more pronounced beef type. A still more radical plan, but going further and more rapidly beefward, would be to dispose of the present grade cows and replace them with those of more or less Shorthorn blood (if preferable), using a sire of as good milking ancestry as might be found. It is no easy matter to work out a problem like that propounded, into which so many hypothetical conditions enter.

LINSEED OIL—BOILED OR RAW.

A horse was given about half a pint of boiled linseed oil in mistake for raw linseed oil, in a case of indigestion. Was there any danger of this dose proving fatal? What would be the action of the boiled oil?
P. D.

Russel Co., Ont.
Ans.—Boiled oil (made by the old process, in which sugar of lead and litharge were used) is an astringent, raw oil a laxative. Their action is, therefore, exactly opposite. As to the effect of the small dose given, the result will be known ere this is published.

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Huron Co.

Ans.—The weed...
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DODDER.

Could you kindly tell me the name and nature of the enclosed weed and what can be done to exterminate it? I sowed lucerne clover last spring in a clean field, and have just noticed the weed, which I never saw before. It is growing in patches all over the field—growing close to the ground and matted, killing out the clover in the patches. A. T. Huron Co., Ont.

Ans.—The specimen is dodder, a noxious parasitic weed very difficult to deal with. The seeds are generally introduced with impure clover seed. After growing a few inches high it clings to the clover plant, which it binds tightly, producing many roots, or suckers, which grow into the tissues of the plant, appropriating its sap. The clover plant when thus attacked usually dies, as does also the root of the dodder, but the dodder stem continues to grow, extending itself to other clover plants, from which it continues to draw nourishment. Thus, the dodder lives on, dying behind as its support is destroyed, and pushing out branches to attack new plants. The seeds, ripening and dropping, are able to retain their germinating power five years or longer, but will grow at the first favorable opportunity. Eradication is not an easy matter. Mowing closely with a scythe and, if seeds are formed, saturating with kerosene and burning is advised. About a week later examine infested spots for new growth of dodder vines, which may appear on remaining stubble or surrounding growth. Strong brine, sulphate of lime and dilute sulphuric acid have been recommended, but the sulphates of iron, potassium and copper (bluestone) are claimed by the U. S. Department of Agriculture to be most effective when dissolved in water and liberally applied in 10-per-cent. solutions. The solution should come in contact with the dodder vine, which it kills, as well as the clover upon which it is growing, but the clover plants usually come up again from the roots. To pasture closely with sheep is a good method of subduing a badly-infested field that is not desired to be broken up.

A Record Breaker.

MR. W. D. FLATT'S SHORTHORN SALE AT CHICAGO.

That was what we expected before we went to Chicago on Nov. 6th to attend the Flatt sale of Shorthorns, and the event fully justified our expectations. For some time speculation has been rife among stockmen representing the different breeds, as to the mark likely to be reached, but all estimates which we heard fell considerably below the actual mark reached. One Western stockman expressed the conviction that the thousand-dollar line might be reached, but even he was far short. Perhaps the great majority of those present were of the opinion that Cicely would have scored much higher. We heard a group of Shorthorn men discuss this later. Their reasons were sound. They said in substance: "The Shorthorn is the poor man's animal; they are business animals, handled for profit by business men who are not mere speculators; they have not behind them a constituency of millionaires who are ready to spend fortunes in support of their chosen breed. Shorthorn breeders are depending upon Shorthorns for their living, and so long as this is so largely the case you will not find fabulous prices paid in the ring. However this may be, most men would be fairly content with the prices at which Col. Woods dropped his hammer on the different animals offered at this sale.

During the last few years we have seen several large ring sales of pure-bred stock, but we have not seen a lot of any breed which were more nearly in the pink of sale-ring condition than

The next bid was \$3,950, which was quickly raised to \$4,000, the price paid by Mr. Flatt. After some hesitation \$4,050 was bid, and like a flash raised to \$4,100 by George Ward, of Hawarden, Ia. Mr. Ward's bid was raised to \$4,105, then another \$5 were added, which was quickly increased, making the bid \$4,115, then \$4,120, then \$4,150. Mr. Ward then bid \$4,200; the bidding was then fast and furious until \$4,500 was reached. A vote was taken to learn how many present thought this cow should bring \$5,000. All agreed unanimously with a shout. The next bid was \$4,600, and raised to \$5,000 by J. G. Robbins & Son, of Horace, Ind. At Mr. Flatt's request, Mr. Robbins' bid was accepted as final, and another famous cow was added to the famous herd of Robbins & Son.

The excitement waxed great as the \$5,000 mark was approached, and when it was reached the applause was deafening. It was repeated, and waxed even greater, when Lord Banff, the pride of two continents, went up to the same mark and finally fell to Geo. E. Ward, Hawarden, Iowa, for \$5,100.

This sale, at which 45 animals brought \$50,520, an average of \$1,122.60, marks another of the historic places in Shorthorn history in America, being as it is the highest priced since the New York Mills sale of 1873. That sale can not be compared on the same basis as this: it represented a "corner" on Duchess blood, and was in no sense of the term on the same lines as our modern sales for practical business purposes.

One of the pleasing features of the Flatt sale was that Bates, Booth and "straight Scotch" alike met the same strong financial reception. In truth, it does look, and we are glad to see it, that a good Shorthorn can scarcely have a bad color or an unfashionable pedigree.

J. J. FERGUSON, Animal Husbandry.

Agricultural College, Michigan.

Note.—The detailed list of animals sold, with prices and purchasers, is given in our "Gossip" columns on another page in this issue.

Buying Feeding Cattle.

To the Editor "Farmer's Advocate":

Sir,—“Beginner” asks the question in your last issue: “Providing fat cattle are sold for May 1st delivery at five cents per pound, live weight, at what price should they be bought in November to make the transaction fairly profitable to the feeder, it being understood that cattle of a good beef type are purchased and fed according to approved methods?”

This is a difficult question, but in a general way I would say about \$3.50. A great deal depends upon the cost of the food fed and also the finished condition of the cattle at the 1st of May. This year coarse grain is very high, consequently the cattle should be bought comparatively low where much grain is used in fattening. Again, where cattle are fed to a finish it will cost nearly one third more than to feed them to the condition in which most cattle are shipped to Britain. To put on the finish it requires costly food, such as ground grain or oil meal. I will say feeding cattle to a finish is a science, and the shippers do not always pay sufficient for the finished animals.

SIMPSON RENNIE.

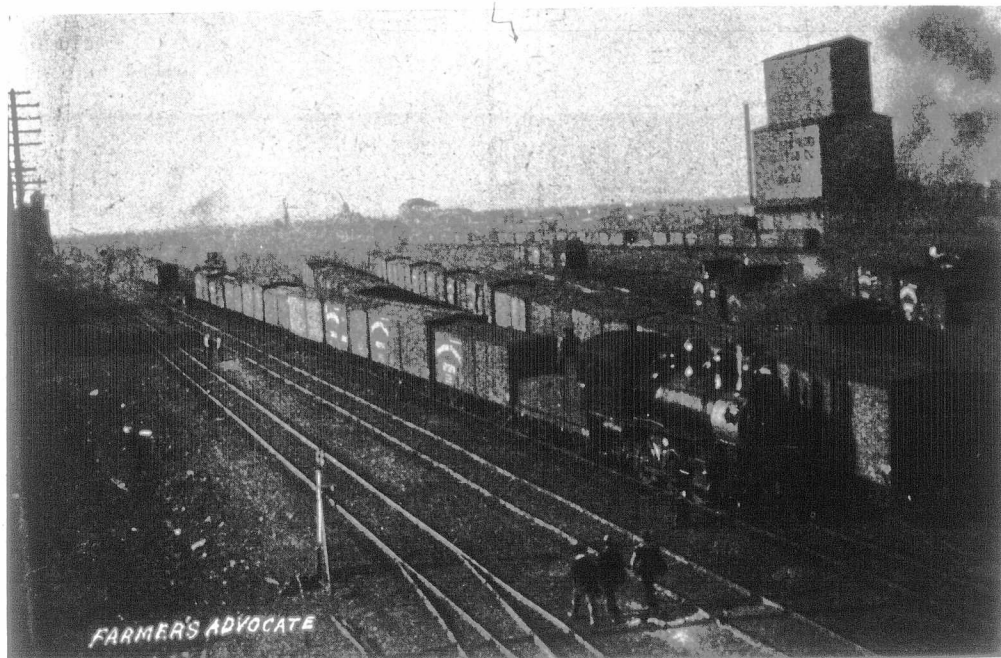
York Co., Ont.

MARKETS.**FARM GOSSIP.****Ontario Road Improvement.**

Mr. A. W. Campbell, who has charge of this branch of work carried on by the Ontario Government, states that a very great improvement is being made in the roads of the Province. “Modern machinery is being used almost entirely. Systematic plans are being laid down and followed, the appropriations by municipalities have been wonderfully increased in the last five years, and the very deepest interest is being taken in the work by Council and people.” Mr. Campbell said he had recently observed in a number of townships, including Norwich, in Oxford, and Bosanquet, in Lambton, examples of levelling, grading and seeding with grass on the sides of the road, where the farmers were taking particular pains to beautify the highway.

Mr. Campbell's attention was drawn to a statement in an American newspaper, that New York State had appropriated \$420,000 for road improvement this year; also that 45 miles had been improved at a cost of \$367,600, and 122 miles further were undergoing improvement at a cost of \$773,730. Mr. Campbell admitted that those roads looked rather expensive, but remarked that the policy in New York State had been to first build enormously expensive trunk roads leading to large centers, and that, further, the necessary gravel and stone were not nearly so convenient in New York State as in this Province. Here there are but few counties which have not all the raw material that is needed close at hand, and we are able to build roads much more cheaply.

“I should say that in the Province of Ontario this year fully 500 miles of good stone and gravel roads will have been built, and this largely by local appropriation. The people have not yet commenced to take advantage of the recent legislation appropriating one million dollars for road improvement within the next ten years, but as soon as they do much more will be done. Within the past ten years \$7,399,449 has been expended for improving the roads by the township municipalities. This is equivalent to almost \$750,000 a year, which is all raised by direct taxation. Besides this, there is expended annually in Ontario 1,100,000 days of labor under the statute labor system.”



350,000 BUSHELS MANITOBA WHEAT PER DAY GOING THROUGH TO FORT WILLIAM.

MISCELLANEOUS.**Clydesdale Sires in 1901.**

A summary indicating the relative success of Clydesdale sires in Great Britain, as reflected in the awards at leading shows this year, gives Baron's Pride (9122) the lead by a long way, the number of prizes won by his get at the principal shows, including the Royal of England, the Highland Society and the two Glasgow shows, being 97, twenty-three of which were first and twenty-two second prizes. The nearest competitor in this connection was Sir Everard (5353), the sire of Baron's Pride, who has to his credit twenty-six prizes, of which eight were firsts and four seconds. Next comes Prince of Carruchan (8151), with fourteen prizes, four being firsts and one a second. Montrave Mac (9958) shows twelve winnings, of which three are firsts and two seconds. Hiawatha (10067) stands fifth, with ten prizes, two of which are firsts and two seconds.

The proportion of animals to awards is shown in the following statement: Baron's Pride took 97 prizes with 46 animals; Sir Everard, 26 prizes with 13 animals; Prince of Carruchan, 14, with 10 representatives. Of the 14, four were firsts, and two of them are notable—the H. and A. S. first prize stallion, Moncreiffe Marquis, and the Earl of Roseberry's beautiful mare, Princess of Glasnick, which stood first at Edinburgh and second at the Highland. Montrave Mac follows in fourth place, and thus the relative positions occupied by these two sires in 1900 are reversed. Montrave Mac has a dozen prizes to his credit, and three of them are firsts, an equal number are seconds, and two are thirds, won by seven animals.

were these. Most men in fitting for show or sale are liable to overdo it. In this case, while some animals were undoubtedly in high fit, it was of that sort which only tends to bring out more strongly desirable features. Where else could such a front as that presented by Cicely be found, and where would you look for such quarters and thighs as those carried by Lord Banff and Choice Goods. It looks very much as if the "Americans" are getting the best results of British and Canadian brains and skill in breeding and feeding as concentrated in their purchases of the last few years.

Col. F. M. Woods, of Lincoln, Nebrasks, who conducted the sale, has perhaps handled more high-priced animals during the last ten years than any other living man. His introductory remarks on this occasion were sound and full of good words of advice and cheer to the stockmen of this continent. He said: "Gentlemen,—Before me I see some of the best men of our two countries. One of the best features of the livestock business is that it knows no narrow boundaries of flag limits—no color line. Let those of you who believe in your favorite breed have faith in it: stay right with it through storm and sunshine, and you will win. Do not fluctuate with every tide of commercial depression. Constancy in this business brings its own reward."

Cicely was the first animal offered and great were the things expected of her. George Bellows, in behalf of Col. G. M. Casey, Shawnee Mound, Mo., started the bidding at \$2,000. Then N. P. Clarke, St. Cloud, Minn., bid \$2,500. An unknown bidder, \$3,000. A. G. Leonard, Chicago, bid \$3,500. F. S. Hines, Indianapolis, bid \$3,750, after which \$3,800 was bid, then \$3,900.

Mutual Helpfulness.

Progressive stock-breeders, dairymen, poultrymen, grain, root and fruit growers, beekeepers, agricultural students and home-makers find the articles and answers to questions in every issue of the "Farmer's Advocate and Home Magazine" simply unequalled and indispensable. Without exception, it is conceded on all sides to be the most helpful, best printed and most beautifully illustrated farmer's paper published. A careful examination will at once reveal that fact. Every mail brings us gratifying acknowledgments of the practical service rendered in scores of ways to its readers. To promote successful agriculture in every way possible is our aim, and to this end the services have been enlisted of the ablest and most practical staff of editors and contributors, among whom are the foremost specialists of the continent in their subjects. In its pages farmers have a medium in which to discuss problems that vitally concern them and to interchange experiences for mutual helpfulness. This being the case, and knowing from actual experience the advantage which the paper brings to the farm and the home, may we not in all fairness ask the co-operation of our readers in extending its circulation, which at least should be doubled for 1902. In nearly every locality there are persons who should be enjoying the rich stores of information given in every issue. We earnestly urge you, reader, to bring its merits before their immediate notice—page by page. Write us for sample copies for that purpose; a post card will bring them free. Every new subscriber receives the paper from now till the end of 1902 for \$1, and this includes the superb Christmas number of the present year—which has been for some months in course of preparation—in itself worth at least half a year's subscription price. With these inducements to offer, you will find it easy to secure new subscribers, and by sending us the names of two new subscribers accompanied by \$2 you can have your own subscription extended for one year without any cost to yourself. This is decidedly the most popular proposition we have ever made, and should be taken advantage of by thousands of our readers. By this one effort you benefit two other persons and yourself. It is a rare opportunity. Take advantage of it without delay. Should you secure more than two new names, you will be entitled to some of our beautiful book or other premiums, or a cash commission, as you may desire.

An Address on the Sugar Beet Industry.

The Ontario Agricultural and Experimental Union has been fortunate in securing a promise from Dr. H. W. Wiley, Washington, D. C., to give an address at the Agricultural College, Guelph, on the "Sugar-beet Industry." Dr. Wiley is the Chief of the Division of Chemistry of the United States Department of Agriculture, and as he has made a special study of the sugar-beet industry, there is probably no better authority on this subject on the American continent. As sugar-beet growing in Ontario is now in its infancy, the information which Dr. Wiley will be able to give will be greatly appreciated. This address will be given at the time of the annual meeting of the Experimental Union, and will likely take place in the Convocation Hall at the College, on Monday evening, December 9th. As there will be cheap rates on the different railroads to the meeting of the Experimental Union and to the Provincial Winter Show, a great many people will have an opportunity to hear Dr. Wiley's lecture on a subject which is receiving so much attention in Ontario at the present time.

Other information regarding the annual meeting of the Experimental Union can be obtained by writing to the secretary, C. A. Zavitz, Agricultural College, Guelph, Ont.

Coming Agricultural Events.

Ontario Beekeepers' Association, Woodstock, December 3, 4 and 5.
International Live Stock Show, Chicago, Ill., December 3 to 6.
Ontario Fruit Growers' Association, Cobourg, December 4, 5 and 6.
Ontario Agricultural and Experimental Union, Guelph, December 9 and 10.
Ontario Provincial Winter Fair, and meetings, Guelph, December 10, 11, 12 and 13.
Western Ontario Poultry Show, Guelph, December 10, 11, 12 and 13.
Maritime Winter Fair, and conventions, Amherst, Nova Scotia, December 17 to 19.
Eastern Ontario Dairy Association, Whitby, January 8, 9 and 10.
Western Ontario Dairy Association (place not fixed), January 14 and 15.
Eastern Ontario Poultry Show, Ottawa, February 12.

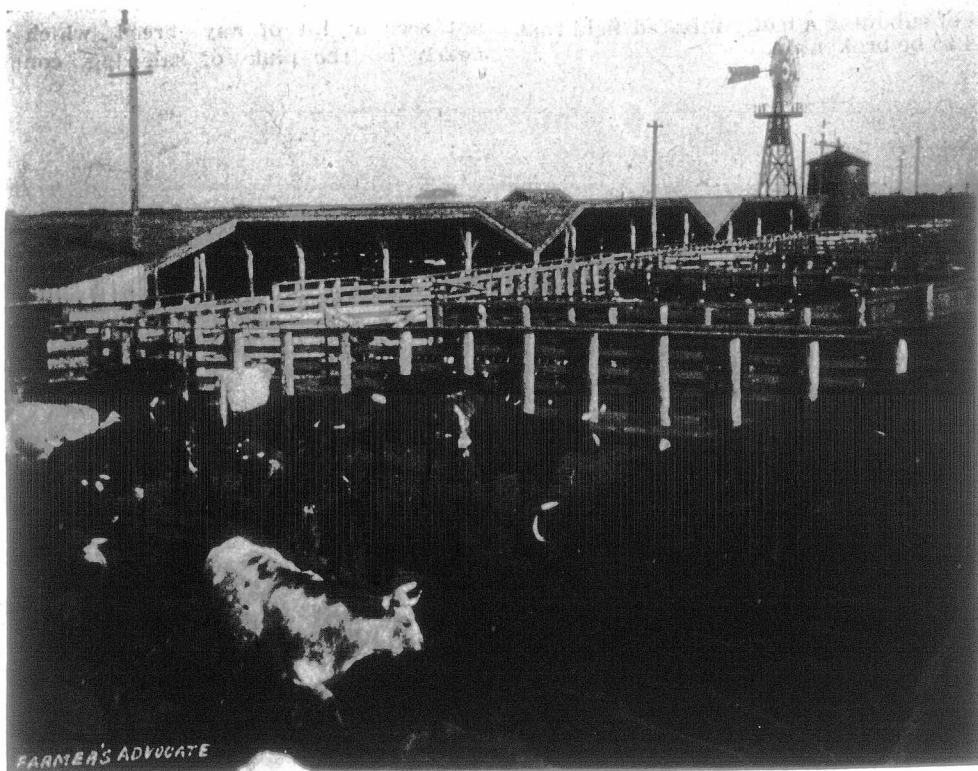
The Outlook in Nova Scotia.

As we look back from the closing months of another year we can truly say that the prospect for the farmer is bright. Although our Province is comparatively small, we have such a variety of soil and climate that our crop conditions are largely local. For example, owing to local showers a certain crop might be good here, while a comparatively few miles distant it might fall far short of an average. The hay crop (which is an important one with us) was fully up to the average as a whole, while in some sections it was one of the largest on record. The quality was good and the season for getting it was excellent. Prices are good now, with a prospect of going higher. Oats, which is our chief grain crop, is away below the average. This crop suffered from the ravages of the grain aphid, and the failure is general throughout the Province. There is not more than two-thirds of an average crop, but the price, 50 cts. per bushel, is the highest known for a number of years. Potatoes, which is one of our chief export crops, while good in some sections, is on the whole below the average. Although the price is high now, a great many farmers are holding them. Our root crop is hardly up to the average, but the quality is good. This crop, for which our Province is admirably adapted, has been rapidly gaining favor among our stockmen during late years, consequently there is quite an increase in the quantity grown. A bountiful supply of roots will be fully appreciated now when all other foodstuffs are expensive. We don't live up to our privileges in growing corn here. But those who were fortunate enough to plant some last spring were rewarded with the best crop on record. The apple crop, which is a very important one in one section of the Province at least, is below the average, but the quality is excellent and the price such that the cash returns will be fully up if it does not exceed the "banner year."

Our live stock, which is really the true mark of progress, is rapidly improving. Visitors at the Halifax Fair could not fail to be impressed with the remarkable change in this respect. While this has been noticeable in the cattle, sheep and swine classes for some years, it was not until the present year that

The Export Poultry Trade.

Among the enterprising firms who have recently embarked in the exportation of Canadian poultry to Great Britain is Scott, Ashton & Co., of London, Ont., with two large warehouses on York street, one for killing and dressing the birds and the other for fattening those that reach them in an unfinished condition. In many cases two weeks have to be devoted to this supplementary feeding. Mr. Ashton, in conversation with a member of the "Farmer's Advocate" staff who visited the premises, said that only about 25 per cent. of the birds coming in were really properly fattened. Very great improvement was necessary in the feeding of Canadian farm poultry. For chickens, oatmeal wetted with water or skim milk is preferable, and for ducks the firm have been feeding corn meal and bran, which they keep before the birds continuously. Towards the finishing period the food is made richer. At the time of our visit they were fattening about 1,000 ducks. The day before they killed 1,000 chickens, and can kill and dress 500 ducks per day. About 50 hands are employed. Turkeys will also be handled in season. One man does the killing, women and boys the picking. The feathers are shipped to Montreal and the dressed birds to Liverpool. Twelve each of chickens and ducks are wrapped separately in tissue paper and placed in neatly-made boxes. All those killed during the day go into cold storage in the evening and stay there till shipped. Before being boxed they are pressed flat on boards in advance. This firm has no use for old hens; what are wanted are this year's chicks, and ducks, when well fattened, three to four pounds, and brought in by train from all parts of Western Ontario, and so far as numbers go, the firm are securing what they can conveniently handle, but, as Mr. Ashton pointed out, a better quality of birds, such as good Plymouth Rocks, are required. The process of dressing, etc., is under the superintendence of Mr. Ernest Craze, an experienced man in the trade, from Liverpool.



A GLIMPSE AT THE C. P. R. STOCK-YARDS, WINNIPEG.

it was apparent to any marked degree in our horses. This has been brought about partly by a steady demand for good horses, at paying prices, and partly by the timely importation by the Government of a number of well-selected pure-bred sires.

Our coming Winter Fair will, I hope, prove another incentive to the production of first-class animals. As this is a new feature with us, it is a little too early to make any definite statements about the probable outcome; yet, from the apparent interest manifested, we predict a fair measure of success. All we want is courage and perseverance. Our prospects are good, and when we become fully alive to the fact that we have a country that is eminently fitted for the production of all kinds of live stock, we will enter upon an era of progress and prosperity unknown to the past generations. F. L. F. Colchester Co., N. S.

Inverness Co., N. S.

The season was very dry from May 1st till Oct. 1st. Hay crop about 75 per cent., grain 60 per cent.; all cured in good condition; grain good quality. Root crop very good. Pasture in first of the season up till July very good; from July till September too dry; fall pasture very good. Up to this date we have had no frost to speak of. Stock will go into winter quarters in good condition. On account of shortage in hay and straw crop, cattle are very plentifully offered for sale. Our only market for cattle is Sydney. Beef, wholesale, from \$4.50 to \$6.00 per cwt. Cattle, generally speaking, very small. Prospects for farmers are good. Prices for all produce good. The indications just now are that stock will not need to be housed as early as usual. DUNCAN McLEOD.

Durham County, Ont.

The root crop, which was an abundant one, has been harvested in splendid condition. Apples, which were a very light crop, have netted the growers more money than they did last year. Several who sold their orchards by the lump realized from \$3.00 to \$5.00 a barrel. Potatoes are a very poor crop along the lake and have rotted a good deal, but further north they are a splendid crop and selling at 25 cents a bushel. Live stock is in splendid condition this fall, and as the straw and roots are very plentiful, they should go through the winter in good shape. D. J. G.

The Market for Range Cattle.

The following quotations from recent issues of the Medicine Hat News, in regard to the status of the cattle trade, furnish food for reflection:

The agitation among stockmen and cattle exporters for better handling of cattle shipments has been productive of much good, as is noticed by the opinions expressed by those interested. The situation, so far as transport is concerned, has much improved. Shippers find plenty of cars and get good runs. We notice, too, that the local stock-yards have been drained and some dry gravel scattered about. The business appears to be getting some of the attention it deserves. While the railway company has improved the service complained of, this improvement has not had the effect of bettering the conditions upon the range, so far as the disposal of stock is concerned. There is plenty of beef cattle unsought and unbought, and with the exception of probably one shipment made from here last week, the prices offered show no improvement. Some of the ranchers talk of holding their beef over until next season, pooling their interests, and doing their own exporting. This, to our mind, is one solution of the present unsatisfactory conditions.

Leaving aside politics and policies and sentiment, and keeping to strict business, there is truth in the assertion that Chicago is the best market for our range beef. There is a general impression that beef producers are getting it in the neck this year in regard to prices. The ranchers blame the buyers, the buyers blame the transportation companies, the railway blame the weather and range conditions, and under it all the prices have ruled lower than the export market warranted. The buyers not only took the tops, and ranchers think they did not get top prices. There is general dissatisfaction on these ranges. What our ranchers want is a market for everything they have for sale, some place where each year they can sell not only tops, but the cattle suitable for butchers' stock and for dead-meat trade. There will never be a wholly satisfactory condition of business on the ranges until this state of affairs is reached, and it is for this reason that so many ranchers would desire a free entry into the Chicago markets. Of course, the American duty of twenty-seven and one-half per cent. prohibits this trade at present.

Macdonald Seed Grain Competition.

The reports for 1901, from competitors who are operating a seed-grain plot in the Macdonald seed-grain competition, show that the systematic continuous selection of seed grain recommended by Prof. Robertson, when given a practical test on Canadian farms, is meeting with the approval of all who are giving the work careful attention. Farmers are quite as much interested in the work as are their boys and girls. On the average farm of 100 acres, two acres of land—one for oats and one for wheat—is as much as is required for growing seed for the main crops on the farm. This seed-grain land should be specially prepared with a view to forcing a vigorous growth of plants that will give a large yield of grain of good quality. The time required to gather by hand, before the grain is cut, sufficient of the best-developed heads to produce enough good seed for an acre of land—the seed-grain plot—need not exceed four hours with two persons.

Experiments have been conducted by Prof. Waters, of the Missouri State Experiment Station, to determine the effect of a change of seed from one soil to another, and from one locality to another. Two varieties of wheat, three varieties of oats and two varieties of potatoes were used. Many samples of each variety were obtained. The results are remarkable. Here the productive capacity of the seed was accurately measured, and the difference between strains of seed of the same variety obtained from the same locality was in many cases greater than the difference caused by variety on the locality from which the seed was obtained. In summing up the results, Prof. Waters says: "The difference appears to be due more to previous treatment of the seed than to a difference of climate or latitude." "The productive capacity of the seed in several cases was unquestionably reached before that of the soil."

What the competitors in the seed-grain competition are doing, is simply growing seed grain on specially prepared plots of land—one quarter of an acre in each plot—selecting seed each year from these plots to sow on the plot for the succeeding year, by first gathering large, well-filled heads from vigorous plants before the grain is cut and when all the conditions of growth may be observed, and then threshing these heads, and, by screening and hand-picking, selecting the large, well-developed grain for seed. To encourage the boys and girls in this work, Sir William C. Macdonald, of Montreal, donated the sum of \$10,000 to be given in cash prizes, according to plans which were arranged by Prof. Robertson, of Ottawa. This work of selecting seed has now been conducted for two years on over eight hundred Canadian farms, which are fairly well distributed throughout the Dominion.

chickens for home and foreign markets. Mr. Graham, Poultry Manager, will have charge, assisted by Poultry specialists, while professors in the Biological and Bacteriological Departments will give instruction in the College laboratories on embryology, the anatomy of birds, poultry parasites, and the diseases of fowl.

In the carpenter shop Mr. A. E. Crawford will give practical instruction in the use of ordinary tools, with a view to such repairs as may be necessary, and the construction of coops, feed troughs, etc.

There has been a gradual increase in the attendance at the Agricultural College during the past few years. Last year there was a greater attendance than in any former year, and in looking over the College Register, it is found that twenty-eight more have registered this fall than were in attendance on the corresponding date last year.

The above courses are likely to be very popular and will do good both to those who take advantage of them and the College.

P. E. Island Agriculture.

PRESENT SUCCESS AND FUTURE PROSPECTS.

Down here in the "Tight Little Island," on our "million-acre farm," we have enjoyed the most delightful weather during the past season. It has been the hottest summer and about the driest that the "oldest inhabitant" remembers. Beautiful sunshine almost continually up to November. With a little more rain it would have been an ideal season for the agriculturist. Crops have been a fair average, taken all over, but in some sections the drought was pretty severe and resulted in failure of some of the crops. But our agriculture is so diversified here that the farmer is never left in want. If one crop fails, others succeed. This year the hay crop was good, so was the early-sown grain in most places. Wheat was especially good, and some enormous yields are reported as threshing progresses. We had no weevil and very little rust; in fact, all crops were singularly free from the attacks of fungous or insect pests, except potatoes, which were attacked by the bug in greater numbers than usual. The shortage in the crop will be partly made up by the increased prices obtainable for farm products. Oats, which is yet to some extent the poor man's money-maker, is fully 8c. dearer than last year. Pork is worth a cent a pound more. Horses are up about 25 per cent. Cattle for beef are as good a price as last year. Mutton is a shade better. The worst shortage will be in our dairy products. Cheese will average a cent a pound less than last season, and the make will not be nearly so large. Butter has held its own in price pretty well, but there will also be a shortage in production.

in church or state. He can adapt the lines of the Quaker poet to express the dignity of his calling:

"Give fools their gold and knaves their power,
Let fortune's bubbles rise and fall,
Who sows a field or trains a flower,
Or plants a tree is more than all."

As this is the season of the "Harvest Home" and the "Thanksgiving turkey," we think a review of the agricultural situation in this "Canada of ours" cannot fail to call forth thankfulness to the Giver of all our blessings, Who has opened His hand and we are liberally fed, and Who has vouchsafed to us the blessings of peace and prosperity.

"Oh, Painter of the fruits and flowers,
We thank Thee for the wise design
Whereby these human hands of ours
In Nature's garden work with thine." W. S.

Toronto Markets.

Business all round shows an improvement, owing to a better Liverpool demand causing an advance in export cattle and a toning up in butchers' stock.

Export Cattle.—Best lots of export cattle are quoted at from \$4 to \$4.87½ per cwt.

Mr. Joseph Gould bought two loads of good export cattle, 1,300 lbs. average, at \$4.60 per cwt.

Butchers' Cattle.—Choice picked loads of butchers' cattle, weighing 1,075 to 1,150 lbs. average, sold at \$4.25 to \$4.50 per cwt. Good butchers' cattle, cows, heifers and steers, sold at from \$3.65 to \$4 per cwt.

Common butchers' cows sold at from \$2.50 to \$3 per cwt.

Bulls.—Heavy export bulls sold at \$3.25 per cwt.; light sold at \$3.60 to \$3.75 per cwt. Bulls suitable for the Gooderham byes, 1,000 to 1,300 lbs., are in good demand and wanted; those on offer sold at \$2.75 to \$3.25 per cwt.

Feeders.—Good heavyweight feeders suitable for farmers, weighing 1,100 to 1,200 lbs., are in good request at \$3.25 to \$3.60.

Steers weighing 800 to 900 lbs. are worth \$3 to \$3.25 per cwt. There is a good demand for this class of feeders.

Stockers.—Yearling steers, average 800 lbs., sold at \$2.50 to \$2.75; black and white, and those of inferior quality, sold at from \$1.75 to \$2.25 per cwt. Good stockers \$3 to \$3.40.

Sheep.—Prices steady, at \$3 to \$3.35 for ewes and from \$2 to \$2.50 for bucks. Mr. W. B. Levack bought 250 sheep at \$3.25 per cwt.; 200 lambs at \$3.20 per cwt.

Lambs.—Prices stronger, at \$3 to \$3.40 per cwt. Calves.—In good supply; good choice veals in demand; those of inferior quality sold down to \$3 per head; choice milk-fed veals sold easily at \$10 per head.

Milk Cows.—About 12 cows and springers on offer; choice dairy cows sold readily at top prices; those on offer sold at from \$30 to \$50.

Hogs.—Best select bacon hogs, singers, off cars, not fed or watered, not less than 160 lbs. and not above 200 lbs., live weight, sold at \$5.50 per cwt. Unculled car lots sold at \$5.37½ per cwt. Light and thick fat sold at \$5.25. Sows at \$4 and boars at \$2 per cwt.

It is difficult to fix the blame for the oversupply of hogs. When this market was calling for hogs at \$6.50 per cwt., very few offered. Now that the price has declined, hogs weighing 250 lbs. are freely offered at \$5.37½. Many of the hogs offered lately were over-fat and unsuitable for export purposes.

Prospects are for lower prices; in fact, we expect \$5 to be the ruling price for the winter months.

Toronto Cattle Market returns for the month of October compared:

	1900.	1901.
Cattle.....	10,146	15,409
Sheep.....	16,271	17,276
Hogs.....	22,095	16,782
Calves.....	220	441

Extreme comparative prices to-day, Nov. 12, 1901. 2 weeks ago. Same date last year.

	to-day, Nov. 12, 1901.	2 weeks ago.	Same date last year.
Export cattle.....	\$4.87½	\$4.50	\$4.60
Butchers' cattle.....	4.60	4.50	4.40
Bulls.....	3.25	4.25	3.25
Feeders.....	4.00	4.00	3.90
Stockers.....	3.40	3.00	3.00
Sheep.....	3.35	3.25	3.50
Lambs.....	3.40	3.40	3.25
Hogs.....	5.50	6.00	4.75
Milk cows, per head.	50.00	45.00	50.00

Grain.—The receipt of farm produce at the St. Lawrence Market: White wheat sold at 72c. per bushel; red wheat sold at 70c. per bushel; goose wheat sold at 64½c. per bushel. Barley sold at 50½c. per bushel; very choice, bright colored sold at 59c. per bushel.

Hay.—This market is overloaded and prices declined; 25 loads sold, at \$10.50 for timothy and at from \$7 to \$8.50 per ton for clover.

Straw.—Two loads of sheaf straw sold at \$10 per ton; loose straw sold at \$7 per ton.

Dressed Hogs.—Prices easy and declined to \$7.50 per cwt.; prospects lower for next week.

Poultry.—Demand good on all choice poultry. Chickens, 40c. to 80c. per pair; turkeys, 8c. to 9c. per lb.; ducks, choice, 50c. to \$1 per pair; geese, 5c. to 8c. per lb.

Dressed Beef.—Beef fore quarters, per cwt., \$5; beef hind quarters, per cwt., \$7. Mutton carcass, per lb., 7c. Lamb carcass, per lb., 6½c. Veal, per cwt., \$8.

British Stock Markets.

London, Nov. 11.—U. S. cattle, 6½d.; Canadian, 5½d. to 6½d. U. S. sheep, 5½d.; Canadians, 6½d. to 5½d. Cattle firm.

Montreal Markets.

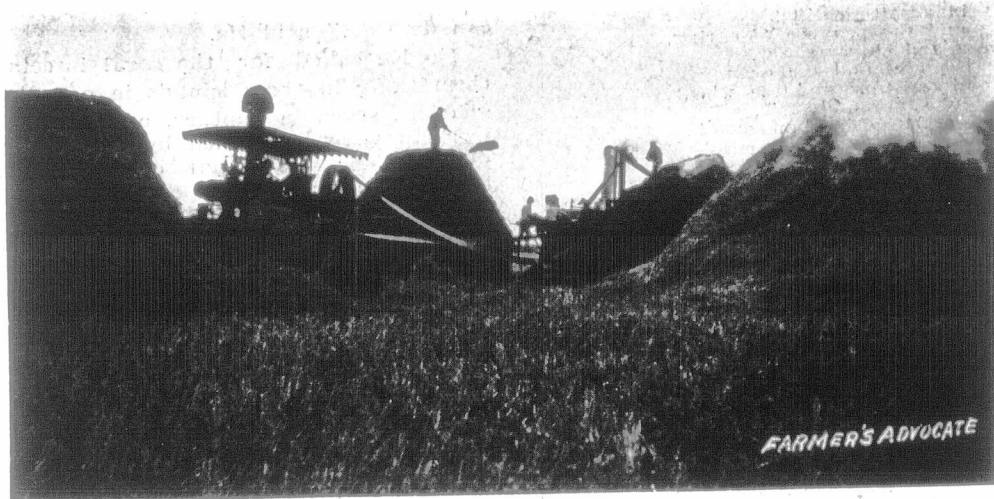
Montreal, Nov. 11.—Five hundred butchers' cattle, 25 calves and 1,500 sheep and lambs on offer. Fairly good cattle, 3½c. to 4½c.; calves, \$3 to \$8; sheep, 2½c. to 3c.; lambs 3c. to 3½c.; hogs, 5c. to 5½c.

Buffalo Markets.

Buffalo, Nov. 13.—Steers, \$5.40 to \$6.25; cows, \$3.40 to \$4.40; bulls, \$3.80 to \$3.95; veals, \$5.50 to \$5.75; hogs, \$5.00 to \$5.80; lambs, \$3 to \$4.60; sheep, \$3 to \$3.90.

Chicago Markets.

Chicago, Nov. 13.—Steers, \$3.80 to \$7.25; stockers and feeders, \$2 to \$4.30; hogs, \$5.00 to \$5.82½; sheep, \$3.40 to \$4.10; native lambs, \$2.50 to \$4.50; Western lambs, \$3.00 to \$4.25.



THRESHING AT HON. THOS. GREENWAY'S FARM, CRYSTAL CITY, MANITOBA.

Special O. A. C. Short Courses.

The regular session of the Provincial Dairy School at Guelph will open on the 4th of January next, and arrangements have been made to give instruction in Home Economics in addition to what was taught in this course last year. A Creamery Course, intended especially for those who are unable to take the regular course, will commence on the 2nd of December and continue for three weeks.

The great majority of farmers and farmers' sons who would like to take advantage of College training find it impossible to spend the time and money required to do so. In order to give these men a chance to improve their knowledge of stock judging, it has been arranged to give a short course, in January, in judging horses, beef cattle, dairy cattle, sheep, and swine. Dr. Reed, the College Veterinarian, will instruct in the judging of horses, while Professor Day and his assistant, Mr. M. Cumming, will take charge of the judging in other classes of live stock. Instruction will also be given in the breeding, feeding and management of live stock.

One hour per day, from 9 to 10 a. m., will be spent in the judging of grain, detection of weed seeds, etc. Mr. Zayitz, who has been in charge of our Experimental Department for the past fourteen years and has had wide experience in the selection of seed grain and the detection of weed seeds in the various kinds of grains, grasses and clovers, will take charge of the class in this subject.

Forty applications have already been received; and the prospects are that a much larger number than was expected will take advantage of the course. No entrance examination or tuition fee are required of those who take either this course or the short course in poultry-raising.

Commencing on the 10th of Jan. next, and lasting for four weeks, a poultry course will be given at the O. A. C. Since only twenty students can be accommodated this year, those who wish to take advantage of the instruction to be given should apply early. This course will include instruction in the preparation of plans, specifications and estimates of poultry houses for various purposes; location, construction, ventilation, and furnishings; breeds and varieties of fowls, origin and characteristics; principles of breeding and mating; judging; natural and artificial incubation and rearing; feeding, care, and management; the production of eggs in winter; demonstrations and practice in fattening, killing, dressing and preparing

The last few years have been very favorable for dairying here; prices have been good, and the supply of milk large.

Notwithstanding these little drawbacks which occur in every business, and are always to be expected in farming, a hopeful feeling pervades the agricultural community. The practice of agriculture has made a distinct advance on the island during the last decade. This is especially true of the time since the inauguration of co-operative dairying here, nine years ago, which has grown beyond the expectation of those who were sanguine at that time of its success, till it is now an all-year-round business in every part of the island. There is now each year a noticeable improvement in the crops of dairy districts. The exhaustive system of farming that was followed previously has given place to a system that tends to conserve and increase fertility. More stock is kept and of better quality. As a result of intelligent breeding and selection, more milk per cow has been obtained, thus reducing the cost of production; more intelligent feeding and the production of more suitable food is also contributing to the same end. Then the bacon hog is following in the wake of the dairy cow. The non-descript, clam-digging, wood-ranging, beechnut-hunting pig has gone out, and is succeeded by hogs of the best bacon type. In fact, all our stock is improving rapidly. Pure-bred animals in many kinds of sheep, cattle and hogs are getting common, and the old scrub that every agricultural writer has had his fling at is being succeeded by the grades that are so much more profitable. In our poultry the improvement is perhaps more noticeable than in anything else. It is common now to see flocks of the best strains of the different breeds of poultry where formerly only the old barnyard fowl held sway. Horticulture is also in the ascendant, and instead of bunches of old seedling apple and plum trees, we have many well-laid-out orchards producing as good commercial fruit as is grown in America. Agriculture in P. E. Island during the season of 1901 has been successful taken as a whole.

Farmers are learning to put skill into everything they engage in. The man behind the plow, "the man behind the cow," and the man among the apple trees, are all improving and doing their work more skillfully and much more profitably. And all this energy and skill is again reacting on the farmer and his surroundings. As he prospers, his tastes become more cultivated and he begins to beautify his home. Ornamental trees and flower gardens engage the attention of himself and family. His farm buildings are getting more artistic and more convenient. Both himself and his cattle are better housed and fed, and as he prospers he begins to feel within himself that, after all, farming is just as respectable as any other business or profession, and that he is the peer of any, whether



Thanksgiving Day.

"Thanks, grim old Puritans, to you— Who 'buildest better than ye knew! True, ye were hard and stern, 'tis said, Intolerant and bigoted, But one sweet gift is of your giving, Thanks, sad old Pilgrims, for 'Thanksgiving.'"

Her Thanksgiving.

Mary Newcome sat curled in a heap on her trunk, looking out of the narrow window of a hall bedroom at the monotonous row of brick houses opposite. It was the day before Thanksgiving—her first Thanksgiving away from home, and she was finding it a new experience.

A letter dated Willow Hill, N. H., was crumpled in her hand, but she straightened it out again, and leaned against the side of the window in order to re-read it by the fading light.

"Dear Molly: I can't help wishing you were here, even if you are having a splendid time in Washington."

Poor Mary groaned and looked solemnly around the bit of a room where, as she told the girl who worked beside her in the office, "the bed, bureau, stand and trunk joined hands to play 'ring round the rosie,' and she must be the rosie, for when she was in the middle, the room was full." Then she read farther:

"I don't think we shall have an extra good dinner. Can't you smell the pudding cooking now?" Somehow that was the last straw to the home-sick girl, and down went her head on the window-sill for a moment of crying. But the head came up bravely again, and the letter was shut away in a bureau. As Mary did this, a new idea came to her, and she took a pencil and paper back to the trunk.

"Now for a list. 'Why I am thankful'—that sounds well. '1. I'm thankful to be earning money to help father.' '2. I'm thankful the home folks are well.' Then, with a wrathful gesture at her quarters, she wrote: '3. I'm thankful I haven't always lived in a hall bedroom. Here's a jummy one for a finish.' she added: '4. I'm thankful Mrs. Elkins doesn't give us cabbage and onions for dinner but five days out of seven.' She was pinning this beside her mirror when there was a timid rap at the door.

"Come!" she called, and in walked a meagre girl about her own age. "Why, Susan Elkins, what is the matter?" Mary cried, at the sight of the woe-begone countenance. For answer Susan covered her face with her hands and began to cry gaspingly. Almost alarmed, Mary led her over to the bed, sat down beside her and tucked a handkerchief into her hand. But all her questioning received only sobs in return, so she poured a glass of water, dropped a tablet into it, and began to stir so emphatically with a teaspoon that Susan peeped at her a moment. This was her chance.

"Now, Susan, drink this, and if you imagine hard you'll think it's soda. Then I want to hear what ails you."

The afflicted one drank a few swallows, then said brokenly: "It's mother—she's dropped a stitch in her back—an' it makes her screech to move. We've sent for Aunt Eliza, an' she'll come Friday; but, oh, what will become of the 'Thanksgivin' dinner?" And her wails broke out afresh.

Mary hesitated; she had once had a disheartening glimpse of Mrs. Elkins' kitchen, where a greasy Dinah washed dishes and scrubbed from morning to night, while the mistress scolded and cooked. But she laid a cheering hand on Susan's shoulder. "There, my dear, perhaps it isn't so bad as it looks. Tell me what your mother planned for dinner."

"Why, there's two turkeys to be roasted, an' all the vegetables and fixin's. She's got her pies made, an' she was goin' to have Maryland puddin' besides."

"Turkey an' fixin's! That's easy, Susan. And as for Maryland puddin', I'll warrant my New Hampshire pudding can beat it!"

"Your puddin'?" Susan said, her eyes wide open with astonishment. "Sure enough! You and I would be smart folks if we couldn't get dinner for nineteen people once in our lives. Come on, let's go to the kitchen. Maybe we'll have to do some marketing."

Most of that night Mary tossed about trying to find a comfortable spot on her lumpy mattress, for, in spite of her calm words to Susan, the thought of managing a dinner for nineteen loomed large before her and made her nervous. When the alarm clock buzzed at five o'clock she was glad enough to spring out and make a beginning of the day's work.

Dinah grinned cheerfully when she entered the kitchen, but Susan was worn from a night of watching and working over her mother, so Mary resolved to spare her all she could. She attacked the huge gobblers first, but almost despaired.

"Oh, you villains, I'll never get you filled with dressing!" she cried. "Why did you grow so big?" And even Susan ventured a feeble smile.

As she mixed big pots-full of her mother's famous pudding, she remembered her sister's letter. "There! I shall 'smell the pudding' after all," she thought, gleefully.

"Susan! Susan!" "Why who is that?" asked Mary, startled. "Just mother. Didn't you know we slept off the kitchen?" "And I've been so noisy all day!" thought Mary, conscience smitten. "Ma wants you to come in a minute before you go up," Susan said when she returned. "Oh, do you suppose I've bothered her?" Mary asked anxiously. "Well I guess not!" Susan said, with an energy so unusual that Mary looked at her curiously. She understood when she sat down in the cheerless back bedroom, while Mrs. Elkins grasped her hand. "Oh, Miss Newcome, you're an angel of light, you be for sure! You don't know what it would have been for me to lose them boarders with winter jes' beginnin'; an' go they would have. I'm mighty sure, they'd have been that mad if they hadn't had any Thanksgiving dinner. You're jes' as tired as a dog, an' oughter go straight to bed, but I thought mebbe you'd like to know what a thankful day you've made for me."

Mary's own eyes filled with tears, and at a sudden impulse she bent to kiss the tired face on the bed.

As she went slowly up to her room she met one of the boarders. "Why, Miss Newcome, you were out for dinner, weren't you? Well, I suppose you were thankful, though we had really a feast."

"Yes," Mary answered with a smile, "I am thankful."—(Canadian Churchman.)

Thanksgiving.

"Have you cut thy wheat in the blowing fields, The barley, the oats, and the rye, The golden corn, and the pearly rice? For the winter days are nigh." "We have reaped them all from shore to shore, And the grain is safe on the threshing floor."

"Have you gathered the berries from the vines, And the fruit from the orchard trees? The dew and the scent from the rose and thyme In the hive of the honey-bees?" "The peach and the plum and the apple are ours, And the honeycomb from the scented flowers."

"The wealth of the snowy cotton field, And the gift of the sugar cane, The savory herb and the nourishing root, There has nothing been given in vain. We have gathered the harvest from shore to shore, And the measure is full and running o'er."

Then lift up the head with a song! And lift up the hands with a gift, To the ancient Giver of all! The spirit in gratitude lift! For the joy and the promise of spring, For the hay and clover sweet, The barley, the rye, and the oats, The rice and the corn and the wheat, The cotton and sugar and fruit, The flowers and the fine honeycomb, The country, so fair and so free, The blessing and glory of home. "Thanksgiving! Thanksgiving! Thanksgiving!" Joyfully, gratefully call To God, the "Preserver of Men," The bountiful Father of all.

—Amelia E. Barr.

A Deed and a Word.

A little stream had lost its way Amid the grass and fern; A passing stranger scooped a well, Where weary men might turn; He walled it in, and hung with care A ladle at the brink, He thought not of the deed he did, But judged that all might drink. He passed again, and lo! the well, By summer never dried, Had cooled ten thousand parching tongues And saved a life beside.

A nameless man, amid a crowd That thronged the daily mart, Let fall a word of hope and love, Unstudied, from the heart; A whisper on the tumult thrown. A transitory breath— It saved a brother from the dust, It saved a soul from death. O germ! O fount! O word of love! O thought at random cast! Ye were but little at the first, But nightly at the last.

—Charles Mackay.

Thanksgiving Time.

Oh! what is the meaning of such a great flurry? Say, why in the kitchen does every one hurry? Just look at the dog and the cat—how they scurry. Why, 'tis Thanksgiving time!

There's Bob, stoning raisins quite sober and steady, There's Nell, peeling apples, there's dear little Teddy, Each doing a part in the grand getting ready For Thanksgiving time!

Oh, the fun and the frolic, the shouts and the laughter, The mirth and the music that ring round each rafter! The boys and the girls will remember long after This Thanksgiving time.

There's grandfather, grandmother, uncles and cousins, There's aunties and neighbors and friends by the dozens, There's dear Sister May with the dearest of husbands, At Thanksgiving time.

Come every one now, great and small, to the table! Let every one eat just as long as he's able! Let the old house resound from cellar to garble, For 'tis Thanksgiving time!

Alas, the poor turkey! what's left of his splendor? Where now are his airs he so proudly did render? Ah, peace to hisavings—but wasn't he tender! This Thanksgiving time.

Hurrah for Thanksgiving! Hurrah for the dinner! Who can help but be glad to be scrapp and sinner? Of all the good holidays this is the winner— Dear Thanksgiving time!

Lady (to departing servant)—"What shall I say in your reference?" Servant—"Just that I stood it for six months with you, mum—that'll do for me."

THE CHILDREN'S CORNER.

Little by Little.

One step and then another, And the longest walk is ended; One stitch and then another, And the largest rent is mended; One brick and then another, And the highest wall is made; One flake upon another, And the deepest snow is laid.

So the little coral workers, By their slow but constant motion, Have built those pretty islands, In the distant dark-blue ocean; And the noblest undertakings Man's wisdom hath conceived, By oft-repeated efforts Have been patiently achieved.

Then do not look disheartened O'er the work you have to do, And say that such a mighty task You never can get through; But just endeavor day by day Another point to gain, And soon the mountain which you feared Will prove to be a plain.

"Rome was not builded in a day," The ancient proverb leaches; And Nature, by her fruits and flowers, The same true sermon preaches. Think not of far-off duties, But of duties which are near; And having once begun to work, Resolve to persevere.

The Coral Workers.

In the Pacific Ocean long ago there were many empty spaces without any land. This ocean was blue and beautiful, but there was no eye to see it. The sun shone brightly, but no flowers or trees could grow beneath its rays. The seeds that fell from the other countries into the water floated by, but there was no soil where they could stop to rest. The Master saw that if there were only some islands there might be lovely homes for men and animals. "My little builders can do this," said He.

So He called for the coral insects and told them to build three islands in one place, five in another, seven in another, and so on. The little workers were so taken by surprise, that they popped their heads out of their windows and looked at each other in astonishment.

"We!" they exclaimed. "We are no bigger than pin heads. We never could build one island, to say nothing of a whole oceanful!"

"If the whales could only try it! A whale's work could amount to something," said the Astra.

"But the whales have their own work to do," said the Master Builder; "and if they come down here to make islands, who will keep the North Pacific free from seaweeds? I do not ask one of you alone to build an island. Think how many of you there are."

"But we do not know how to shape the islands; they will all be wrong!" cried the Madrepora.

"I will take care of that," said the Master, "only see that each one builds one little cell."

So the corals divided the work among themselves. Some began to build the middle and some the outer edge. Very busily and patiently they wrought. The islands grew higher and higher, until they came to the top of the water. Then the waves and the wind did their part by bringing sand and weeds and leaves to make soil. The nuts and seeds that had fallen into the water and were so tired by bobbling up and down all the way from India and South America, found a nice bed to sleep in for a few days. When they felt rested, they got up and grew into thorn trees and bushes and cocoa trees. Long vines began to creep across the sand, and sweet flowers blossomed; men and animals came to live there, and little children ran about and played beside the ocean. The islands were called the Friendly Islands, the Caroline Islands, and so on.

"Who would have believed we could have done it!" said the little corals, as they saw the result of their efforts. "The whales could have done no better! And to think it was all done by us making one cell apiece."

Appreciative Words from a City Visitor.

To the William Weld Co.

Dear Sirs,—This summer I spent several weeks in the country, and though some time has passed since then, I hope it is not too late to tell you how I grew to appreciate the F. A. When I heard my cousins' enthusiastic remarks about it, I merely thought they were ardent farmers, but after seeing a few numbers I realized that it was not only for the head of the house, but every member of the family was furnished pleasure as well as information. The real literary merit, the unusual freshness and up-to-dateness about the jokes, the beautiful choice of pictures, are all a delight.

Allow me to sign myself, Yours admirably, E. L. E.

Travelling Notes.

My notes once more shall date from Bonnie Scotland.

Perhaps the most interesting visit amongst the many which Fan and I paid during our brief stay in Edinburgh was that to Holyrood, which literally teems with stories, real and imaginary, many of them so tragic that one's very heart aches even to think of them. Neither of us could have gazed without emotion, even had there not been those few drops of Scottish blood coursing in our veins, upon scenes so associated with the hapless Mary Stuart, with the court pageants and festivities, the dark intrigues, the feuds, and the written and unwritten tragedies of her most tragic life. Whilst the walls of Holyrood held records for us of other royal happenings, our interest, as is the case with most visitors to that historic palace, naturally centered upon those spots so full of associations with Mary, Queen of Scots. It was at Holyrood she had enjoyed her brief span of happiness; here she had not only extended her royal hospitalities and transacted her affairs of state, but here also she had entered into the quieter occupations of a woman's life. Mary had sat at Holyrood with pen or needle in hand. She had taken up sundry studies, and had really tried to inform her mind on subjects with which, as a reigning sovereign, it was incumbent upon her to be acquainted. Here, with her passionate love for music and song, began and ended her friendship with Rizzio, who was slain at her feet, with his hands frantically clutching her very skirts. The walls fairly echoed with his dying cries. Nor were they the only sounds which seemed almost audible to our imagination. We could almost fancy we could hear the passionate, tearful retorts of the angry young Queen to the stern remonstrances of her mentor, John Knox the Reformer, as in strident tones he warned her of "evil to come of it if she did not amend her ways."

At Holyrood were celebrated those two dreadful marriages with their train of direful consequences. How could Mary marry either the dissolute, unprincipled, treacherous Darnley, or the brutal Bothwell? Oh! the madness of it all, and who can read the riddle? If Mary sinned, she suffered, but it was not for Holyrood to witness the filling of her cup of sorrow and repentance to its very last drop, although it was to it she was brought as a prisoner after her surrender at Carberry Hill, and it was from Holyrood she was taken to Lochleven Castle on the 16th of June, A. D. 1567.

"Fan," said I, as we passed out from the portals of Holyrood, "let us think of poor tempted Mary, Queen of Scots, when next we read that wonderful passage in the 8th chapter of St. John, where the Saviour, after first turning a deaf ear to the voices of the woman's accusers and writing upon the ground 'as though He heard them not,' said, 'Neither do I condemn thee; go and sin no more.' We may rest assured that at the Great White Throne the false will be eliminated from the true, and not upon Mary, Queen of Scots, alone will condemnation fall. Let us be thankful that we are not called upon to give our verdict upon the happenings of that troublous long ago." I am very glad that for the remainder of my Scottish trip (the details of much of which I must, at least at present, leave untold) I still had the pleasant company of my friend and cousin, but just now I am alone, for alas! Fan has left me. We parted a few days ago, after having been together, sharing one another's pleasures and experiences, for nearly five months. She returned to England to pay first a farewell visit and then to join a cousin who also was about to return to Canada. It goes without saying that I shall miss my bright, cheery, appreciative companion very much. I think much as she had enjoyed what she called "the best holiday in her life," she was beginning to feel a little homesick for Canada and her beloved ones there. Fan had seen England and Scotland under delightful circumstances, having shared my welcomes into many delightful homes, and when we meet again, as, please God, we shall before many months are over, we can have many "a crack" over our reminiscences. One special regret I have, and that is that I shall have no Fan with me when I visit the Green Isle, about which I may have something to tell you later on.

MOLLIE.

"The Wolf and the Lamb."

"The Wolf and the Lamb" is a characteristic production of the British School. We may no doubt trace the inspiration of this class of pictures to the Dutch, who first dug into the rich vein of common life and brought to life the wealth of material there awaiting the seeker with eye and hand endowed with the power and instincts of art. But though the Dutch were the first to develop with genuine sympathy the art aspects of the life of the common people, and were for nearly a century singularly alone in this respect, in catching these inspirations British Art assumed a form distinctly national. Mulready was a close student of the mechanism of the Dutch School, but the spirit of his work is widely different, and the student would search in vain through the crowded galleries of Holland for any work analogous in conception or intention to such as "The Wolf and the Lamb," which is a characteristic example of the general direction of the artist's sympathies, gentle and refined and instinct with a touch of the genial humor of the "Spectator."

Mulready is one of the great names in British Art. He is one of the four men who at once recur to the memory when reference is made to the state of art in England during the first half of the last century.

present position. The worst of the lad's offense may well be supposed to be nothing more than the presumption of mingling with rich men's sons. Inoffensiveness and poverty are in themselves sufficient provocatives of the worse than animal cruelty of the ill-fated bully. The picture presents to our minds one of the humbler tragedies of life. None who know the capabilities of suffering inherent in the young but will have their sympathies aroused. To such it will be a matter of regret that the painter has not given us a companion picture indicating the deliverance of the poor little cowering orphan from the shadow that threatens his future. It is sufficient to say that the coloring and execution of this picture is worthy of the hand of a master of the craft.

On Some Kinds of Furnishing.

In an old copy of the "Girl's Own Paper" of 1885, I have found some veritable words of wisdom, which, being so incomparably better than any I could offer of my own, I will quote as my contribution to this issue of our Home Magazine.

They occur in a bright little sketch of the earlier married life of one who became afterwards so well known to every woman in Canada, either personally or by reputation, as the 'Countess of Aberdeen, the wife of our former Governor-General. They were written when, although only twenty-eight years old, she had already realized not only her responsibilities as wife and mother, but also all the duties entailed upon her by her position as the wife of one of the largest landowners in Scotland. This is no record of her wonderful life of unselfish service for others, but just an introductory setting, as it were, for my quotations.

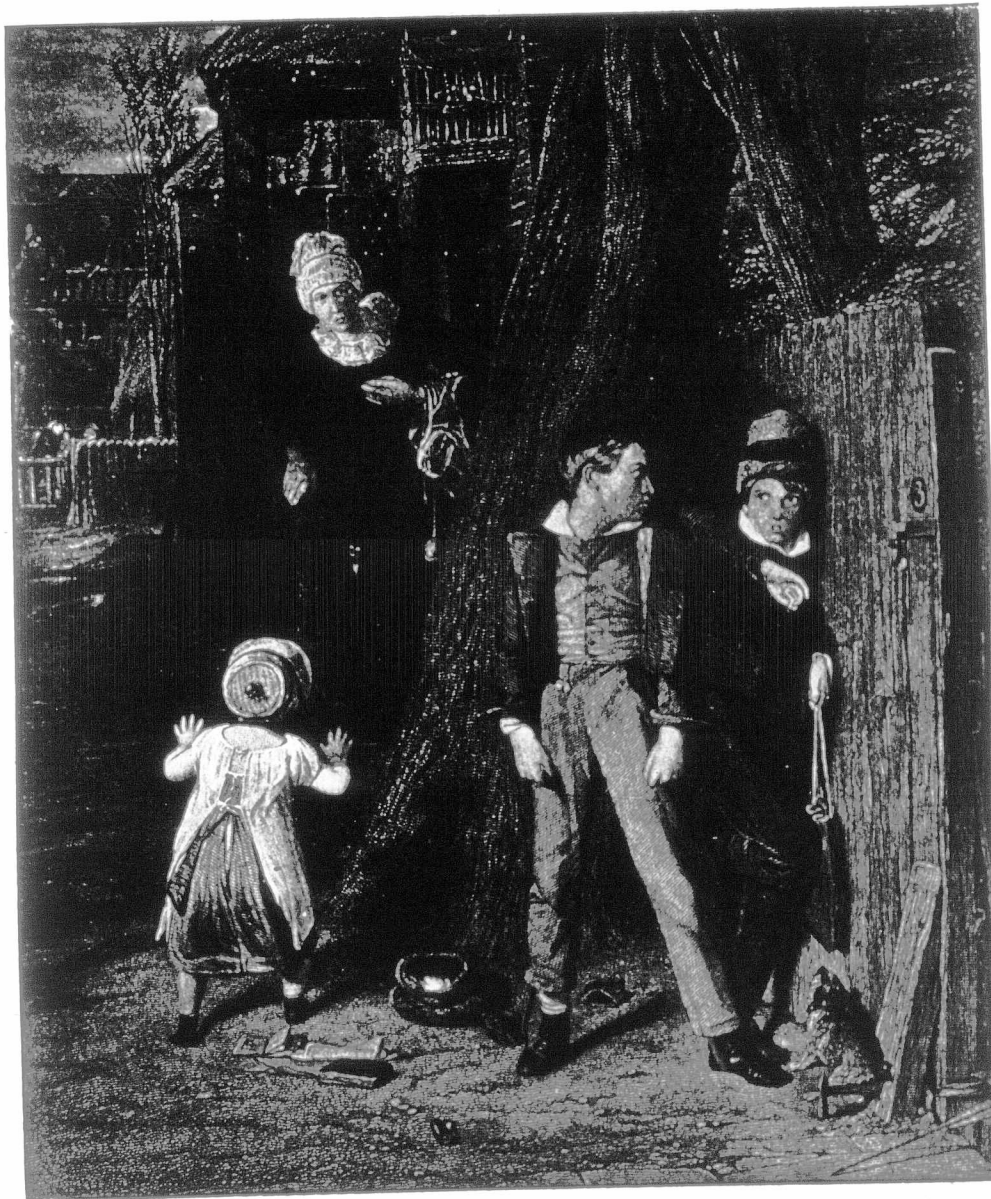
Amongst the efforts for the uplifting and betterment of the young daughters of their Aberdeenshire tenantry was the formation of the "Upward and Onward" Society, and apparently it was to the members of this most helpful organization that the following words were addressed:

"It is not the sort of work that we have to do, but how we do it, that makes the difference between a worthy and an unworthy life. A girl who has been rightly educated, and who uses her education in the right way, will always be the better for it in whatever station of life she may be, for she will have been taught to think how she can do everything she has to do as well as possible.

"I have heard it said that everyone is like a house which contains a kitchen, a drawing-room, a library, and an inner private room. . . . The kitchen represents that part of our life which is dependent on the body; the drawing-room is our social life; the library is our mind; and the inner room is our spiritual life. So now let us see to it that our house is in good order; and first let us begin with the kitchen. That room must on no account be neglected by any of us, for our bodies belong to God, and we must care for them, and do all we can to make them healthy. Those who keep this kitchen in order will take the utmost pains with all their domestic work. They will do all

that lies in their power to make the house in which they live a healthy house, because a clean house; they will cook every meal, however simple, with the utmost care, remembering that food badly prepared is injurious to the health of the body; and if they have children under their care they will see to it that they lead healthy lives. They will care for their own bodies too, because they are so precious in God's sight that He has redeemed them; they will, therefore, attend to every law of health and purity.

"Now let us think of the drawing-room that we each have to furnish and keep in order and make beautiful to look at—that is, our social life. What sort of friends do we ask into this drawing-room of ours? Are they such as will help us onwards, both in our earthly and in our spiritual life? Or are they such as make light of sin, who scoff at those who are striving to serve God; such as live selfish lives, only thinking of their work as something to be got through for the sake of a living, and then making their chief object in life the gratification of self? God forbid that we should choose such as our friends! Then, again, what amusements do we seek after in our drawing-room? Is it the coarse joke, the unkind gossip, the sensational tale, the unseemly flirting with a man whom you cannot respect?



(By William Mulready, B. A.) "THE WOLF AND THE LAMB."

Who does not know Turner and Wilkie, and, though far inferior to them, West?—men who wrought during the same period as Mulready, and left the strongest impressions on the English mind, their works being found the world over, wherever Englishmen live. Many other names that recall work worthy of honor illuminate this period and shine clearly to the memory of the student of art, bright with the light of fair achievements, with the records of imagination, feeling, close observation, and strenuous labor.

"The Wolf and the Lamb" is one of Mulready's best efforts. We recognize the typical public-school bully of the English middle class in the juvenile ruffian who is elbowing his victim against the palings. It matters little what has provoked his truculence. The unprotected meekness of his prey is inducement enough for the exercise of his tyranny. We have sufficient assurance that the reduced gentlewoman who is hastening to the rescue of her son will meet but scant courtesy from the young brute whose watch ribbon, well-cut clothes, shapely boots and strapped trousers indicate at least pretensions to gentility—the gentility of money rather than of breeding. The humble raiment of his victim would suggest the strained efforts of the widowed mother to give her son an education beyond her

Or do we seek after the pleasant talk with those whom we can esteem, the healthful walk, the cheery social gathering where we can ask our Father's presence, the making and giving of some simple yet welcome present for a friend or poorer neighbor, or perhaps the making of something to beautify our own rooms and homes? Then, again, what sort of dress do we wear when we go abroad? Is it the becoming, quiet, well-made and pretty dress, with bonnet or hat in keeping, and we ourselves knowing that every undergarment is clean and beautifully made, though it may be but plain? Or is it the gaudy and ugly imitation of stuffs, and flowers, and feathers, which we cannot afford, and, therefore, which cannot be in good taste?

"And now for the library. Mind that you do not keep your library locked up. You know that the library is the room where all the books in the house are kept, and we must each strive to lay up in the library of our minds as much knowledge as we can get. You may not have much time for reading, but see that the little that you read is good reading, such as will raise you and will give you matter to think over and to turn to some account in your daily lives. And when you are reading the Bible, do not get into the habit of just "reading a chapter," but try to think over what you read, although it may be but a few verses; and try to apply it to your own life with the help of God's Holy Spirit.

"Last of all, we all have an inner chamber in our heart and life which God only can see. Is this chamber of ours furnished with sorrow for and hatred of sin, with faith in our Saviour and love for Him, with an earnest desire to show our love by living for Him day by day, and by striving to win others for Him, showing them what a happy thing it is to be a true, whole-hearted Christian? Or do we try to keep this room shut up, doing our best to banish all thoughts of the life beyond, of the Father who made and redeemed us, and whose eye is ever on us, do what we will to forget Him? Can we, indeed, keep the door of our hearts locked when Jesus says, 'Behold, I stand at the door and knock: if any man hear My voice, and open the door, I will come in unto him, and will sup with him and he with Me?'"

My readers, let us think on these things.
H. A. D.

The Pleasure of Ownership.

The man, woman or child who "has nothing" in this world is a sorry spectacle; indeed, the consciousness of possession is necessary to the happiness of every one. If seems inborn in us to want things for our own. Notice how tenaciously the infant clings to his own toy. I believe this spirit should be cultivated in a child, instead of being repressed, as is too often the case. It will tend to make him tenacious of his own rights. Boys and girls should have certain things given them, and be made responsible for the proper management of such possessions. On the farm, children ought to have a few hens, a pig, or a calf—not a calf that will grow into father's cow, but one the proceeds of which, when sold, will be their own. Such a course will give interest to the life of boys and girls, besides teaching them habits of frugality which cannot be acquired so easily in any other way. And is not the girl who carries her own pocket-book—the result of her own efforts—far more independent than she who has only what she asks or begs for? While we admire generosity, we must maintain the idea that people should be careful not to part with so many of their possessions that disaster will follow. It is true that so long as we have something we are objects of consideration; but once let us part with everything and we instantly cease to be interesting, and are left to enjoy (?) our poverty in comparative loneliness.

When I see old people giving up everything to their children, I feel like shouting to them the advice of an old Dutchman: "Cut off de slices if you want to, Schmidt, but keep de bread loaf under your own arm." The time has been when the girls on the farm never got a crust from the family loaf. In case of the father's death the farm was invariably left to the son or sons, with the privilege of shelter to the girls, who were expected to marry as soon as possible. But alas! Dan Cupid & Co. did not always come their way; the result was a jumble of uncongenial elements in the old homestead. Now all that is changed, and the single woman has hundreds of avenues of work open to her, by which she may come to possess not only money, but independence, and, in consequence, a measure of happiness. And it is the best possession in the grasp of humanity, this power to accomplish something by one's own efforts. Every girl knows what satisfaction she has in looking at her room with "egg money" curtains and "butter money" table and chairs, just because they are mementos of her own labors.

Speaking of these household possessions reminds me of the absurdity so many of us have of hoarding up sets of high-day and holiday dishes, silver, etc. Hoarding them up for what?

For a son's wife, possibly, who will not value them more than iron-stone china, because the design will be out-of-date; and those precious knives and silver forks will be found in kitchen drawers, used to scrape pots and pry corks out of pickle bottles. I take up the cry of the old Dutchman and say, "Schmidt, you and your frau eat off dem dishes every day you liff; break a cup, never mind, who has de better right? Liff under your own roof, spend your own money, but when de bread loaf must be cut, remember a slice for de girls, and some china, and some silver, for

"A son is a son till he takes him a wife,
But a daughter's a daughter all her life."
"Piggy," you say? No; just.
"ONE OF THE GIRLS."

THE QUIET HOUR.

Giving Thanks.

"We thank Thee, Gracious Giver,
For all Thy tender care,
We ask that we may ever
Thy choicest blessings share.
We thank Thee for each comfort,
The common joys of life;
For health and strength to labor,
Freedom from want and strife.
Thanks for our special blessings,
The friends that cheer our way;
'Tis joy for them to labor,
'Tis sweet for them to pray.
Thanks for the highest blessings
Thy matchless love has given;
Faith in the world's Redeemer—
Hope of a home in Heaven."

Several hundred years ago a brave little company of pioneers started out to make for themselves a home in a new country. All their courage was needed, for when that first terrible winter was over about half of the exiles were laid in their graves; the living were "scarce able to bury the dead, the well not sufficient to tend the sick." But they still toiled bravely on, planting the precious seed-grain, saved from half-starving mouths; trusting in God and never losing heart. At length they were able to rejoice over their first harvest. Then they appointed an annual "Thanksgiving Day," and kept it as a right merry day too, preparing for it by a holiday of hunting game for the feast. That year had brought with it many hardships, and they had found it hard enough to keep body and soul together, yet they felt themselves in all honor and gratitude bound to thank God for His goodness to them, and especially for His great gift of harvest.

Now, what do you think of that record, you prosperous Canadian farmers, who gather in abundant harvests every year, and don't know the meaning of the word starvation? Do you keep Thanksgiving Day as loyally and heartily as those brave, thankful exiles? Don't you think we get so used to receiving God's blessings that we often forget to thank Him for them? If we had a year or two of famine, then indeed we should be ready to thank God when He sent an abundant harvest. It is just because He pours out His bounty so freely on this dear Canada of ours, just because we don't know the meaning of famine, that we sometimes forget that God has sent our blessings—almost forget to thank Him at all. A man may begin to fancy, "My power and the might of mine hand hath gotten me this wealth," and forget that it is God who giveth power to get wealth. Both in the natural and in the spiritual world, man may sow the seed and water it, but only God can give the increase.

I saw in the paper the other day that some corn had been grown in Ontario from seed supposed to be two thousand years old. That sounds very marvellous, but we forget to marvel at the everyday miracle of the increase of the seed each harvest-time. When our Lord fed the multitudes with a few loaves of bread, He did a marvellous thing, but is it not just as wonderful to think how many thousands might be fed from the increase of one handful of grain? One miracle was worked in a moment, the other takes many years, but only God could do either. We sow seeds of many kinds, and sometimes the harvest follows quickly, sometimes we have to wait a long time for it, but take heart—

"The good we hoped to gain has failed us. Well,
We do not see the ending; and the boon
May wait us down the ages—who can tell?
And bless us amply soon.
In God's eternal plan, a month, a year,
Is but an hour of some slow April day,
Holding the germs of what we hope and fear
To blossom far away."

Don't let us wait until we know the meaning of the word "famine" before giving real and hearty thanks, not only for the harvest but for all the good things given us by our Father.

There is a story told of a poor woman who, with her two children, was nearly frozen. She took the cellar door off its hinges and put it up to shelter them from the draft. One of the children said, "Mother, what do those little children do who have no door to put in front of them?"

Don't you think we have greater cause for thankfulness, if only because we can leave our cellar-doors to protect our vegetables instead of ourselves?

Every day should be a thanksgiving day, and we have often more reason to thank God for the dark days than even for the bright ones.

"Thanks for the disappointments
That oft our hopes assail,
They teach us to look forward
To joys that cannot fail.
We thank Thee for the shadows
That often cloud our way,
Our hearts are prone to wander,
Our feet are prone to stray.
Our trials keep us humble,
We feel the need of prayer,
While bending at Thy footstool
We find a blessing there.
And so, though tears are falling,
O'er joys for ever flown,
We thank Thee for the sorrows,
Our human hearts have known."

There are many homes in which the ancient custom of giving thanks before a meal is neglected. Surely those who are trying to walk in the footsteps of the Master will not fail to follow His example in this respect. In four gospels the feeding of the five thousand is described, and two evangelists also describe the feeding of the four thousand. If you read carefully those six inspired statements you will find that in every account the "blessing" or "giving thanks" is closely connected with the miracle. More than that, St. John, in referring to it afterwards, again speaks of the giving of thanks as an important part of the miracle, when he speaks of "the place where they did eat bread, after the Lord had given thanks." These words were written for our learning, and surely we have no right to disregard them when repeated seven times over, nor any reason to expect an increase when we don't give thanks really and heartily.

St. Paul also sets a good example in the matter of "saying grace." One might have thought that in a case of shipwreck at least he might have been excused if too excited and flurried to think about it. But we find him quite calmly suggesting that it would be advisable to take some food. Then "he took bread, and gave thanks to God in presence of them all: and when he had broken it, he began to eat."

Here is a quaint old grace, which I am not advising you to use, as it would probably provoke mirth, although it contains some useful suggestions:

"Some have meat but cannot eat,
Some can eat and have no meat;
But we can eat and we have meat,
So God be thanked by us."

I am afraid only those who have suffered from indigestion remember to thank God, not only for good food, but also for the power to enjoy and assimilate it.

If the multiplication of the loaves was closely connected with the giving of thanks, may not our national prosperity be largely the result of our national thanksgiving? I don't mean only the public celebration of the yearly holiday; but the fact that Canada is on the whole a nation fearing God and paying, to some extent at least, the thanks due to Him. The promise to the Jews will surely be fulfilled to God's people now. If they kept the covenant, He promised to bless them in the fruit of the land, in the corn, wine and oil, and the increase of kine and sheep. Ingratitude is a sin we none of us like to be charged with. We can understand our Lord's disappointment when, out of ten men cured of a dreadful disease, only one returned to thank Him. But let us not forget that we have far more reason to thank Him if we have not suffered at all. But whatever our Father sends must be a good gift. If we really believe this, we must "offer the sacrifice of praise to God continually, that is the fruit of our lips, giving thanks to His name." HOPE.

Special Offer to Subscribers.

We would call the attention of the readers of our Home Magazine, in common with the other readers of the "Farmer's Advocate," to the offers made within.

ANY WHO SUBSCRIBE NOW get not only November number, but also the beautiful Christmas number included in their subscription for 1902.

What better Christmas gift could our readers give to a friend than a year's "Advocate"? Several have done so already, and others are thinking of doing so. Why not you?

Olivia's Prayer.

Olivia is a little girl who is on a visit to her grandparents. The other evening at bedtime she repeated her "Now I Lay Me," as grandma sat beside her cot. Just as good-nights were about to be exchanged, she remembered about the Lord's prayer, and said:

"When I'm home sometimes pray to God to bring us bread."

"Do you, dear?" said grandma, "and butter, too, I suppose?"

"Nope, I don't pray for butter, 'cause the butter man brings it."

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Ingle Nook Chats.

My dear Guests,—

"Bare and brown in the shadows, The meadowland meets the gaze, Where the bold, blithe bee went seeking Its sweets in the summer days, The honey is stored in plenty So what if the winter is near? The time is not one for repining The day of Thanksgiving is here."

November, bluff old fellow, so often maligned because of the dreary weather that in the usual routine of nature generally accompanies it, will now be doubly festive, in that it not only ushers in the feast of Thanksgiving, but also marks the birthday of our King, Thanksgiving! What pleasant memories it brings of visits to the old home-nest, to those whom duty leads afar from home! In some countries this festival is placed on a par with Christmas, but while all welcome its coming, to the hearts of the young, at least, it can never replace the latter.

It is a laudable custom, however, this setting apart one day for special thanksgiving for the benefits of the year just passed, and he is poor indeed who has not something—nay, much—for which to be grateful. True, the opening year of the new century has brought disappointments to many; poor crops, damage by storms, potato blight and kindred troubles have visited a great number of farmers this year. Taxes and household expenses still go on as usual, and numberless minor worries seem standing at the door clamoring for admittance. Has not this been just the case with some of you who read this? Thinking over these troubles has made you somewhat blue and you do not feel like giving thanks for what you call failure. But is it failure? Perhaps this check has been wisely sent to cause you to be more sympathetic for the trials of others, and thus to prevent the warping by selfishness of an otherwise fine character. "A fellow-feeling makes us wondrous kind," you know. Jean Blewett's poem, "The Mother's Lecture," bears so strongly upon the subject of gratitude that I cannot forbear to quote a few stanzas from it:

"Suppose the frost did take the corn, And the cattle are not fat, Another harvest is coming— You might thank the Lord for that."

"You've lost from field, and barn and fold— You've that word 'loss' very pat; But you've lost nothing from the home, You might thank the Lord for that."

"The fire that burned your fences down, And laid your haystacks flat, Left the old house above your head— You might thank the Lord for that."

Thus on through all the list of overlooked blessings goes the dear old mother, whom life's stern lessons have but softened and mellowed, till at length the disconsolate son sees a rift in the cloud and the blue sky peeping through, and concludes it may be worth while celebrating Thanksgiving after all.

"Ah, now my own boy Reuben, I'm so glad we've had this chat, You're growing so like your father— You might thank the Lord for that."

Reuben's case is similar to those of many of us, and like him, perhaps, we have gazed on the discouraging view of everything so long we can scarcely see the blue behind the cloud. We may have been visited by severer trials than the loss of mere tangible belongings, but an honest scrutiny of our loss and gain will probably reveal the fact that we are debtors still.

"The morn and the noon have passed by us, 'Tis the sweet afternoon of the year, So let not your tribute be lacking— The day of Thanksgiving is here."

OUR COMPETITION — CONTEST XVI.

Another Skeleton Rhyme Contest will afford entertainment to our Guests, and will, I trust, have as many contributors as had its predecessor. Three prizes will be given in classes, as before, viz.: Class I.—Those over 18 years; Class II.—Those 14 and under 18 years; Class III.—Those under 14 years of age. The subject this time is

The New Year.

.....gladness
.....mirth
.....sadness
.....birth
.....clear
.....room
.....hear
.....home
.....youth
.....rest
.....truth
.....blest

The above rhyming ends have been selected, and contestants are required to fill in the rest of the lines. All work to reach Pakenham not later than December 20. Address as given below.

Ingle Nook Chats, Pakenham, Ont.

Raw Recruit (on duty)—"Who goes there?" Answer—"A friend!" R. R.—"Advance, friend, an' gie's a pipe o' baccy."

Some Good Advice to Boys.

If I were a boy, says Bishop Vincent, in an exchange, with my man's wisdom, I should eat wholesome food and no other; and I would chew it well, and never "bolt it down." I should eat at regular hours, even if I had to have four meals a day. I should never touch tobacco, chewing gum, and patent medicines; never once go to bed without cleansing my teeth, never let a year go by without a dentist's inspection and treatment; never sit up late at night unless a great emergency demanded it; never linger one moment in bed when the time came for getting up; never fail, every day, to rub every part of my body with a wet towel, and then with a dry one; never drink more than three or four tablespoonfuls of ice water at one time. All this takes will power—and that is all it does take.

If I were a boy I should keep my own secrets, except as I revealed them to my father or mother, for the sake of securing their advice.

I should put no unclean thoughts, pictures, sights or stories in my memory and imagination, and no foul words on my tongue.

I should treat little folks kindly, and not tease them; show respect to servants; be tender toward the unfortunate—all this I should strive to do for the sake of being a comfort to people, a joy to my parents and a help to the next century.

If I were a boy I should play and romp, sing and shout, climb trees, explore caves, swim rivers and be able to do all the manly things that belong to the manly sports; love and study nature; travel as widely and observe as wisely as I could; study hard and with a will when the time came for study; read the best literature—works of the imagination, history, science, and art, according to my taste and need; get a good knowledge of English; try to speak accurately and distinctly; go to college, even if I expected to be a clerk, a farmer, or a mechanic; spend my Sabbaths reverently; try to be a practical, everyday Christian; help on every good cause; never make sport of sacred things; be "about my Father's business," like the boy of Nazareth; "use the world and not abuse it"; treat old men as fathers, "the younger men as brethren, the elder women as mothers, the younger as sisters, with all purity"; and thus I would try to be a Christian gentleman, wholesome, sensible, cheerful, independent, courteous. — (Germantown Telegraph.)

FARMERS AND STOCK-RAISERS, ATTENTION!

Have you tested Prof. A. V. M. Day's English Tonic Powders—five separate packages, containing specially-prepared powders for the horse, cattle, hog, sheep, and poultry? Each package will make 25 pounds of fresh-forming, tonic food. Price, 35c, a package, or 5 for \$1.50.

Our special offer for 10 days only: If we have no agent in your town, we will ship to your railway point in Ont., prepaid, 1 package of each powder or 5 of any one kind for \$1.00. Only one order to each person. It is our desire to have you test the powders, therefore we have reduced the price below cost for 10 days only. Write your name and address, and enclose \$1.00, and you will receive the five packages by express. Address—

The Day's Stock Food Co., TORONTO, ONT.

Sole owners for Canada. Express C. O. D. if desired.

The inaugural Winter Fair for the Maritime Provinces will be held at Amherst, N. S., Dec. 17, 18 and 19, being a fat-stock, poultry and dairy show, with a series of educational meetings similar to those held in connection with the Ontario Winter Fair at Guelph. Prize lists and other information may be obtained from the Secretary, Mr. W. W. Hubbard, Halifax. Mr. F. W. Hodson, Dominion Live Stock Commissioner, Ottawa, has gone to the Maritime Provinces to confer with the local authorities regarding the fair, which is under Dominion as well as Provincial auspices.

A MERTORIOUS SHORTHORN HERD.

On Manitoulin Island, Ontario, no man is better or more favorably known than Edwin Battye, the veteran Shorthorn breeder and importer, and owner of Bellevue Stock Farm. This farm which consists of some 500 acres of farming and grazing land, lies about three miles south of Gore Bay, which is Mr. Battye's post office, telegraph office, and shipping port, at which all the only about 36 hours' run from Collingwood. Mr. Battye is of English extraction, being born in Yorkshire. He came to this country about 30 years ago, and settled in the county of Grey, where he remained for 20 years. About 10 years ago he visited Manitoulin Island, and seeing a bright future ahead for the Island as a stock-raising country, immediately purchased 300 acres, to which he has since added 200 more, built on the land and moved there; and deciding that pure-bred stock could be raised there just as cheaply as scrub or grades, paid a visit to the farm of Mr. Arthur Johnston, Greenwood, Ont., and purchased the stock bull, Gordon Prince, sired by Bridegroom 22504, by that sired by Crickshank bull, Sittlyton Chief 17060. Bridegroom's dam was Matchless 11th, by the famous Barpton Hero. The dam of Gordon Prince was Lady Aberdeen, by Imp. Baronet. He

also at the same time purchased the cow, Duchess of Gloster 45th, sired by cow, Duchess 64121, dam Duchess Imp. Grand Sweep 64121, dam Duchess of Gloster 24th, by Imp. Duke of the Lavender. Jubilee Jilt is another of the early dams. She is sired by Imp. British Statesman, dam Jilt, by Imp. Reporter. Still another one is Daisy, sired by Chief 22927, by Sittlyton Chief 17060, dam Cornhill Lass, by Scarlet Velvet 2nd 15662. Since then purchases have been made whenever opportunity offered, notably among them being the cow, Matchless of Elmhurst 17th, sired by Imp. General Booth 54353, by Banner Bearer, dam Matchless of Elmhurst 14, by Imp. Excelsior.

This season Mr. Battye visited the Old Sod, and purchased 11 head of high-class animals, which, together with his already large herd, will place him well up in the front among Canada's largest importers and breeders. The stock bull of this importation is Royal Emperor 79809, bred by Wm. S. Mart, Uppermill. He was sired by that great show bull, Bapton Emperor 73982, who won 1st prize and championship at the Royal as a yearling in 1889, and first and championship at Liverpool and first at Exeter and first at Windsor same year, and sold for £800 to go to South America. Dam Roan Lady 32nd, by Wanderer 60138. The cow, Winsome Beauty 3rd, is a beauty and no mistake. She was sired by Lord James 67361, a noted prizewinner; dam Winsome Beauty of Ravensworth 61570. This cow, Winsome Beauty 3rd, won first at Elgin as a year-old and first at Doncaster this year. She is a large, extra well proportioned cow, weighing 1,800 lbs. There is also a heifer out of her and sired by Sovereign, by Pride of Fame. Jilt 22nd is a rich red-roan, sired by Spicebox, dam Jilt 19th by Red Rover. She also has a heifer calf sired by Pride of Fortune, Miss Comfit 4th, sired by Rosario 75471, dam Miss Comfit 4th; Picture 4th, sired by Golden Robin 68718, dam Picture 2nd by Premier. Such is the breeding of a few of this year's importation, the others being equally as well bred. Among the young ones on the farm are a number of bulls and heifers, some of which deserve special mention. Salper-ton is a roan yearling bull sired by Imp. Blue Ribbon, dam Minnie Warrior 4th. Earl Roberts is another roan bull, eight months old, sired by Gordon Prince, dam Daisy 31541. These two young bulls are hard to duplicate, being an exceptionally evenly-balanced pair, and no matter where they may go, they will surely be heard from. Mr. Battye deserves great credit for the very excellent herd of Shorthorns he has got together, and has certainly shown an enterprising spirit and extra good judgment in his selection of sires and dams. Besides having so much of his time taken up with his large herd of cattle, Mr. Battye handles nearly the whole wool output of the Island, averaging about 35,000 lbs. annually.

Winnipeg Heater.

We have made most favorable terms with the Winnipeg Heater Co. whereby we can give one of these celebrated heaters to anyone sending us ten new subscribers to the FARMER'S ADVOCATE, accompanied by \$10.00.

IT SAVES FUEL AND LABOR. IT STOPS COLD DRAFTS. IT DOES NOT MAKE DUST OR DIRT. IT DOES NOT OBSTRUCT THE DRAFT. IT TAKES THE COLD AIR FROM THE FLOOR. IT PRODUCES COMPLETE COMBUSTION. ATTACHABLE TO ALL KINDS OF STOVES, GRATES, FURNACES, AND GAS BURNERS. DETACHABLE AND EASY TO CLEAN. OCCUPIES LITTLE SPACE, AND HAS A TIDY APPEARANCE.

The heater can be put in an adjoining room, on the same level as the cooking range, baseburner or fireplace, and heats with perfect success. Hot air passes from the top to the bottom, and returns up into the pipe above, thus heating the room to the very floor, which is not done by any other heater. Price in the ordinary way is \$10.00, but we offer it for sending us 10 new yearly subscribers.

The William Weld Co., Ltd., London, Ont.

NOTICE.

TOLTON'S DOUBLE ROOT CUTTER AND MODEL ROOT PULPER is advertised in this paper. It has been tested and found to be all that is claimed for it. It is simply indispensable to the feeder of cattle, sheep or hogs who seeks to secure the best results from the use of roots, or in a mixture of foods to get the best returns from each and all. Read the advertisement and think it out for yourself.

D. J. Gibson, Bowmanville, Ont., advertises young Tamworth boars and Mammoth Bronze turkeys.

As we go to press we learn that the auction sale of the Shorthorn herd of Messrs. A. & D. Brown, Iona, Ont., on Nov. 12th, conducted by Capt. T. E. Robson, was very successful, a good gathering of stockmen being present. The highest price of the day was \$400, for the roan heifer, Heather Blossom 2nd, just over a year old, sold to Mr. W. D. Flatt, Hamilton. Three hundred and ten dollars was paid by Mr. John Hill, Wellesley, for the 6-year-old cow, Heather Blossom, the dam of Heather Blossom 2nd. The average for the entire herd was over \$160.

Mr. W. D. Flatt is reported to have sold privately, on the day of his great auction sale at Chicago, the imported bull, Choice Goods, the Highland Society champion of this year. The buyers are Messrs. J. G. Robbins & Sons, Horace, Ind., who also bought the female champion, Cicely, at the public sale for \$5,000. The price paid for the bull is not made public, but is stated to be the highest paid for a Shorthorn bull in America for the last 25 years.

Maple Lodge Stock Farm.

ESTABLISHED 1854

SHORTHORNS.—First-prize milking strains, best Scotch breeding. Young bulls and heifers for sale. LEICESTERS.—A grand lot of ewes, bred to our imported rams, and a few choice rams, now for sale. Also Bronze turkeys.

A. W. SMITH, Ailsa Craig Station, Maple Lodge P. O., G.T.R., 3 1/2 miles, ONT.

SAVE ONE HALF YOUR FUEL.



I placed a Winnipeg Heater in my dining-room, which is 20 x 24 ft. It was connected with the kitchen stove, the waste heat from which heated my large dining-room perfectly, and kept it up to any temperature desired. We are exceedingly well pleased with the Heater. I consider it a great economizer of fuel. J. SPENCE, M. D., Toronto, Sept. 28, 1900. 646 Dufferin St.

The Winnipeg Heater Co. of Toronto, Limited, 77 Victoria St., Toronto, Ont.

An important auction sale of farm stock, cattle, hogs, and horses, the property of the Rev. F. W. Hughes, of Westminster Township, 1 1/2 miles from the City of London, is advertised in this issue to take place on November 25th. Some good driving horses are included. The farm, consisting of 150 acres, will also be offered at the same time, and if not sold will be rented. There will be no reserve, as Mr. Hughes is leaving for England.

DISPERSION SALE OF
Shorthorn Cattle
 24 FEMALES 10 BULLS
WEDNESDAY, DECEMBER 18, 1901.

The herd consists of a choice lot of cows with calves by their side, and cows in calf. Some of the bulls are about 2 years old and fit for service. They have all been purchased by the proprietor within the last two years, from some of the most noted breeders in Ontario, and have been sired by such bulls as Chief of Stars (imp.) = 32076 =, Royal Standard = 27653 =, Norseman = 16397 =, Albert Victor (imp.) = 6315 =, Chivalry = 12853 =, Red Stanley = 25345 =, Sir Roland = 23762 =, Ronald = 25325 =, Bobs 34695, and Engineer = 34761 =. The stock is all in first-class breeding condition. Woodalee Farm is one mile from Unionville Station, G. T. R.; 18 miles from Toronto. Conveyances will meet the forenoon trains from both east and west at Unionville. Lunch at 11. Sale at 1. Terms: 9 months' credit, on approved joint notes; 5 per cent. off for cash. Send for catalogue.

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

S. G. LITTLE,
HAGERMAN, ONT.

GREAT CREDIT SALE OF
Farm Stock, Implements, Etc.

D. H. PORTER, Auctioneer, has been instructed by Rev. E. W. Hughes to sell by public auction, at 10 a.m., at LOT 22, CON. B. F., WESTMINSTER, 1 1/2 miles from London and just east of the Port Stanley track, half a mile from electric cars, on

TUESDAY, NOVEMBER 26, 1901:

30 Cows.	2 Sows.
5 Two-year-old heifers.	10 Horses.
10 Calves.	A full line of implements, all nearly new.
1 Bull.	

TERMS.—Twelve months' credit. Six per cent. per annum off for cash.

The farm, consisting of 150 acres, will also be offered for sale, and if not sold will be for rent.

As the proprietor is leaving for England, everything will be sold without the slightest reserve.

D. H. PORTER,
97 CARLING ST., LONDON. CITY AND COUNTY AUCTIONEER.

Barred Plymouth Rocks.

We have a number of cockerels which we wish to dispose of within the next month. Will put them on express car at Guelph for \$1 each. If neighbors would buy together express charges would be much smaller.

JAS. BOWMAN,
Elm Park. Guelph, Ont.

Tamworths and Bronze Turkeys

Five boars 2 months old, from prizewinning stock, at \$6 each; registered. Also a large flock of Mammoth Bronze turkeys. Safe arrival guaranteed. Write for particulars.

D. J. GIBSON, Box 38,
HAZEL DELL STOCK FARM. Bowmanville, Ont.

Barred Rocks and Pekin Ducks.

Large, vigorous cockerels, finely barred in all sections, good in leg, beak and comb. Also cheaper grade, pure-bred, for market breeders. Eight extra fine Pekin drakes.

H. GEE & SONS, Fisherville, Ont.

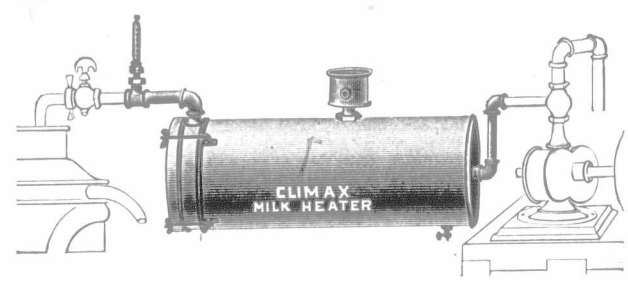
Chickens, Turkeys, Ducks

FOR THE ENGLISH MARKET.

Active buyers wanted, to buy well-fattened poultry in every locality in Western Ontario. For further particulars, write to

Scott, Ashton & Company
LONDON, ONTARIO.

THE CLIMAX MILK HEATER.



Even Heating The desirability of even heating is well understood. With the Climax heater the temperature can be regulated exactly. Every particle of milk that passes through it is heated to just the temperature desired.

Rapid and Thorough

This heater operates on the correct principle to accomplish rapid and thorough heating. The milk is distributed in a thin sheet or layer, and the heating medium is caused to circulate continuously, producing an even distribution of heat.

No Steam in Contact with Milk The outer cylinder is filled with water and steam applied to its entire length, heating the water and thus heating the thin sheet of milk. No steam comes in contact with the milk, as this has been found quite objectionable, especially where fowl water and boiler compounds are used. Very little steam is required for its use.

Either Pump or Gravity System The heater may be attached to a force pump, or connected direct to the vat, where the gravity system is used.

Sizes and Prices:
 No. 1, capacity 1,500 lbs. milk per hour. \$7.50
 No. 2, " 3,000 " " 8.50

Creamery Package Mfg. Co., Limited,

COWANSVILLE, P. Q.

Butter and cheese making machinery for factory or farm dairy. Ask for our new catalogue, just out—Free.

Mammoth Bronze Turkeys, and Chester White Swine from 5 to 6 months old—both sexes, bacon type. Write for prices.

W. E. WRIGHT, Glanworth, Ont.

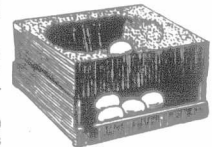
PARKHILL POULTRY YARD IS OFFERING bargains in the following varieties: L. Brahmas, G. S. L. and W. Wyandottes, W. Rocks, Buff and W. Leghorns, S. S. Hamburgs, M. B. turkeys, Embden and Toulouse geese.

D. A. GRAHAM, Thedford, Ont., Prop.

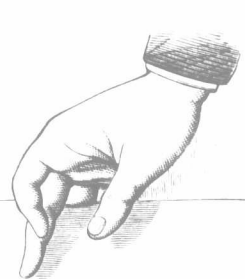
BARRED ROCKS (EXCLUSIVELY). — We have a large number of large, strong, vigorous cockerels, bred for utility, from \$1 to \$5 each. Also a number of pullets and good breeding hens. **A. E. SHERRINGTON,** Walkerton, Ont. Box 100.

"VIGILANT" NEST

SLIDING—ADJUSTABLE (Patented Can. & U.S.)
 The only nest in the world which positively prevents hens from eating their eggs.
 Simple—Effective—Durable
 No springs—Eggs cannot break. The inclined nest gathers them safely in lower section. Prevents fleas, or parasites, etc. Everlasting, never failing, comfortable. Thousands now in use. Ask your dealer for it or write to **L. P. Morin, Inventor, Mfr,** 12 Antoine St., St. Hyacinthe, Que.
 Price 45c. each. AGENTS WANTED.



PLEASE MENTION FARMER'S ADVOCATE.



TROUT CREEK HERD
 — OF —
IMPORTED and HOME-BRED
Shorthorn Cattle.
W. D. FLATT, Proprietor, HAMILTON, ONT.

WE keep in our herd a choice lot of both imported and Canadian-bred cattle, of both sexes, for sale. Personal inspection invited. Parties desiring to see the herd will be met on arrival of trains at Hamilton if notice is given. Visitors always welcome.

ADDRESS—
JAMES SMITH, Mgr., MILLGROVE, ONT.
W. D. FLATT, 378 Hess Street South, Hamilton, Ontario.

GOSSIP.

A SIGNALLY SUCCESSFUL SHORT-HORN SALE.

The auction sale of Shorthorn cattle from the famous herd of Mr. W. D. Platt, Hamilton, Ont., held at Dexter Park, Chicago, on November 7th, proved successful beyond all expectation, the 45 head sold bringing the handsome total of \$50,520, or an average of \$1,122.66 each.

That the \$5,000 mark would be reached in this sale was probably not expected by any one, though it was anticipated that Cicely, the championship winning cow, would bring a high price, and enthusiasm ran high when, after a starting bid of \$2,000, the offerings bounded upwards till she was finally sold at a bid of \$5,000 to Messrs. J. G. Robbins & Sons, Horace, Ind.

We give below the names and date of birth of the animals sold, with the price and the address of the purchaser in each case.

COWS.

Table listing cow sales including Cicely (imp.), Empress 12th (imp.), Lady Hamilton, May Blossom (imp.), Lady Waterloo B 2nd, Assote Mayflower (imp.), Clara 59th, Lavender Rose 2nd, Princess Royal 64th, Lady Clara 6th, Pine Grove Mildred 3rd, Fame's Matchless, Blythesome 16th, Missie 16th, Lavender Princess, Golden Chain, Victoria Adelaide, Carey Victoria, Crescent 8th, Martha 10th, Primrose 6th, Orange Blossom 36th, Dalmeny Fragrance 6th, Rosaline 3rd, Lustre 18th, Vain Queen, Dalmeny Princess 9th, and Cowan, Paulina.

Table listing bull sales including Solidity of Pitlivie, Precious Pearl, Banner Fortune, Clover Hill Lorne, Veronica (imp.), Susanna (imp.), Lady Mary 2nd, Dalmeny Regina 5th, Bracelet, Hawthorn Blossom 12th, Graceful 8th, Asphodel, and Guelder Rose.

BULLS.

Table listing bull sales including Lord Banff, Valiant, Knight Errant, Nestor of Dalmeny, Britannia's Duke, and a summary of 39 females and 5 bulls brought.

ONTARIO PROVINCIAL WINTER FAIR.

The Ontario Provincial Winter Fair, to be held in the City of Guelph, December 10th to 13th, will undoubtedly be the greatest aggregation of butchers' stock ever brought together in Canada.

So much interest was taken in these lectures last year that the lecture room provided for the purpose did not provide sufficient accommodation; this year the lecture room has been enlarged and will accommodate almost twice as many persons.

The Ontario Farmers' Institutes will again be well represented. A large number of these have already affiliated this year, and have signified their intention to do everything in their power to have their members and those located in their district attend the Provincial Winter Fair.

Railway rates—Passenger—Sharbot Lake, Kingston and West—General Public—From points in Ontario west of and from Kingston and Sharbot Lake.

From the territory beyond Kingston and Sharbot Lake, a single ticket to Guelph should be purchased and a standard convention certificate received from the agent. When this is signed by the Secretary of the Fair at Guelph, it will entitle the holder to a ticket to the original starting point free of charge.

GOING INTO CONSUMPTION

Thousands of Persons Are Hastening Towards Their Graves as a Result of This Dread Disease.

READ HOW TO SAVE YOURSELF.

Full Free Course of Treatment to Our Readers.



DR. SLOCUM IN HIS LABORATORY,

Demonstrating to Medical Men, Scientists, Statesmen and Students the value of the New Slocum System of Treatment for the Permanent Cure of Consumption, and all Pulmonary and Wasting Diseases.

Do you cough? Do your lungs pain you? Is your throat sore and inflamed? Do you spit up phlegm? Does your head ache? Is your appetite bad? Are your lungs delicate? Are you losing flesh? Are you pale and thin? Do you lack stamina?

Not a step backward, but a stride out of the old ruts. Made possible only by Pasteur's, Virchow's, Metchnikoff's, and Slocum's latest discoveries in bacteriology, hygiene and therapeutics.

TOLTON'S No. 1 Double Root Cutter.

Points of Merit:

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



THE ONLY DOUBLE ROOT CUTTER MANUFACTURED. Fitted with ROLLER BEARINGS, STEEL SHAFTING, and all that is latest and best in principle, material and construction.

TOLTON BROS., GUELPH, ONT.

Exmoor Jerseys for sale: 1 year-old bull, by Ace of St. Lambert. Also 1 bull calf by Sirdar of St. Lambert. A. Norman Smith, Meaford P. O. and Stn.

NOTICE.

THE ONTARIO WIND ENGINE AND PUMP CO., Ltd., have completed a deal whereby the company have acquired the business of The Toronto Grain and Seed Cleaner Mfg. Co., Limited, who were patentees and manufacturers of the Toronto fanning mill, which, although only placed on the market two years

ago, is already known as the leading mill, and some very important improvements have recently been added which cannot fail to still further increase its popularity.

PLEASE MENTION FARMER'S ADVOCATE



SAVE ONE HALF YOUR FUEL.

THE WINNIPEG HEATER. Make the best use of heat you pay for, now wasted up chimney. Reliable parties wanted to sell this wonderful new invention.

THE WINNIPEG HEATER CO. OF TORONTO, Limited. 77 Victoria St., TORONTO, ONTARIO.

GOSSIP.

Mr. Wm. S. Myers has been appointed successor to the late John S. Myers as delegate of the Permanent Nitrate Committee for the United States, with headquarters at New York.

Within one mile of Fergus station on the G. T. R. and C. P. R. is the Centre Wellington herd of Shorthorn cattle, owned by H. B. Webster, which now numbers 35 head of choice animals. At the Centre Wellington Show at Fergus this fall, this herd was awarded 5 first prizes, and at West Garafraxa township show 5 first prizes. The herd bull is Lord Stanley 4th 23678, sire Lord Stanley, the World's Fair champion, dam Nonpareil Victoria, the dam of the Canadian champion Topman. Lord Stanley 4th won at the above-mentioned shows 2 first prizes and 1 sweepstakes. He is a very prepotent sire, which the young things in the herd fully warrant, being thick-fleshed, smooth and having long, mossy hair. The females are represented by such families as the Watt Matchless, Marr Beautys and Mistletoes, being all regular breeders and splendid milkers. The 18-months-old bull, Matchless Sailor 33709, sire Sallor King 33276, dam College Countess 31077 (first-prize cow at the Centre Wellington Show), is good as his pedigree, and fit to head a first-class herd. There are some nice young bulls of pure Scotch breeding, all sired by Lord Stanley 4th, which are now offered for sale at reasonable prices, together with a few young cows and heifers. The farm is situated 15 miles north of the City of Guelph, and the station and post-office address is Fergus, Ont., as per advertisement.

CHOICE FARM FOR SALE.

Attention is directed to the advertisement in another column, of the auction sale of the "Plains Farm," Arkell, Ont., owned by the F. W. Stone Stock Co., Guelph. This is a grand chance for any one wanting land of a high-class order, being used by the late F. W. Stone for breeding pure-bred stock for over 40 years, and still used for the same purpose by the F. W. Stone Stock Co. This was the first farm owned in Canada by the late Mr. Stone, he having chopped down the trees and cleared it largely with his own hands, and it was retained by him when he sold to the Ontario Government his second farm, now known as the Ontario Agricultural College farm. The F. W. Stone Co. still have a fine herd of Hereford cattle, and are offering for sale some 30 head—bulls, cows and heifers.

Colwill Bros., breeders of Shorthorn cattle and Tamworth hogs, Newcastle, Ont., write: "We now have a choice lot of young Tamworths, from three to six weeks old, out of Evelina, and sired by Colwill's Choice, our famous prize-winner at Toronto; and another choice litter of 11 out of Maid of Honor, and 8 out of Newcastle Queen. Our three Toronto prize sows gave birth to 32 youngsters, and they are doing fine. We have been very successful at the various fall fairs, having won in all some 60 prizes; and those consist mainly of firsts and seconds. The young Shorthorn calves we offer in this issue are a choice lot, being sired by Brave Baron 23259, a son of imported Indian Chief, and out of cows carrying such strains as Duke of Lavender, Dr. Miller, Imp. Oxford, and many such noted stock animals."

The International Live Stock Exposition to be held in Chicago the first week in December promises to be, beyond a shadow of doubt, the greatest event of the kind ever held in America. It will undoubtedly be the grandest display of breeding and butchers' stock, and heavy horses, beef cattle, sheep and swine ever brought together on the continent. The building accommodation for the show is immense in extent, yet compact and comfortable for man and beast. The exhibits will include not only individual and show-herd competitions, but also carload lots and slaughter tests. The Union Stock Yards and the immense packing houses are alone worth a trip to see, and when to these is added the great Exposition, a liberal education is afforded the young or middle-aged farmer, and the reduced railway rates make the expense very moderate.

A SHORTHORN DISPERSION SALE.

Mr. S. G. Little, Hagerman, Ont., announces in an advertisement in this issue a dispersion auction sale of his herd of 34 registered Shorthorns, to take place on Dec. 18th, at his Woodstock Farm, in the township of Scarborough, one mile from Unionville Station, G. T. R., and 18 miles from the City of Toronto. The herd was founded two years ago, on selections from prominent Ontario herds, the animals purchased being bred on sound lines and sired by bulls of well-known excellence, while the produce of the cows by high-class sires have rapidly increased the number, and the young stock should be of a very good class. Mr. Little is about to rebuild his barns, and in order to be free to devote the necessary attention to this has decided to dispose of his cattle. We shall make more extended reference to the breeding of the cattle in our next issue, and in the meantime it will be well for those interested to read the advertisement and send for the catalogue.

H. J. Davis, Woodstock, Ont., writes:—"I have recently sold and shipped 20 Improved Yorkshire boars to Morrell & Co., pork packers, Iowa, and a large number to different points in Canada."

One hundred and ten of the trained horses of Col. Cody's (Buffalo Bill) Wild West Show outfit were killed in a railway collision near Charlotte, N. C., on Oct. 29th, only two of the entire number of ring horses escaping death. The loss is estimated at \$60,000.

The annual meeting of the American Shropshire Registry Association will be held at the Board of Trade rooms, Union Stock Yards, Chicago, Tuesday, Dec. 3rd, at 10.30 a.m. This will be during the great International Live Stock Exposition.

Mr. R. J. Hine, Dutton, Ont., writes: "With the good help received from the 'Advocate,' the greater part of my Oxford Down sheep held for sale are scattered far and wide, only a few ram lambs and half a dozen nice two-shear ram lambs and one yearling and two-shear ram left. Our flock is in grand shape this fall. Lots of pasture, consequently fat Oxfords. Have just received a letter from Mr. George Heskett, of Fulton, Ohio, to whom I sold a show lot of Oxfords last July. He wrote: 'I made the best lot of fairs I ever did, won 51 firsts, 32 seconds, 3 thirds, 11 sweepstakes, and 4 championships over all Down breeds. Eight fairs, including Ohio and Michigan State Fairs. A fairly good showing for Linden Oxfords.' See Mr. Hine's change of ad., offering Oxfords and young Shorthorn bulls."

The by-law admitting English-bred Jerseys to the American Jersey Cattle Club Herd Register has received the necessary number of votes to carry it, the vote being 157 for and 13 against, and in consequence English-bred Jerseys can now be recorded in the A. J. C. C. subject to the terms of the by-law which reads as follows: "Cattle imported from the Island of Jersey and from Great Britain to the United States of America and to the Dominion of Canada, without change of marks or ownership while in transit, their descendants, and the descendants of animals heretofore entered in the Herd Register, and no other, may be entered in the Herd Register on proof either of their exportation from the Island of Jersey or of their purity of descent, to the satisfaction of the board of directors."

The young Shorthorn bull, Bonnie Lad, illustrated in this issue, bred and owned by Mr. H. Smith, Hay, Ont., is of the proper pattern individually, and comes by his excellence honestly, being bred in the purple. His sire, Imp. Knuckle Duster, bred by Mr. Bruce, Inverquhomery, was a prizewinner in Scotland and first at London in 1899 over the Toronto winners without special fitting. His dam, Bonnie Brae, of the Cruickshank Queen of Beauty tribe, was also the dam of Bruce, the champion of the Provincial Fat Stock Show, 1897, of Bannockburn, first-prize yearling of the same show, and of Barnard, sweepstakes female at the Winter Show, 1900. He has for grandsire Prince Albert, by Barnpton Hero, who is his great grandsire, and back of that is Imp. Stanley, bred at Sittytown. If blood and individual merit of ancestry count, then Bonnie Lad should prove a prepotent bull.

HORSEMEN!—THE ONLY GENUINE IS

GOMBAULT'S CAUSTIC BALSAM.

None genuine without the signature of The Lawrence-Williams Co. Sole Importers & Proprietors for the U.S. & CANADA, CLEVELAND, O.

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY or FIRING. Impossible to produce scar or blemish. Every bottle is warranted to give satisfaction. Price \$1.50 per bottle. Sold by Druggists, or sent by Express, charges paid, with full directions for its use. Send for free descriptive circulars. THE LAWRENCE-WILLIAMS CO., Toronto, Ont.

Mr. Jas. A. Cochrane, Hillhurst, P. Q., writes:—"I have to report recent sales as follows: To C. E. Therrien, East Sherbrooke, the roan Shorthorn bull calf, Scottish Bridegroom, winner of first prize at Sherbrooke Exhibition, and to McKinley Bros., Charlotte-town, P. E. I., the roan yearling bull, Scotch High Ball, by Scottish Hero."

Mr. W. H. Beattie, Wilton Grove, Ont., the well-known breeder of Mammoth Bronze and White Holland turkeys, reports his winnings at three large shows: Toronto—7 firsts, 4 seconds, 2 thirds, also diploma for best pair, and bronze medal for best turkey in the show; London—7 firsts, 4 seconds; Pan-American—3 firsts, 5 seconds, 2 thirds. Have a choice lot to sell. Also Pekin ducks and Embden geese. Parties wanting some of the winners should look up his advertisement and write at once for prices.

John Miller & Sons, Brougham, Ont., write:—"We have sold all the yearling rams advertised in your paper, and are now offering some extra good young Shorthorn bulls. We have a specially good calf from the Vice-Consul cow, Lydia 7th, that should soon be at the head of some good herd. Our Imp. Marr heifers are all safe in calf, and we are expecting something good from them. We will be pleased to send our catalogue upon application."

Wm. Stewart & Son, Menie, Ont., the well-known breeders of choice Ayrshire cattle, write: "Our stock are going into winter quarters in fine condition, after a circuit of fairs covering seventeen hundred miles and the winning of 86 prizes, 33 of which were firsts. The grand young cow, May Mitchell, came out head of her class all the way round, and Jean Armour was only beaten once and has six sweepstakes to her credit out of the lot, and we have six herd prizes to our credit. Our 2-year-old bull, Hover-a-blink, has six firsts and six sweepstakes prizes. We have yet a few fine young bulls for sale out of such cows as Jean Armour, Sprightly (imp.) and Moss Rose, and we will sell our old stock bull, White Prince 808 (imp.), which is still in active service."

SHORTHORNS

SCOTCH IMPORTED.

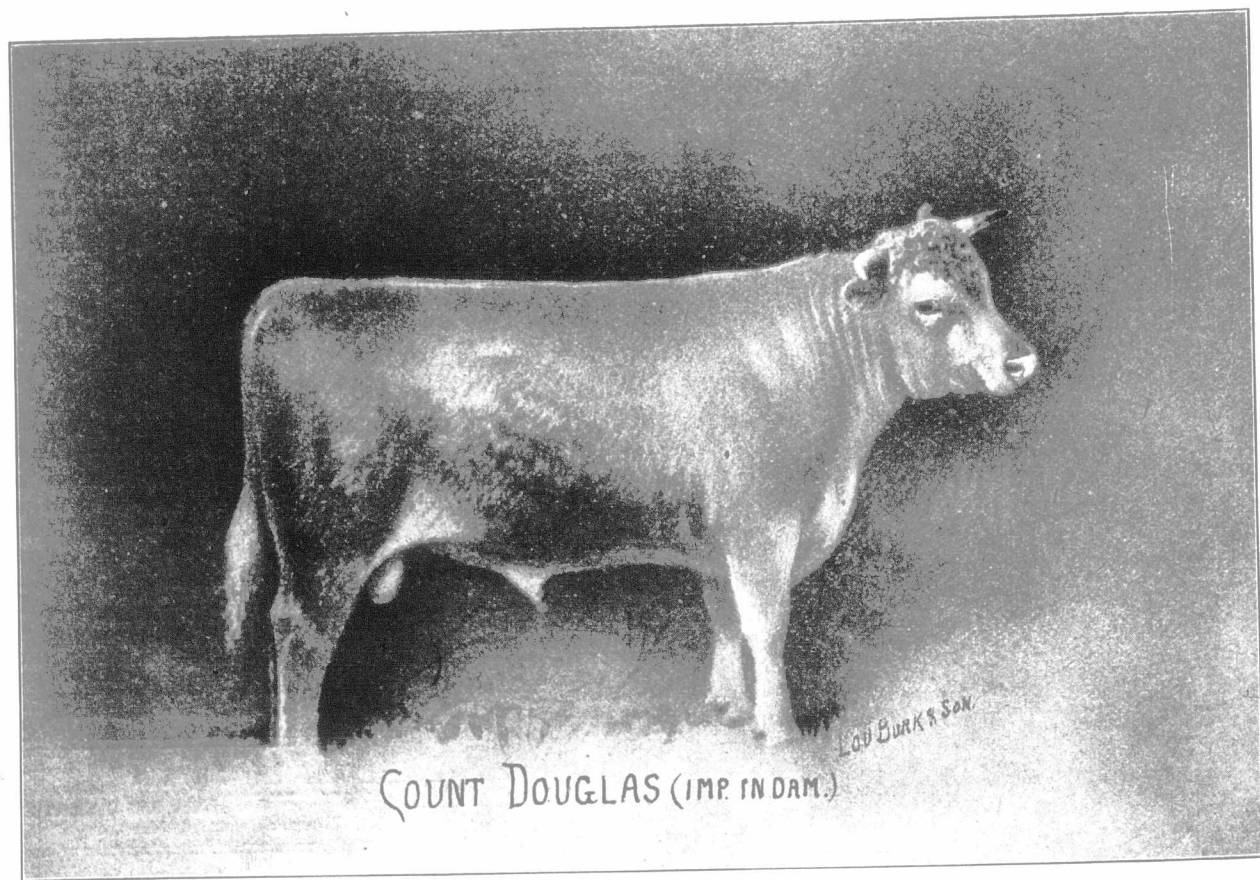
160 HEAD.

Young imported cows with calves at foot for sale. A number of the calves are imported in dam.

Some of the families represented in the herd are as follows:

- AUGUSTAS
- CLARAS
- NECTARS
- GOLDIES
- JENNY LINDS
- VICTORIAS
- MATILDAS
- BESSIES
- CROCUSSES
- ROSEBUDS
- BRAWITH BUDS
- LANCASTERS
- MAYFLOWERS
- AMARANTHS
- BUTTERFLYS
- CLIPPERS
- EMMAS
- BROADHOOKS
- MEDORAS
- MINAS
- VILLAGE MAIDS
- BEAUTYS
- MISS RAMSDENS
- FLORAS
- RAGLANS
- LUSTRES
- GEMS OF THE VALE

Herd headed by the imported bulls, GOLD-EN DROP VICTOR and PRINCE BOSQUET.



IF INTERESTED, COME AND SEE US, OR WRITE

H. CARGILL & SON, CARGILL, ONTARIO, CANADA.

CATALOGUE FREE.

FARM BOOKS.

The farmer's home without an Agricultural Library is lacking in one of the chief aids to pleasure and success. We have gone over the available first-class works on agricultural subjects, and have selected the best. See below for prices and how to obtain.

SOIL AND CROP.

- THE FERTILITY OF THE LAND.—*Roberts*. 372 pages. \$1.25.
- A BOOK ON SILAGE.—*Woll*. 185 pages. \$1.00.
- SOILS AND CROPS.—*Morrov & Hunt*. \$1.00.
- FORAGE CROPS.—*Thos. Shaw*. \$1.00.
- SOILING, ENSILAGE, AND BARN CONSTRUCTION.—*F. S. Peer*. 247 pages. \$1.00.

LIVE STOCK.

- VETERINARY ELEMENTS.—*A. G. Hopkins, B. Agr., D. V. M.* \$1.50. A practical book for stockmen and agricultural students.
- THE STUDY OF BREEDS (CATTLE, SHEEP, AND SWINE).—*Prof. Shaw*. 400 pages; 60 engravings. \$1.50.
- HORSE BREEDING.—*Sanders*. 422 pages. \$1.50.
- LIGHT HORSES—BREEDS AND MANAGEMENT. 226 pages. \$1.00.
- HEAVY HORSES—BREEDS AND MANAGEMENT. 219 pages. \$1.00.
- CATTLE—BREEDS AND MANAGEMENT. 270 pages. \$1.00.
- SHEEP—BREEDS AND MANAGEMENT. 232 pages. \$1.00.
- CATTLE BREEDING.—*Warfield*. 386 pages. \$2.00.
- THE DOMESTIC SHEEP.—*Stewart*. 371 pages. \$1.75.
- THE SHEEP.—*Rushworth*. 496 pages. \$1.50.
- PIGS—BREEDS AND MANAGEMENT.—*Sanders Spencer*. 175 pages. \$1.00.
- FEEDS AND FEEDING.—*Henry*. 600 pages. \$2.00.

GENERAL AGRICULTURE.

- AGRICULTURE.—*C. C. James*. 200 pages. 30 cents.
- FIRST PRINCIPLES OF AGRICULTURE.—*Voorhees*. 207 pages. \$1.00.
- AGRICULTURE.—*Storer*. 1,875 pages, in three volumes. \$6.00.
- CHEMISTRY OF THE FARM.—*Warrington*. 183 pages. 90 cents.
- FARMYARD MANURE.—*Aikman*. 65 pages. 50 cents.
- IRRIGATION AND DRAINAGE.—*King*. 502 pages. \$1.50.
- IRRIGATION FOR THE FARM GARDEN AND ORCHARD.—*Henry Stewart*. \$1.00.
- SUCCESSFUL FARMING.—*Rennie*. 300 pages. \$1.50, postpaid.

DAIRYING.

- AMERICAN DAIRYING.—*H. B. Gurler*. 252 pages. \$1.00.
- THE BOOK OF THE DAIRY.—*Fleischmann*. 330 pages. \$2.75.
- MILK AND ITS PRODUCTS.—*Wing*. 230 pages. \$1.00.
- TESTING MILK AND ITS PRODUCTS.—*Farrington & Woll*. 255 pages. \$1.00.
- DAIRYING FOR PROFIT.—*Mrs. E. M. Jones*. 50 cents.

POULTRY.

- ARTIFICIAL INCUBATING AND BROODING.—*Cypher*. 146 pages. 50 cents.
- PRACTICAL POULTRY-KEEPER.—*Wright*. \$2.00.
- AMERICAN STANDARD OF PERFECTION.—*Pierce*. 278 pages. \$1.00.

APIARY.

- THE HONEYBEE.—*Langstroth*. 521 pages. \$1.50.

FRUIT, FLOWERS, AND VEGETABLES.

- VEGETABLE GARDENING.—*Green*. 224 pages. \$1.25.
- FLOWERS AND HOW TO GROW THEM.—*Rexford*. 175 pages. 50 cents.
- THE PRINCIPLES OF FRUIT-GROWING.—*Bailey*. 514 pages. \$1.25.
- BUSH FRUITS.—*Card*. 537 pages. \$1.50.
- HORTICULTURIST'S RULE BOOK.—*Bailey*. 312 pages. 75 cents.
- SPRAYING OF PLANTS.—*Lodeman*. 399 pages. \$1.00.
- THE NURSERY BOOK.—*Bailey*. 365 pages; 152 illustrations. \$1.00.
- AMATEUR FRUIT-GROWING.—*Samuel B. Green*. 5x7 inches; 134 pages, with numerous fly leaves for notes; bound in cloth, and illustrated. 50 cents.

PLANT AND ANIMAL LIFE.

- THE STORY OF THE PLANTS.—*Grant Allen*. 213 pages. 40 cents.
- THE STUDY OF ANIMAL LIFE.—*J. A. Thomson*. 375 pages. \$1.75.
- INSECTS INJURIOUS TO FRUITS.—*Saunders*. 436 pages. \$2.00.

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- THE HOME PHYSICIAN AND CYCLOPEDIA OF MEDICINE.—By seven eminent physicians, aided by specialists. 1,300 pages; illustrated. Cloth, \$4.75; leather, \$5.75.
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HOW TO OBTAIN THESE BOOKS:

We will furnish present subscribers any of the above books for cash or as premiums for obtaining new yearly subscribers to the FARMER'S ADVOCATE at \$1.00 each, according to the following scale:

Books valued at, from	\$0.30 to \$0.65,	for 1 new subscriber.
"	.90 to 1.25,	for 2 "
"	1.50 to 1.75,	for 3 "
"	2.00 to 2.50,	for 4 "
"	2.75	for 5 "
"	6.00	for 12 "

We can furnish any of the above books at the regular retail price, which is given opposite the title of the book. By a careful study of the above list, any farmer can choose a select list of books suited to his needs, and for a small outlay in cash, or effort in obtaining new subscribers for the ADVOCATE, secure the nucleus of a useful library.

Cash to accompany names in every case. Subscriptions credited a year in advance from date received.

The WILLIAM WELD CO., Ltd., London, Ontario.

Want a Good Watch?

WE have succeeded in procuring from one of the most reliable jewelers in Canada a complete list of Gents' and Ladies' Watches of sufficient variety to suit every one, and have no hesitation in recommending them to our readers as premiums worthy of an effort to secure. These are not by any means trashy goods, but first-class in every particular, and we assure you that you will be pleased with whatever of the above premiums you may obtain. Let us hear from you at an early date with a good list of new subscribers accompanied by the cash, and take your choice.

Gents' Watches.

No.	Description	New Subscribers.
No. 1.	Yankee Nickel Watch.....	2
No. 2.	Trump Nickel Watch.....	4
No. 3.	Trump Gun Metal Watch....	5
No. 4.	No. 14 Silver Watch.....	8
No. 5.	7 Jeweled Gent's Elgin in 3 oz. Nickel Case.....	10
No. 6.	7 Jeweled Gent's Elgin in Gun Metal Case.....	11
No. 7.	7 Jeweled Gent's Elgin in Sterling Silver Case.....	14
No. 8.	7 Jeweled Gent's Elgin in 20-year Filled Case.....	18
No. 9.	7 Jeweled Gent's Elgin in 25-year Filled Case.....	21
No. 10.	15 Jeweled Gent's Elgin in 3 oz. Nickel Case.....	15
No. 11.	15 Jeweled Gent's Elgin in Gun Metal Case.....	15
No. 12.	15 Jeweled Gent's Elgin in Sterling Silver Case.....	18
No. 13.	15 Jeweled Gent's Elgin in 20-year Filled Case.....	21
No. 14.	15 Jeweled Gent's Elgin in 25-year Filled Case.....	25

Ladies' Watches.

No.	Description	New Subscribers.
No. 15.	Gun Metal Swiss Chatelaine.....	4
No. 16.	Sterling Silver Swiss Chatelaine.....	5
No. 17.	Nickel American O. F., large size.....	5
No. 18.	Gun Metal American O. F., large size.....	5
No. 19.	Nickel, small size.....	9
No. 20.	Gun Metal, small size.....	10
No. 21.	Sterling Silver, small size....	10
No. 22.	7 Jeweled Elgin in 20-year Filled Hunting Case....	20
No. 23.	7 Jeweled Elgin in 25-year Filled Hunting Case....	22
No. 24.	15 Jeweled Elgin in 20-year Filled Hunting Case....	23
No. 25.	15 Jeweled Elgin in 25-year Filled Hunting Case....	25

Description of Watches.

The accompanying cuts fairly well represent all the Ladies' and Gents' Watches, and a description of each as numbered is as follows:

No. 1. American Nickel Key-wind Boy's Watch that is absolutely guaranteed to keep good time and give satisfaction.

No. 2. Gent's Nickel American O. F. Watch; stem wind, and push-in stem and turn to set hands. This is a very strong, reliable Watch.

No. 3. Same as No. 2, excepting that it has Gun Metal case instead of Nickel case.

No. 4. Is a smaller-sized Gent's Watch, has sterling silver case, O. F. Screw Back and Bezel; stem wind, and push-in stem and turn to set hands. This is the lowest-priced and most reliable Boy's or small Gent's Silver Watch that is on the market.

No. 5. Is fitted with 7-Jeweled Nickel, first-quality Elgin movement. The case is a 3-oz. O. F. Nickel case; stem wind and set; screw back and bezel case.

No. 6. Same movement in Gun Metal or Black Steel screw back and bezel case.

No. 7. Same movement with Sterling Silver O. F. screw back and bezel case.

No. 8. Same movement in 20-year guaranteed Gold Filled O. F. screw back and bezel case.

No. 9. Same movement in 25-year guaranteed Gold Filled O. F. screw back and bezel case.

Nos. 10, 11, 12, 13 and 14 are fitted in the same style of cases as Nos. 5, 6, 7, 8 and 9; the difference is in the movement, and the movement is 15-Jeweled Nickel, first-quality Elgin movement.

No. 15. Is a small-sized Swiss O. F. Gun Metal Chatelaine Watch.

No. 16. Is the same, only with Sterling Silver case, which can be had nicely engraved.

Nos. 17 and 18 are a good-quality American Watch, O. F. stem wind, and push-in stem and turn to set hands. These are a little larger than the usual Ladies' Watches, and are smaller than the usual Boys' Watches, though can be used for either Boys, Girls or Young Ladies.

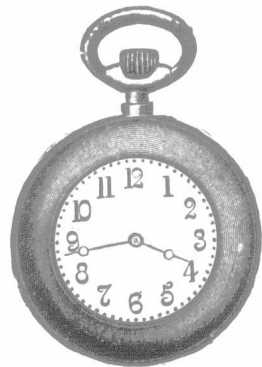
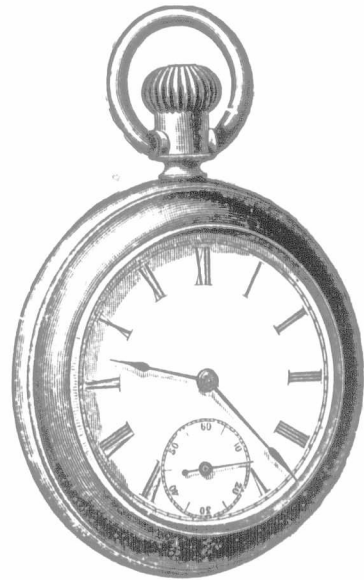
Nos. 19, 20 and 21 are small sized; in fact, are the exact size of cut. These are American Watches, O. F. stem wind, and push-in stem and turn to set hands, and are first-class timekeepers. Will give perfect satisfaction.

If a nice leather wrist case is desired with these watches, send two extra subscribers.

Nos. 22, 23, 24 and 25 are similar to the accompanying cut. These are regular Ladies' Hunting Watches. Nos. 22 and 24 are fitted in 20-year guaranteed Gold Filled cases, nicely ornamented, or to be had in plain or plain engine turned, and the same applies to Nos. 23 and 25, excepting that they are fitted in 25-year guaranteed Gold Filled cases, and 14k Gold Filled; 22 and 23 are fitted with 7-Jeweled Nickel, first-quality Elgin movements. Nos. 24 and 25 are fitted with 15-Jeweled Nickel, first-quality Elgin movements.

When making your choice of Watch as premium, be sure to mention its number as given in premium list, also whether Lady's or Gent's.

The WM. WELD CO., Ltd., London, Ontario.



For Sale or to Rent.

200-Acre Farm.—Parts of Lots 6 and 7, concession 6, Tp. of Blenheim, 2½ miles from Drumbo, 2 miles from Wolverson, 1½ miles from Richwood. Church, school and post office; good brick house, large bank barn, well fenced, well watered, good orchard. Apply to **DALZELL & BARRIE, Solicitors, GALT.**

Ontario Provincial

WINTER FAIR,

A COMBINED EXHIBITION OF FAT STOCK, DAIRY CATTLE, LIVE AND DRESSED POULTRY.

WILL BE HELD AT

GUELPH, ONT.,
DECEMBER 10 TO 13, 1901.

Every provision will be made for the convenience and comfort of visitors, exhibitors and their exhibits.

Practical Lectures Delivered on the Following Topics:

BEEF CATTLE, BACON HOGS,
DAIRY CATTLE, LIVE POULTRY,
SHEEP, DRESSED POULTRY.

RAILWAY RATES:

SINGLE FARE FROM ALL POINTS.

For information, prize lists and entry forms apply to

A. P. WESTERVELT,
SECRETARY,

PARLIAMENT BUILDINGS, TORONTO.

A. W. SMITH, PRESIDENT,

MAPLE LODGE, ONT.

SPLENDID STOCK AND GRAIN FARM FOR SALE.

160 ACRES, in Tp. Rochester, Essex Co. 140 acres well improved, balance with considerable good timber. Two good dwellings—one brick; good stable for 50 head of cattle in bank barn, with power mill, and all other outbuildings in good shape. Soil, clay loam, suitable for all crops, and in good state of cultivation, fall work being done. Terms to suit purchaser. For particulars apply:

GEORGE LEAK, WOODSLEE, ONT.

GOSSIP.

Mr. W. G. Sanders, of St. Thomas, Ont., announces in this issue a Shorthorn bull for sale. The only reason for selling is that he has several heifers by this bull and does not wish to inbreed them. This bull is Scotch-bred and has proved a good stock getter. As a prize-winner he took first as a calf at Western Fair, London, in 1898. This is a rare opportunity to obtain a capital bull at a reasonable figure.

Trout Run Stock Farm is situated in the County of Norfolk, about two miles from the village of Lynedoch and seven miles from Delhi station on the G. T. R. The owner, Mr. Wm. Thorn, is somewhat extensively engaged in the breeding of Ayrshire cattle, and pure-bred poultry. The Ayrshire herd was founded eight years ago, on animals purchased from the noted herd of David Morton & Sons, Hamilton, and included the cow Lottie, sired by Royal Chief (Imp.). This well-balanced cow has a milk record of 64½ lbs. of milk per day, and a butter record of 11 lbs. 7 ozs. in five days. One of her produce, Lottie 2nd, is a splendid type of Ayrshire perfection, showing that depth and breadth of hind quarters that make the record-breakers. Another of the foundation cows is Norval Rose, by the same sire, also a big, fine type of milk-producing animal. Since then additions to the herd have been made as necessity demanded; notably among them was the purchase of the cow, Verona, by Byron of Park Hill, bred by the late Thos. Gny, of Oshawa; also the cow, Belle of Rosmond, bred by Michael Ballentyne, of St. Mary's. These cows have done not a little towards bringing the herd to its now high standard. Among the earlier sires was the bull, Bob Brown of Barmoorhill, sired by Imp. Monarch, dam Maggie Brown. This bull, being a splendid, evenly-built individual, has left many valuable additions to the herd that are a credit to him as a sire and a profit to the owner. The present stock bull is the grandly-built prizewinner, Royal Star of St. Anne 7966, by Imp. Glencairn 3rd, dam Marjory of Williamstown, by Duke of Park Hill. As above intimated, this bull is an exceptionally well built animal. In the prize ring he was first at Toronto and first and sweepstakes at London in 1898. The young ones sired by him and out of the splendid cows of the herd are all that could be desired. The winnings of the herd this fall at the county show are first on cow, first on 3-year-old, first on 1-year-old, third on cow, and 2nd on both a heifer and bull calf. In poultry, Mr. Thorn excels, showing B. P. R., W. Wyandottes, Indian Games, B. Minorcas, W. Cochins, D and L. Brahmans, Pekin ducks, and Toulouse geese. In poultry Mr. Thorn literally swept the board at the county show this fall, winning in almost every class. There is young stock for sale in all the breeds, as per his advertisement.

Auction Sale.

THERE will be offered for sale by public auction (subject to a reserved bid), at the front door of the City Hall, Guelph, on

Wednesday, 11th Dec., '01

During the Winter Fair, that excellent grain and stock farm,

"THE PLAINS,"

Being composed of parts of lots 3, 4, 5 and 6, in the 9th Con., Township of Puslinch, County of Wellington, containing 240 acres, more or less, in first-class state of cultivation, having for over 50 years been used for the purpose of breeding pure-bred stock. It is about three miles from the City of Guelph. Church chapel, post office, store, etc., within a mile—and half a mile from flag station, C. P. R. (10 minutes to Guelph).

This farm is watered by a never-failing spring creek. For further particulars as to terms of sale, etc., apply to

S. E. STONE,

THE F. W. STONE STOCK CO., GUELPH,

Or A. D. CARTWRIGHT, Esq.,
Macdonald, Cartwright and Garvey,
37 Yonge street, Toronto.

THOS. INGRAM, Auctioneer. -om



Tenders FOR SUPPLIES, 1902.

THE undersigned will receive tenders up to noon on MONDAY, 25TH INST., for supplies of butchers' meat, creamery butter, flour, oatmeal, potatoes, cordwood, etc., etc., for the following institutions during the year 1902, viz.:

At the Asylums for the Insane in Toronto, London, Kingston, Hamilton, Mimico, Brockville, Cobourg and Orillia; the Central Prison and Mercer Reformatory, Toronto; the Reformatory for Boys, Penetanguishene; the Institutions for Deaf and Dumb, Belleville, and the Blind at Brantford.

Exception—Tenders are not required for the supply of meat to the asylums in Toronto, London, Kingston, Hamilton, and Brockville, nor for the Central Prison and Mercer Reformatory, Toronto.

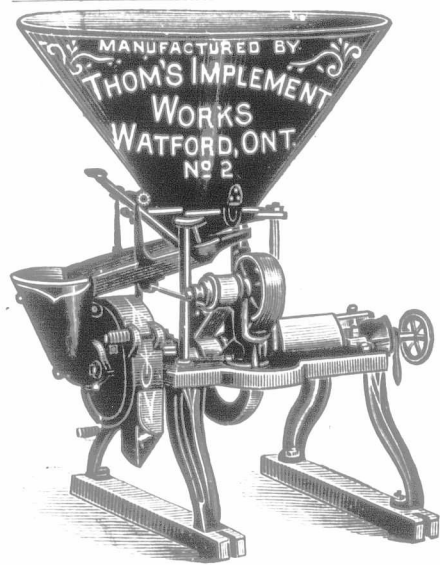
A marked cheque for 5 per cent. of the estimated amount of the contract, payable to the order of the Honorable the Provincial Secretary, must be furnished by each tenderer as a guarantee of his bona fides. Two sufficient sureties will be required for the due fulfillment of each contract, and should any tender be withdrawn before the contract is awarded, or should the tenderer fail to furnish such security, the amount of the deposit will be forfeited.

Specifications and forms of tender may be had on application to the Department of the Provincial Secretary, Toronto, or to the Bursars of the respective institutions.

The lowest or any tender not necessarily accepted. Newspapers inserting this advertisement without authority from the Department will not be paid for it.

J. R. STRATTON,
Provincial Secretary.

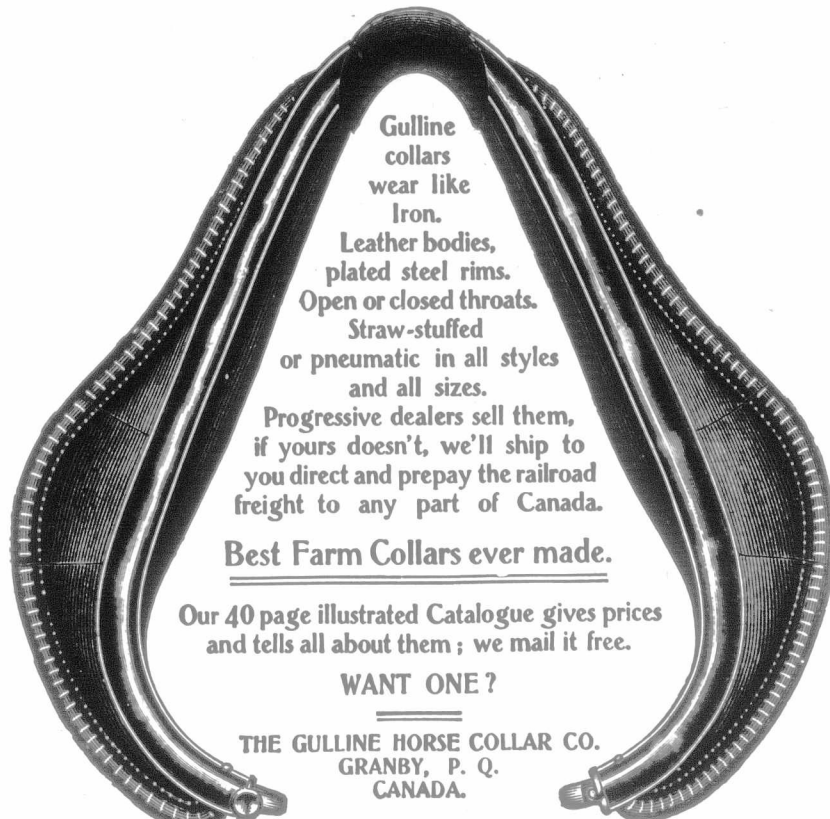
Parliament Buildings, Toronto, November 11th, 1901.



POSSIBLY you did not know that we made Grinders: have done so for the past five years. Our name is widely known as the originators of the successful blower silo filler. We hold all records in the cutting box line. Now we want to prove to you that we make the best Grain Grinder, and this is our plan: One machine to be placed in every township at a big cut price; the price that we are prepared to offer you has nothing to do with the regular selling price. Our object is to let the merits of our Grinders advertise them, and the demand will follow.

THOM'S IMPLEMENT WORKS, WATFORD, ONT.

IT PAYS TO ADVERTISE IN THE FARMER'S ADVOCATE.



Gulline collars wear like Iron.

Leather bodies, plated steel rims. Open or closed throats. Straw-stuffed or pneumatic in all styles and all sizes.

Progressive dealers sell them, if yours doesn't, we'll ship to you direct and prepay the railroad freight to any part of Canada.

Best Farm Collars ever made.

Our 40 page illustrated Catalogue gives prices and tells all about them; we mail it free.

WANT ONE?

THE GULLINE HORSE COLLAR CO.
GRANBY, P. Q.
CANADA.

BIBBY'S CREAM EQUIVALENT

SUPPLIES AT A SMALL COST WHAT ALMOST EVERY CALF-REARER WANTS, VIZ., A GRUEL WHICH WILL ENABLE HIM SUCCESSFULLY TO SUPPLEMENT THE SUPPLY OF MILK, OR ENRICH SKIM OR SEPARATED MILK, OR REAR CALVES ON OCCASION WITHOUT ANY MILK AT ALL. IT IS BY FAR THE MOST POPULAR CALF FOOD EVER MANUFACTURED. THE COST OF FEEDING IS SMALL. IT IS VERY EASY TO PREPARE, AND MAY BE RELIED ON TO GIVE SATISFACTION. PRICE: 50-lb. bag, \$2.00; 100-lb. bag, \$3.50; freight prepaid to nearest railroad station. TO BE OBTAINED FROM LOCAL DEALERS OR DIRECT FROM

J. BIBBY & SONS, 10 BAY ST., TORONTO.



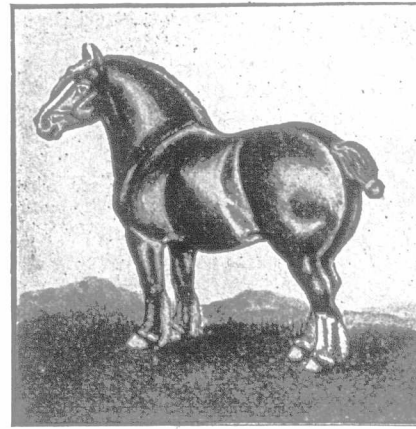
We beg to call your attention to a new and indispensable article in

Barclay's Patent Attachment

FOR THE CURB OF BALKING AND KICKING HORSES.

Will control any vice known to a horse. Invaluable for breaking-in colts. Can be adjusted in two minutes, and used with any harness, vehicle or implement. Sent, charges paid, to any part of Canada, with full directions for use, on receipt of price, \$5. Reliable representatives wanted. For further information, address

THE BARCLAY MFG. CO., Brougham, Ont.



LATELY IMPORTED A FRESH LOT OF

Glydesdale Stallions,

Comprising sons and grandsons of many of the most noted Scotch showyard winners and sires, all in the pink of condition without surplus flesh, and personally selected to meet the best Canadian markets, having, without exception, the best of bone, hair, feet, and action, coupled with true Clyde character. I will make further importations as the times demand. Inspection invited. Prices consistent with quality.

ROBERT GRAHAM, Ringwood P. O., Ont.

Stouffville Station, G. T. R., and telegraph office.

NOTICES.

Good for Enlarged Tendons.

St. JOHN, N. B., April 29th, '97.

The Lawrence-Williams Co., Cleveland, O.: The bottle of "Gombault's Caustic Balsam" you so kindly sent me in November, 1896, I have used on my horses for enlarged tendon, and found it to work to my entire satisfaction, and would recommend it to all horsemen instead of using the firing irons, as it has even a better result.

R. O'SHAUGHNESSY.

Vol. VII. of the Kent or Romney Marsh Flockbook, issued under the auspices of the Kent or Romney Marsh Sheep Breeders' Association of Great Britain, has reached us through the courtesy of the Secretary and editor, Mr. W. W. Chapman, 32 Fitzalan House, Arundel street, London. It is a well-printed and strongly-bound volume of 150 pages, containing the pedigrees of over 1,200 rams and the registry of 59 flocks.



A good looking horse and poor looking harness is the worst kind of a combination.

Eureka Harness Oil

not only makes the harness and the horse look better, but makes the leather soft and pliable, puts it in condition to last twice as long as if ordinarily would.

Sold everywhere in cans—all sizes. Made by **IMPERIAL OIL CO.**

Give Your Horse a Chance!

Weston Herd Large Yorkshire Swine.

Headed by Summerhill Ruler 2nd, same litter as Summerhill Ruler; 1st-prize winner at Pan-American. Strictly choice young pigs by Ruler 2nd, and from noted prize-winning sows, for sale. Prices the lowest, breeding and quality considered. Address:—

L. ROGERS, WESTON, ONT.

New Ontario.

DO YOU WANT A FARM ?

WRITE for information concerning Government lands for homesteading in the various districts of New Ontario.

Hon. E. J. DAVIS,

Commissioner of Crown Lands,
TORONTO, ONT.

Clydesdales--Hackneys.



WEIMPORT, breed, and develop the highest class of stock from the best studs in Scotland, Canada, and the United States. Clydesdales headed by Lord Charming and Cloth of Gold; Hackneys headed by Square Shot.

QUEEN.

A Few Choice Yearlings of Either Breed can be spared.

O. SORBY,
GUELPH, ONT.

FOR SALE:
Clydesdales and Shorthorns.

Young stallions and fillies bred from imported sires and dams. Also a choice bunch of Shorthorns, of both sexes and all ages, including a few extra choice young red and roan heifers and bulls.

JOHN BRIGHT, Myrtle, Ontario.

Shires, Shorthorns, and Leicesters.

Young stock of both sexes for sale. Imported Prince Louis = 32082 = heads the herd. Write for prices or come and see them.

John Gardhouse, Highfield P. O. Weston, G. T. R. and C. P. R.

WM. SMITH, COLUMBUS, ONT.,
IMPORTER AND BREEDER OF

Clydesdale Horses & Shorthorn Cattle

L. BURNETT, GREENBANK, ONT.
BREEDER OF

Clydesdale horses, Shorthorn cattle, and Shropshire sheep.

Four bulls from 12 to 14 mos. old, bred from imp. Cruickshank blood, for immediate sale.

GOSSIP.

At the Kansas City Cattle Show last month a splendid exhibition of the beef breeds was made, there being over 1,000 head in competition for exceptionally large cash prizes. The leading awards in the Shorthorn class were as follows: Aged bull—First, C. E. Leonard's Lavender Viscount; second, Ryan's Young Abbotsburn, a 5-year-old son of the World's Fair champion; third, Thompson & Son's Galant Knight; fourth, Robbins' Lad for Me. Two-year-old bulls—First, Harding's Golden Victor; second, Hanna & Co.'s Inglewood; third, Geo. Bothwell's Blackwatch. One-year-old bulls—First, Bothwell's Nonpareil of Clover Blossom; second, Warnall's Valley Count; third, G. M. Casey's Scottish Lavender. Aged cows—First, Harding's Rose Princess; second, Casey's Miss Mayflower; third, Robbins' Young Matchless. Two-year-old heifer—First, Robbins' Ruberta; second, Casey's Princess Violet; third, Harding's. Senior yearling heifer—First, Purdy Bros' Lovely 30; second, Harding's Golden Fame's Lady. Junior yearling—First, Robbins' Clarissa; second, Peak & Son's White Rose. The winners of the sweepstakes are: Senior sweepstakes bull, two years old and over—Lavender Viscount, owned by C. E. Leonard, Bell Air, Mo. Junior sweepstakes bull, under two years old—Nonpareil of Clover Blossom, owned by George Bothwell, Nettleton, Mo. Senior sweepstakes cow or heifer, two years old or over—Ruberta, owned by J. G. Robbins & Son. Junior sweepstakes heifer, under two years old—Clarissa, owned by J. G. Robbins. The Armour Packing Company's special for best bull any age was won by Golden Victor, owned by Geo. Harding & Son, Waukesha, Wis. Prize, the Armour trophy, valued at \$250. Best cow or heifer of any age—Ruberta, owned by J. G. Robbins & Son, Price, \$300. In the contest for aged herd J. G. Robbins & Son were placed first, George Harding & Son second, G. M. Casey third.

Following are the principal awards on Herefords at Kansas City Show: Aged bulls—First to Gudgell & Simpson's Dandy Rex, second to W. H. Curtice's Prince Rupert, third to Soham's Improver. Two-year-olds—First to Soham's Checkmate, second to Kinsell's McKinley, third to Harris' Lomax. Yearling bulls—First to Gudgell & Simpson, on Magnet; Soham second, on Thickfish; Curtice third, on Beau Donald. Aged cows—Harris first, on Bettie 2nd; Gudgell & Simpson second and third, on Mischievous and Dolly. Two-year-old heifers—Gudgell & Simpson first, on Modesty; Soham second, on Golden Lassie; Harris third, on Theresa. Senior yearling—Gudgell & Simpson first, on Miss Caprice; Stewart & Hulcheon second, on Queenly; Soham third, on Galatea. Junior yearling—Harris first, on Kessie 3rd; Stewart & Hulcheon second, on Tempter's Queen; Gudgell & Simpson third, on Gypsy Lady. Senior sweepstakes bull, two years old or over—Prince Rupert, the second-prize aged bull, owned by W. H. Curtice, Eminence, Ky., the sweepstakes prizes being awarded by a different committee from that acting in the class awards. Junior sweepstakes bull, under two years—Goodenough 3rd, the first-prize senior bull calf, owned by Oryton Harris, Harris, Mo. Senior sweepstakes cow or heifer, two years or over—Harris' Betty 2nd, the first-prize cow. Junior sweepstakes heifer—Gudgell & Simpson's Miss Caprice, the first-prize senior yearling. The grand championship for best female any age went to Betty 2nd. Herds—Best aged herd—Gudgell & Simpson; second, Harris; third, Soham. Young herd—First to Harris, second to Gudgell & Simpson, third to Stewart & Hulcheon.

DOCKING GOING OUT OF FASHION.

George Burton, horse breaker, Brough, and W. Dent, farmer, Brough, were fined £2 17s. 6d. each, including costs, at Kirby Stephen, for ill-treating a foal by docking its tail and afterwards tying up the stump with string to stop the bleeding. The tail became gangrenous, lockjaw supervened, and the poor animal was eventually put out of its misery. Expert evidence condemned the practice of docking, and described the custom of tying up the stump with string as a relic of last century. Mr. J. J. Bell, veterinary surgeon for Cumberland, spoke of the decadence of docking, and said that in his own practice he did not dock one per cent. of the number of animals he operated upon a quarter of a century ago. The defendant, Burton, informed the bench that he had docked hundreds of foals in the same way, and nothing ever went wrong. It was his opinion that the animal had been struck by lightning.

4 Imp. Clydesdale Stallions

31 Imported Shorthorn Cows and Heifers.
7 Canadian-bred Cows and Heifers.
3 Imported Shorthorn Bulls.
5 Canadian-bred Bulls.

GEO. ISAAC & BROS., BOMANTON, ONT.
COBBOURG STATION, G. T. R.

FOR SALE.

CLYDESDALE stallions, mares and fillies, representing the best blood in Scotland—Prince of Wales, Darnly, Macgregor and Lord Lyon—including the great sweepstakes winner, The Marquis (1182), a grandson of Prince of Wales and Macgregor; also the first-prize 3-year-old at Ottawa this season.

THOS. GOOD,
Richmond P. O., Ont.

R. R. Station, Stittsville, C.P.R.

Wm. Brash, Ashburn, Ont.,
BREEDER OF

CLYDESDALE HORSES and SHORTHORN CATTLE.

CLYDE & SHIRE HORSES
SCOTCH SHORTHORNS, LEICESTER SHEEP.

Stock of different ages and sexes for sale. Two stallions, colts, and a few young bulls now ready. Also choice rams and ewes. Our flock won 1st prize at Toronto, Ottawa and Chicago in 1900. Write for what you want. My motto: The best is none too good.

J. M. GARDHOUSE, Rosedale Stock Farm,
Malton, G.T.R.; Weston, C.P.R. Highfield, Ont.

HIGHEST AWARD
BUFFALO EXPOSITION.

NOTWITHSTANDING the evasive assertions and lying misrepresentations of unsuccessful would-be competitors, the indisputable fact remains that just as in the case of every representative exhibition or other contest since the invention of the Cream Separator twenty years ago, the **De Laval** machines have maintained their supremacy at the Pan-American Exposition, Buffalo, having received the Gold Medal on Cream Separators.

This is the highest and only award of its kind on cream separators. One other make of machine has received a Silver Medal, and another concern a Gold Medal for its combined exhibit of cream separators, Babcock testers, churns and other apparatus. With characteristic advertising honesty, the latter concern is now claiming this Gold Medal to be an award to its separators.

OTHER GREAT EXPOSITIONS.

The supremacy of the **De Laval** machines at Buffalo is a continuation of their triumphant record at all previous great expositions. At the World's Fair, Chicago, in 1893, they received the Gold and only medal awarded by the regular jury of awards, and were the only separators used in the Model Dairy. At Antwerp, in 1894, and at Brussels, in 1897, they received the Grand Prizes or highest awards. At Omaha, in 1898, they received the Gold Medal, and again at Paris, in 1900, the Grand Prize or highest award.

THE DE LAVAL SEPARATOR CO.

CHICAGO.	General Offices:	MONTREAL.
PHILADELPHIA.	77 YORK STREET,	WINNIPEG.
SAN FRANCISCO.	TORONTO.	NEW YORK. o

Clydesdales and Ayrshires

Imported and home-bred. Also Dorset Horned sheep, and the leading varieties of poultry. -om
ROBERT NESS & SONS, Howick, Que.

FARMERS!

**KEMP'S INSTANTANEOUS
Sheep Dip**

Contains more value for the money than any other Dip on the market. We will send a tin prepaid to any part of Ontario for **ONE DOLLAR.** Half gallon, Imperial measure, in each tin. It is the cheapest disinfectant for outbuildings, drains, etc. -om

W. W. Stephen,
MEAFORD, ONTARIO.

HIGH PARK STOCK FARM.

GALLOWAYS of the choicest breeding and most fashionable strains. Inspection or correspondence invited. **A. M. & ROBERT SHAW,**
P. O. Box 294, Brantford, Ont.



90 HEAD
High-quality, Early-maturing
Herefords
Prizewinners.
Young bulls, cows, heifers.

The blood of "Corrector," "Eureka," "Ancient Briton," and "Rupert," on an "Anxiety" foundation. Send for illustrated catalogue. -om

H. D. SMITH, COMPTON, QUE.



A QUICK, SHARP CUT
hurts much less than a bruise, crush or tear. Done with the **DEHORNING KEystone KNIFE** is the safest, quick, sharp cut. Cuts from four sides at once. Cannot crush, bruise or tear. Most humane method of dehorning known. Took highest award World's Fair. Write for free circulars before buying.
Owned and Manufactured by R. H. MCKENNA, V. S., Picton, Ont.

TWO YOUNG ROAN SHORTHORN BULLS

Eight to ten months old, also a few choice two-shear ewes, ram lambs, one imp. Stielgoe yearling ram, one two-shear ram. -om

R. J. HINE, DUTTON P. O., ONT.

Shorthorn Bull For Sale:

An excellent stock getter, sure and active; Scotch-bred. Price very reasonable. Desire to change blood only reason for selling. Write or call on
W. G. SANDERS,
St. Thomas, Ont.
Box 1133.

Rams! Rams!!



Angus bulls and ten cows and heifers at reasonable prices. - W. R. BOWMAN, Mt. Forest, Ont.

**FOR SALE:
FIVE SHORTHORN BULLS**

from 8 to 12 months, good colors and choice breeding. Write, or come and see them. -om

Colin Campbell, Crosshill P. O., Ontario.

W. G. PETTIT & SON,
FREEMAN P. O., ONT.,

IMPORTERS AND BREEDERS OF

Scotch Shorthorns and Shropshire Sheep,

Are offering 10 Imp. bulls from 10 months to 2 years old; 10 home-bred bulls from Imp. stock, 10 to 15 months old; 40 Imp. cows and heifers, all ages. Home-bred cows and heifers all ages. Also a grand lot of ram and ewe lambs and yearling ewes for sale. -om

Burlington Jct. Stn. Tele. & 'Phone, G. T. R.

BELLEVUE SHORTHORNS.

Both sexes. IMPORTED AND HOME BRED. All ages. Prizewinners at home and abroad.

EDWIN BATTYE,
GORE BAY P. O. AND PORT.
MANITOULIN ISLAND. om



T. DOUGLAS & SONS, STRATHROY, ONT.,
BREEDERS OF

Scotch Shorthorns.

100 HEAD TO SELECT FROM.
Offer for sale 20 young bulls, and cows and heifers of all ages, of the most approved breeding, bred to (imp.) Diamond Jubilee = 28861 =, at head of herd. Farm one mile north of town. -om

PLEASE MENTION FARMER'S ADVOCATE.

FOR SALE:
SHORTHORNS: 8 young bulls, from 3 to 8 mos. old, sired by Leta's Lad and out of deep-milking cows. H. E. HIND, Bagersville P. O. and Station, G. T. R. and M. C. R.

WE HAVE FOR SALE
10 SHORTHORN BULLS
 From 6 to 18 months old. Nearly all from imp. dams, and sired by the imp. Golden Drop bull, Royal Prince. Catalogue upon application.

John Miller & Sons, Brougham P. O., CLAREMONT STATION, C. P. R. ONT.

HEREFORDS FOR SALE.
THE HERD of upwards of 90 head of registered animals contains the blood of the best English herds, with imported True Briton and Likely Lad at the head. Stock of both sexes and all ages for sale. Correspondence or a personal visit invited.

A. S. HUNTER, DURHAM, ONT.

SHORTHORNS FOR SALE:
 Seven choice young bulls, from 9 to 12 months old. Also a few choice heifers, in calf to the grandly bred Marr bull, Spicy Marquis (imp.).

JAS. GIBB, Brookdale, Ont.

Live Stock Labels in large or small lots. Also odd numbers supplied. Send for circular and price list.
 K. W. James, Bowmanville, Ont.

Shorthorns
 For Sale: Choice young cows and heifers in calf to imp. bull. A few choice heifer calves. Bulls of various ages. Shropshire ram lambs, out of imp. Mansell-bred ewes. Prices moderate.

G. A. BRODIE, BETHESDA, ONT. Stouffville Station, G. T. R.

Newcastle Herd Shorthorns and Tamworths
 Two bull calves and two heifer calves, 6 to 9 mos. old. Twenty Tamworth boars and sows, soon fit to wean. Sows safe in pig and bears fit for service. All from Toronto prize stock. Prices right, quality considered.

Colwill Bros., Newcastle, Ont.

SHORTHORN BULLS.
 RARE GOOD BULLS. SCOTCH-BRED BULLS.
 Write for bull catalogue free.

H. SMITH, Hay P. O., Huron Co., Ont. Exeter Station on G. T. R., half a mile from farm.

Agents Wanted for the New Pictorial Stock Doctor and Live Stock Cyclopaedia, revised to 1901 with the assistance of the Professors of the Ontario Agricultural College, Guelph. The finest illustrated, cheapest and best book of its kind ever published. Large wages to agents. A full-page announcement of this book appeared in the ADVOCATE of the issue of June 1st. Particulars mailed free. Address WORLD PUBLISHING CO., Guelph, Ont.

SHORTHORNS.
 Fashionably bred, of both sexes and all ages. Nothing reserved.

H. PARKER, Durham P. O. and Station.

SHORTHORNS AND LINCOLNS.
 A. D. MCGUGAN, RODNEY, ONT.

Herd headed by the great sire and sweepstakes bull, Abbotsford. Grand crop of calves from imported and home-bred cows. Bulls one year and under for sale—reds and dark roums. Ram and ewe lambs for sale at reasonable prices.

LIDLAW'S CONCENTRATED TOBACCO POWDER

Sheep Dip.
 THISTLE BRAND.

Contains correct proportion of sulphur, all mixed and ready for bath. For thirty years Laidlaw's Tobacco Powder Dip has had steadily increasing sale. Many hundred millions of sheep have been dipped with it. Non-poisonous; no injury possible to sheep or wool. For full particulars and prices, write—

ROBERT MARR, WALKERTON, ONT.

LAKE VIEW STOCK FARM. SCOTCH SHORTHORNS, both sexes, all ages. As good as the best.

Meaford Station, G. T. R. North. JAMES BOWES, Strathmairn P. O.

SHORTHORNS (IMPORTED). Five choice young bulls, from 6 to 10 months old, by Imp. Capt. Mayfly, out of Indian Chief dams.

JAMES A. CRERAE, Shakespeare P. O. and Station, G. T. R.

GOSSIP.
 The Seven Maples stock farm is situated in the County of Haldimand, Ont. The nearest station is Nelles' Corners, on the G. T. R., which is distant about two miles. The owners, Messrs. H. Gee & Sons, Fishersville P. O., make a specialty of Shropshire sheep and high-class Barred Plymouth Rock poultry and Pekin ducks. They have also a small but select herd of Shorthorns. The flock of Shropshires was founded six years ago on sheep purchased from the famous flock of John Campbell, Woodville, and are of the noted Mansell breeding, descended from that great stock ram, Newton Lord. The sheep are a large, well-formed, perfectly-covered lot, of short legs. This season's crop of lambs are sired by a son of Imp. Montford Beauty, and are typical Shrops. from the ground up. The shearlings offered for sale are good ones and should prove a profitable investment. In poultry, the Pekin ducks are as good a lot as can be found in the country. The drake used this year was raised by A. G. Hallock, of Long Island, N. Y. The ducks are from the famous Watson flock, of Caro, Michigan, and won first prize at Detroit and second at Chicago. Parties wishing anything in this line should write to H. Gee & Sons, 11 Barred Plymouth Rocks, the flock certainly excels. They are of the Conger strain, of Shelbyville, Indiana. The cockerels used this year on the different breeding pens are one from Conger, one from Watson, and one from Bradley; the two latter from Lee, Massachusetts. A large number of choice cockerels are for sale that are ideal birds. In Shorthorns, the Messrs. Gee are showing some nice animals of the old-time favorite Bates strain, topped with Scotch-bred sires. The present stock bull is sired by Imp. Christopher. He is a nicely-turned animal, with a very even distribution of flesh. Parties ordering from the Messrs. Gee can depend on the animals or birds being exactly as represented.

JERSEYS AND GUERNSEYS AT THE LONDON DAIRY SHOW.
 The Channel Island cattle made, as usual, an exceeding good showing at the London (England) Dairy Show last month. Of these the Live Stock Journal says: The Jerseys displayed the greatest combination of breeding, quality, and milk of any breed in the Hall. In cows, Sir Edward Lawson had a couple of exhibits, one of which, Crocus, Island-bred and sired by Boyle, carried off the first honor. As a typical Jersey, Crocus takes a good deal of beating; she is small, fine, stylish, rich, and in outline and udder leaves little to be desired. Her companion (very highly commended) is also a very useful-looking cow. The second prize fell to Mr. Antony Gibbs' Silver Ring, a fine cow, neat at the tail-head, and with capital milk vessel. Her herd companions, Buttercup 3rd and Lass of Jersey 2nd, two excellent cows in every respect, were each of them highly commended. The Marquis of Winchester secured a third with Brobis 12th, bred at Tring Park, and a handsome, good-bagged cow with capital milk veins. Captain A. B. S. Fraser's Countess of March came in for the reserve, a very rich, level cow, and with a bag of the best shape; she is also heartily looking. Mr. Spencer Evans, for Hope, a daughter of Golden Fern's Lad, was highly commended, as was also Mr. David Mutton for a couple of very useful entries from his old herd at Plumpton; similar honor to Mr. McMullen's Lucy Templar completed the class. Guernseys, as compared with previous years, stood in as good a light as any in the Hall. Generally speaking, the younger animals were smaller and neater, and both in cows, heifers and bulls there were several animals of extra nice quality, as well as possessing great milk appearance and richness. Some twelve cows were entered, of which Mr. H. M. Ozanne, from the Island, contributed three, and carried off first, third, and a highly commended. The first cow, Rose of Gold, possesses great quality and a capital set of milk vessels, as well as richness. The third, Happy Belle, has also very even outline, fine character, and is evidently an excellent cow at the pail. The highly-commended companion of these two is also of very creditable type. A much stronger cow divided these for the second place, in the shape of Mr. E. A. Hambro's Arabella, who is both hardy, correct in outline, and good in her udder and milk appearance.

9 CORDS IN 10 HOURS
 RUNS EASY No Backache weighs only 41 lbs. EASILY CARRIED SAWS DOWN TREES

BY ONE MAN with the FOLDING SAWING MACHINE made at Essex Centre, Ontario. NO DUTY TO PAY NOW. Send to Main Office for FREE catalogue showing LATEST IMPROVEMENTS, and testimonials from thousands. First order sure agency. Address Folding Sawing Mach. Co. 55 N. Jefferson St., Chicago, Ill.

ARTHUR JOHNSTON
 Greenwood, Ontario, Canada.
HIGH-CLASS SCOTCH SHORTHORNS
 (First Importation Made in 1874.)
 (My recent importation of 30 head has just arrived home from quarantine. Herd now numbers over 120 head.)

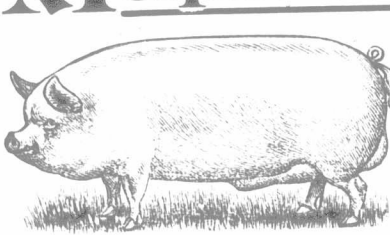
OFFERS FOR SALE
 40 Imported Cows and Heifers,
 40 Home-bred Cows and Heifers,
 11 Imported Bulls and Bull Calves,
 13 Home-bred Bulls and Bull Calves.

Railway stations—Pickering, on main line of Grand Trunk Railway, 22 miles east of Toronto, and Claremont, 23 miles east of Toronto, on the C. P. Railway. Catalogues on application.

PLEASE MENTION FARMER'S ADVOCATE.

Large English Berkshires.
 My herd consists of sows imported from England; three of them (including a show sow) were selected from the herd of Geo. Green and were bred to his show boars. Young stock for sale (not akin). JNO. LAHMER, VINE, ONT.

Maplewood Herd



7 IMPROVED LARGE YORKSHIRES
 PRIZEWINNERS AT Pan-American Exposition, Buffalo.
21 HEAD PRIZEWINNERS
 AND PRIZEWINNING BLOOD.
 IMPORTED AND CANADIAN-BRED.

EASY FEEDERS. BEACON TYPE. STOCK FOR SALE. WRITE US WHAT YOU ARE WANTING.
IRA JOHNSON, BALMORAL, ONTARIO.
 Nelles' Corners Station and Telegraph.

LESS LABOR AND MORE MONEY ON THE FARM.

BUY A LOW-DOWN, THICK-FLESHED
Hillhurst Shorthorn Bull,

Scotch-topped, from Cumberland, Gloucestershire, or Canadian dairy strain, and raise DEEP-MILKING, BIG-FRAMED COWS AND BABY BEEF in nature's way. Many cows that do not pay board at the pail will give a handsome return in growing beef. Four handsome young bulls, seven to nine months old, reds and roans, by the celebrated imported sires, "Joy of Morning" and "Scottish Hero," for sale at moderate prices. Low freights.

M. H. COCHRANE, COMPTON CO., P. Q., G.T.R., 117 MILES EAST OF MONTREAL. HILLHURST STATION.

Farmers!
 Now is the time to build your stable floors, hogpens, etc. You will find **QUEENSTON CEMENT** the cheapest and best. I warrant all structures when my instructions are carried out. Investigate my patented system of **VENTILATION.**

When properly arranged, it will give you perfect sanitary stables. It is free to all of our patrons.

For pamphlet, prices, and other particulars, write to

ISAAC USHER,
QUEENSTON, - ONTARIO.

J. & W. B. WATT, SALEM, ONTARIO,
 BREEDERS OF (POST AND TELEGRAPH OFFICE)

Shorthorn Cattle, Clydesdale Horses, Leicester and Oxford Sheep, and Berkshire Pigs.

OUR herd contains such families as Matchless, English Ladies, Mildreds, Village Buds, Missies, Stamfords, Clarets, and Marthas. Royal Wonder—34682—, junior champion of 1901, now heads the herd. A choice lot of young bulls and a few females for sale. We offer our whole flock of Leicesters for sale—thirty five ewes and ewe lambs and fifteen rams.

FARMS 2 MILES FROM FLORA STN., G.T.R. and C.P.R.; 15 MILES NORTH OF GUELPH.

Shorthorns and Leicesters.

Herd Established 1855.
 A number of young bulls, cows and heifers for sale. Imported Christopher—28859— heads the herd of large cows of grand milking qualities. Also a number of Leicesters of both sexes, from imported foundation.

JAMES DOUGLAS, CALEDONIA, ONT.

SPRINGBANK FARM. Shorthorn Cattle, Oxford Sheep, and Bronze Turkeys. Young bulls for sale.

JAS. TOLTON, WALKERTON, ONT.

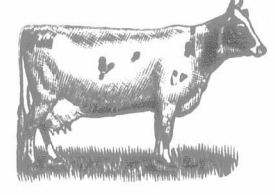
SHORTHORN CATTLE AND LINCOLN SHEEP.

Imp. Prime Minister at head of herd. Seven young bulls for sale—good ones. Also a few females. Stud rams all imported from H. Dudding, Esq.; the same blood as the 1000-guinea ram.

J. T. GIBSON, DENFIELD, ONT.

FOR SALE:

Three Guernsey bulls, 5, 9, 18 mos. old, sired by Mashie (imp.). Six Ayrshire bulls, 1 year and under, sired by Matchless, Shropshire lambs, sired by Canadian Flag-staff (imported direct). Address—



ISALEIGH GRANGE FARM, J. N. GREENSHIELDS, Prop. Danville, Que.

SPRINGBANK FARM
 HERD OF Shorthorns, Oxfords, AND Berkshires.

Young bulls and Heifers on hand. Also a few choice Berkshires.

CHAS. RANKIN, Wyebridge, Ont. SIMCOE Co.



J. R. McCallum, Iona Station, Ont. Offers young SHORTHORN BULLS and HEIFERS, of choice breeding, at reasonable prices. Iona Sta. on M.C.R., half a mile from farm.

CENTRE WELLINGTON SHORTHORNS Herd consists of Scotch and Scotch-topped females, with Lord Stanley 4th = 22678 = at the head. Stock all ages for sale. Farm adjoins the town. Box 66. H. B. WEBSTER, Fergus, Ont.

High-Class Shorthorns and YORKSHIRE PIGS.

2 GRAND show bulls, 16 months old, by Imp. Sirius; 3 bulls from 8 months old up; low-down, thick, fleshy fellows; all bulls of great substance. A few cows and heifers in calf. Yorkshires—A lot of young pigs 3 months old and down.

JAS. McARTHUR, Goble's, Ontario. For Sale: 3 Shorthorn bulls of first-class breeding, sired by such noted bulls as Scotland's Fame (imp.) and Bold Britain, bred by John Isaac, Markham. Also some choice cows and heifers. F. A. GARDNER, Britannia, Ont. PERK COUNTY.

SHORTHORNS: We are offering for sale 8 bulls, from 8 months to 3 years old, by Mungo 2nd and Scottish Bard. Also a few cows bred to Baron's Heir. ROBT. GLEN, Owen Sound, Ontario.

SHORTHORNS (imported) 3 BULLS: 1 two-year-old, 2 one-year-olds. A few cows and heifers. THOS. RUSSELL, EXETER P. O.

Hawthorn Herd of Deep-Milking Shorthorns Stock for sale of both sexes. Herd headed by the Isabella bull, Golden Eagle = 30943 =, by Golden Measure.

Wm. Grainger & Son, Londesboro, Ont. SPRING GROVE STOCK FARM

Shorthorn cattle and Lincoln sheep. Herd prize and sweepstake at Toronto Industrial Exhibition, 1897 and 1898. Herd headed by the Marr Missie bull, Imp. Wanderer's Last, last of the get of the great sire, Wanderer of the Cruickshank Brawith Bud tribe. High-class Shorthorns of all ages for sale. Also prizewinning Lincolns. Apply T. E. ROBSON, ILBERTON, ONT.



"ORCHARD HILL" STOCK FARM. Our breeding cows comprise: Missies, Lustres, Clarets, Crimsons, Buttercups, Canadian Beauty and Imported Beauty, with Lord Lavender at head of herd. Young animals of both sexes for sale; also one bull 2 years old, sired by Aberdale and from an Indian Chief cow. ARTHUR JOHNSTON, Vandeleur, Ont.

SHORTHORNS. One bull, 1 year old; two bulls, 7 months old; a few heifers of choice breeding and superior quality. Listowel station. AMOS SMITH, Trowbridge P. O., Ont.

For Sale: 10 Choice-bred Scotch Short-horn Bulls, from 4 to 22 months; also cows and heifers in calf to imported Red Duke = 36084 = (77585). Farm 1/2 mile from Ethel station, G.T.R. -om D. MILNE & SON, Ethel, Ont.

JOHN DRYDEN, BROOKLIN, ONTARIO, BREEDER OF CRUICKSHANK SHORTHORNS AND CHOICE SHROPSHIRE SHEEP.

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

SHORTHORNS: We are offering 3 extra choice yearling bulls, all from imported sires, straight Cruickshank, with Lavendar and Miss Ramsden dams. THOS. ALLIN & BROS., Oshawa, Ont.

MAPLE LODGE STOCK FARM. ESTABLISHED 1854. SHORTHORNS.—First-prize milking strains, and best Scotch breeding. Imp. Knuckle Duster and Imp. Sir Wilfred in service. LEICESTERS—Thirty choice shearing rams and 100 ewes and ram lambs for sale.

ALEX. W. SMITH, MAPLE LODGE P. O., ONT.

SHORTHORNS. 6 choice young heifers, 4 imported cows. Also 16-months-old home-bred bull. A. P. ALTON & SON, Burlington Junction Station. Appleby P. O.

SHORTHORNS. High-class (imp.) bulls, heifers and young cows of highest merit and belonging to superior Scotch families, personally selected from the leading herds of Great Britain; also a number of home-bred heifers bred to our imp. bulls. Write for catalogue and full particulars. R. MITCHELL & SON, Burlington Jet. Station. Nelson P. O., Ont.

PLEASE MENTION FARMER'S ADVOCATE.

LARGEST HOG IN THE WORLD WEIGHT 1621 LBS. The Poland-China hog called "Old Tom" was raised in Minnesota and was exhibited at Minnesota State Fair in 1897. He made a Big Gain by eating "INTERNATIONAL STOCK FOOD." "INTERNATIONAL STOCK FOOD" causes Hogs, Cattle, Horses and Sheep to grow very rapidly and makes them Big, Fat and Healthy. It is used and strongly endorsed by over 500,000 Farmers. It is sold on a Spot Cash Guarantee to Refund Your Money in any case of failure by over 50,000 Dealers. It will make you extra money in Growing, Fattening or Milking. Owing to its blood purifying and stimulating tonic effects it Cures or Prevents Disease. It is a safe vegetable medicinal preparation to be fed in small sized feeds in connection with the regular grain. It Fattens Stock in 30 to 60 Days less time, because it aids Digestion and Assimilation. In this way it saves a large amount of Grain. The use of "INTERNATIONAL STOCK FOOD" only costs 3 FEEDS FOR ONE CENT. Ask your dealer for it and refuse any of the many substitutes or imitations. It always pays to feed the best. "INTERNATIONAL STOCK FOOD" is endorsed by over 100 leading Farm Papers. A \$3000.00 STOCK BOOK FREE MAILED TO EVERY READER OF THIS PAPER. This Book Contains 183 Large Colored Engravings of Horses, Cattle, Sheep, Hogs, Poultry, etc., and of this Hog. It cost \$3000 to have our Artists and Engravers make them. It contains a finely illustrated Veterinary Department that will save you Hundreds of Dollars. Gives description and history of the Breeds of Horses, Cattle, Sheep, Hogs and Poultry. THIS BOOK FREE, Postage Prepaid, If You Write Us a Postal Card and Answer 3 Questions: 1st—Name this Paper. 2nd—How much stock have you? 3rd—Did you ever use "INTERNATIONAL STOCK FOOD" for Horses, Cattle, Sheep, Hogs, Colts, Calves, Lambs or Pigs. We will give you \$14.00 worth of "INTERNATIONAL STOCK FOOD" if Book is not exactly as represented. We Won the Highest Medal at Paris in 1900. Answer the 3 Questions and Write Us At Once for Book. INTERNATIONAL FOOD CO., MINNEAPOLIS, MINN., U. S. A. 3 FEEDS FOR ONE CENT

Water Basins.



WOODWARD WATERING BASIN PAT. D. MAP. 7-1895 O. W. E. & P. CO. MANUFACTURERS TORONTO

EIGHT REASONS FOR ADOPTING THE Woodward Water Basin. 3rd. They will pay you first cost in two years in increased milk. It has been tested that cows properly watered indoors will amply refund the cost. Whilst arranging this get the best, and the Woodward Basin is the only "Best." Fourth reason, see next issue.

Ont. Wind Engine & Pump Co., Ltd., TORONTO.

SCOTCH SHORTHORNS. We are now offering a few young bulls, from 6 to 11 months; also a few heifers, from 6 months to 2 years; all showing No. 1 quality. W. G. HOWDEN, COLUMBUS P. O.

SIX SHORTHORN BULLS FOR SALE—2 yearlings, 4 calves—two of them prizewinners. Write for breeding and prices. Terms easy. F. MARTINDALE & SON, YORK, ONT.

SHORTHORNS FOR SALE. The undersigned offer for sale four young bulls from 8 to 13 months old; also a few cows and heifers. Herd built on Lavinia and Barrington foundations. Prices reasonable. Bulls used on herd during last 10 years: Earl of Bruce = 15867 =, Janitor = 21385 =, Scarlet Velvet = 21446 =, and Chief of Clan = 31123 =. James Smith & Son, Ingils Falls, Ontario.

Clover Leaf Lodge HERD OF Shorthorns A number of choice young bulls, heifers and cows, excellent milking strains. Correspondence invited. R. CORLEY, Belgrave P. O., Ont., and G. T. R.; Wingham, C.P.R.

For Sale: Shorthorns—Young bulls, heifers and calves. Berkshires—Young boars and sows. Leicester—Aged, shearings and lambs, both sexes. Southdowns—Rams and ewes, all ages. Write or come to E. JEFFES & SONS, Bond Head, O.

Shorthorns, Berkshires, Leicesters Am offering at present the grand stock boar, Crown Prince; also some young ones. ISRAEL GROFF, ALMA, ONTARIO.

SHORTHORNS, COTSWOLDS AND BERKSHIRES FOR SALE. One yearling bull; 9 bull calves; cows, heifers and heifer calves; 7 yearling rams; 20 ram lambs; ewes and ewe lambs; young pigs, from 6 weeks to 2 months old. HENRY STEVENS & SONS, LACONA, OSWEGO CO., N. Y.

4 HOLSTEIN BULLS 4 FOR SALE: From 4 to 7 months old, having sires in their pedigrees from such strains as Inka, Netherland, Royal Aaggie, and Tritonia Prince, and out of imported females that have proven their worth at the fair. THOS. B. CARLAW & SON, Warkworth.

HOLSTEINS. Maple Grove offerings are of the richest breeding, combined with greatest individual merit. Young stock of both sexes. For particulars address: H. BOLLERT, Cassel, Ontario. F. L. GREEN, BREEDER OF Jersey Cattle and Yorkshire Pigs. Choice stock of each sex for sale. PICKERING STATION, G. T. R. CLAREMONT STATION, C. P. R. GREENWOOD P. O.

Geo. Rice, CURRIE'S CROSSING, ONTARIO, OXFORD COUNTY.

Men Wanted

To sell Nursery Stock and Seeds on salary or commission. Part or full time. First-class Outfit furnished

FREE OF CHARGE

We can give you the best chance right now of any firm in the business. If you cannot start now, let us talk it over and you can arrange territory and details and start later. Write us and get terms.

CHASE BROTHERS COMPANY, Established 1857. Nurserymen, Colborne, Ont.

To Rid Stock of Lice AND ALL SKIN DISEASES.

Also to Keep Poultry Healthy

WEST'S FLUID Which is a SURE CURE OF CONTAGIOUS ABORTION. STANDARD SHEEP DIP IS CHEAP AND GOOD. Pedigree forms free to customers. Manufacturers:

The West Chemical Co'y, TORONTO, ONT.

Riverside Holsteins Victor DeKol Pietertje and Johanna Rue 4th Lad head the herd.

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Ridgedale Farm Holstein-Friesians for Sale. 2 yearling bulls; also bull and heifer calves; all of choice breeding. Prices always reasonable. Write, or come and see them. R. W. WALKER, Utica P. O. Shipping stations: Port Perry, G. T. R.; Myrtle, C.P.R. om

SUCCESS WITH HOLSTEINS depends on starting right. Brookside has furnished foundation stock for some of the best herds in the country. We have 250 head, and if you want to establish or strengthen a herd, can supply you with animals of the right sort. We have 50 young bulls on hand, and females bred to the best sires living. Let us know just what you want. Catalogue of bulls now ready. We also have six fine thoroughbred Jersey Red boars, 6 months old, for sale, \$9 to \$10 each. HENRY STEVENS & SONS, LACONA, OSWEGO CO., N. Y.

6 HOLSTEIN BULLS 6 FOR SALE: From 4 to 7 months old, having sires in their pedigrees from such strains as Inka, Netherland, Royal Aaggie, and Tritonia Prince, and out of imported females that have proven their worth at the fair. THOS. B. CARLAW & SON, Warkworth.

HOLSTEINS. Maple Grove offerings are of the richest breeding, combined with greatest individual merit. Young stock of both sexes. For particulars address: H. BOLLERT, Cassel, Ontario.

F. L. GREEN, BREEDER OF Jersey Cattle and Yorkshire Pigs. Choice stock of each sex for sale. PICKERING STATION, G. T. R. CLAREMONT STATION, C. P. R. GREENWOOD P. O.

Jerseys and Cotswolds. For sale, three-year-old stock bull, Count of Pine Ridge 53662, a grandson of Adelaide of St. Lambert, that gave 82 1/2 lbs. milk in a day, and 2,005 1/2 lbs. in a month. Also two of his sons—one year old, and a few daughters; and a useful lot of Cotswold rams and ewes. For particulars and price write: WILLIAM WILLIS, Newmarket, Ontario

SUNNYLEA FARM. Jerseys—6 yearling bulls; females for sale: any age. Tamworths—30 boars and sows, different ages. Shropshire sheep—rams and ewes of good breeding. Prices reasonable. H. E. WILLIAMS, Knowlton, P. O.

Maple Glen Stock Farm. EXHIBITION OFFERING: Two bull calves under 1 year. Also a Sylva and an Abbekirk bull calf, with spring and fall heifer calves of Sylva breeding, bred from winners and ones that will make winners. Prices according to quality. C. J. GILROY & SON, Brockville, on C.P.R. and G.T.R. Glen Buell, Ont.

CHOICE JERSEYS. Am offering 1 cow, 4 yrs. old (very choice); 1 bull 17 mos. old; 2 bull and 1 heifer calves. W. N. HASKETT, "Avon Manor," Markdale, Ont.

Jersey Calves From large, deep-milking cows, who have given 7,000 lbs. each of 4 1/2 cent. milk during the past year; good colors, and from two to six months old. For description and prices write W. C. SHEARER, - BRIGHT, ONT.

SPLENDID Jerseys for Sale. Two bull calves and two heifer calves that will equal anything I know of; age, 1 to 3 months; price, \$30 to \$60. One yearling heifer, blood of old Massena, 900 pounds butter in one year, \$100. One yearling bull, extra breeding, \$80. All registered. Crated and put on express car.

MRS. E. M. JONES, Box 324. BROCKVILLE, ONT., CAN.

JERSEYS FOR SALE. Two choice bull calves of the highest breeding and of true dairy type, at moderate prices. W. W. EVERITT, Chatham, Ont. DUN-EDIN PARK FARM, P. O. BOX 552.

BRAMPTON JERSEY HERD For sale: 2 yearling bulls; 8 bull calves, sired by Brampton's Monarch (imp.), and out of first-class cows. A number of cows and heifers in calf. Also some unregistered cows and heifers, fresh-calved and springers—grand family cows. B. H. BULL & SON, BRAMPTON, ONT.



PLEASE MENTION FARMER'S ADVOCATE.

A New Departure.

A New, Effectual and Convenient Cure for Catarrh.

Of catarrh remedies there is no end, but of catarrh cures there has always been a great scarcity. There are many remedies to relieve, but very few that really cure.

The old practice of snuffing salt water through the nose would often relieve, and the washes,



douches, powders and inhalers in common use are very little, if any, better than the old-fashioned salt-water douches.

The use of inhalers and the application of salves, washes and powders to the nose and throat to cure catarrh is no more reasonable than to rub the back to cure kidney disease. Catarrh is just as much a blood disease as kidney trouble or rheumatism, and it cannot be cured by local treatment any more than they can be.

To cure catarrh, whether in the head, throat or stomach, an internal antiseptic treatment is necessary to drive the catarrhal poison out of the blood and system, and the new catarrh cure is designed on this plan, and the remarkable success of Stuart's Catarrh Tablets is because, being used internally, it drives out catarrhal infection through action upon stomach, liver and bowels.

Wm. Zimmerman, of St. Joseph, relates an experience with catarrh which is of value to millions of catarrh sufferers everywhere. He says: "I neglected a slight nasal catarrh until it gradually extended to my throat and bronchial tubes and finally even my stomach and liver became affected, but as I was able to keep up and do a day's work, I let it run along until my hearing began to fail me and then I realized that I must get rid of catarrh or lose my position, as I was clerk and my hearing was absolutely necessary."

"Some of my friends recommended an inhaler; another a catarrh salve; but they were no good in my case, nor was anything else until I heard of Stuart's Catarrh Tablets and bought a package at my drug store. They benefited me from the start, and in less than four months I was completely cured of catarrh, although I had suffered nearly all my life from it."

"They are pleasant to take and so much more convenient to use than other catarrh remedies that I feel I cannot say enough in favor of Stuart's Catarrh Tablets."

A little book on cause and cure of catarrh will be mailed free by addressing F. A. Stuart, Co., Marshall, Mich., and the tablets are sold by all druggists in the United States and Canada.

We have now on hand young females sired by **Nero of Glen Rouge 50241**, and cows and heifers bred to him.

E. B. HINMAN & SON, GRAFTON, ONT.

FOR SALE:
IMPORTED AND HOME-BRED **AYRSHIRES**, including cows, heifers and young bulls out of our prize and sweepstakes cows. Foundation selected with due regard to quality and productiveness. Come or write.

WM. WYLIE, - HOWICK, QUEBEC.

Ayrshire Bulls from 1 1/2 years to 6 months, from special milking stock, sired by prize bull, Jock of Burnside—1684—, also females all ages. Shropshire sheep. Berkshire pigs, either sex, and B. P. Rocks. For particulars write

J. YUILL & SONS, Carleton Place, Ontario.

Maple Cliff Dairy and Stock Farm.

REPRODUCERS OF **AYRSHIRE CATTLE, IMPROVED BERKSHIRE AND TAMWORTH PIGS.**

FOR SALE: 5 bull calves, a few heifers; young pigs, young not akin; 2 boars, 4 months old; young pigs. Farm adjoins Central Experimental Farm, Ottawa.

R. REID & CO., Hintonburg, Ont.

TREDINNOCK AYRSHIRES

Imported bulls at head of herd: Glencairn 3rd, Napoleon of Auchenbrain, and Lord Dudley. Forty imported females, selected from leading Scotch herds, and their produce from above-named bulls. Size combined with quality and style, well-formed udders, good-sized teats, and capacity for large milk production. Bull calves for sale; also a few young cows and heifers. For prices and particulars address

JAMES BODEN, Mgr., St. Anne de Bellevue, Quebec.

Farm close to St. Anne Station, G.T.R. & C.P.R., 20 miles west of Montreal.

PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

At the Pan-American Poultry Show, 1,005 Ontario birds won \$1,100 in prizes, and 1,300 American birds won \$1,200 in prizes. This is something to crow over.

A plucky Minnesota girl, Miss Louise Nicols, whose father operates a large dairy, is reported to have milked 31 cows in two and one-half hours. This is the best record for despatch we remember to have seen.

The export of Canadian pork, bacon and hams increased from \$645,300 worth in 1890 to \$11,829,820 for the year ending June, 1901, and is still growing rapidly.

J. A. Ruddick, Assistant Dominion Dairy Commissioner, is back from British Columbia, where he instituted a travelling-dairy school, under the direction of J. E. Hopkins and C. W. MacDougall, two competent instructors from the Northwest Territories.

Mr. John Isaac, Markham, Ont., has, we are informed, made a sale privately of his entire 1901 importation of Shorthorns, some 28 head, recently received from quarantine, to a United States breeder.

A free short course (four weeks) in poultry-raising at the O. A. C., Guelph, Ont., beginning on January 10th, is announced in an attractive little folder issued by President Mills. Drop a line to Mr. W. R. Graham, B. S. A., the efficient lecturer and manager of the Poultry Department, for particulars.

At the dispersion sale of the noted Hereford herd of Mr. John Price, in England last month, a choice bull calf out of the fine cow, Lavender, was secured for the Ontario Agricultural College farm, at the price of 120 guineas, the selection having been made by Mr. J. W. Barnett, Rockland, Ont.

John Campbell, Fairview Farm, Woodville, Ont., advertises Shropshire rams for sale, also a limited number of ewes bred to choice rams, and Barred Plymouth Rock cockerels bred from Ontario Agricultural College and Shearer stock.

Mr. James Douglas, Caledonia, Ont., writes that his Shorthorn cattle and Leicester sheep are doing finely, and that he has a particularly fine lot of young bulls and heifers for sale at present, some as good as he has ever bred, which is saying a good deal. He has also a lot of extra good Leicester ram lambs, some weighing over 120 lbs. each and of the right sort.

Mr. John Miller, Markham, Ont., last month shipped 20 head of young Shorthorn bulls and heifers, selected from a number of herds in the Province, to Mr. David Harrell, Austin, Texas, and has recently purchased 24 head to be shipped in this month to Mr. Joseph F. Green, Gregory, Texas. These last will go in charge of Mr. Miller's son George, who is manager for Mr. Green of his farm and herd at Encinal, in the same State, and who is now in Ontario.

Mr. J. Stonehouse, Canadian representative in the conduct of the model-dairy test at the Pan-American Exposition, was, nearing the close of the test, presented with a valuable gold watch and chain by the employees of the dairy barn, in recognition of his uniform kindness and courtesy to all with whom he came in contact in connection with the trial. The presentation was made by Mr. G. W. Clemons, on behalf of the Canadian contingent, and the address accompanying was couched in kindly and complimentary terms.

Last month a sale was made by a London (Eng.) auctioneer of a great auk's egg, which fetched the respectable sum of £252 (\$1,260). That, however, large as it is, is not near the record price paid, not long ago, for one of these curios, which brought 315 guineas (\$1,650). Rather an amusing incident occurred during this last sale. The auctioneer was met by an old lady, who gravely informed him she had a newly-laid auk's egg. When an explanation was forthcoming by the production of this extraordinary curio, it was found that the extinct bird had not dropped an egg, but that the lady had merely dropped her "h."

The Duke of Roxburgh, a distinguished member of the suite of the Duke of Cornwall and York, by prearrangement inspected at London, Ont., during the short stay of the Royal visitors, of one hour, a pair of driving horses from the string of Dr. Routledge, of Lambeth, and afterwards by correspondence purchased one of them, which has since been shipped to Glasgow. The horse was a bright bay with black points, stands 16 hands high, was sired by Wildbrino, and is handsome, stylish, and a fast trotter.

Mr. W. L. Amoss, of the Maryland Agricultural College, who visited Ontario recently, says: "The Ontario Agricultural College is without doubt the best of the twelve institutions of its kind that I have visited in the Northern States and Canada for educating farmers' sons for the farm. Each member of the faculty seems to thoroughly understand his work, and is doing all in his power for the young men under his charge. The neatness of the entire institution is particularly noticeable, and Dr. Mills is quite right in keeping before his students and visitors a high ideal of farm practice." While in Ontario Mr. Amoss made a study of the Farmers' Institute system, with a view to introducing it in his own State.

Mr. Arthur Johnston, Greenwood, has, we learn, made a sale of 13 head of his recent importation of Shorthorns, five of which are calves, to an Ohio breeder, for an average of \$550 each. These cattle, under the present arrangement between Canada and the United States, were sold in quarantine, and were therefore shipped direct to their destination without having to undergo the tuberculin test. But for the test he would have taken them to his farm, and after a needed rest and proper care for a short time, they would have been worth a considerably larger amount than the sum he obtained for them. With the test removed, and he was convinced that there would be no danger in abolishing it; the trade would be given a great impetus.

SHIPMENT OF LIVE STOCK.

Shipments of cattle from Montreal for ports in the United Kingdom for the season to date, November 1st, show a decrease of 11,252 head, compared with last year. Shipments of sheep on the other hand, increased for the year to date by 12,091 head. Exports of horses for South Africa for the season to date total 6,018 head, an increase of 2,297 over last year to date.

Excelsior Feed Cookers

Are Indispensable for Fattening Stock and Poultry.



Why not bring this branch of your farming up to a good profit point?

A "Famous" Excelsior Cooker will help you to do this.

By means of it you can fatten your stock in less time and with half the work of the ordinary way.

They are inexpensive, easily worked, light enough to be moved and set up anywhere, easy on fuel, and can be used for boiling sap and many other purposes.

No harm to write for free pamphlet which tells you all about them.

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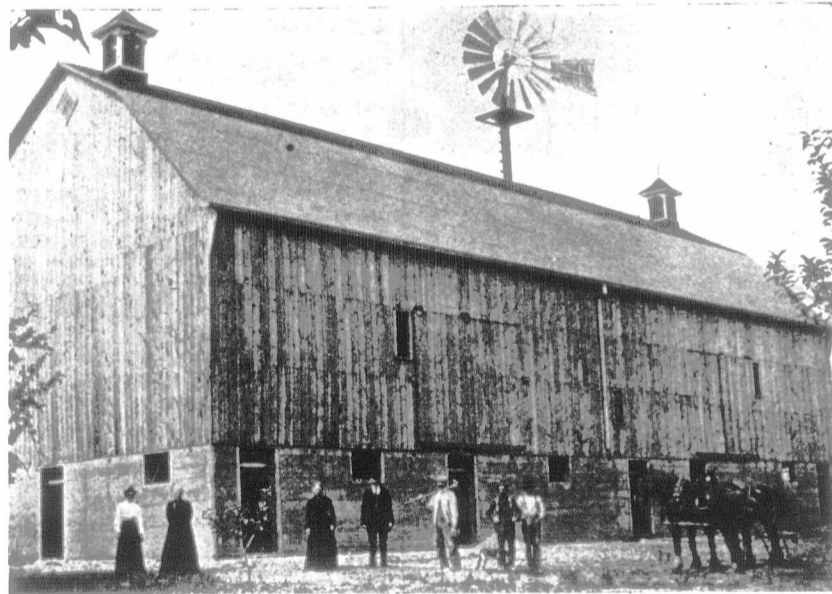
London, Toronto, Montreal, Winnipeg, Vancouver; St. John, N. B.

JOHN SMITH, BAYSIDE FARM, PORT WHITBY, ONT.,

BUILDS A FINE BASEMENT BARN WITH

BATTLE'S THOROLD CEMENT

AND FULLY APPROVES IT.



Basement Barn of John Smith, Bayside Farm, Port Whitby. Size of walls, 40 x 100 feet, 8 feet high.

ESTATE OF JOHN BATTLE, CEMENT MFGRS., THOROLD, ONT.: Bayside Farm, Port Whitby, Oct. 9, 1901.

Gentlemen,—It is with much pleasure that I testify to the good qualities of your Thorold Cement for building purposes. I have built a new barn this summer, using your cement for basement walls, cistern and floors throughout the whole building. Size of walls is 40 x 100 feet, 8 feet above the floor, 12 inches thick at one side and both ends, the other walls being 18 inches by cistern, while the other part of the same wall is 16 inches thick. I used 220 bbls. of your cement. I built the basement walls and cistern in May, and it appears now to be good and solid, without a crack. We finished the floors a few days ago, and they also seem to be as hard as a rock. The work was under the direction of your Mr. Geo. W. Read, who understands his work well. To anyone intending to build, I can recommend your Thorold cement. My walls and floors are here for the inspection of any one who wishes proof.

JOHN SMITH.

ESTATE OF JOHN BATTLE, THOROLD, ONT.

MANUFACTURERS OF THOROLD CEMENT.

Rapids Farm Ayrshires.

REINFORCED BY RECENT IMPORTATIONS of 2 bulls and 20 cows, selected from noted Scotch herds, and including the male and female champions at leading Scottish shows last year. Imported Douglasdale of Dam of Aber, champion at the Pan-American, heads the herd. Representatives of this herd won the first herd prize at the exhibitions at—

Toronto, London, and Ottawa, in 1900, AND AT THE Pan-American in 1901.

Come and see or write for prices.

Young Bulls and Heifers for Sale, bred from High-class Imported Stock.

Robert Hunter, Manager

for W. Watson Ogilvie, Lachine Rapids, Quebec.

AYRSHIRES.

Five bulls ranging from 11 to 23 mos., from such noted cows as Jean Armour, Lady Ottawa, Sprightly and Primrose (imp.), and from the best sires procurable. Also heifers and cows all ages, and poultry.

WM. STEWART & SON, MENIE, ONT.

LIVE STOCK AUCTIONEER.

The undersigned is prepared to conduct pure-bred auction sales. 20 years' experience. References: John I. Hobson and Alfred Stone, Guelph; Jas. Hunter, Alma, and Mossom Boyd, Bobcaygeon. THOS. INGRAM, care Mercury Office, GUELPH, ONT.

READ THIS! Ayrshire Cattle and Poultry for Sale

Royal Star of St. Anne's, 1st prize at Toronto, 1st and sweepstakes at London as a two-year-old; also bull and heifer calves sired by Royal Star and from choice show and dairy cows.

Ayrshire bulls for sale: The celebrated bull, Klondyke of St. Ann's, 8897, bred by R. Reford, sire Glencairn 6855 (imp).

Spring Burn Stock Farm, H. J. Whitteker & Sons, Props., North Williamsburg, Ont., breeders of Ayrshire Cattle, Oxford Down Sheep, Berkshire Pigs, and Black Java Fowls.

RIDGELING CASTRATION. Dr. J. Wilson, V. S., Wingham, Ont., Specialist in the castration of ridgeling horses and colts.

Ayrshires.

One bull fit for service, and a very fine April calf; also 4 August (1901) calves. Good colors, good individuals, and from good milking stock.

LITTLE'S PATENT FLUID SHEEP DIP AND CATTLE WASH. THE ORIGINAL Non-Poisonous Fluid Dip.

Still the favorite dip, as proved by the testimony of our Minister of Agriculture and other large breeders. For sheep: Kills ticks, maggots; cures scab; heals old sores, wounds, etc.

English Shorthorns. Both and Bates Shorthorns, topped with Cruickshank bulls. Young cows, bulls and heifers always on hand for sale.

Ayrshire HERD of 150 cows and heifers, bred from deep milkers, with large teats, of a commercial stamp.

PEDIGREE AYRSHIRES. Cows and heifers, all bred from prizewinning stock at the leading shows.

FAMOUS ALL OVER THE WORLD ALFRED MANSELL & CO., LIVESTOCK AGENTS AND EXPORTERS, SHREWSBURY.

PLEASE MENTION FARMER'S ADVOCATE.

J. E. CASSWELL'S LINCOLNS.

Breeder of Lincoln Long-wooled sheep. Flock No. 46. At the Palermo Show, 1900, 25 rams bred by J. E. Casswell averaged £51 each.

W. W. Chapman, Secretary of the National Sheep Breeders' Association.

Pedigree Live Stock Agent, Exporter and Shipper. All kinds of registered stock personally selected and exported on commission.

WALTON HERD OF PEDIGREE PIGS. The property of Sir Gilbert Greenall, Bart., Walton Hall, Warrington, England.

This herd is unrivalled for its true type, large size and strong constitutional vigor. It is the premier herd in England at the present day.

SOUTHDOWNS AND COLLIES.

Imported and home-bred prizewinning aged sheep. After the Pan-American a number of particularly good ram and ewe lambs.

Lincolns, Shorthorns, Berkshires.

Am offering a few choice bulls from 3 to 18 months old, from imp. stock of Miss Ramsden and Varuna families.

LEICESTERS.

Our present offering are all ages and both sexes. Choice animals.

SUMMERHILL OXFORDS.

Present offering: A choice lot of ram lambs and ewe lambs. Also 50 extra nice yearling ewes.

BROAD LEA OXFORDS.

We have a choice lot of lambs this year, bred from our imported rams, Royal Warwick 3rd and May King 1st, some weighing 17 lbs. at birth.

OXFORD DOWN SHEEP

This season's lambs, both sexes; yearlings, both sexes; breeding ewes, imp. and from imported stock.

SMITH EVANS, GOUROCK, ONT.

Breeder and importer of registered Oxford Down Sheep. Selections from some of the best flocks in England.

COTSWOLD HILL STOCK FARM

Offers imp. and home-bred Cotswolds of both sexes and all ages, from the champion flock of Canada for the last six years.

PLEASE MENTION FARMER'S ADVOCATE.

FAIRFIELD LINCOLNS.

Rams and ewes (all ages), consisting of those bred at Fairfield and importations from the flocks of Dudding, Dean, Wildsmith and Wright.

J. H. PATRICK, ILDERTON, ONT., CAN. One mile from Ilderton. Post office. Telegraph office. Railway station.

IMPORTED COTSWOLDS

We are now offering some choice shearlings of both sexes; also this season's crop of lambs, sired by Imp. Swanwick.

BROOKS & LANGMAID, COURTICE P. O.

SIX MILES FROM OSIIAWA STATION, G. T. R. om

Pure-bred Cotswolds

om UXBIDGE P. O. AND STATION.

CHAS. GROAT, BROOKLIN, ONT.

Offers for sale Cotswold Ram Lambs for service this fall, of good quality and breeding.

FAIRVIEW

Has still a few good rams for sale. Also a limited lot of ewes, bred to choice rams.

50 CHOICE RAM LAMBS. 10 shearling rams by imported sires.

SHROPSHIRE LAMBS FOR SALE. Ram, two-shear (winner); yearlings, both sexes.

SHROPSHIRE AT HOLWELL MANOR FARM.

Extra choice ram and ewe lambs from imported Mansell rams.

Bonnie Burn Stock Farm. 30 Shropshire rams and Canadian-bred sires.

W. H. BEATTIE, Wilton Grove, Ontario, Importer and Breeder of Shropshire sheep, collie dogs, White Holland and Mammoth Bronze turkeys, and Barred Rocks.

SHROPSHIRE LAMBS FOR SALE.

WM. PIERCE, BRINSLEY P. O., ONT.

1901 Importation

of Shropshire rams and ewes of finest quality, from the best breeders, now being offered at reasonable prices.

50 SHROPS. 50 FOR SALE.

Shearling and two-shear rams; also stock ram, bred by John Miller & Sons, and this season's crop of lambs ready for the fall trade.

HIGH-CLASS SHROPSHIRE.

A flock of 75, of good type. Two-shear rams, shearling rams, ram lambs, ewe lambs, fine lusty fellows.

FOR SALE: Berkshires (both sexes), Shorthorn stock bull, cows, heifers and young bulls.

LARGE ENGLISH BERKSHIRES.

Pairs supplied not akin. Boars fit for service. Sows ready to breed.

Chester Boars

A few good Also some Dorset ewes and ewe lambs. Prices reduced for 30 days.

WILLOW LODGE BERKSHIRES FOR SALE. Young boars and sows for sale, from 8 weeks to 6 mos. old.

Fresh Berkshire Blood, prize herds of Eng. and the U. S., including among others the famous sow, Elphick's Matchless—never beaten, and imported at a cost of nearly \$100.

LARGE ENGLISH FOR SALE. YOUNG boars and sows carrying the blood of Baron Lee 4th, Bright Star, Teasdale and Snell females, with Allandale Boy 5875 and Royal Lad 3rd 4307 heading the herd.

CHESTER WHITE SWINE. OLDEST ESTABLISHED REGISTERED HERD IN CANADA. Choice young stock, 6 weeks to 6 months old.

SPRING BROOK STOCK FARM. Three choice Tamworth boars ready for service, by Imported British King. Two 4 months old. One sow in farrow.

TAMWORTH SOWS AND BOARS. Several young nearly ready to ship. Also a few ready for service, of both sexes.

GOLDSRING TAMWORTHS. First-prize yearling boar at Toronto. Boars fit for service, and sows ready to breed.

Improved Yorkshires FOR SALE. of the most popular families. All ages and both sexes now ready for immediate shipment.

Yorkshires and Holsteins Best type and quality. Young stock constantly on hand.

WILLOW LODGE BERKSHIRES FOR SALE

Young boars and sows for sale, from 8 weeks to 6 mos. old; sired by Longfellow 10th of Hood Farm No. 8633 and Gallant Prince No. 7691.

WM. WILSON, SNELGROVE, ONTARIO.

Fresh Berkshire Blood

price herds of Eng. and the U. S., including among others the famous sow, Elphick's Matchless—never beaten, and imported at a cost of nearly \$100.

LARGE ENGLISH FOR SALE. YOUNG boars and sows carrying the blood of Baron Lee 4th, Bright Star, Teasdale and Snell females, with Allandale Boy 5875 and Royal Lad 3rd 4307 heading the herd.

S. DYMENT, BARRIE, ONT.

CHESTER WHITE SWINE.

OLDEST ESTABLISHED REGISTERED HERD IN CANADA. Choice young stock, 6 weeks to 6 months old.

E. D. GEORGE, Putnam, Ont.

SPRING BROOK STOCK FARM

Three choice Tamworth boars ready for service, by Imported British King.

A. C. Hallman, New Dundee, Waterloo Co.

TAMWORTH SOWS AND BOARS

Several young nearly ready to ship. Also a few ready for service, of both sexes.

P. R. Hoover & Sons, Green River, Ont.

GOLDSRING TAMWORTHS.

First-prize yearling boar at Toronto. Boars fit for service, and sows ready to breed.

Norman M. Blain, Brant Co. -om St. George, Ont.

Improved Yorkshires

of the most popular families. All ages and both sexes now ready for immediate shipment.

E. DOOL, Hartington, Ont.

Yorkshires and Holsteins

Best type and quality. Young stock constantly on hand.

Brickley P. O., instead of Warkworth.

YORKSHIRES A SPECIALTY.

Boars fit for service. Sows ready to breed. Boars and sows from two to three months.

JAS. A. RUSSELL, Precious Corners, Ont.

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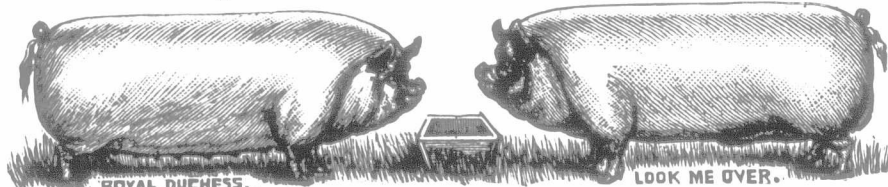
PIANOS AND ORGANS

Built to Last a Lifetime by the
Largest Makers of Pianos and Organs in Canada.

The Bell Organ & Piano Co., Ltd.,
GUELPH, ONT.

SUMMERHILL HERD OF— Large English Yorkshires.

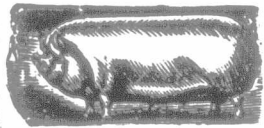
HEADQUARTERS FOR THE IDEAL BACON HOG.



Our winnings at the large shows, for 1901, are as follows: At Toronto every possible first prize and five seconds, two silver medals, and first for pen of pure-bred bacon hogs, also sweepstakes on bacon hogs over all breeds; at London every possible first but two; while at the Pan-American, where our herd was divided, half going to Toronto, we won six out of ten possible firsts, also sweepstakes on boar any age. At the Pan-American (Buffalo), Toronto and London there were thirty-six first premiums and medals given: all the medals and every first prize but six won by the Summer Hill Yorkshires. When in need of the best write D. C. FLATT & SON, MILLGROVE, ONT. Telephone: Millgrove, Ont.

LARGE WHITE YORKSHIRES.

Am offering this month a superior lot of Yorkshire sows bred to Riddington Ensign (imported). Young pigs up to three months of age, furnished in pairs not akin. A fine lot to select from. Write: H. J. DAVIS, WOODSTOCK, ONT. Importer and breeder of Shorthorns and Yorkshires.



YORKSHIRES

Headed by Oak Lodge Prince 5071. Litters 15 weeks, either sex; 2 sows to farrow.

WM. TEASDALE, Dollar, Ont.
Northern branch G.T.R., 15 miles from Toronto.

PINE GROVE FARM

HERD OF Large Yorkshire and Essex Swine.

We have two young York boars from imported sow and the celebrated boar, Whistar Star, for sale, and six sows, five months old, of the same breeding, also one imported boar. Our motto is to ship nothing but first-class stock, and guarantee safe delivery. JOSEPH FEATHERSTON & SON, STREETSVILLE P. O., ONT.

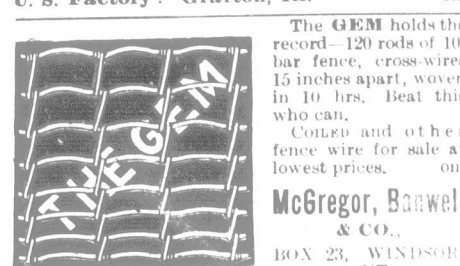
YORKSHIRES AND POULTRY

30 young pigs now ready to ship. Our Yorkshires are bred direct from imported stock. They are prizewinners and are producing prizewinning young stock. Choice cockerels in B. P. Rocks, W. Wyandottes, Blk. Minorcas, and W. Leghorns. A. B. ARMSTRONG, Codrington, Ontario.

RIPPLEY'S COOKERS

Are now made in Canada, saving duty and freight for our customers. Made of boiler steel. No flues to rust or leak. Will cook 25 bushels roots or grain in two hours. Fine for heating stock water-tanks, dairy rooms, pigpens. Can be used outside or attached to chimney same as a stove. Used and endorsed by the following Canadian breeders and many others: Brethour & Saunders, Burford; W. D. Flatt, Hamilton; D. C. Flatt & Son, Millgrove; H. J. Davis, Woodstock; Ontario Agricultural College, Guelph; also James Boden, Graham Bros., Newton & Gosh, J. A. McDonald, J. P. Comley. Prices, \$10 to \$15. Took first premium at Toronto and London fairs. Catalogue and prices mailed free. Address: RIPPLEY HARDWARE COMPANY, BOX 215, LONDON, ONT. U. S. Factory: Grafton, Ill.

The GEM holds the record—120 rods of 10-bar fence, cross-wires 15 inches apart, woven in 10 hrs. Beat this who can. Coles and other fence wire for sale at lowest prices. McGregor, Banwell & Co., BOX 23, WINDSOR, ONT. AGENTS WANTED.



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(To be incorporated under "The Ontario Insurance Act.")

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AUTHORIZED CAPITAL, - \$1,000,000.00
IN 10,000 SHARES OF \$100.00 EACH.

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This Company has been formed for the purpose of transacting Accident and Surety Insurance, a class of business which is becoming very popular, as well as remarkably profitable to the companies writing such business.

Sufficient of the stock of "The Empire" to comply with the requirements of the Ontario Insurance Act is now offered to investors in small blocks. It is expected this will be the only opportunity offered of securing a portion of this stock, and as insurance stock is generally conceded by leading bankers and capitalists to be the safest and most profitable investment on the market to-day, and after its first issue can scarcely be obtained at any price, it is safe to say the stock of this Company will not prove an exception.

Farmers and others having funds on hand should avail themselves of this opportunity of securing what must eventually become to themselves during their lifetime, and at their decease to their families, a never-ending dividend-producing investment. Banks may fail, property may depreciate in value, thus curtailing loss, and as we can only estimate for the future on the experiences of the past, such stock has steadily increased in value and profit with the age of the Company until to-day the stock of many of our oldest insurance companies cannot be procured except at premiums of from 150 to 300 per cent, and over, and at the same time are paying in dividends from 7 to 20 per cent, on the money invested.

Why be satisfied with 4 and 5 per cent, when an opportunity is now offered of earning double that or more on your investment? and with such safeguards as are thrown around it by the Government.

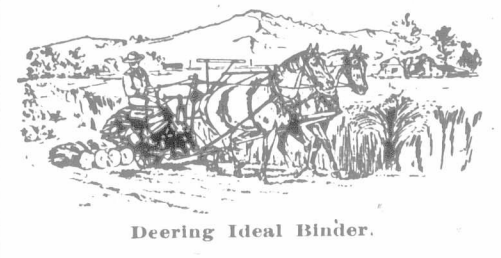
It is to your interest to look into this matter and communicate at once for further information to the Managing Director or Secretary of the Company, Temple Building, London, Can.

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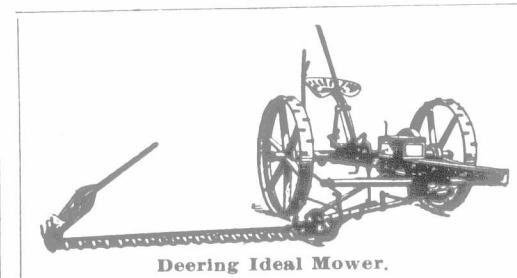
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Deering Ideal Binder.

THE BEST HARVESTERS IN CANADA. STRONG, DURABLE, MODERN MACHINES.

On Sale in Every Part of the Dominion



Deering Ideal Mower.

MADE IN THE
LARGEST HARVESTER WORKS
IN THE WORLD,
COVERING 85 ACRES OF GROUND,
EMPLOYING
9,000
PEOPLE.

IT PAYS TO USE DEERING MACHINES.

BINDERS, MOWERS, REAPERS, RAKES, CORN BINDERS, HUSKERS AND SHREDDERS, BINDER TWINE AND OIL.



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MAIN OFFICE AND FACTORY:

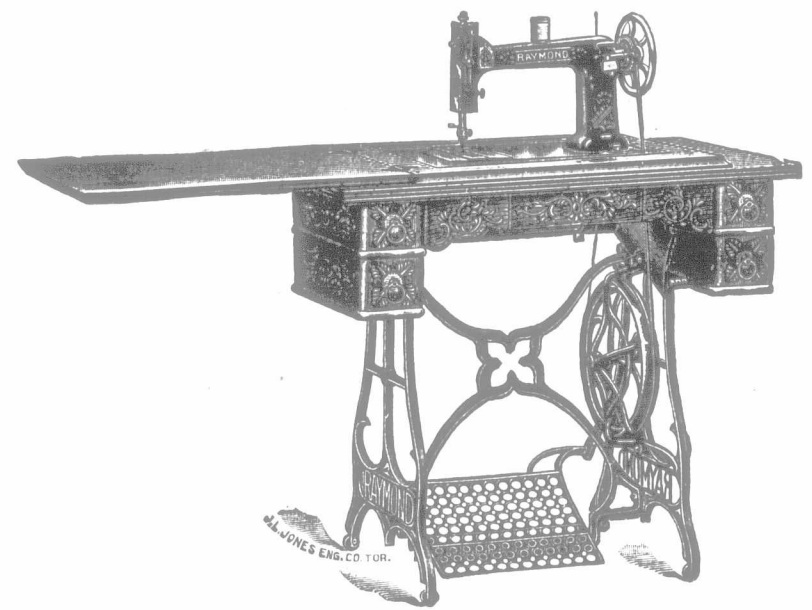
CHICAGO, U. S. A.

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CANADIAN BRANCH HOUSES:

TORONTO, LONDON, MONTREAL, WINNIPEG.

The Raymond



STILL THE MOST POPULAR AND MOST RELIABLE

Family Sewing Machine

ON THE CANADIAN MARKET, AFTER A CONTINUOUSLY SUCCESSFUL RECORD OF NEARLY FORTY YEARS.

The steadily increasing demand for the Raymond has necessitated the recent enlargement of old premises and building of new, all of which are being run to their full capacity.

THE 1901 "RAYMOND" is unsurpassed for style, finish or utility. The above is a cut of STYLE "DROP HEAD." The other styles are "Cabinet," seven-drawer with cover, five-drawer with cover, and three-drawer with cover. In all, five styles; finished in the best quarter-cut oak. For sale in all the leading towns and cities of the Dominion.

MANUFACTURED BY

The Raymond Manuf'g Co'y, Ltd.,
GUELPH, ONTARIO.