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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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Dept. of Agriculture
Dec 31, '09

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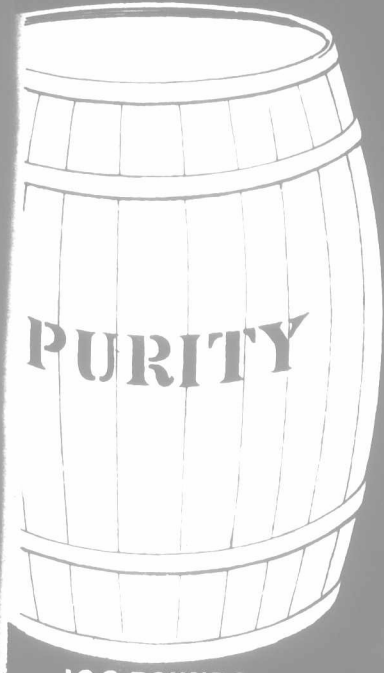
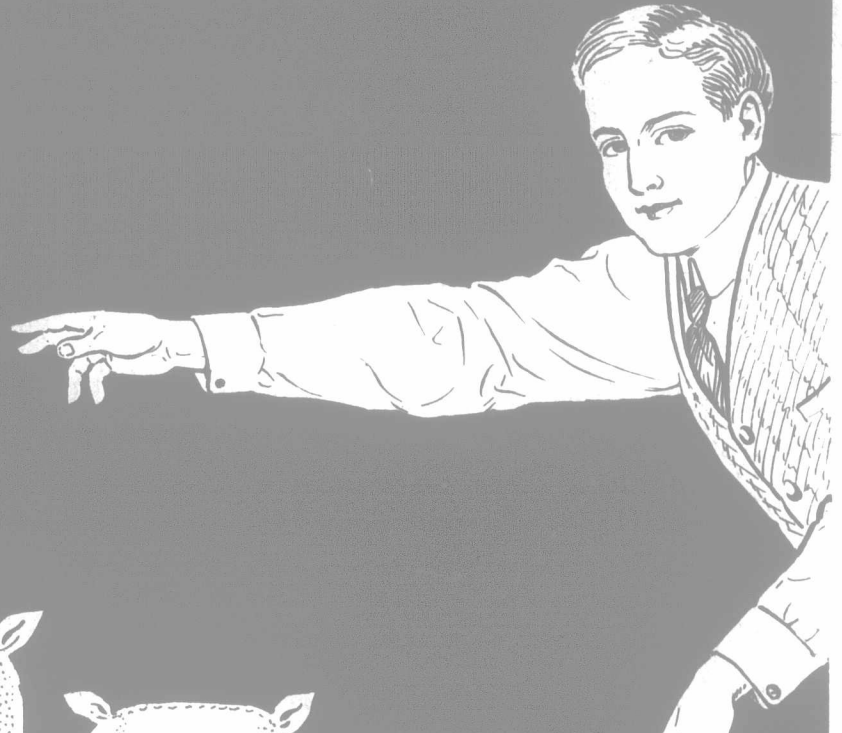
L. XLV.

LONDON, ONTARIO, JANUARY 27, 1910.

No. 905

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98 POUNDS



49 POUNDS



24 POUNDS



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ANY "coilless" Fence is liable to snap in certain weather conditions.

But the Frost is a coil Fence. In Winter, when steel Wire contracts, Frost coils "give" their surplus, instead of snapping like "coilless" Fence.

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And no matter how often contraction or expansion is caused, the Frost Fence always acts the same, like a Spring.

Merely Excuses

Lots of other Wire Fences have a Tension, Curve or Kink, as an excuse for "Give" and "Take." But the number of these "gives" and "takes" is limited. They cannot keep it up. It isn't in the Wire or the method to do so.

Both the Frost Field-Erected and the Frost Woven Fence have extra provisions for "Give" and "Take." But no others have it. You simply cannot find another Fence which will retain its shape like the Frost.

Please remember that when buying Fence!

Make Our Own Wire

We are the only Fence Makers in Canada who Make and Galvanize Wire exclusively for Fence purposes.

Wire, to give satisfactory service in Canada, should be made especially to fight off the peculiar Canadian climate, which simply knocks the very life out of most Fences. But all Wire is not made with Canadian conditions in view.

For that reason we decided to Make and Galvanize our own Wire. So we built a Mill for Wire-making, and another for Galvanizing, and installed the most modern Machinery in use.

Then we obtained the services of one of the most Expert Wire-Makers in America. A man with 25 years of Wire-Making experience back of him.

The new Frost Wire is Annealed so scientifically that it possesses the proper temper for Canadian conditions.

Every inch is of uniform temper, and stronger than any other No. 9 Wire. It will not snap, regardless of the peculiar Canadian weather variations.

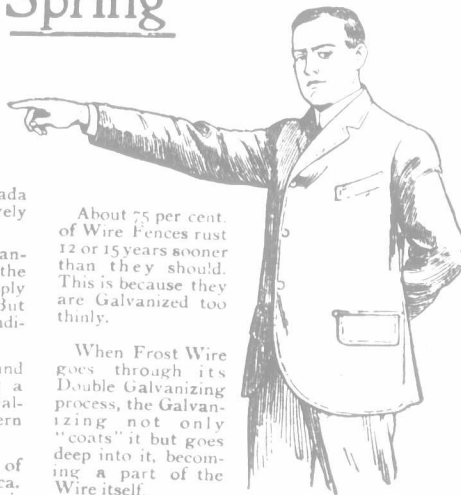
About 75 per cent. of Wire Fences rust 12 or 15 years sooner than they should. This is because they are Galvanized too thinly.

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THAT WORN-OUT LANDS MAY BE MADE PRODUCTIVE AND PROFITABLE BY THE JUDICIOUS USE OF THE RIGHT KIND OF FERTILIZER?

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YOU are not giving your maple grove a show to bring you good returns when you spend twice the amount of time and fuel and make a poor grade of syrup using primitive methods. Why not try a

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No machine on the farm is used as many days in the year, or saves as much hard disagreeable work as a Litter Carrier. A boy can fill, wind up and push out in a "BT" LITTER CARRIER four barrows of manure with ease, no matter how much mud or snow there is in the yard. The manure can then be dumped into a wagon or sleigh, and put directly on the land, with very little if any more labor and time than is required to pile it in the yard with the old method, where the greater part of the fertilizing value of the manure is wasted.

Write for free catalogue showing best method of erecting Litter Carriers, and telling why you should buy a "BT" LITTER CARRIER.

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We also build Steel Stalls and Stanchions and Hay Carrier Goods.

Synopsis of Canadian North-west Land Regulations.

ANY person who is the sole head of a family or any male over 18 years old, may homestead a quarter-section of available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Lands Agency or Sub-Agency for the district. Entry by proxy may be made at any agency, on certain conditions, by father, mother, son, daughter, brother or sister of intending homesteader.

Duties—Six months' residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres, solely owned and occupied by him, or by his father, mother, son, daughter, brother or sister.

In certain districts a homesteader in good standing, may pre-empt a quarter-section alongside his homestead. Price, \$3.00 per acre. Duties—Must reside six months in each of six years from date of homestead entry (including the time required to earn homestead patent) and cultivate fifty acres extra.

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Deputy of the Minister of the Interior.

N.B.—Unauthorized publication of this advertisement will not be paid for.

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are swinging stanchions. See the comfort and freedom they give cattle. Are strongly made to stand roughest usage, and save lumber and labor in fitting up cow stables. Saves time in tying cattle, because the latch is easily operated and absolutely secure. Made in five sizes. Write for catalogue and prices.

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Canadian grown seed corn. Your money back if not satisfied.

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Thousands of dollars are lost each year through lightning. Yet the farmers of Canada need never lose another cent from this cause if they will roof their buildings with PRESTON Safe-Lock Shingles—the ONLY roofing GUARANTEED proof against lightning.

We don't charge you a cent for this lightning guarantee. It's absolutely free. Yet no other guarantee actually means as much to the Canadian farmer as this.

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We could not afford to give this Free Lightning Guarantee had we not known the superior lasting qualities of PRESTON Shingles. If a PRESTON roof were likely to wear out in a few years, it would not be proof against lightning.

PRESTON Safe-Lock Shingles are made and galvanized according to British Government Specifications—the only shingles that are.

The British Government, you know, is the most particular buyer in the world. Ordinary metal shingles could not pass their Acid Test for galvanizing.

This test is more severe on the galvanizing than twenty years of Canadian weather. Yet PRESTON Shingles will pass this test.

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You don't get a Free Lightning Guarantee with other shingles. Neither do you get shingles SAFE-LOCKED on all FOUR sides. Nor shingles with the nailing fully protected against the weather. Nor shingles made according to British Government Specifications. Nor shingles so easy to lay.

But we cannot tell you in this space all the superior features about PRESTON Safe-Lock Shingles or give other roofing information of vital interest to you. So we've issued a new booklet, "Truth About Roofing."

We should charge something for this booklet, as it contains information of real value to anyone who has a building to roof. But we will send it FREE as a reward to all who cut out, fill in and mail the coupon to us.

Just you send the coupon today.

METAL SHINGLE AND SIDING CO., LTD.

Head Office, Queen St. Factory, PRESTON, ONT.

Branch Office and Factory, Montreal, P. Q.



PRESTON SAFE-LOCK SHINGLES

Please send me your new booklet, "Truth About Roofing." I am interested in roofing, and would like complete information about PRESTON Safe-Lock Shingles, British Government Specifications and Free Lightning Guarantee.

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1905

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FILL OUT THIS BLANK AND SEND IT TO US.

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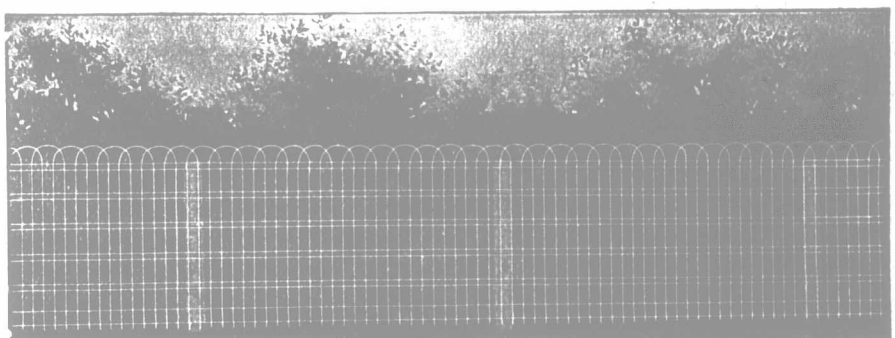
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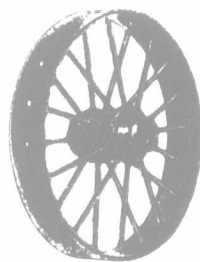
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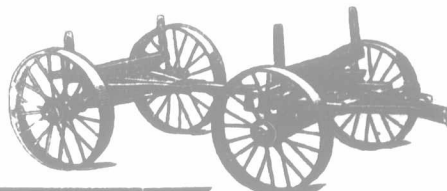
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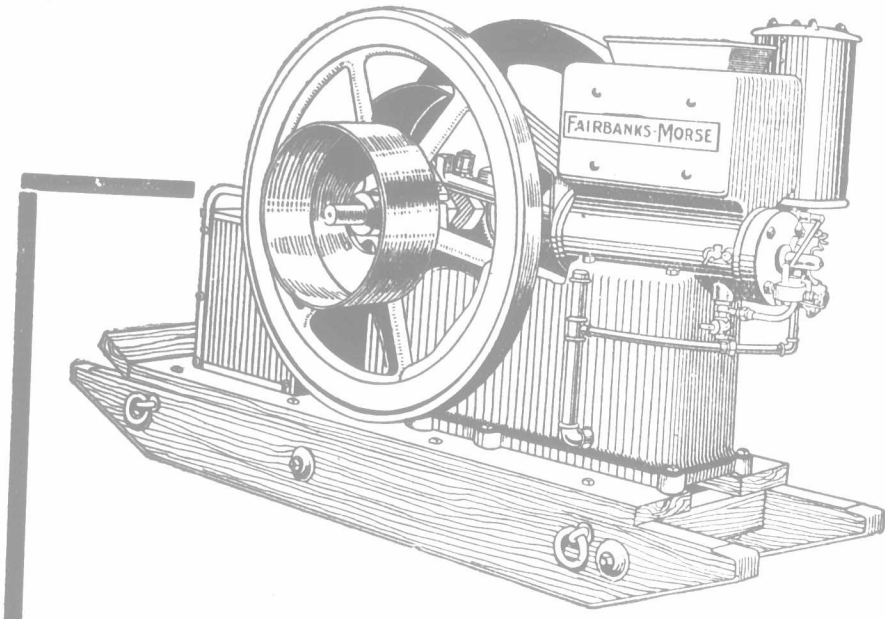
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GASOLINE ENGINES

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No cooling tank is required, thus overcoming the difficulty of carrying the usual great volume of water. The lubrication difficulties of Air-cooled Engines are overcome in the above, there is very little water in the tank to take off by drain in the cold weather, thus saving time and trouble, and there is no water pump to freeze up. We provide a shield to prevent water slashing out of the Hopper Jacket.

The skidded engine is a very desirable outfit where it is necessary to move the engine, providing a means where by the engine can be drawn about on its iron-shod runners, or can be placed on a farm truck or a bob-sled.

The engine itself is Fairbanks-Morse in every respect, and ensures to the customers the best there is in Gasoline Engine construction.

Send for our FREE CATALOGUE GE 102, showing our full line of Fairbanks-Morse Vertical and Horizontal Gasoline Engines and Machinery for farm work. It means money saved for you. Write to-day.

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Ease of Operation,

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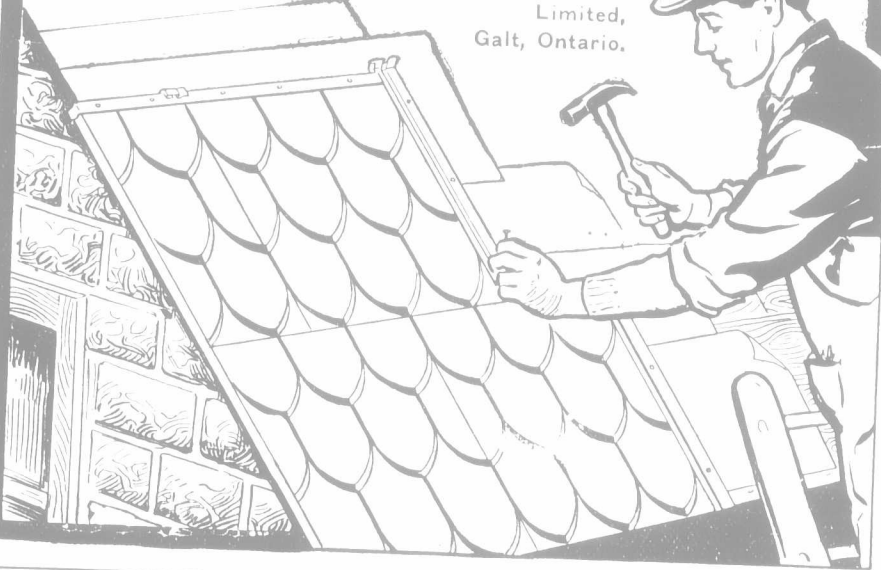
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Fence, stays 22 inches apart. In lots to suit, in 40 rod rolls. PRICE, 23c. PER RD. Freight paid east of Fort William. This fence was made up for a foreign customer, who failed just before shipment was made.

Also, some bargains in small lots of 7 bar 8 bar and 10 bar Fences. Particulars on request.

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GOOD DEALERS DESIRED IN UNOCCUPIED CANADIAN TERRITORY.

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The Farmer's Advocate and Home Magazine

"Persevere and Succeed."

Established 1866.

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875.

Vol. XLV.

LONDON, ONTARIO, JANUARY 27, 1910

No. 905

EDITORIAL.

Reports from many sections of Eastern Canada agree that the winter is passing most agreeably; not too cold, and with fine sleighing that facilitates trade and makes business brisk. The snow jacket is generally regarded as the precursor of good crops the coming season.

We commend the manner of account-keeping that Alfred Hutchinson, of Wellington Co., adopted with his pig-feeding, as calculated to let light into the recesses of profit and loss in farming. Note how Mr. Hutchinson's attention has been drawn to the value of skim milk!

The conditions of the building-plans competition, announced in "The Farmer's Advocate" of January 13th (see page 42), have been broadened to include plans and descriptions of barns erected in 1908. The contest was at first restricted to plans of buildings put up in 1909, but it was realized that this might exclude many good modern buildings, hence the change.

Live hogs have touched 9½ cents in Montreal. An Ontario farmer submits figures showing that he has produced them at a feed cost of 5 cents. That leaves a pretty nice profit, and would, even if 2½ cents were deducted from the above-named selling price. But what good would twenty-cent prices be to the man with no hogs to sell? Some Canadian farmers have been missing a good thing in the pork line.

Prosperity has its perils. There is the temptation to excessive expenditure, and, what is still more dangerous, to speculation in schemes outside the farm, in order to the more speedy accumulation of wealth. Just now, as during the past year, farmers are pestered through the mails with all sorts of seductive propositions to invest their surplus in stocks and shares of every imaginable sort. The kindling-box is the best place for most of this literature.

Data collected at cheese factories all over Western Ontario for two years in succession, show that where the whey is pasteurized the liquid going into the patrons' cans contains twice as large a percentage of butter-fat as where the whey is not pasteurized. The fat thus saved figures out to 22 pounds per ton of cheese made. Five cents a pound is a conservative estimate to place on the feeding value of that fat. This would be \$1.10 per ton of cheese, or more than the whole cost of pasteurizing the whey. There is, besides, the saving of considerable loss of sugar through fermentation, the destruction of tuberculosis and other disease-producing bacilli.

Nearly a hundred thousand more head of stock were marketed in and through Toronto stock-yards in 1909 than in 1908, and the average value per cwt. has been estimated a dollar higher. This perhaps is a slight exaggeration. Our own reporter, the most diligent and accurate reviewer of the Toronto market, estimated, in his special Christmas-number review, that cattle of all classes of butchers and exporters had realized 50 cents per cwt. more. Similar comparisons, he added, might be made in regard to sheep, lambs and calves, while hogs were from \$1.50 to \$1.75, and even \$2.00, above the figures of the corresponding dates in the previous year.

Nearly five hundred and sixty million dollars is the estimated value of the live stock in Canada last year, being an increase of 27,790,000 over the estimate for 1908.

In a recent issue "The Farmer's Advocate" devoted an article to a discussion of the causes of the remarkable rise in the price of farm products, one view being that consumption had got ahead of supply, and another that gold—the basis of all our circulation—had become plentiful and cheap, and, therefore, it took more of it to buy a given quantity of food. The latter view has lately been endorsed by a number of experts in the Annals of the American Academy of Political and Social Science. A study of Canadian markets and prices goes to show, however, that there is a combination of keen demand with which food supplies do not keep pace, and naturally prices rule high.

How long will the effect of manuring last? This point is suggested by a correspondent, who cites a case where a two-acre strip, manured for potatoes, at the rate of 25 tons per acre, showed marked results in a wheat crop seven years later. Still more remarkable, he states that for thirty-six years his crops have always been more marked on a certain old building site. We have all observed instances of this kind, going to prove the lasting effect of manure and humus. We should like to learn of other such cases from those who can relate the facts accurately, and, if possible, give results in bushels and tons. These facts bear distinctly upon the instructive discussion on the value of manure.

Purchasers of concentrated commercial feeds, other than the staple grains and their direct by-products, such as bran, middlings, and the like, should acquaint themselves with the provisions of the Commercial Feeding-stuffs Act, which requires all these commercial feeds except the ones specifically excepted in the Act, to be registered and stamped on the sack, or else tagged with the name of the brand, its registration number, the name and address of the manufacturer, and a guarantee of analysis. By familiarizing oneself with the meaning of the guarantee, as anyone will have already done who has followed the feeding articles in this paper, a feeder will be enabled to buy these more or less unfamiliar products and use them to advantage. Read the synopsis of Prof. Harcourt's address before the dairymen at St. Thomas.

The short-course classes at the Nova Scotia Agricultural College have been, by all odds, the most successful in the five-years' history of the institution, having been attended by from 250 to 300 enthusiastic farmers and their sons. In addition, twelve ladies or more have been studying dairying, fruit-growing, poultry-raising and domestic science. Sixty-five of these students hail from Prince Edward Island, 26 from New Brunswick, and about 150 from Nova Scotia, and one from Newfoundland. At no previous short course has so much interest been manifested in fruit-growing, vegetable-gardening, and the various branches of horticulture. Students, not only from the Annapolis Valley, but also from other parts, requested more classes in these subjects than were provided in the course, and these classes were arranged for.

The Farmer's Wood-lot.

Elsewhere in this issue will be found a letter on the farm-forest question by J. H. Burns, who condemns in rather relentless style all advice to the farmer to spare the forest. Mr. Burns is certainly to be commended for the terse and vigorous way in which he presents his arguments. His first point, that the idea that forests and wood-lots increased the rainfall has had to be abandoned, is well taken. Instead of being, as he says, an exploded theory, it would probably be more accurate to say that it is in abeyance at present. The theory that, though the amount of rainfall may not be affected by the presence of forest, yet the regularity and even distribution of this annual rainfall is greatly promoted by the presence of trees in a country, is one that has not had to be given up. A most important consideration this, as either prolonged drouth or floods are destructive.

We are glad that we can heartily agree with Mr. Burns on the wisdom of retaining the forests on the uncultivated areas of the country, and of planting wind-breaks for shelter and for beauty near the buildings and the orchard. The fearlessness and hopefulness with which the fuel question is faced is also worthy of admiration, though the steadily increasing cost of the article has evidently not been taken fully into account.

There are some points raised, however, which might well bear further discussion. Anxious as we are that the ground should dry early in spring, so that spring work can be started; on the other hand, all will admit that the season through the soil dries much too quickly. The influence of even a clump of forest here and there in checking the sweep of the wind and retarding this drying process, is doubtless very much greater than is generally supposed. We complain now of the increasing force of the winds, which, owing to the greater clearing off of the timber, dry the earth and beat down the grain, but probably we have but little idea of the extent to which they are modified by even the small amount of forest that still remains. Read the opinions of Dr. Saunders, of the Dominion Experimental Farm, and R. S. Kellogg, of the United States Forest Service, as given in H. R. Macmillan's letter on "Forestry for Farmers."

Will it pay to preserve a wood-lot? That will depend in part on the value that is placed upon land. To suggest that it is worth \$10 to \$50 per year is surely a great over-statement. Though some crops in some seasons might return that amount over expenses, the general average is another thing. We take it that the sum that land will rent for represents the general opinion as to what it is worth per year over and above the expense of working it. Another method of arriving at the value per year that is placed upon land by the public is to compute the yearly interest at a moderate rate on the selling value. By either of these methods it will be found that from three to five dollars per acre per year is a fair value for land, including buildings. At present prices, and at a low estimate, a wood-lot will return per year \$4.00 per acre net in fuel alone. For timber purposes the annual growth would represent a much higher value. If, as is likely, timber continues to rise in price, the profitability of a few acres of forest, even on the best land, is beyond question.

But there is more than mere climatic influence or dollars and cents involved. There is sentiment. Utilitarianism carried to an extreme is the veriest folly. Without sentiment this old world would be but a bleak desert. It is, we believe, a solemn truth that if everything is made

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

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to bend to the bare material view of things, the result in the end will be less hard cash rather than more. Nature has a way of revenging herself on short-sighted man. Shoot the birds without compunction and insects multiply. Drive the feathered friends away by depriving them of woodland harboring places and a similar result follows. Because of the money to be got in the meantime, mercilessly sweep the lake waters with cunningly-devised nets and a fish famine follows.

Why do we treasure the family Bible that belonged to our great-grandfather? This elusive sentiment. This emotion of the soul, this clusive feeling that we are half ashamed of, actually has a money value. But value or no value, it makes life worth living. Who does not prefer a house gracefully draped with vines and surrounded with stately trees to one unadorned and bare? What a charm, what a healthful corrective to the humdrum, every-day grind of work there is in a forest left in its natural condition! The solemn, quiet gloom, the great towering trees, the tender undergrowth of sapling and of herb, and the graceful shape and droop and color of everything have an effect on the being beyond calculation. It does seem a pity, that to enjoy such a scene many farmers have to leave their own places and visit city parks or public reserves.

It is perfectly in order to bring sentiment to bear on the question of preserving the wood-lots that yet remain. When one sees the few lingering trees, all that are left on many farms of the old-time magnificent timber crop, and reflects that their days also are few, it is impossible to repress a feeling of regret at the passing away of what will probably never be replaced. The furore over the ordering of a few trees cut on the Rondeau Park means, for one thing, that sentiment still has power with the Canadian people, the sentiment in this case being probably accentuated by stings of conscience over their own ruthless tree slaughtering.

In the case of the forest, prevention is better than cure.

It is much easier to preserve and restore than

to replace. A lifetime is scarcely long enough to bring back a forest once it is cut down. Many farmers would, we believe, have taken steps long ago towards conserving their wood-lots only they did not just know how it could be done, or did not think it worth while. More light is obtainable on the subject now, and to all interested Mr. Macmillan's article on the subject is commended. In very many cases the bush can yet be saved, and it is well worth while.

A Banker's View of the Farm.

The impression is current that politicians and others in describing the farmer as the bone and sinew of the country, and agriculture the foundation of its prosperity, are merely indulging in so much patronizing hifalutin. The tangible evidence of interest may not always be in due proportion to the expression, because the farmer is an individualist rather than a unit in relation to public affairs, but no one can regard the efforts of Federal and Provincial Governments, particularly the latter, without realizing, as statesmen know, that the output and profit of the farm are of paramount concern to this country.

No one would think of bankers spending their time or their rhetoric over the condition and progress of farming, if it were not vital to their functions of lending, borrowing, issuing or caring for money, to the end that their institutions might declare dividends and other profits. Nearly one-half of the comprehensive address, based on reports from local managers, of President B. E. Walker, at the recent annual meeting of the Canadian Bank of Commerce, dealt with various aspects of farming from the Maritime Provinces to British Columbia. The miner, the fisherman, the railway promoter and the lumberman received their share of comment, but the farmer loomed largest by far in the presidential eye. The suggestion might, therefore, not be inappropriate in passing, that the influential persons associated with these monetary institutions will naturally be actively concerned that legislative or other tendencies prejudicial to the interests of the farmer will receive their stern disapprobation and resistance.

Mr. Walker notes the gradual recovery of trade and appreciation of values during the past year in Canada, the land which now represents Opportunity to those who have energy out of proportion to their surroundings. Immigrants are coming in, he considers, as fast as they can be properly settled, and capitalists seeking industrial ventures and securities are coming too, the former largely from the United States, the latter from England. He foreshadows that Canada will in her own way manage her resources, favoring Britain in tariff matters, but making such arrangements as seem best with countries that treat her well. No fear is apprehended regarding our trade with the States. Barring the great coal strike, Nova Scotia did fairly well in 1909, and the activity in agricultural movements of an educational character in the Atlantic Provinces is most encouraging. Ontario and Quebec farmers show their prosperity by the power to buy and to wipe out old obligations, and grow crops that put to shame most other parts of North America. The line of future progress is in the direction of intensive farming, and an output of products that will give greater profit for a given area of land. The opportunity for the apple-grower is especially noted, and a regret expressed that dairy products enough for both export and home consumption are not forthcoming. Lack of farm labor is regarded as the one great hindrance to progress, but no solution of the difficulty is offered other than the usual reference to labor-saving machinery. Mr. Walker ventures the opinion that the Ontario farmer is not trying very hard to improve in horse or cattle breeding. The marvellous records of Ontario horses and cattle in international show-rings and elsewhere, and their general good character, do not bear out his observation. It may be true that a good many poorly-finished beef cattle, so-called—really dairy grades—make their appearance on the Toronto market, but the dairy herds and beef herds in appearance and performance rank deservedly high. In importations of superior horses and cattle for breeding purposes, the Province takes easily first place, and her stock is everywhere in demand. What other Province of Canada or State in the American Union can show an equal average in pure-bred importations, in output of high-grade breeding stock or in general excellence? Through nearly every agency

which the Provincial Government can set at work, and the enterprise of private citizens, the work of horse and cattle breeding has been pushed in the direction of improvement for generations, and the splendid results, as they appear at the National Exhibition, Toronto, or the Winter Fair at Guelph, should be an eye-opener to those who say that so little is being done.

Reference is made also to the prosperous crop year in the Western Provinces, but regret is expressed at the hold weeds are getting on the country, and the suggestion offered in support of methods calculated to conserve soil fertility. Some adequate scheme of hail insurance is advised for the West, and some plan worked out by the Provincial authorities there to assure an adequate supply of harvest laborers, which, however, is not likely to be forthcoming until the advent of farming methods that will assure more all-the-year-round employment.

Co-operation in Kent County.

Editor "The Farmer's Advocate":

There is no doubt but that many pulling in the same direction will accomplish much more than many pulling each in his own peculiar way; and this is very true in regard to co-operation among farmers. By working together the "many-variety" folly may be done away with, and the price of the produce much increased by selling in a co-operative manner.

About seven years ago a combine among the bean buyers of Kent County and adjoining sections, which comprises practically the bean area of Canada, was the means of bringing about the formation of a farmers' company, known as the "Kent Farmers' Produce Company, Ltd." The price of beans for the buyer in the combine was set at a central office, thus doing away with any competition among buyers. But if the farmer is to look after his interest, no fault can be found with him for trying to operate some scheme whereby he can secure the most possible out of what he has to sell. The Kent Farmers' Produce Co., Ltd., was incorporated in 1903 as a joint-stock company, with a capital of \$35,000, divided into 7,000 shares, of \$5 each. About \$18,000 worth of stock has been sold, and about \$15,000 paid in. The plant, consisting of three warehouses, cost \$8,000, but with this accommodation the company now handle not only beans, but wheat, oats, barley, and seeds of all kinds, as well as salt, flour, cement, rope and binder twine, and, in addition to this, operate a first-class feed-grinding outfit.

The turn-over of the various grains named above will average 300,000 bushels a year, and it can be proven that at least four or five cents more per bushel has been received by the farmer than he would have received had not the company been in existence. This means an addition of at least \$12,000.00 to the farmers' income each year, to say nothing of what may be saved by the various other lines handled.

The Farmers' Company is managed by a board of seven directors, appointed at the annual meeting. The manager of the company is appointed by the directors, and we have been fortunate enough to secure a good business man and practical farmer as manager. Since 1903 the company has each year made many dollars for the farmers by increasing the prices of the different grains, and at the same time made improvements to the plant, and made a small profit each year. Co-operation in any particular line has a beneficial effect, in that it increases a spirit of unity among producers, and they are made to see the advantages of working together for a common good. J. O. L.

Kent Co., Ont.

Best Christmas Number Yet.

I want to congratulate you on the best Christmas Number you have yet issued; in fact, the breadth of subjects treated of universal interest, the mechanical excellence of the illustrations, printing, etc., and the evidence of authority in the articles, all combine to place it at least on a par with the Christmas numbers of such papers as The Globe, Graphic, etc. You are to be congratulated not only on this issue, but the whole volume of 1909. As one interested in getting all out of an orchard possible, I have been greatly interested in the success of your work in "The Farmer's Advocate" demonstration orchard. I hope you will keep your readers in touch with the details of treatment and results as time and work go on.

I would like to know who "Whip" is. I suppose you are not at liberty to divulge his name, but if his excellent articles have done others as much good as they have me, they have saved many times the subscription price of "The Farmer's Advocate." They are always sound, sane and helpful, and I must agree that he is a pretty good judge of a colt-training essay. I hope you may keep him as a contributor.

R. J. MESSENGER.

Annapolis Co., N. S.

HORSES.

Cause, Treatment and Prevention of Influenza.

Influenza—epizootic, catarrh, catarrhal fever, pink-eye, hepatic fever, and many other synonyms, all pertain to different manifestations of one disease, influenza. It is a contagious and infectious disease, affecting the equine species.

The disease brings about certain changes in the blood; it affects the brain and nervous system, causing profound depression of the vital forces, and frequently produces complications of an inflammatory character, affecting important vascular organs, particularly the lungs, intestines, liver, brain, and occasionally the sensitive structures of the feet. It is very apt to assume an epizootic form, and the tendency is to complications of certain organs at different outbreaks. For instance, at one time the disease may be in the catarrhal form; at another it may affect the throat—laryngitis—and in other outbreaks it will manifest itself by attacking some other organ of the body, perhaps the lungs, or an abdominal organ.

The period of incubation—that is, the time elapsed between the entrance of the germ into the animal's system, and the first evidence or manifestation of influenza—appears to vary within certain limits. When, during an epizootic, a sick horse is brought into a locality which has hitherto been free from the disease, fresh cases usually develop in from one to three days. In fact, cases are on record where only a few hours have elapsed before a new case was discovered. In other cases the incubation period has been extended to fifteen days. As an explanation for the prolonged incubation, we must take into account the varying susceptibility of the animals exposed, and the potency of the individual germs.

The symptoms of influenza vary according to the vagaries of each outbreak, but in general these phenomena are present: Sudden attack, absence of appetite, profound early prostration, and weakness, high temperature, swelling and watering of the eyes, brownish-red coloration of the lining membrane of the eyes, nervous prostration and stupor, pulse unusually fast and feeble, lacking in firmness, even when the heart beats forcibly. In the mild catarrhal cases, the chief symptoms are a discharge from the eyes and nose, accompanied with sneezing and coughing; the cough may at first be nervous, husky and paroxysmal, but later, as the discharge is established, it assumes a looser, mucous character. Coughing is liable to be started by excitement, by drinking cold water, by inhalation of dust, or by giving medicines. In connection with these symptoms there are usually indications that the digestive organs are involved.

These mild attacks, which constitute the majority, will show marked improvement on the fourth or fifth day, and prompt recovery follows.

When the thorax—chest—and its organs are involved, the symptoms are very much more severe, and the danger of a fatal termination correspondingly greater. These complications may occur in any affected animal, but the young are particularly liable, and are frequently met with when the sick are housed in close, badly-ventilated buildings, or where the victim has been overworked, poorly fed, or is in any way a debilitated subject. In exceptional cases, congestion of the lungs may be so acute as to lead to speedy death, or pleurisy and pneumonia may follow congestion. The heart and its envelope also frequently become involved in the inflammatory action going on within the chest cavity. When the heart is affected, the tendency to extensive infiltration—swelling—of the limbs and lower aspect of the trunk is much in evidence.

In the abdominal cavity, congestion of the stomach and bowels are indicated by loss of appetite, flatulence, constipation, or, in certain cases, diarrhea, slight transient colics, and tucked-up flanks, the faeces (dung) are passed in small balls, a few at a time, hard, and with a glistening surface; the odor is unusually strong and offensive. Urination may become frequent with straining, the urine is scanty and high-colored. When the liver is affected, the conjunctiva (lining membrane of the eye), by its color, shows evidence of the presence of bile in the blood. Instead of being pink, as in the normal subject, it is a yellowish brown.

The complications of influenza are of many kinds. Pregnant mares may abort, laminitis (founder) may result, the microbes of strangles, contagious pneumonia, cerebro-spinal meningitis, septicæmia, take advantage of the debilitated system, and thus complex diseases are developed. There are many other symptoms of this disease, known and observed by the expert veterinarian, which may be overlooked by the average layman, so they will not be alluded to in this article.

On account of the great importance of this disease, affecting as it does nearly every fresh importation into Saskatchewan from the East and South I have dealt at length with the most

prominent symptoms. Influenza is not, under ordinary circumstances, a fatal disease. The mortality has been stated by different authorities to amount to from 3 to 10 per cent. In the outbreak which occurred in Toronto and extended through the States in 1872, the mortality among 30,000 horses was 7 per cent. The variation in the mortality, as given by the different observers, may be put down to the difference in the surroundings of the sick horses. It is generally conceded that an animal once attacked is immune from further susceptibility to the disease, but in practice we are aware of exceptions to this rule. Young horses are predisposed to be attacked, while the older ones, even if they have not had the disease, are less liable to it. Again, the young horse is the one usually imported. He is taken from the farm, where he has been free from the risk of exposure to disease, and is exposed to the infection at every turn. In livery and feeding stables, where dealers usually assemble their purchases until a sufficient number is obtained to ship, the first exposure usually takes place. The next probably takes place in the previously-infected railway car, then in the damp stables of our city dealers. Through these centers of infection the disease is perpetuated. The atmosphere is

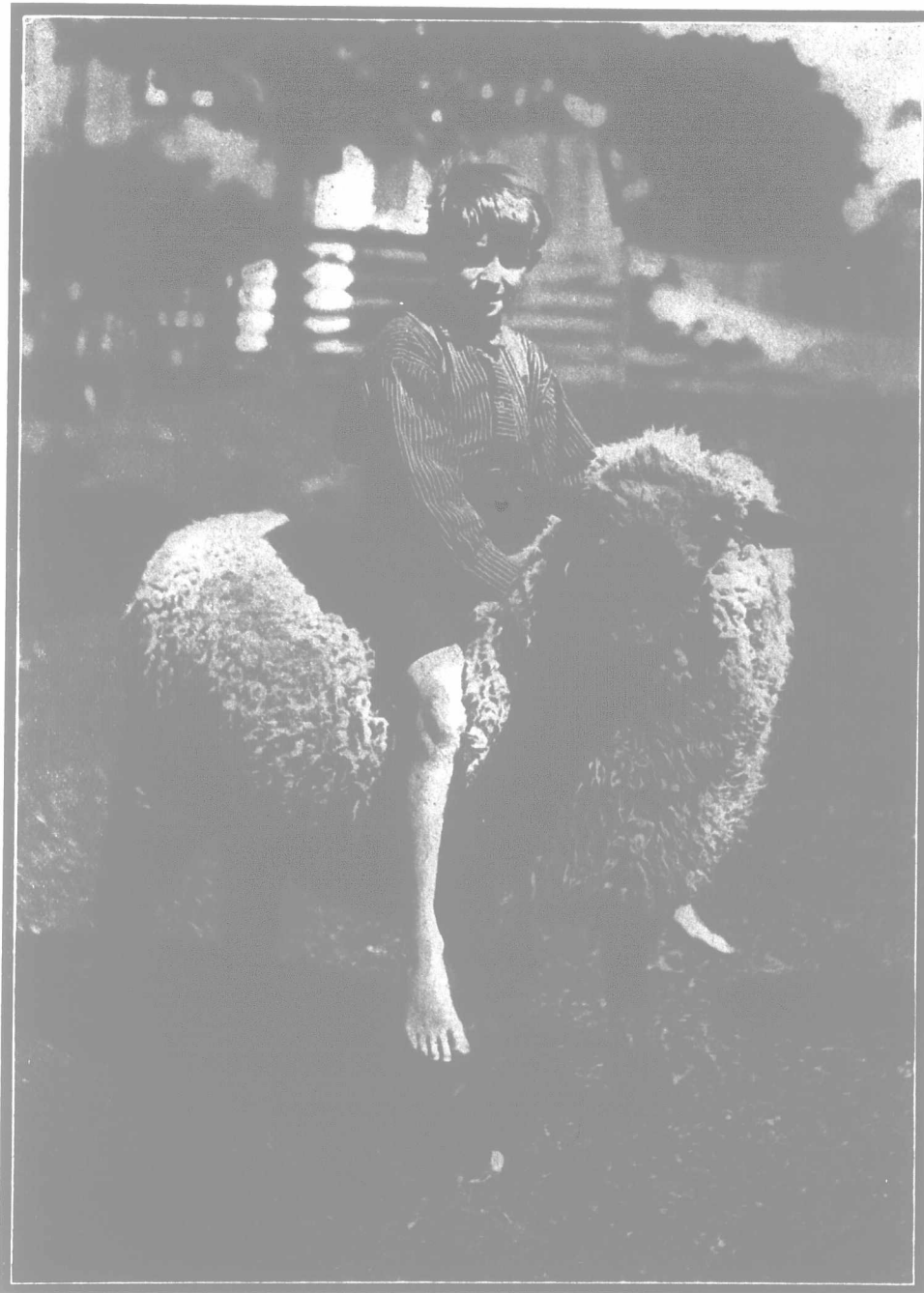
brown color, the animal convalesces promptly to its usual good health.

The treatment of influenza varies according to the conditions prevailing in the different outbreaks, and whether the disease is of a virulent type. The many complications, also, must be taken into account. We will only here refer to the treatment of mild cases, for unless the disease is of the very mildest form, a veterinarian should be called in without delay. In the first place, the patient should be placed in a comfortable loose box, well lighted and ventilated, and the temperature should be kept at between fifty and sixty degrees; by artificial heat, if necessary, but never by closing the stable tight so as to impede the ingress of pure air. The body should be well blanketed, and the legs hand-rubbed and bandaged. A disease like this, which tends to spontaneous recovery, needs mainly dietetic and hygienic care. Rest is the prime consideration, combined with comfortable surroundings and pure air. In the summer, during fine weather, mild cases do best when housed in open sheds, but protected from drafts; or, even on pasture, the animals brought in during rain or cold winds.

The food should be cooling and laxative, bran mashes, steamed hay, carrots

and grass, if in season. Some horses relish an occasional feed of boiled oats and flaxseed. Always allow a plentiful supply of fresh, clean water, given often. Linseed tea and hay tea may also be taken with a relish by many horses. Milk may be allowed if the horse will drink it. Constipation may be overcome by injections of warm water. Cold water may be used if the fever continues high. By unloading the large intestine, it removes irritants, without the danger of increasing the congestion or diarrhea.

If anything further is required in these mild cases, stimulating medicines of a mild character, which act on the kidneys and skin may be given. Nitrous ether, in ½-ounce doses, or the liquor acetate of ammonia, in 2-ounce doses, may be given in the drinking water twice a day. If these medicines are not available, ½-ounce doses of nitrate of potash may be given in drinking water once or twice a day, if the temperature continues high. Quinine, in 2-dram doses, should be given two or three times a day, until the temperature is reduced to cases, more active under the guidance



A Soft Saddle.

the most common carrier of the infection from sick animals to healthy ones, and by it may be carried for considerable distances. The contagion will remain in the bedding, and in the manure from sick animals (the manure being particularly infectious), also in the feed; and if these are removed to other localities, the disease may be carried with them. Infection may be carried in the clothing of those attending the sick animals. Drinking water in troughs, and even running water, may carry the germs, and be the means of spreading the disease at a distance.

Experience shows that the virus of influenza is excessively diffusible, and often erratic. Dirt, which often is allowed to accumulate in the feed-boxes of sick horses, will hold the contagion for days, or weeks, and communicate it to susceptible animals, if placed in the same stalls or stables.

At the termination of the usual course of the disease, which is generally in from a week to ten days, the fever abates, the swelling of the legs and under surface of the belly diminishes, the appetite returns, the strength is rapidly regained, the visible mucous membranes lose their yellowish-

near normal. In the severe treatment must be resorted to of the veterinarian.

From what has already been stated, it will be readily seen that the only preventive to this disease is to avoid exposure to infection. When recently-imported horses are to be introduced among horses that are free from the disease, the new arrivals should be isolated for two weeks, until the period of incubation is past. Then there is not likely to be any spread of infection.

The disease called shipping fever is a mixed infection, comprising one or more of the forms of influenza and its complications. On general principles, the treatment is as outlined above, but on account of the serious complications attending these cases, they should be treated by the skilled veterinarian. Thorough disinfection of stables, railway cars and other places wherever sick horses have been, should be done.—[From "The Farmer's Advocate and Home Journal," Winnipeg.]

[Note.—In recommending treatment for the various forms of this disease, our veterinarian ad-

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MESSSENGER.

vises the application of a sharp liniment, as equal parts spirits of ammonia, spirits of turpentine and raw linseed oil, or mustard mixed with turpentine and water, to the throat, and also wrapping the throat with flannel cloths to keep warm. In most all cases there is acute soreness of the throat, evidenced by the cough and inability to swallow, hence the necessity of local treatment. He also recommends the administration of chlorate of potassium, in 2 to 3 dram doses, three times daily, instead of nitrate of potassium, as recommended in the above article. The administration of quinine, as recommended, is good practice. On account of the inability to swallow, drenching should be avoided. Instead, give the medicine with a spoon, placing it well back on the tongue, and, if liquids are given, use a syringe, instead of a bottle. The giving of medicines in the drinking water in these cases is generally unsatisfactory, from the fact that in many cases very little is taken.—Editor.]

Another Experience with Switchers.

Editor "The Farmer's Advocate":

Have been reading with much interest the answers to the question regarding "Switching Mare," and on some points I agree with J. B. M. (January 13th issue); that is, gentle handling and having a good mate, if she is to be driven double, as I have found her, as your correspondent says, usually high-spirited and very sensitive.

I have a young mare of the above disposition. When a three-year-old she began to switch very badly, and if she got her tail over the line would kick over the pole and traces, which makes matters much worse. So I bred her, and still kept working her, thinking she would become quieter, but could do nothing with her, unless her tail was tied. She would switch it over the line and kick in spite of everything. She went on in this way for two years; raised two colts but got no better. Last spring, as a last resort, I had her docked short (she was not in foal). To-day she has a nice bushy tail, and does not switch nor hug the line, even if she should by chance get it over. She gave up switching completely after having been docked about two or three weeks, and is right in her place, no matter what she is hitched to. I would not have her tail on again for \$50. I have not now a more admired nor nicer-working horse on the farm.

Before closing, I might say I do not approve of taking the grain away and working a horse down, especially a young horse, as it takes years to bring her up again; and I have my doubts if that will prove a genuine cure. My theory is to work her well and feed her well; give her a chance for her life. I never had a switcher before, but I have seen several treated with work and tail tied, but never saw one cured. My neighbor has one that he works hard, with her tail tied. I have seen her so poor and tired that it took her all her time to reach the barn at night, but still she switched, and I believe she always will be an aggravating switcher. This mare is now somewhere between twelve and fifteen years old.

Northumberland Co., Ont.

A. R. H.

Training the Colt.

In my experiences in breaking colts, I have been fairly successful, and would like to give my methods. Put a strong halter on the colt when he is a few days old. It will not be necessary to leave it on long, as he will soon tire himself pulling. Stay beside him, and as soon as he is quiet take it off. Repeat this two or three times a day. When well halter-broken a colt is much more easily handled. Talk gently to the colt and pat him while the halter is on; never at any time speak crossly or unkindly to a colt. Also, lift the feet frequently and pat and rub them. Hit them with the hand as though shoeing; get the colt accustomed to having his feet handled. Keep up this treatment every winter until time to break the colt. I commence to break when he is coming three years old.

Harness him about twice a day. Have everything solid and secure. Keep the breeching tight. Put a bridle on and check him up, but not too tight; then let him run around for an hour or two in a small yard, which is fairly free of objects for him to run against. Repeat this for two or three days; then commence to use the lines. Take the lines out of the rings in the back hand and let them come along each side. In this way they help to guide the colt, and he cannot turn around nor get his tail over the lines. Chirp to him and use the various terms necessary in driving a horse; also talk to him gently. Keep this up until he gets used to it and understands what you mean when you tell him to go or to back up, etc., and until he gets used to the bit. If a colt is unusually headstrong and stubborn, use a "persuader." Put a half-inch rope round his neck, with a half hitch on under jaw, and fasten it through his mouth. Lead him with this, and whenever he disobeys jerk him up, speaking to him meanwhile. In this way you will soon get him trained so that he will do as you wish.

When the colt is thoroughly used to the harness, etc., hitch him up with a gentle horse that is good to walk—not slow, but kind and gentle. If you prefer hitching single, be sure to use a kicking strap, and use it until the colt is thoroughly broken and quiet. For double hitching a kicking strap is not necessary. Use a light rig, which is easy to draw. Never give a colt a heavy load when first breaking him in. Continue driving with a quiet horse, and gradually increase the weight of the load. Be careful not to overheat the colt. His flesh is tender, and his shoulders especially will get sore. To prevent this, raise up the harness and air the shoulders occasionally; also wash them with salt and water. The mouth is also apt to become sore, on account of not being used to the bit. By using a rubber bit or winding the other kind with cotton this will be prevented. If the shoulders or mouth are allowed to get sore, the horse will balk and refuse to draw. I might say that if the shoulders do get sore, or if the colt cuts or scratches himself, or becomes calked, or if he gets boils on his neck from the collar, use crude oil freely. I have found it a sure and safe remedy.

First, last and always, never lose your temper. Always speak gently and kindly to a colt. And don't lose your nerve. Just hang on and keep cool.

Ontario Co., Ont.

W. L. GOFORTH.

LIVE STOCK.

The Milking Shorthorn.

Editor "The Farmer's Advocate":

On reading the reports of the Dairyman's Conventions of Eastern and Western Ontario, and noticing the dominant note, "Produce more milk," there arises the question, "What place does the milking Shorthorn hold in Canada?" It appears to me that much could be done to increase the popularity of Shorthorns as a truly dual-purpose breed, and much more to increase the productiveness of individual cows, if the breeders would only follow lines of improvement similar to those followed by the breeders of the distinctly dairy breeds. In Great Britain, the pedigreed dairy Shorthorn has steadily grown in favor, and an average price of nearly \$300 for some seventy head of pure-bred Shorthorns of highly-developed milking qualities, is a fair indication of what can be done by intelligent breeding and development of the Shorthorn breed along dual-purpose lines.

Without doubt, the Shorthorn is the beef animal par excellence of Canada to-day, and a continuance of all-Scotch sires will maintain this excellence, but I believe such a continuance is a line of short-sighted folly for the Canadian breeder to-day, if that breed is going to attain the highest possible standard of utility. "But," say our breeders, "we must sacrifice beef type if we are going to secure milking capacity." While this may be true to a degree, we must all admit having seen Shorthorn cows, prizewinners, of excellent beef type, that were also splendid performers at the pail. These are the kind we want to perpetuate, and who shall say that a cow of any beef breed is not more attractive by having a well-developed milk system and fine, capacious udder, even although the extreme of beef symmetry has been sacrificed. Records of over 80 pounds per day are not rare in Britain, and, with the use of sires of pronounced dairy strain, coupled with

the weeding out of the poorer cows, these records could be duplicated here.

Another statement often seen in print is that, "Shorthorns have a very short milking period." It is very misleading. We know that the breeders of the dairy breeds lay great stress upon the importance of establishing the long milking period in their heifers; the same can be done, and often is done, with the Shorthorn, a matter of equal importance being the possibility of securing sires from heavy-milking dams, and the keeping of records of individual cows.

The annual meeting of the Shorthorn Breeders' Association will be held in Toronto on February 1st. I would suggest for its adoption the starting of a Record of Performance of pedigreed Shorthorn cows; also, the donation of liberal prizes at the leading Canadian exhibitions for Shorthorn females in milk, thus giving encouragement to the full development of the milking qualities, and consequently the highest utility of the Shorthorn breed.

For the year 1909 I did not keep individual milk records, but will submit the total receipts from six cows, two of them pedigreed, and four of them high-grade Shorthorn cows, two of the latter being their first year in milk:

Butter, 8 mos., 815 lbs., at 22c.....	\$179.30
Cheese, 4 mos.	137.27
Four calves, fed new milk, and sold.....	21.00

Total\$337.57

Being an average of \$56.26 per cow for the year. In addition to this, I have two pure-bred calves, worth at least \$100.

Perth Co., Ont.

J. M. McCALLUM.

Cement Stalls.

On account of the high and increasing price of lumber, in a constantly enlarging number of kinds of structures cement is taking its place. The accompanying cut shows cow stable with manger, water troughs and stall divisions made of cement, on the farm of Louis Reodding, Waterloo Co., Ont. As will be noticed, the stalls in the front of the picture are single, though 80% in this stable are double stalls. A single stall complete, not including floor, requires two sacks cement, 1/2 yard gravel, and labor estimated at \$2. A double stall is comparatively a little cheaper, requiring 3 sacks cement, 5-12 yard gravel, and \$4.00 for labor. These prices are but little different from what good wooden stalls would cost.

Feeds Tagged for What They are Worth.

Since January 1st it has been illegal to offer for sale in the Dominion of Canada any commercial feeding stuff (hereinafter defined) until the brand shall have been registered with the Inland Revenue Department at Ottawa, and given a registration number, which, together with the guaranteed minimum percentage of protein and fat, and the maximum percentage of crude fibre, must be affixed by the manufacturer or agent to every package sold or offered for sale. The statement required is as follows:

1. Name of brand.
2. Registration number.
3. Name and address of manufacturer.
4. Guaranteed analysis.

This may be either printed on the sack or on a



All-Cement Stalls.

... cows, these records
... seen in print is that
... short milking period.
... now that the breeders
... stress upon the im-
... long milking period
... can be done, and often
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... portance of securing sires
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Shorthorn Breeders'
Toronto on February
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not keep individual
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milk:

.....	\$179.30
.....	137.27
.....	21.00
.....	\$337.57

5 per cow for the
have two pure-bred

M. McCALLUM.

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printed tag attached to the package. The Act defines a commercial feeding stuff as "Any article offered for sale for the feeding of domestic animals, and feeds claimed to possess medicinal as well as nutritive properties, excepting only hay and straw, roots, the whole seeds, or the mixed or unmixed meals made directly from the entire grains of wheat, rye, barley, oats, Indian corn, buckwheat or flaxseed; wet brewers' grains; the bran or middlings from either wheat, rye, oats, peas or buckwheat, sold separately and not mixed with other substances." To avoid unnecessarily hampering the trade in staple commercial products, the common well-known articles, such as the whole seeds, or the mixed or unmixed meals, from these certain grains were exempted.

However, to check such frauds as mixing of the oat hulls with wheat bran, and the adulteration of meal from mixed grains, it was decided to deal with the adulteration of these products under section 26 of the Adulteration Act. With the object of determining a fair standard composition, remarked Prof. R. Harcourt, in his paper before the Western Ontario Dairymen's Convention, the Chemist of the Inland Revenue Department, at Ottawa, collected and analyzed 541 samples of bran, middlings and chop-feed, or moulee! The results are given in Bulletin 191 of the Inland Revenue Department. To show the variation in composition found in these products, Prof. Harcourt quoted these figures, which give the extreme and average results of the analyses:

Bran.—148 samples analyzed:

	Maximum.	Minimum.	Mean.
Fat	9.52	1.42	3.92
Proteids ..	17.56	11.81	14.67
Crude Fibre	13.20	3.96	9.26
Ash	7.16	3.16	5.53
Carbohydrates	64.25	50.06	56.01

Shorts or middlings, 258 samples analyzed:

	Maximum.	Minimum.	Mean.
Fat	6.88	0.95	4.04
Proteids ..	18.93	10.00	15.25
Crude Fibre	12.15	0.22	5.63
Ash	5.74	0.88	3.63
Carbohydrates	74.18	51.04	60.55

Chop-feeds—135 samples analyzed:

	Maximum.	Minimum.	Mean.
Fat	11.75	0.87	3.09
Proteids ..	16.19	6.63	10.70
Crude Fibre	25.80	1.21	8.69
Ash	7.64	1.04	3.24
Carbohydrates	74.59	47.89	64.45

There is nothing to hinder the manufacturer of these products guaranteeing their composition, as required for other foods in the Commercial Feeding Stuffs Act. In fact, the Chief Chemist strongly recommends the manufacturer of chop feeds—i. e., feeds made from mixed or unmixed grains, ground or unground, to register such feeds and sell them under a definite guarantee.

In case bran, shorts and chop-feed are sold or offered for sale without a registration number, and without a special guarantee from the manufacturer or agent, the Chief Chemist recommends that the following limits be made legal:

	Crude Protein (Not less than)	Crude Fat (Not less than)	Crude Fibre (Not more than)
Bran	14.	3.	10.
Shorts	15.	4.	8.
Chop-feed ..	10.	2.	10.

With reference to the above standards, it is important that the three constituents be considered. Recently, a sample of bran was sent in for examination which was found to contain more than the standard amount of protein and fat, and could not be considered adulterated, if these were the only constituents considered; but, it also contained about 15 per cent. of crude fibre, which was one-half more than the standard allows. It is in this constituent that the addition of oat hulls would be most readily detected. It is expected that the adulteration of bran may be controlled in this way, without requiring the guaranteed analysis to be stamped on the bag.

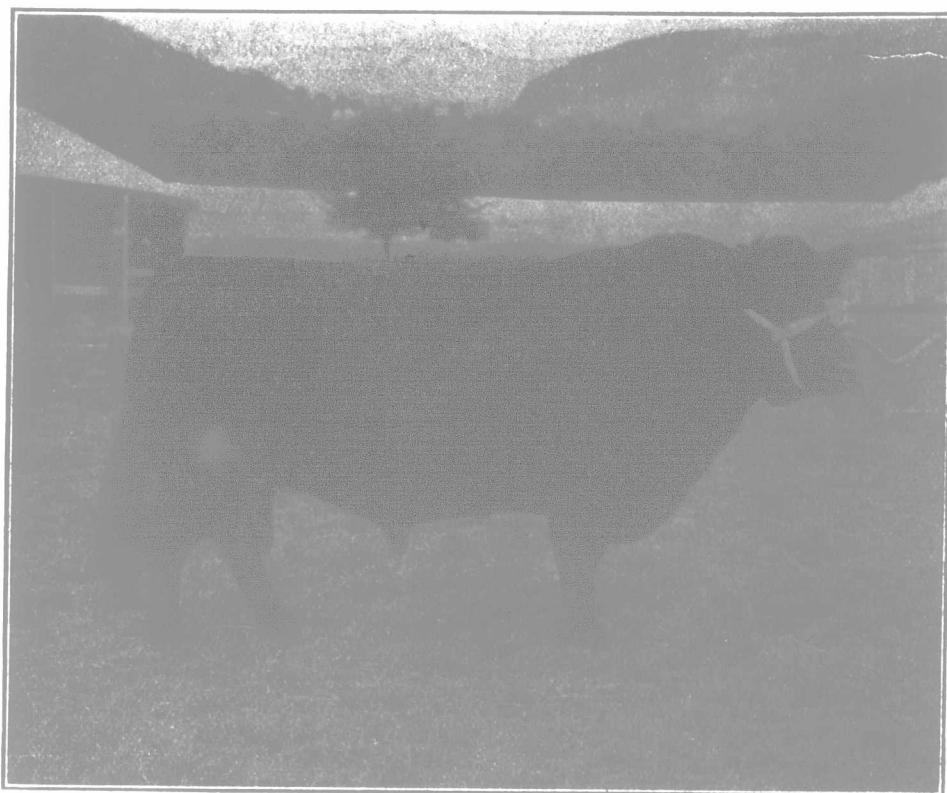
The Commercial Feeding Stuffs Act ought to be decidedly beneficial in the three ways:

1. It will protect the stock-feeder against low-grade and mixed by-products which he is not familiar with.
2. It will protect the manufacturer and dealer against dishonest competition.
3. It will promote a more intelligent use of the mill by-products, and thus directly help to bring about a more economic use of all feeding stuffs. There are some in the market that are dear at any price; others are good value at the prices asked.

It is to be hoped that farmers, dairymen, and all feeders of live stock will make themselves familiar with the terms of the Act, and so study

the composition and price of the feeds offered for sale that they will be able to make the best possible use of these in supplementing the home-grown roughage in producing economic gain, whether for growth, or fattening, or for milk production.

A member in the audience was informed that it has been a custom, in some cases, to adulterate bran with ground Western screenings, and inquired whether this form of adulteration would come under the Act. Prof. Harcourt was not prepared to reply what ruling the officers might make on this point, but thought that if the screenings were brought in separately, and then mixed with the bran, it would.



Galloway Bull.
A Highland Society champion.

Note that the Act prohibits the mixing, say, of corn and wheat brans, unless stamped and sold for whatever the mixture may be.

Incidentally, Prof. Harcourt strongly emphasized the feeding value of alfalfa, which no dairy farm should be without a patch of. No fodder crop, except, perhaps, corn, yields so well of good feed, fresh and green, throughout the season, and its protein content is very high.

Frosted wheat is rather higher in protein content than normally-ripened wheat. The proteid framework of the grain is the first to be constructed, and it is then filled with starch.



A Typical Galloway Cow.

Western spring-wheat bran is probably slightly higher in digestible protein than the bran of Ontario fall wheats.

Wheat bran should contain not less than 14 per cent. of crude protein, but samples have been analyzed that went as low as 3 per cent.

Well-matured silage is superior to rape or anything I have tried for fattening steers. However, where it shines is for feeding milch cows.—[R. D. Nodwell, Wellington Co., Ont.]

Galloway Cattle.

By David McCrae.

The district known as Galloway is in the south-west of Scotland, and now comprises Kirkcudbright and Wigtonshire. The hardy, hornless breed of beef cattle known as Galloways take their name from this district. For many centuries they have been bred in considerable numbers on the uplands and rough pasturage of the district. The true Galloway is a hardy, well-shaped, profitable beef animal, the body long, deep and round; the back straight and broad; leg short and stout; foot large; the coat of hair shaggy and black, with often a brownish tinge.

Of all the hornless breeds, it has the oldest record, and they can be fed and handled like a flock of sheep, when carefully and kindly treated. Much has been written about the origin of polled cattle; scientists have claimed one or other of the wild breeds as their progenitors. How or when the first were domesticated, is unknown, whether or not Jabal, the father of such as have cattle, had polled cows amongst his first flock, is not known, but it is known that polled cattle were described by Herodotus, who wrote over 2,300 years ago. Herodotus says that the domestic cattle of the Scythians were without horns. Galloway was early inhabited by the Picts, and Bede, one of the earliest English historians, known as the Venerable Bede, says: "The nation of Picts, coming (as reported) out of Scythia," what more

likely than that from Scythia they brought their hornless cattle, and that these were the progenitors of the modern Galloway breed? Long before the union between England and Scotland considerable numbers of Galloway cattle were taken south to be fattened on the richer pastures of England. Their beef, of excellent quality, mottled and marbled, the fat and lean intermixed, gave them a famous name in the old days. In 1723, the author of "A Journey Through Scotland" says he saw a thousand bullocks grazing in preparation for the markets in Norfolk and Suffolk. Dairying and cheesemaking have invaded the old home of the Galloway, and it would now be hard to find a flock of a thousand in that section. They are still in the front of good beef-producers, and at Smithfield have taken a good place in that great show.

A considerable importation of Galloways was made in 1853 by Messrs. Graham, of Vaughan, York Co., near Toronto. Records were not kept by the Board of Agriculture till 1872. The descendants of that first importation are still numerous, and good enough to win yet in our larger shows. Geo. Miller, Markham; John Snell, Edmonton, Ont. (now Snelgrove); Wm. Hood and Thomas McCrae, of Guelph, were also early and extensive breeders. The latter made many importations, and so far-reaching were his sales that, at the recent sale at the International Show, in Chicago, 1909, every animal but one in the sale traced to stock at one time in this Canadian herd.

In 1871, M. Smith and R. B. Caruss, of Michigan, came to Canada and purchased herds of Galloways. Shortly after, Peter Davy, of Wisconsin; M. R. Platt and A. B. Matthews, of Kansas City, and J. McHardy, of Emporia, Kansas, brought herds, and the descendants of these animals are now widely scattered over many of the United

States. The latest success of the Galloways is at the United States Government Farm, in Alaska, where, after a trial of several breeds, the Galloways have been selected as the best fitted for that northern post, and they are now using them for dairy purposes, as well as for beef animals.

Galloways are all hornless, or polled. So marked is this polled character that the produce of a pure-bred Galloway bull with any breed of horned cows should give polled calves. No other breed of polled cattle will equal the Galloway in this respect. Galloway cows crossed with a white Shorthorn bull produce the celebrated British "blue-greys," the most famous feeding animal in that land. From this cross, all animals are fed for the butcher. All improvement of the breed has come from within, by careful selection, and in recent years the advance in quality has been marked. Attempts at improving by crossing with other breeds, which have been often tried, have all failed. In the Canadian West, Galloways have been used for crossing native cattle, grades and others, with marked success. The size has been quoted against them, as they look much smaller than the Shorthorn. They weigh much heavier than they look, and are always a first-class butcher's beast when fitted and fat. The late Mr. Andrews, of the Crane Lake Ranching Company, reported that the steers from his Galloways weighed more in Winnipeg than those from his Shorthorn bulls. This he ascribed to their better rustling qualities. The Galloways, he said, were always first out in the cold winter days, and the last to return to the bedding-ground. They are much the hardiest of all the beef breeds, and should be splendidly adapted for our extreme northern pastures in the great West.

\$86.94 Profit from Two Litters.

Editor "The Farmer's Advocate":

In compliance with your request of last spring, I have kept a careful account of the cost of feeding two litters of pigs, numbering 17 in all. The two litters came a month apart, but were pastured together, fed out of the same bin, and, to a certain extent, mixed at the trough, too, though, as far as possible, they were parted while feeding. All were sold the same day. The first litter, numbering 10, were weaned May 25th; the second, numbering eight, June 25th. One of these died a month later, apparently of lockjaw, probably induced by castration. Following is the account of feed:

May 25—200 lbs. shorts, at \$1.40.....	\$ 2.80
June—178 lbs. shorts, at \$1.40.....	2.50
80 lbs. barley chop, at \$1.00.....	1.27
1,636 lbs. skim milk	
July—800 lbs. shorts	11.50
150 lbs. barley chop, at \$1.40.....	2.10
30 wheat sheaves	1.50
2,150 lbs. skim milk	
Aug.—910 lbs. barley chop, at \$1.25.....	11.35
1,700 lbs. skim milk	
Sept.—1,420 lbs. barley chop, at \$1.25.....	17.75
One-seventh acre peas	2.00
One-seventh acre of mangels.....	3.00
Three-quarters acre rape	3.00
1,100 lbs. skim milk	
Oct.—1,275 lbs. mixed-grain chop, at \$1.10	14.03
2,580 lbs. heavy chop, at \$1.20.....	30.96
5 bushels mangels30
70 sheaves green corn	1.75
1,214 lbs. skim milk	
One acre lucerne (alfalfa) pasture (first	
crop cut for hay)	6.00
Total amount of skim milk, 7,800 lbs., at	
20 cents per cwt.	15.60
Total cost of feed	\$127.41
18 young pigs, at \$2.50 each	45.00
	\$172.41
Nov. 4—9 pigs, weight 1,910 lbs., at	
\$7.50 per cwt.	\$143.25
7 pigs, weight 1,335 lbs., at \$7.50.....	100.10
1 pig retained for breeding	16.00
	\$259.35
Less cost	172.41
Profit	\$ 86.94

The day that these pigs were sold, the larger litter was exactly seven months old, and the smaller litter exactly six months, the average weights being 212 lbs., and nearly 191 lbs., respectively. This is somewhat better for the younger litter, showing better gains, which one would hardly expect under the circumstances. I account for this by the fact that up to August 11th I was buying feed at a very high price, and we were just a little too economical with it, and did not increase the allowance of chop to the older pigs quite as fast as it should have been increased. We threshed barley August 10th; this I have charged for at the price I could have sold it at then. The end of September we threshed all out. The mixed chop is as grown, being barley, oats and peas, sown in

proportion of 2-2-1, but the peas are never so plentiful in the crop as in the seed. The heavy chop was the same, with addition of one-half bush. of peas to 1½ bushels of the mixture.

The pasturage was just about ideal. Up to the end of July they had the run of a small grass lot, fenced off one side of orchard. They were then let onto an acre of second-crop alfalfa; this would probably have cut about one ton of hay, and I have charged for that. In September the alfalfa began to get woody and dry (we got no third crop this year on account of the drouth), so I let them into the orchard. This was sown to rape in July for cover crop, and was good. There was a strip of mangels on one side, where the trees are small; these they ate first. They only consumed about half the rape, leaving quite sufficient for the purpose for which it was sown. The last two or three weeks they were confined to their pens, and this was when the green corn and mangels were fed. The one-seventh acre of peas was a piece sown for the cows, and not used; the peas were



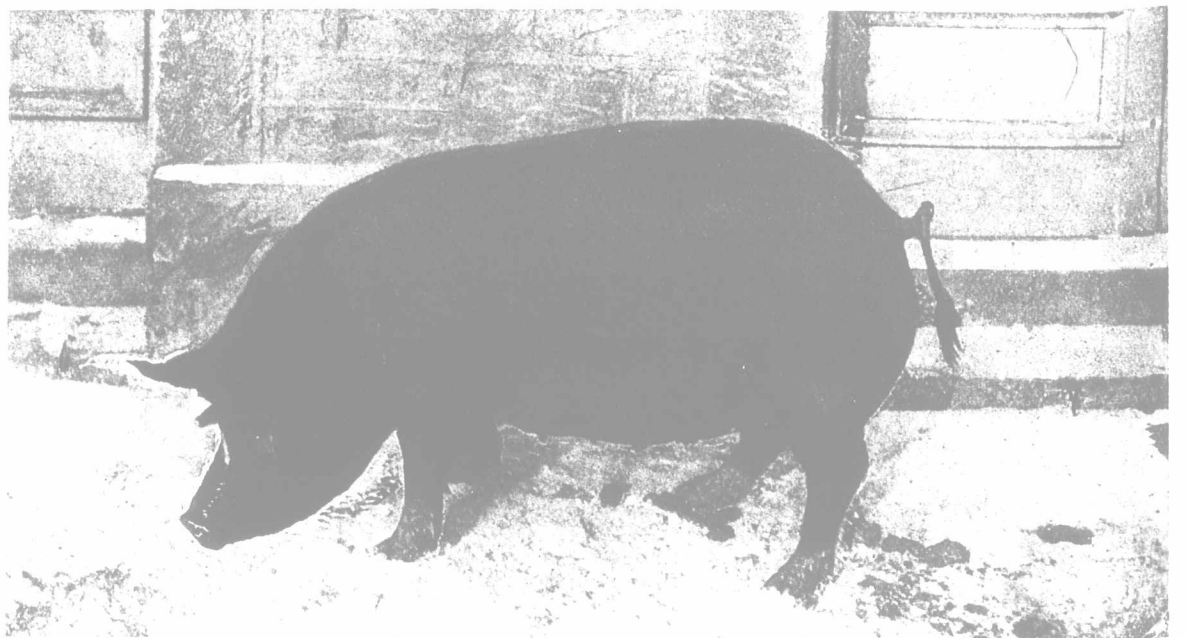
Lincoln Lambs.

First and breed cup, and champion pen of Longwools, any breed, Smithfield, 1909. Exhibited by S. E. Dean & Sons.

cut and thrown over fence to pigs as long as they lasted. The only thing the pigs ate that is not charged are the fallen apples, of which they no doubt got a considerable quantity; but as there was considerable rape left, it will offset the apples. Although these pigs show a very handsome profit, still I am disappointed, in that they cost more than I expected to raise. This pork cost exactly 5 cents per pound, all counted. Of course, there was a profit on the young pigs; in this case, they would not stand at more than \$1.15 each when weaned, but the litters might have been much smaller, and the cost would have totalled very nearly the same; moreover, they could not have been bought for any less, if they could have been bought at all. Compared with three pigs I fed last winter in the stable, they are away behind, as these cost me just 4½ cents, weighing 210 lbs. each at six months old. They were fed skim milk and chop right through. No doubt, a small lot will beat a large one, under the same circumstances, but it looks as though skim milk would beat pasture. The amount of milk fed per head to the three hogs was just about three times what was fed to the large lot.

ALFRED HUTCHINSON,

Wellington Co., Ont.



Oxford Girl 21686.

Berkshire sow at 11 months. Property of Joshua Lawrence, Oxford Centre, Ont. Sire British Duke (imp.)

Reminiscences of Sittyton.

In an interesting series of recollections of Amos Cruickshank, the great Scottish Shorthorn breeder, Thomas F. Jamieson, LL.D., in the Live-stock Journal Almanac for 1910, says in part:

He was, in many respects, a very unusual character. Being a bachelor, and living much alone during a lengthened life, he contracted a very silent and reticent demeanour, which was no doubt intensified by his belonging to the Quaker community. The Society of Friends, followers of George Fox, are a most estimable body of men. Amos Cruickshank's father was tenant of Wardhead, a farm of no great size, on the lands of Kinnuck, a few miles from the Town of Inverurie, in Aberdeenshire. His mother's name was Sarah Wigham; and her brother, Amos Wigham, occupied the neighboring farm of Alton of Kinnuck. As there was a pretty large family at Wardhead, the strictest economy no doubt had to be observed, and Amos Cruickshank worked a pair of horses on his uncle's farm some time before he went to Sittyton.

The two brothers, Amos and Anthony, were, in many respects, a great contrast to one another, but agreed in having a decided taste for farming and live stock. Amos, the elder of the two, was painfully silent and reserved, whereas Anthony was bright, and always ready to converse, full of enterprise and speculation. In fact, it was he, I believe, who supplied the capital to start the Shorthorn enterprise, and the steam to keep it going. Compared with him, Amos seemed a dull man, but there was more beneath that silent demeanor than most people would have surmised. He was a soul that would have delighted the heart of

George Fox, being a man of deep piety and earnest feelings. In that modest parlor at Sittyton, where he usually sat, there were no gaudy ornaments, but behind his chair there hung an engraving of the garden of Gethsemane and the Mount of Olives, which showed where his hopes rested.

The kindly nature of the man was manifest, among other things, by his pleasant smile, and the love he had for his pigeons. These latterly almost took possession of some of the byres where the Shorthorns were kept, but Amos wouldn't allow them to be driven out. Nevertheless, I don't think it is good for a man to dwell so long and so much alone as he did, for it must tend to blight the affections. It is a noticeable fact, however, that most of our great cattle-breeders have been either unmarried or without family, which shows that the condition has its advantages.

The steadfast character of Amos Cruickshank was evinced by the way in which he refused to follow the fashion when everyone else was running after the Bates blood or that of the Booths. When the Kirkleyington herd was sold off, Anthony and his sons were vexed that Amos would have nothing to do with the famous Duchesses, but stuck doggedly to his own Champion of England blood instead. Being hopeless of converting him, they resolved to establish a stock of fashionable

Sittytton.

collections of Amos northern breeder, the Live-stock in part:

very unusual char- ing much alone ntracted a very ch was no doubt

Quaker com- s, followers of le body of men, tenant of Ward- on the lands of own of Inverurie, name was Sarah igham, occupied Kinmuck. As t Wardhead, the to be observed, air of horses on e's farm some ore he went to

t w o brothers, d Anthony, were, respects, a great to one another, d in having a aste for farming stock, Amos, of the two, was silent and re- heras Anthony ht, and always converse, full of and specula- act, it was he, I who supplied the start the Short- rprise, and the keep it going, with him, Amos dull man, but s more beneath silent demeanor t people would mised. He was hat would have the heart of iety and earnest or at Sittytton, no gaudy orna- ng an engrav- and the Mount opes rested. was manifest, ant smile, and These latterly the byres where os wouldn't al- rtheless, I don't ell so long and t must tend to reable fact, he- breeders have family, which advantages.

os Cruickshank e refused to lse was running e Booths. When t, Anthony and s would have Duchesses, but ion of England onverting him, of fashionable

fish Duke (imp-)

blood themselves, which they did, at Lethenty, at great trouble and expense; and when Torr's great herd was dispersed they bought some of his cows at fabulous prices. Shortly after that, Amos, happening to meet a neighboring friend, said to him: "Hast thou seen my nephews' herd at Lethenty?" "Yes, I have," replied the man. "And what dost thou think of them?" "Well, not very much," said he. "Nor do I," was all the remark of Amos.

A very short experience of these Booth animals proved sufficient to convince the nephews that their uncle was not so far wrong as they had imagined, and after getting clear of them a new herd was established at Lethenty by Edward Cruickshank, entirely of Sittytton blood. The Warlaby animals were no doubt excellent in Richard Booth's time, and likewise the Killerby ones about the same period, but the master-spirits that bred them had passed away.

The last bull I bought directly from Mr. Cruickshank was an animal called Robin Hood 54928, in 1886. When I got him home I found Amos had made a mistake as to his maternal grandsire, which was one I didn't like so well as the animal he had stated. In remitting the price, I mentioned this, and received from him the following characteristic letter, which is worth giving, as it shows both the honorable nature of the man and also his opinion about the proper proportion of Champion blood:

"Sittytton, November 1st, 1886.

"Dear Sir,—I have received thy letter with cheque in payment of the bull, for which I return my sincere and grateful thanks. I regret much having made the mistake about his grandsire. I had it not on my finger-ends at the time, but there is as much Champion blood in him as is necessary, he being by Cumberland, who is a grandson of Princess Royal by Champion of England, and I am convinced he is a thoroughly good animal, as regards size, shape, and quality, but as I have made a mistake I will remit a luckpenny as soon as I have an opportunity of procuring a postal order.—I am, very sincerely,

"AMOS CRUICKSHANK."

Latterly, Amos Cruickshank often felt himself unable to accompany visitors to the more distant parts of his farm, so he had some of the boys of his married farm servants trained to be able to tell the names of the cattle. On one of my last visits he said: "I can't go over to the Clyde with thee, but Johnnie here will go and tell thee the names of the beasts. He knows them all."

Accordingly, I got the boy to accompany me, and found him well posted in his task. "What is the name of that white cow?" said I to him. "That's Sober-tety." "And yon roan one?" "That's Corn-cockle." Coming upon a smallish cow with a very fine big calf, I happened to remark: "That is a shabby-like cow to have such a splendid calf." "Aye," says Johnnie, "it's our worst coos that have the best calves." No doubt because they had most milk. Amos Cruickshank didn't aim specially at milk, but it was appreciated when got in combination with other good qualities. Those cows, however, which went all to milk were seldom favorites. Nevertheless, I think the milking faculty has been too little cultivated by Shorthorn breeders in general. It was the great merit of Thos. Bates that he made good dairy properties a specialty. Mr. Taylor, of Cranford, Lord Rothschild and Lord Rayleigh are now doing good service in the same line.

Anthony Cruickshank was much the smarter man of the two brothers. He had more of the commercial spirit, was more of a money-making man than Amos. He liked to spread his wings, to see his enterprises flourishing, and his cattle taking good places at the shows. He conducted most of the correspondence concerning the herd, in its early days at least; drew up the catalogues and got them printed. I believe he also named all the animals, and negotiated the terms of lease for the various farms. In short, he took such a leading part in the concern that some people looked upon Amos as little more than grieve and head-cattleman to Anthony, and even expressed themselves to that effect. This, however, was a mighty mistake, for Amos had a strong mind of his own, and, as he once said to me, "had great battles with Anthony" sometimes about the bulls they were to use. He was emphatically the breeder—the man who developed the type of animal that has made the Cruickshank blood famous. It was he that first appreciated the excellence of the Letheny stock. It was he that saw the possibilities that lay hidden in the young Champion of England, and saved him from being flung away, as the animal no doubt would have been, when it was rejected by the judges of the Royal at Leeds.

We see, then, what a happy combination the two brothers made, the one supplying just what

THE FARM.

Root Crop at Macdonald College.

Editor "The Farmer's Advocate":

Thinking readers of "The Farmer's Advocate" might be interested to know something about the root crop grown on the College farm here, I venture to send the following:

EIGHTEEN ACRES OF ROOTS.

Table with 2 columns: Item and Price. Includes Rent of land at \$3 per acre, Manure, 1/2 of quantity applied at \$6 per acre, Plowing and gang plowing, Cultivating, disking and harrowing, Drilling, Men trimming drills, Rolling, Mangel seed, Sugar mangels, Swede turnips, Sowing, Hand-wheel hoeing, Sowing bran and Paris green, Thinning roots, Hoeing, Cultivating, Pulling, loading, unloading, Drawing to root-house, Use of farm machinery, Letting off surface water in spring, Gathering stone. Total cost \$921.38.

Eight acres of mangels grown on a peaty soil gave a yield of 36 tons 750 pounds per acre. Four acres of sugar mangels grown on a very shallow sandy loam gave 20 tons 1,260 pounds per acre. One acre of Greystone turnips, sown July 14th, gave 23 tons 750 lbs. Five acres of Swedes gave 25 tons 1,695 pounds per acre. Total, 526 tons 265 pounds. Average per acre, 29 tons 459 pounds. Valuing the roots at 6 cents per bushel, equal to \$2.00 per ton, a very moderate estimate, the product of the 18 acres is worth \$1,052.25, a net profit of \$130.87.

Macdonald College, Que. JOHN FIXTER.

Shall We Save the Wood-lot?

Editor "The Farmer's Advocate":

So much has been said of late years of the necessity of preserving our timber resources, pulp-wood, and even our common farm wood-lot or "bush," that one almost feels conscience-stricken at the thought of cutting down a tree. The poor things have now become so much the object of veneration that legislation has been devised to induce the rapacious woodsman to "spare the tree." Yet, notwithstanding this, the slaughter still continues, unabated. But does it not seem strange that the very thing which in Great Britain the Government believes has been one of the curses of the country for centuries, viz., the keeping of so much of the land in unproductive forests, untaxed, is just what we are aiming now at doing. But note that I am referring to the cultivable portion of the Province of Ontario. Of the hilly or sandy

parts I have nothing further to say than that it may be wise to continue them in woods to supply the cultivable portion. But for the ordinary farm wood-lot, I think it very unwise to legislate with a view to reducing the taxes on land retained in bush. How can such action be reconciled with the movement to reduce taxation improvements, and increase it on unimproved land. There are several reasons given by the advocates of wood-lot preservation, which I would like to consider briefly:

1. A great deal used to be made out of the idea that forests and wood-lots increased the rainfall. That is now believed to be an exploded theory, no substantial proof having been offered.

2. They increased the water supply. That is doubtless true to some extent in respect to forests at the source of rivers and creeks, but of practically no account with wood-lots.

3. They act as wind-breaks. Doubtless, this also is true of both forests and wood-lots, but of what practical value in either case? Where forests are, wind-breaks are not needed, and the wood-lots are never in the right place to act as wind-breaks, for who would have the "bush" near the house or barn, a breeding-den for rabbits to girdle the trees in the orchard, of skunks to take the chickens and eggs, and squirrels to eat the grain, besides the inconvenience of it? A shelter-belt of evergreens on west and north sides is all right to protect the buildings and orchard. We need the shelter as much or more in winter than in summer, and evergreens are best for the purpose at either season, and especially in winter. Besides, their roots are not such an intolerable nuisance as those of deciduous trees such as grow naturally in our wood-lots. A row of thifty soft maples will injure crops or grass for at least two rods on each side, and hard maples are not much better. As for the wood-lot at the back end of the farm, one on every hundred acres would have some influence in checking the force of storms, but we need considerable wind now to pump water, and it is always valuable in pollenizing grain crops and timothy when kept for seed. Moreover, the presence of a wood-lot greatly retards the drying of the land in spring in the field next to it, and this is often a great drawback. It is also uncomfortably close and hot for both man and beast where the trees so effectually stop the cooling and refreshing breeze. So important is this consideration that it often takes double the time to work and harvest a field near the bush. The crop is also more subject to rust, mildew, and premature ripening. It is true the soil of our fields dries out too quickly now, but it is an open question whether the wind has a much greater effect in this process than steady sunshine in a sheltered spot.

At any rate, cultivation and the earth mulch will overcome this condition, and it is not an unmixed evil that compels farmers to cultivate their soil more. Cultivation is almost everything in farming. It unlocks plant food, aerates the soil, conserves moisture, and, in fact, it is claimed by some leading agriculturists to be the nearest thing to a panacea for all the ills of under-production.

4. They afford a harborage for birds. This is quite true; but I claim that the shelter-belt of evergreens and the orchard are better suited for the kinds of birds which are desirable to retain in the country. The present wood-lot is the rendezvous for hawks and owls and crows, which prey upon the farmer's chickens. The proximity to the buildings, and absence of tall trees in which to nest would act as a deterrent to these birds of prey, and leave room for more desirable kinds. The evergreen is an ideal tree for harboring all kinds of small birds. Some kinds will stay near a shelter-belt of evergreens till early winter. And is it not near the house where we want the birds, so they can be heard and seen easily by travellers



An Attractive Country Home.

Residence of Gov. Saul, Middlesex Co., Ont., Nassau Township.

on the highway, and the women in the house, who seldom, if ever, get time to go to the woods, often over a mile from the house.

5. It has been urged that the wood-lot will guard us against a fuel famine, and that it is as profitable a crop to grow as any on the farm. One might as well say that a farmer shouldn't sell all his wheat, for fear there would be a flour famine, or that the citizen of Old London shouldn't eat his last pound of mutton, or burn his last scuttle of coal, for fear he couldn't get another. If an acre of soil will grow from ten to fifty dollars' worth of produce over all expenses, is it not penny wise and pound foolish to continue growing a crop of wood which, according to the best estimates, will not net over three or four dollars per acre per year, and generally much less? A cord of the best wood in a tree here is not worth more than four dollars, and, according to estimates of foresters, it takes a good thick stand of trees to produce a cord per acre per year. As long as there is fuel in the world at all, it will be available for the buying, and as yet there is no serious sign of its failing. It is quite possible that within a few years we can heat our homes with electricity supplied by wind or water-power, to say nothing of our vast stores of peat and natural gas.

Perth Co., Ont.

J. H. BURNS.

Forestry for Farmers.

Editor "The Farmer's Advocate":

On nearly every farm there are a few acres of land unfit for growing agricultural crops. It may consist of swamp, steep hillsides, stony fields, worn-out sand or odd broken corners inconvenient to cultivate. In Canada such land remains covered with brush, poor timber or scanty pasture. In European countries, where farmers, through intensive settlement, have been driven to make the highest possible profit from every acre, such land is kept producing a crop of timber. There are many advantages in this policy of raising timber—the timber growth indirectly benefits the farm and community, and the wood produced yields a revenue.

Other conditions being equal, a country in which there is a small proportion of timber-land, not less than 10 per cent., preferably nearer 20 per cent., is a more agreeable one in which to live, and a more profitable one in which to farm, than a district which has been cleaned quite bare of trees.

LESSENS FORCE OF WIND.

Standing timber decreases the force of the wind. Dr. Saunders, of the Dominion Experimental Farm, estimates that a shelter-belt or wood-lot provides a shelter 50 feet to the leeward for every foot in height of the trees. R. S. Kellogg, of the United States Forest Service, investigated the influence of shelter-belts in Kansas, and came to the conclusion that they provided shelter for crops one rod to the leeward for every foot in height of the trees. This breaking up of the wind protects crops from being beaten down by gales, and decreases the evaporation of soil moisture. Experiments made by E. H. King, at the University of Wisconsin Experiment Station, show that the evaporation from the soil 200 feet to the leeward from a wind-break is 41 per cent. more than at its base, and at a distance of 300 feet is 60 per cent. more. Where the soil is dry and light, it would thus pay to have a wind-break or shelter-belt in such a location as to provide protection from the prevailing winds. A wood-lot or shelter-belt is always a valuable protection for the orchard, garden and farm buildings.

REGULATES WATERFLOW.

In a hilly country the presence of wood-lots tends to regulate the waterflow. Where the land is all cleared the snow melts quickly and the water running down from the hills carries a great deal of the most fertile soil into the creeks. This action is partially checked where the steep slopes and hilltops are covered with timber. The wooded area holds the snow later in the spring; it does not melt so rapidly, nor does the water run away so quickly, and the moisture which creeps down the slopes tends to keep the valleys and low-lying fields in a better state for cultivation.

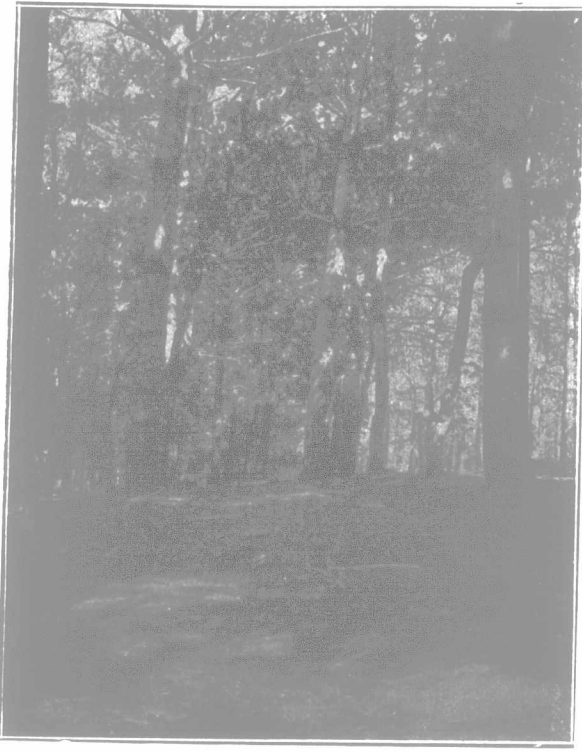
A shelter-belt causes snow to drift close to the trees on the side sheltered from the prevailing wind. Thus a shelter-belt planted some distance from farm buildings forms a snow trap, which prevents snow from drifting close to the buildings. The space between the shelter-belt and buildings is well adapted for a garden or orchard. The accumulation of winter snow serves as an annual reservoir, which stores up moisture for the garden or orchard crops, and the shelter-belt protects the crops from severe windstorms.

HARBORS INSECTIVOROUS BIRDS.

A wood-lot on the farm encourages the presence of large numbers of birds, and reduces the bill for insecticides. The United States Department of Agriculture estimates that the yearly loss to American farmers through insect damage to crops is \$671,000,000. The greatest natural enemies to the insects are the birds which feed upon them.

Where there is no timber on a farm there will be but few birds, but where there is a wood-lot birds will congregate and breed.

The above are the more indirect advantages of maintaining a certain growth of timber on a farm.



27-year-old Plantation of White Pine.

On gravelly soil, in Iowa. The trees are 40 to 50 feet high, with a diameter of 12 to 14 inches.

The great direct advantage lies in the production at home of a constantly-increasing quantity and improving quality of timber, always available for fuel or building purposes. It is an additional profitable crop on a farm secured from land which



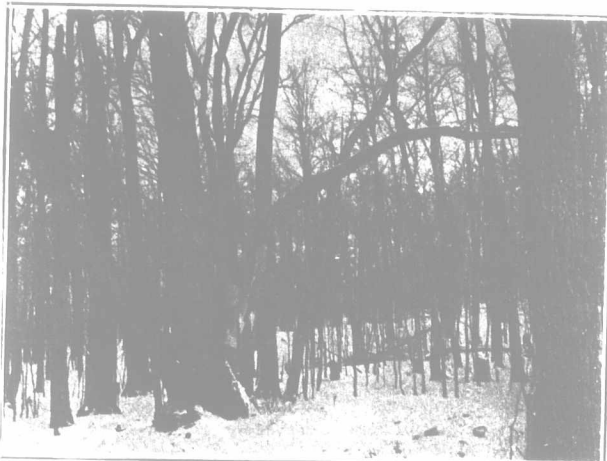
Dense Growth of Young Trees.

Such as will come up on a wood-lot protected from cattle and fire.

hitherto may have been unproductive, or nearly so. Where the wood-lot is of any size there should also be each year a surplus of timber for sale.

IMPROVING THE WOOD-LOT.

Unfortunately, where farms have been long



A Typical Run-down Wood-lot.

The large trees are defective. They should be cut, stock kept out, and the young trees given a chance to grow.

cleared the wood-lots now remaining are in bad shape. Always the best trees have been taken, the poorest left, and in the meantime heavy grazing permitted, until now only a few over-mature,

partially-decayed trees remain, with an undergrowth of ironwood, blue beech, balsam, and other less valuable species. Where the pasture is worth more than the timber and other advantages named above, it is inadvisable to try to improve the wood-lot, for wherever stock are allowed to pasture reproduction of valuable trees is impossible. Where stock graze they browse off the young trees, pack the soil and encourage a heavy sod, which prevents the starting of young trees. But where the pasture is not good, and is not worth more than the improvement of the wood-lot, it is good business for the farmer to take steps to put his timber or waste land in shape.

Forest operations on farms fall into two classes: the improvement of wood-lots already existing, and the starting of plantations on land where there are not at present enough trees.

The first necessity in the improvement of a wood-lot is the shutting out of all stock, to give the young trees a chance to grow. Stock will need to be kept out several years, until the reproduction has reached such a size as to be beyond danger of damage. The second point is to remove the poorest trees; the wood species which do not furnish valuable wood—such as ironwood, beech, birch and balsam. The cutting of these may be done in one season, or in several, according to the desire of the owner. Their removal and the absence of stock will give the trees remaining a chance to seed up the open spaces with valuable species, such as elm, maple, oak, basswood, pine, and others which grow rapidly and produce merchantable timber. As soon as the mature trees of the more valuable species have covered the ground with a thick stand of seedlings, they should be removed in order to save what timber remains in them. On the greater part of the wood-lots remaining in the country the mature timber standing is deteriorating year by year, so that keeping it is, except where prices are going up rapidly, poor economy. The programme outlined above, a mere application of common sense, may cover a period of several years, until all the old timber has been removed at a profit, and until the ground is covered with a thrifty reproduction of young timber. The most important point in the programme is to cut out the poor species first, so that the reproduction may be of valuable species. After the old timber has been removed there will be a gap of a period of years, during which nothing of value can be cut from the wood-lot, but this gap will not be so long as it will be on those farms where no plans are being made for the continuance of timber. Several acres of thrifty young timber, even if it cannot be cut at a profit, will have a sale value and will enhance the price of a farm. This influence will be greater in a few years, when the decrease in the supply of hardwoods becomes more marked.

ANNUAL GROWTH PER ACRE.

A well-stocked wood-lot on fair soil will produce 1½ to 3 cords of wood per acre per year. This would mean that managing a ten-acre wood-lot, on the basis outlined above, cutting the mature timber, letting the young growth take its place, would provide an annual crop of 15 to 30 cords of wood, and yet leave the wood-lot in better condition, for if the process of selection were continued there soon would be nothing left but perfect specimens of valuable trees—all readily salable for timber.

CORPORATIONS AND COMMUNITIES GROWING

In United States and Canada many corporations and communities have figured that they can plant trees for timber and realize good interest on the land and capital involved. Chief among these are the Canadian Pacific Railroad, Pennsylvania Railroad, and the State of New York. The farmer is in a better position than any to plant trees for a profit; he does not buy land as do the corporations, but uses land which, in the majority of cases, would otherwise be waste. He does not pay so highly for the labor, and for the few days' work which the operation takes on the ordinary farm, incurs no actual cash outlay. At present the farmers of Ontario, Quebec and the Western Provinces do not even have to buy the trees, but can secure them free from the Provincial and Federal Governments, and can get with the trees expert advice and assistance for their planting.

SOME RETURNS FROM TREE-PLANTING.

Planting is of such recent date on this continent that but few instances can be given of actual results. A few examples are given here to show what might be expected from well-managed plantations.

In the spring of 1891, one-third of an acre of good land was planted with two-year-old seedlings of American elm, at Brandon, Man.; 1,613 trees were set out at a distance apart each way of 3 feet. In 1903, after 12 years, there were 805 trees standing, with an average height of 25 feet. Accepting a length of 7 feet and a top diameter of 2 inches as the minimum size for a post, 350 trees were too small for posts, 496 were large enough for one post each, and 85 were large enough for two posts each. The total number of posts was 660 for one-third acre, or 1,980 per acre. Valuing the posts at 10 cents each, the plantation was worth \$198.00 per acre when 12

with an under-balsam, and other pasture is worth to improve named trees is impossible. off the young trees, heavy sod, which trees. But where not worth more good lot, it is good steps to put his

s fall into two wood-lots already plantations on land enough trees.

improvement of a all stock, to give low. Stock will s, until the repro- as to be beyond point is to remove ies which do not ironwood, beech, of these may be al, according to removal and the trees remaining a ces with valuable basswood, pine, ly and produce a as the mature ies have covered of seedlings, they ave what timber ter part of the try the mature year by year, so rices are going programme out- of common sense, ars, until all the a profit, and un- thrifty reproduc- important point the poor species y be of valuable as been removed of years, during of from the wood- long as it will e being made for veral acres of and not be cut at and will enhance will be greater in the supply ed.

ACRE. r soil will pro- acre per year. a ten-acre wood- cutting the ma- rowth take its rop of 15 to 30 wood-lot in bet- of selection were ething left but trees—all readily

ES GROWING many corpora- l that they can a good interest l. Chief among New York. The n any to plant and as do the in the majority He does not r the few days' on the ordinary v. At present and the Western the trees, but incial and Fed- h the trees ex- planting.

E-PLANTING. e on this con- e given here to a well-managed of an acre of ar-old seedlings n.: 1,613 trees each way of 3 here were 805 ight of 25 feet- a top diameter or a post, 350 96 were large 85 were large otal number of or 1,980 per ts each, the acre when 12

years old. According to N. M. Ross, in charge of the Forest Nursery Station, the cost of establishing and taking care of the plantation was not more than \$16.00 per acre. This leaves a profit of \$182.00, or an average annual profit of \$15.17 per acre. This return would increase as the plantation become older and the trees larger, as the first few years are the least productive.

E. J. Zavitz, in charge of the forest-planting operations of the Ontario Government, has made a conservative estimate of the revenue which may be depended upon from a plantation of white pine, at the age of 60 years, after calculating all possible expenses, most of which would be met upon a farm by an expenditure of labor not reckoned as actual cash. The land on which this planting might be done would be of small value for other purposes, and is placed at \$5.00 per acre.

The estimate is given here:

Cost of land, \$5, at 3½% for 60 years.....	\$ 39.39
Cost of plants and planting, \$10, at 3½% for 60 years	78.78
Management and protection, 15 cents per year, at 3½% for 60 years	29.48
Taxation, land worth \$5, at a 17-mill rate for 60 years	17.69
Total	\$165.34
Less original cost of land	5.00
Total expense	\$160.34

From various growth studies made in the Lake States and elsewhere, it is quite reasonable to say that an acre of 60-year-old white pine, artificially planted, will contain about 200 trees, varying from 12 inches to 24 inches in diameter. Assume that there will be 200 trees, 18 inches in diameter, which is a conservative estimate; this 18-inch tree will cut 400 feet, B.M., and the acre would yield 80,000 cut. At a stumpage value of \$100 per thousand feet the acre would be worth \$800.00.

The above estimate does not take into consideration the thinnings which would come during the period. The \$800.00 represents only saw material, and there would without doubt be a market for the smaller dimensions.

Stumpage value for one acre of white pine, 60 years old	\$800.00
Total cost, as shown above	160.34
Net profit, after allowing 3½% interest on all expenditure	\$639.66

As an illustration of what may be done by small plantations in good soil, the average returns from four larch plantations in Iowa may be considered. These four plantations varied in age from 24 to 33 years. The average diameter of the trees on the four plantations varied from 8 to 10 inches. The average annual growth per acre of the four plantations varied from one cord per year per acre on the poorest to two and three-quarter cords per year per acre on the best. At the time these measurements were taken the crop was most valuable for use as telephone and telegraph poles, of which, averaging the four plantations together, there were 309 per acre. Valued at one dollar each, the crop of poles gave a return of \$10.75 per acre for each year of the life of the plantations. Such an example, taken from actual experience, shows the profit that may be realized from small wood-lots, shelter-belts, or wind-breaks. The conditions in Western Ontario are quite as suitable for tree growth as in Iowa, and returns would consequently be as satisfactory.

H. R. MacMILLAN.

Average Farm Manure Pile Worth \$200.

Editor "The Farmer's Advocate":

Your very suggestive article on the value of manure, in the December 30th issue, is of more than ordinary importance, and as you invite discussion by your readers, we would give you the results of our observations and experience on the subject. As you suggest, it is not possible to fix the actual value of manure, because we cannot find out just when its constituents are all used up by growing plants, nor do we know exactly all its function in promoting plant life. What we do know is but "A beam in darkness." Our duty is to follow on till we have a clearer light. We have lately proven that soil otherwise perfectly devoid of organic matter will mature crops by its use. Two years ago we dug a cistern, and we took two barrow loads of clay from the bottom, 8 ft. deep. This we heaped up, and left it exposed all winter and the following summer. The following autumn we dug out a square one foot deep, put in a box without a bottom, which we filled with the raw clay. We worked into the surface about ½ inch of rotted manure, to give the seedling plants a start, as we intended to sow fall wheat. The weather being so dry we deferred sowing until it was too late. Last spring we sowed peas, oats and barley upon it; the result was a surprise to us. The peas did much the best (we had always thought that peas required

considerable humus to do well); the barley headed well, but the straw was weak and rusted; the oats made but a poor growth. The plot received no extra attention, and received only the rain which fell; this, of course, would supply a certain amount of fertility, the rest must have come from the air and manure applied. The opinion is generally held that fertile soil is rather injured than benefited by manure. This we have proven is not so; we believe that applied in moderation and in the right way it is always beneficial. We believe that the most important function of manure is to promote the development of bacteria in the soil. If this be true, a moderate application (say 10 tons, or 5 loads per acre) cannot but be beneficial. This is especially so when applied on grass land; which we believe to be the only correct way to apply it, for the reason that it is all taken up by the dense growth of grass; this, when plowed up, gives back to the soil, by its gradual decay, all the fertilizing elements in the manure previously applied. The effects of the use of manure are influenced greatly by temperature and moisture; when these are suitable to the conditions of healthy growth the effect is most marked, it is not so marked on fertile as on poorer soils; in fact, we have seen on summer-fallowed land no apparent difference in the crop where manure was applied and where it was not. The reason is obvious; there was already sufficient available plant food in the soil, hence we often see splendid crops of barley grown on wheat stubbles after fallow. We have seen some marked effects of the lasting properties of manure. When we purchased our farm 36 years ago we erected our buildings on a new site—the old site being in the middle of a field; the crops have always grown more rank on this spot, though no manure has ever been put upon it.

On an adjoining farm some years ago our neighbor manured about two acres across the center of a field for potatoes; he applied about 25 loads per acre. Seven years afterwards we purchased this property, and summer-fallowed that field and sowed to fall wheat. The following harvest these two acres were very noticeable from the stronger growth and earlier maturity, proving either that some of the fertility of the manure still remained, or that its mechanical effects on the soil were still continuing.

Speaking generally, the value of manure is not appreciated fully. It is too often looked upon as a nuisance, to be got rid of in the easiest way. The near-by fields get the most of it. We have known farmers give it away, or sell at 25c. per load, to get rid of it. The reason given is the crops go down when we use it. This, we consider, is not the true reason. We have seen very heavy crops stand when very light crops have fallen down. This condition may arise from a deficiency of silica in the soil; or, as is more often the case, an excess of moisture during a heated term promotes a too rapid, and consequently, an unhealthy growth.

What we have said does not answer the question, what is manure worth per ton? We once applied five loads—about 10 tons—per acre on pea stubble for fall wheat, one-half of the field, which was fairly even in quality, not receiving any manure. The whole field received the same preparation and the same seeding. At harvest time, as nearly as we could estimate, the manured plot yielded five bushels per acre more than the other. This gave a value of \$1 per load for the manure; assuming that its fertilizing value was exhausted, which what we have previously said proves was not the case.

I should say from my life-long experience in farming, that the manure produced on the ordinary 100-acre farm yearly has a money value of \$200. This can best be seen by supposing the case of two adjoining farms of equal fertility, cropped for a period of ten years, the one with the manure made upon it and applied yearly, the other with the manure taken off it. The difference for the first five years might not be very marked, but after that there would be a rapid falling off in yield on the unmanured land; the yield would be at least one-third less, and to the same extent would the property depreciate in value.

We have in mind a farm in the Nottawasaga Valley, which thirty years ago, under good farming, gave yields of 100 bushels of oats per acre, which in the past season did not yield 30 bushels per acre. It is false and unscientific to say that soil cannot be exhausted. We very much question the possibility of keeping up soil fertility for a lengthy period without animal manure, hence the making of it, the care of it, and the time and manner of applying it should all be interesting topics to "The Farmer's Advocate" readers, and we trust that this subject will be taken up by abler pens than ours, and that farmers generally may be stirred up to rightly appreciate this important waste product of the farm. FOYSTON BROS., Simcoe Co., Ont.

A Farm Census is to be taken by the United States Department of Agriculture on April 15th, next.

Live-stock Values and Wages.

The Census and Statistics Office, at Ottawa, has given out a statement on farm-land values, the values of farm animals and wool, and of the average wage paid farm and domestic help. The statistics are based on the reports of regular correspondents in every constituency in the Dominion.

The average value of occupied farm land in the Dominion is placed at \$38.60, as against \$35.70 last year. All the Provinces, except Prince Edward Island and British Columbia, show slightly increased values over last year. This upward tendency is due to the increased market value of all kinds of farm products. The lowest value, \$20.46, is shown for Alberta, and the highest, \$73.44, for British Columbia. Values are high in the last-named Province owing to the comparatively large extent of farm land there under orchard and small fruits.

The average value of occupied farms in Manitoba shows an increase of \$1.64, in Saskatchewan \$1.14, and in Alberta an increase of \$2.26 per acre over last year. In four of the Provinces the value is over \$30 per acre, being \$32.07 in Prince Edward Island, \$30.50 in Nova Scotia, \$43.37 in Quebec, \$50.22 in Ontario, and \$73.44 in British Columbia. In New Brunswick the average is \$23.77, in Manitoba \$28.94, in Saskatchewan \$21.54, and in Alberta \$20.46 per acre.

Although the values of farm animals are very close to those of last year, yet they show a steady increase for all classes in all the Provinces. The average value of horses at the end of the year is \$49.29 for those under one year old, as against \$46 last year; \$106, as against \$100, for those of from one to under three years; and \$150, as against \$143, for those three years and over. Horses of the last class have the highest value in the Western Provinces, being \$187 in Manitoba, and \$165 in British Columbia. In Ontario and Quebec they are about \$144. In the Maritime Provinces they are \$126 to \$137.

Milch cows have an average value in the Dominion of \$36, as against \$34 last year. In the Maritime Provinces they have a value of \$31, in the Northwest Provinces \$30, in Quebec \$33, in Ontario \$40, and in British Columbia \$51. These averages are generally close for all Provinces, the lowest value being in New Brunswick, and the highest in Ontario and British Columbia.

Other horned cattle have an average value for the Dominion of \$10, as against \$9 last year, for those under one year; \$23, as against \$21, for those of from one to under three years; and \$33, as against \$32 last year, for those of three years and over. Animals of the last class are about \$38 in Ontario, Nova Scotia and British Columbia; from \$28 to \$30 in Manitoba, Quebec, New Brunswick and Prince Edward Island, and \$40 in Saskatchewan.

The average value of swine is given as \$7.90 per 100 pounds, as against \$5.86 a year ago. The values are very close for all the Provinces, being \$7.33 in Ontario and Prince Edward Island, \$7.26 in Nova Scotia, \$7.36 in New Brunswick, \$7.00 in Manitoba, \$7.20 in Alberta, and \$7.50 in British Columbia; but in Quebec the average is \$9.62 per cwt.

The average value of sheep for the Dominion is \$5.89, as against \$5.23 last year. They are above the average in the Northwest Provinces, British Columbia and Ontario, and below the average in Quebec and the Maritime Provinces. From the general trend of remarks by correspondents, it would seem that, owing to the ravages of dogs in the Eastern Provinces, and wolves in the Western Provinces, this industry is on the decrease.

The total value of farm animals, computed on the foregoing averages and the number of animals on farms in June, was \$558,790,000, as against \$531,000,000 in 1908. The value of horses is put down at \$278,759,000, milch cows at \$103,601,000, other horned cattle at \$126,326,000, swine at \$34,368,000, and sheep at \$15,735,000; and the average value as \$130.72 for horses, \$36.36 for milch cows, \$28.81 for other horned cattle, \$41.80 for swine, and \$5.89 for sheep. The June price for wool for the Dominion was 17 cents per pound for unwashed, and 24 cents for washed wool.

WAGES.

The average wages during the summer season for competent farm and domestic help for the Dominion is \$23.69 per month for males, and \$11.08 for females, exclusive of board; and per year, \$226.29 and \$116.08 for males and females of the same class. These figures are for the native-born; the wages for immigrants are lower. The average value of board per month is placed at \$10 for males, and at \$8 for females.

The highest wages are reported for the Western Provinces, where they reach \$30 per month and \$300 per year for males, and \$17 per month and \$171 per year for females. A large majority of correspondents comment on the scarcity of reliable farm and domestic help, and report that neither male nor female help make yearly contracts. It would appear, from the reports of correspondents, that the more general practice is to employ male help during the busy season by the day, and the wages range from \$1.00 per day in

the Maritime Provinces, to \$2.50 and \$3.00 per day, with board, in the Western Provinces. In Ontario, the average monthly wage for men is \$23.52 and \$10.22 for women.

THE DAIRY.

I wouldn't give ten cents for ten carloads of aerators.—(Geo. H. Barr.)

"There are very few mortgages on the farms of Eastern Ontario; we are into dairying."—J. R. Dargavel, M.L.A.

There is just as much sense paying the same price for 4½ and 3 per cent. milk as in paying the same price for screenings and good wheat.—[N. P. Hull.]

Six thousand four hundred and fifty-three pounds of milk, and 271.01 pounds of butter-fat per cow, is the average 1909 production of a herd of fifteen head belonging to Halliday Bros., Comox-Atlin District, British Columbia. The greatest yield of butter-fat of any cow was 378.08 pounds; the lowest, possibly by a heifer or a cow milking only part of the time, was 179.42 pounds. J. H. Grisdale, who supplies these particulars, adds that he considers it a most satisfactory showing.

Increase in English Milk Prices.

The cost of milk production has largely increased in England in the last few years, but dairymen have been unable to get higher prices from consumers, largely owing to lack of combination, writes an English correspondent. A concerted effort is to be made to get better prices, and it is probable that the larger centers of population will have to pay more for milk.

There are curious divergencies in prices in some districts only a few miles apart. In Lancashire, Rochdale and Oldham are practically contiguous towns, but Rochdale dairymen get only 3d. per quart for milk, while Oldham retailers get 4d. Most large provincial towns now pay 4d., and an effort is to be made to make this price uniform in the provincial towns.

The recent disclosures on foreign condensed skim milks have been before various Boards of Agriculture, and resolutions have been passed demanding that all such milks should be prominently labelled "Unsuitable food for children."

Saskatchewan Dairying.

It is remarkable what can be accomplished in connection with the dairy industry, even in a great grain-growing country, when reasonable attempts are made to place it on a sound basis. A comparison of the seasons of 1908 and 1909 reveal an increase of 323 patrons sending to eleven creameries in the Province of Saskatchewan, and an increased output of 123,122 pounds of butter from these creameries. The average selling price from six creameries under Government supervision was 23.44 cents, and the average cost of manufacture 2.92 cents. Patrons received the gross selling price, less the actual expenses connected with manufacture and marketing.

Saskatchewan's development has been due largely to a rational system of education along dairy lines among farmers, and to a concentration of effort at points where success can reasonably be expected. High quality in the product turned out guarantees satisfactory prices, and the patrons have learned that to maintain a uniformly high-grade butter a rich cream should be supplied. Cream wagons are provided with small cans, so that each patron's cream is kept in a separate vessel, where it can be examined before there is a chance of it being contaminated by mixing with cream from another patron.

POULTRY.

Profit from Flock of Brahmas.

Editor "The Farmer's Advocate":
In answer to your invitation to readers to give their experience with a flock of hens, and in raising chickens, the following may be acceptable, although not making as big a showing as some.

HENS FOR EGGS.

I started in 1909 with a flock of 36 well-bred Light Brahma pullets. The henhouse is by no means a modern building, being a basement under driving shed. Not being light enough to suit my fancy, I cut out some of the boards and filled in with cheesecloth, thus providing both light and air. The floor was covered with about six inches of chaff, which was occasionally added to or renewed. All feed, except the mash, was scattered here in winter; in summer, the pullets were fed outside. As I had never bothered with the hens before, I was in some doubt as to the right amount to feed, but one of Professor Graham's bulletins set me on the track, and I found out the

afternoon, with a small quantity of whole grain to "fill up the corners." The grain consisted of buckwheat, oats, barley and wheat, the first named forming by far the largest part. In addition were fed skim milk, buttermilk, mangels, potatoes, and a little meat, and gravel ad libitum. The mash was made of chopped buckwheat, oats and barley, mixed dry with clover leaves, then hot mashed potatoes and boiling water poured over them. What meat was fed was mixed in the mash, but the skim milk was mainly depended on for the supply of protein. All whole grain was well buried in the chaff, and it was very seldom that the hens were found idle. In very severe weather, snow was given, instead of water, and seemed to serve just as well. In summer, as has been mentioned, the hens were fed outside, the grain being scattered very thinly among the grass, or among a patch of sunflowers, planted for shade. Here is where the big mistake was made, for, owing to the scarcity and high price of grain, the birds were very sparingly fed. I believe that it would have paid much better to have bought feed then, and fed the hens more liberally, and I intend to try it during the coming summer.

The results are not very startling, but they show that hens well looked after will pay a good deal better than any other farm stock; and also that the light Brahma is not to be despised as a laying breed.

The total number of eggs laid in the year by the 36 pullets was 300 1-3 doz., being 100 eggs per hen, of large size, and a uniform brown color. The average price per dozen throughout the year was 20.3 cents, a comparatively low price, judging by the market reports. This gives a total of \$61.19 for the year. The cost of feed, including meat, milk, potatoes (and also cost of leg bands), was \$33.30, giving a net profit of \$27.89, or 81 per cent. on cost of feed.

There were only eight days in the year when the hens did not lay any eggs. The number for each month was as follows: January, 2½ doz.; February, 16 2-3 doz.; March, 55 2-3 doz.; April, 55½ doz.; May, 48 1-6 doz.; June, 33½ doz.; July, 20 doz.; August, 15 1-6 doz.; September, 33½ doz.; October, 12 1-3 doz.; November, 2 5-6 doz.; December, 4 1-12 doz. The pullets also made good growth during the early part of the year.

RAISING CHICKENS.

In this department my success was not at all conspicuous, but a great deal of useful experience was gained, which may also be useful to others. A very minute account of each hatch was kept, and forms a good guide for future incubations. I would advise every person who runs an incubator to have a small book for the purpose of recording temperatures, times of cooling, percentage of fertile eggs, and chicks dead in the shell, or any other incident in connection with each hatch.

As my flock was composed entirely of pullets, I thought it advisable to buy eggs from mature birds, but I would probably have had greater success had I stuck to my own birds; for, in six hatches, only 73 per cent. of the eggs were fertile, and many had weak germs. This might be expected in winter, but in summer I certainly expected to find a greater percentage of fertile eggs. However, even under these circumstances, a fair profit was obtained, which shows that, with better conditions, the profit would be more than satisfactory. We had no difficulty in raising the chicks after they were hatched, as will be seen from the fact that, out of 250 hatched, 210 were alive at three weeks old, and 220 at ten weeks. These, sold at different ages, from 10 weeks (broilers) to maturity, brought in a total of \$75.83, the price varying from 20 cents per pound in June to 9 cents in September, live weight. The cost of feed was \$33.80, cost of eggs for hatching, \$10, and, what I think should always be counted, depreciation in value of incubator and brooder, \$6; coal oil, at \$1, brings the total cost of raising to \$53.80, leaving a net profit of \$22.03. This does not seem much, but it must be remembered that, if twice as many chickens had been raised, the cost of running incubator and brooder would remain the same, and the receipts would be much larger. Or, if as many chickens had been raised in the first three hatches as in the whole six, the chicks would have been larger, and therefore, more valuable. And these were both possible, considering the low percentage of fertile eggs.

A few words as to running the incubator and brooder might help others to avoid some of the mistakes I have made, and profited by. Best results were obtained by

1. Spraying with Zenoleum, and using buttermilk, as moisture, changed every three days, and removed on the 18th day.

2. Starting with a temperature of 101½ degrees, gradually increasing to 103 during the last week.

3. Cooling first week only while turning; second week, 20 minutes per day; third week, 30 minutes per day, stopping on the 18th day.

4. Testing by sunlight. This can be done by covering a window with a thick cloth, in which a

Testing by lamplight was very unsatisfactory.

The chicks should not be fed for twenty-four hours, at least, and as soon as possible be allowed on the grass. Breadcrumbs and eggs seem to be the most suitable food, with skim milk for drink. Very little heat in the brooder is sufficient, and, in summer time, their natural heat is usually sufficient. Shade is a necessity, and a patch of sunflowers is as good as anything. Plenty of fresh water or skim milk should be given as the chicks grow older; it is surprising how much the little things drink in the hot weather, and in most cases they do not get nearly enough.

These remarks are the result of very careful observation, and while they are neither original nor final, they may serve to help, in a small way, some who are starting in the business of poultry for profit.

WALTER HAIGRAVE.

Waterloo Co., Ont.

Will Keep Water Vessels Clean.

W. R. Graham, Poultry Manager and Lecturer at the O. A. C., in an address at the Winter Fair, Guelph, recommended the use of a small quantity of potassium permanganate in the drinking water supplied to poultry, as a means of keeping the water vessels clean, preventing them becoming slimy. Asked as to the exact amount he would advise his recipe is, "As much as would lie on a five-cent piece to about four gallons of water."

APIARY.

Bees and Fruit Blossoms.

At a meeting of the British Beekeepers' Association, held last October, T. W. Cowan, speaking from the chair, introduced the subject, "Beneficial Results From the Fertilization of Fruit Blossoms by Bees." His address, which we abbreviate, appeared in the British Bee Journal of October 14th, 1909.

It is not my intention to go into all the reasons why we do not make the most of our orchards, as other countries do, by scientific cultivation, but I wish to show that fruit-growing, to be successful, should be combined with beekeeping, and that without bees large crops of good fruit are not to be obtained.

The horticulturist in his work has to deal with two groups of insects, those which are injurious, and those which are beneficial. The injurious insects receive the most attention, while the quiet and successful work of beneficial insects is not observed. For convenience, we can divide these latter into two groups: those which are indirectly of benefit, such as the "ladybirds" and parasitic hymenoptera, which, by their habits, prey upon injurious insects, and those which are directly beneficial by creating useful commercial products, such as the silkworm and honeybee.

The causes that sometimes make trees unfruitful are: (a) Vigorous wood-growth, (b) unhealthy condition and lack of vigor, (c) fungous attacks on the blossom, (d) frosts, (e) bad weather during the flowering season, and (f) lack of bees to fertilize the blossom. Let us here refer to the two last.

Rain, during the blooming season, is a frequent cause of unfruitfulness, and in California it is estimated that more fruit is lost from this cause than from all other causes combined. Continuous rain may wash away the pollen, and it may lose vitality, but the principal cause of unfruitfulness at such times is the fact that insects, and particularly bees, which promote cross-fertilization between varieties, are absent.

Unfruitfulness may be due to a scarcity of bees. An instance of a forty-acre orchard of Alexander peaches, at Penryn, California, from which the owner complained that he could hardly get any fruit, may be mentioned. It was noticed that there were no bees of any sort on the blossoms, and, on inquiry, found that the nearest apiary was five miles away (too far for the bees to be seen at once). The owner was advised to get some bees at once, and to spare the trees for another season (he was about to cut them down). He took the advice, obtained two colonies of bees, and placed them in the center of his orchard. Of course, by that time more than half the blossom fruit, the trees nearest the hives having the most on them. The next year he got more bees, and the orchard was a perfect sight, being so laden that all the fruit had to be thinned.

Some trees are self-sterile, and are unable to set fruit when planted alone, but must have some other variety planted near to become productive. However, if two trees of a self-sterile variety are planted together, both will often be made fruitful, because the pollen of each, although unfruitful in itself, is fruitful on the other. It has also been found that, although the pollen may fertilize another tree of the same variety, the pollen from a different variety is prepotent, and the result is seen in the superior quality of the fruit.

An orchard of Bartlett pear trees in New York

POOR COPY

ing two Clapp's Favorite trees which had been planted by mistake. The same thing occurred at another place in the orchard surrounding a Buffum tree.

Not only has cross-pollination a good effect on the quantity of fruit produced, but the influence of the pollen affects the character and quality also. It is said to have been found that cross-pollinated trees produced larger and better-flavored fruit containing more perfect seeds.

The pollen of the pear and apple is not produced in sufficient quantity, nor is it of the right consistency, to be carried by the wind, and the pollination of the trees is, therefore, dependent on the activity of insects. Warm, sunny weather favors insect visits, while cool or rainy weather interferes seriously with them. In spring, when fruit trees are in bloom, there are twenty bees flying and visiting blossoms to one of any other kind of insect.

I have said enough to show that not only beneficial results are obtained by cross-fertilization, but that there should be enough bees in the neighborhood, within a couple of miles, to visit the flowers properly. In the case of large orchards, especially where there are several close to each other, if there is no apiary near-by, each orchardist should keep a number of beehives, as we have seen that honeybees and other members of the bee family are the best workers in cross-fertilization.

GARDEN & ORCHARD.

Would Prefer Manure at \$3.00 a Ton.

Editor "The Farmer's Advocate":

In your issue of December 30th you ask, What is a ton of manure worth? and then proceed to say that it varies in its intrinsic value, according to a variety of conditions, all of which is quite true.

It seems to me that the true value of farmyard manure should be based upon, first, the commercial value of its constituents, if you were obliged to buy them in the form of commercial fertilizers, together with any other added value that farmyard manure may have over that which commercial fertilizers have, because I take it for granted it is not worth while arguing that all soils become depleted in time, and require to be fed from some source or other. Every farmer, no matter what kind of crops he is growing, will surely concede this. It is true different kinds of soils will become depleted only in a greater length of time than others from various causes, but sooner or later soil exhaustion must take place if the land is continually cropped; the process goes on very rapidly when crops are taken off the land and sold. So, it being conceded that the land requires constant fertilizing to repair the exhaustion, the only point necessary to consider is, what is the cheapest form in which to supply this fertilizer? As you say, farmyard manure varies wonderfully in its composition; so, for purposes of calculation, about the only thing we can do is to take an average sample. In a bulletin issued by the Central Experimental Farm in 1898, an average analysis is given of manure unbleached, but mixed with litter. Figuring nitrogen at 15½ cents per pound, phosphoric acid at 4½ cents per pound, and potash at 4½ cents per pound, in this bulletin, the values of ordinary farmyard manure would run about \$2.10 per ton. This would, no doubt, be somewhat reduced under the conditions existing in the ordinary barnyard, where there is a great deal of leaching, and where sometimes the manure is allowed to heat to the extent of burning. Snyder, in his "Soils and Fertilizers," gives as the average composition of farmyard manure .5 per cent. nitrogen, .5 per cent. potash, and .35 per cent. phosphoric acid. I understand the present price of nitrogen is 16 cents per pound, phosphoric acid 6 cents per pound, and potash 5 cents per pound. At these values, a ton of manure would be worth \$2.52. But we can purchase at the dearest market, perhaps, in Canada, namely, Toronto, what is equal to farmyard manure at about 75 cents per ton, loaded on the cars. The freight to this district amounts to about 50 cents per ton; teaming and spreading on the field, say, 25 cents per ton, depending upon the distance, or a total cost of about \$1.50 per ton, put on the field. This price, therefore, though it may seem high, is much less than the real value of the constituents in the manure if purchased in the shape of artificial fertilizer, and leaving aside all other considerations, is a much cheaper way of getting the necessary elemental constituents of plant-growth than by buying artificial fertilizers. But this is only part of the value of farmyard manure.

On all kinds of clay soils or heavy clay loams it has mechanical value, loosening the soil, making it friable, and capable of absorbing and retaining moisture, and of admitting more readily the light and heat—all of which are so absolutely necessary to the growth of plants. But the third, and in many cases the greatest value the farmyard manure has over commercial fertilizers, is the value of the humus produced by the rotted manure. Everybody knows that a new soil is fertile, and produces heavy crops. All experiments show that

if you were to put the mineral products and nitrogen that have been extracted from the soil upon a well-worked soil, you could not, year in and year out, get the crops you would when the soil was new. Why? Because the old soil will not retain and absorb moisture, since the humus has been exhausted. Every farmer knows that, to produce crops, you must have abundance of moisture. The rootlets cannot absorb the fertilizing elements of the soil except in a fluid condition. Moisture is necessary to carry the fertilizing material into the plant, so one of the chief aims of an agriculturist should be to put his soil into such a condition that it will absorb and hold the greatest amount of moisture, provided that moisture is not stagnant. I have seen fields of naturally fertile, friable soil which have been constantly worked for twenty years, get into such a condition that when the warm showers of summer fell, the first dash would run the soil together, and the balance of the rain would run off into the furrows and pass away to the creeks. Every drop of it was required by the roots of the trees; the consequence of its escape was a crop of apples none of them big enough to pack. Vetches were put on this field two years, and, although they were not plowed under the first year, they loosened up the soil to such an extent that the rains, as they fell, were absorbed by the soil, and the apples were of normal size. Every farmer is acquainted with that condition of soil who owns a clay loam or a clay farm, where the soil will run together. Such soil requires humus or vegetable mould mixed with it to absorb and hold water.

It is a mistake to suppose that such soil is necessarily poor. It may have plenty of the elements necessary to plant-growth in it, though usually it has not; but, if artificial fertilizer were applied to such a soil in ever so abundant quantity, a crop would not necessarily follow. A sufficiency of moisture would be required. The moisture in such a soil, instead of being absorbed into the land, largely runs off. Then, again, in lighter soils, where the humus is worked out, the moisture passes through the soil and leaches away, and is not held near the surface, where it is required, because of the lack of vegetable mold, which would retain it. So that, upon all heavy soils that are likely to run together, and upon all light soils that are subject to leaching, the value of farmyard manure, decomposed into humus or vegetable mold for the purpose of retaining the moisture necessary to plant-growth, is equal, I think, to its commercial value for the constituents contained in it, of nitrogen, potash and phosphoric acid. So we have three values for farmyard manure, against only one value in commercial fertilizer.

First, there is the commercial value of the constituents, say \$2 per ton; secondly, the mechanical value as a loosener of soils, impossible to estimate in dollars and cents; thirdly, its value as a producer of humus, absolutely necessary on most soils to retain moisture. This value, also, is impossible to estimate, in dollars and cents. To sum up, for my own use, under average conditions, I would prefer to pay \$3 per ton for good farmyard manure than to buy artificial fertilizer at current rates. However, there is a use for artificial fertilizer. A soil may have plenty of nitrogen, may be full of humus through the plowing under of green crops, or otherwise, but may be lacking in phosphoric acid or potash, and the surest way to find this out is to test small plots with crops. An analysis of the soil is another way to test it, but it is somewhat uncertain, as, to obtain anything like accurate results, a great number of samples should be taken. If potash alone were needed to make a soil complete, of course it would be not only wasteful to put on farmyard manure, but might be disadvantageous. In such cases the potash could be furnished most cheaply by the application of wood ashes. So, there may also be soils that have a sufficiency of nitrogen and potash, but be deficient in phosphoric acid, in which case it would be economy to apply phosphoric acid in some form or other of commercial fertilizer; but my experience is that most soils that require fertilizer require at least as much of nitrogen as is found in farmyard manure.

It is only very rarely that crops or fruit trees, even, are injured by too great an application of nitrogen in the application of farmyard manure, although, undoubtedly, there are some such cases. For instance, a peach-grower, having an orchard that produces wood abundantly, but is not producing fruit abundantly, might find that, by the application of phosphoric acid or potash, or both, he would restore to the soil the natural proportions of the elements necessary for the production of a crop of peaches, but such cases are rare. Nine times out of ten, farmyard manure is just what the peach crop wants.

Strawberries, raspberries, blackberries, gooseberries, currants, are all great users of nitrogen, and there is no danger of excess of nitrogen by the application of farmyard manure. Nitrogen is just what these crops are usually most in need of next after moisture.

On account of the fact that a rapidly-growing pear tree blights more readily than one making less wood-growth, it is advisable, on good soil, to

fertilize pear trees with potash and phosphoric acid in some form or other, and leave out the nitrogen. But, for all other fruit crops, nine times out of ten, I prefer farmyard manure at \$3 per ton, to the use of artificial fertilizers at current rates.

E. D. SMITH.

Wentworth Co., Ont.

Selling British Columbia Fruit.

Early last summer the British Columbia Government appointed J. S. Metcalfe to investigate the best method of handling the fruit output of the Province. Mr. Metcalfe spent most of the summer going from town to town in the three Prairie Provinces, and talking with dealers and consumers. He considers the market for British Columbia fruit to be almost unlimited. No matter how fast the orchard acreage increases, the population and wealth of the Prairie Provinces increases still faster. Manitoba is partially supplied with Eastern fruit, but in Alberta and Saskatchewan he found little fruit from the East, and a strong demand for fruit from the Coast Province.

Apples, pears and peaches from the West have been giving satisfaction, but there are complaints of the grading and packing of berries. Plums and cherries do not seem to hold up well, and it is advised that cherries, in particular, be sent to nearest Alberta markets alone, and then only by express.

More fruit is wanted. The supply is not sufficient for the trade. Competition from Ontario, and especially from the Western States, is keen. A large proportion of the jobbing-houses were found to be under the control of Americans. Wholesalers contend that British Columbia prices are too high, but retailers to whom fruit has been sent direct, are quite satisfied with them.

Mr. Metcalfe thinks that a campaign of education is necessary along the following lines:

- Growing more fruit, both large and small.
- Growing better fruit.
- Growing varieties wanted by the prairie market.
- Better grading, packing, and filling of fruit packages.
- Care in loading cars.
- Co-operation, so that uniformity in varieties, prices, and method of handling and selling may prevail.

More Apple-packing Convictions.

The following persons have been convicted for illegal marking and packing of apples, as a result of prosecutions by the Dominion Fruit Inspectors, since the middle of December: Vair & Gossling, Barrie, Ont., fine, \$10; R. D. Sloan, Blyth, Ont., \$10; Jas. Brown, Clinton, Ont., \$10; D. Canteleon, Clinton, Ont. (8 charges), \$200; G. T. Turnbull, Seaford, Ont. (2 charges), \$20; J. A. & E. Brown, Port Hope, Ont., \$50; Dickson & Clarke, Brighton, Ont., \$10; R. J. Ross, Brighton, Ont., \$10; A. L. Kent, Oakville, Ont., \$10; T. F. Cain, Lucknow, Ont., \$10; Ira Edwards, Colborne, Ont. (3 charges), \$30; D. C. Matthews, Colborne, Ont., \$10; F. G. Matthews, Colborne, Ont. (3 charges), \$60; A. R. McKenzie, Centreton, Ont. (2 charges), \$20; G. Wellington, Forest, Ont., \$10; J. C. Fuller, Forest, Ont., \$10; J. D. Ellis, Kingsport, N. S., \$10; W. W. Pineo, Waterville, N. S., \$10; W. L. Borden, Lower Canada, N. S., \$10; J. D. Bennett, Delhaven, N. S., \$10; D. A. Martou, Billtown, N. S., \$10.

Strawberry Culture.

Anyone interested in growing strawberries would do well to send for Dominion Bulletin No. 62, prepared by W. T. Macoun, Horticulturist at Experimental Farm, Ottawa.

It is embellished with beautiful photographic reproductions showing perfect and imperfect flowers; beds at Ottawa in bloom, and also straw-covered; planting done too shallow, too deeply, and just right; and clusters of berries of some varieties.

The bulletin treats of the different systems of cultivation; matted row, single and double row and hill; renewing beds, winter protection, and the merits of the many varieties now under test.

Tables are given showing the yields, average weight of berries, date of ripening, hardness, healthiness and attractiveness of the different sorts.

Altogether a most complete and useful work. Apply Central Experimental Farm, Ottawa.

Whilst writing, let me congratulate you upon the able manner in which important and difficult themes were dealt with in 1909. The value of "The Farmer's Advocate" is receiving its just recognition now, and the statement to the effect that the co-editors are now or have been "sons of the soil," must of itself not only strengthen your hands in your future bids for popularity, but give your present supporters that sense of satisfaction that one experiences when taking advice from long experience. 'Tis not in mortals to command success, but we'll do more—deserve it," and Addison's words might well have been intended for "The Farmer's Advocate." Northumberland Co., Ont. COMMUNE BONUM.

THE FARM BULLETIN.

Best Function of the Institutes.

The regular annual meeting of the Farmers' Institute was held in the Town Hall, in the Town of St. Mary's, Ont., on the afternoon of Saturday, January 8th. The officials of this Institute used to object to Saturday meetings, but the attendance at this one would seem to indicate that there can be no objection from lack of attendance. The spacious hall was well filled, including the gallery, and the receipts show a gratifying degree of prosperity. The time is always too short (from two to five o'clock) to answer half of the questions that are fired at the speakers. As is usual with farmers, they are usually slow in gathering and in a greater "fidget" to get home to the chores before dark, consequently, comparatively little information is obtained, considering its value and cost. However, scientific practices are slowly but surely making headway. Yet, we think that the agricultural papers, such as "The Farmer's Advocate," are disseminating this information faster and more surely than the Institute. In this case the pen is mightier than the tongue. There is scarcely a family in this neighborhood who do not take "The Farmer's Advocate," and generally some other paper containing more or less information on agriculture; consequently, the press wields a large influence in the farming communities. The farmers, owing largely to their isolation, are becoming a great reading class, but they are deficient in speaking. As a result, the meetings are now left almost entirely to the delegates, which we think is really the better way, as the demand is now for expert, first-hand, first-rate knowledge. It might be better to confine the Institute more to stock-judging and demonstrations, and leave the rest mainly to the agricultural press. For the amount of information given it is certainly a more costly way of imparting information than the printed page, and should, we think, be confined to those subjects which the latter cannot properly handle.

The meeting was addressed by Anson Groh, of Waterloo Co., and Mr. Todd, of the O.A.C. The former is from one of the most progressive counties in the Province, settled as it is by the thrifty, painstaking, home-loving Germans. Mr. Groh is a worthy representative of the county, being one of those self-made men who started on a run-down farm of light soil, underlaid with gravel and sand.

He told us how by getting humus into his soil and by growing alfalfa he is now able to winter about thirty head of stock, mostly cows, on the produce of fifty acres. He divides his farm into two-fifths grain (barley and oats mixed), two-fifths alfalfa and one-fifth corn and roots. He does not grow the Daubenay oats with the barley, because of yield being so much lower than of other varieties, such as the Siberian. He held the attention of his audience closely, and they seemed loath to let him go at the end of an hour and a half.

Mr. Todd spoke on Co-operation. He seemed a rather young man for so weighty a subject. However, he acquitted himself "like a man," and succeeded in interesting his audience in this rather hazy subject. However, the older men of experience are better able to hold the confidence of hard-headed farmers, and we think the Superintendent should be chary of sending ex-students of the College, however clever, until they have attained both age and experience.

The women's session was held in the Council Chamber, and it was "packed." It takes the women to go to meetings—if they can get there. Their Institute was but recently organized, and the Secretary reports a membership of eighty-five. Mrs. Colin Campbell, of Essex Co., was the speaker, and she told the audience how to make hens pay. Her flock last year averaged a clear profit of \$1.25 per hen. Wheat was the best all-round feed, even at \$1.00 per bushel, and two of the secrets of success were not to feed warm mash hot, and dose the hens liberally with a certain patent preparation. We think Institute speakers should be careful in recommending patent preparations. The laity are too much inclined to depend on that which is more of a stimulant than a food.

J. H. BURNS.

A \$20,000,000 Melon.

A New York despatch states that an announcement was made at the offices of J. P. Morgan & Co., of a distribution of \$20,000,000 in common stock among the shareholders of the International Harvester Co. out of the profits of the past seven years. It was further recommended by the directors that \$3,200,000 be set aside out of last year's earnings as a four-per-cent. dividend on the common stock, which heretofore paid no dividends.

The tenth annual convention of the Canadian Forestry Association is to be held at Fredericton, N. B., on February 23rd and 24th.

Split-log Drag Competition in Manitoba.

At a meeting of the Manitoba Good Roads Association, held in Winnipeg recently, preliminaries were discussed regarding a competition in the improvement of clay roads by the use of the split-log drag. A donation of \$100 was offered by "The Farmer's Advocate and Home Journal," of Winnipeg, with the suggestion that prizes of \$15 and \$10 be offered to each of the four municipalities first to make application or entry. The idea is to induce individual farmers to use the drag in improving half a mile of road apiece, leading from their respective gates toward town, though other sections may be chosen if preferred. In accepting the offer, and moving a vote of thanks to "The Farmer's Advocate," Capt. J. N. Smith, reeve of one of the municipalities in the Province, testified to the efficiency of the drag. He had good results both on clay and gravel from using a cedar log split down the middle, and the edges faced with iron. There was no doubt but that Manitoba clay roads could be greatly improved by its use, as many miles of road have been in other Provinces and States.

Kitchen Equipment.

Please accept my sincere thanks for the complete kitchen equipment, which arrived all safe. I am well pleased with them; they are well worth working for. We are constant readers of "The Farmer's Advocate," and could not get along without it. Mother says she cannot remember the time it did not come to grandfather's home. He is still reading it. (MISS) H. TURNER. Bruce Co., Ont.

John D. Carnegie, ex-M. P. P. of Peterboro', Ont., died at Guelph on January 18th, after an illness of about two years. Mr. Carnegie was for several years a useful member of the Council of Agriculture and Arts Association of Ontario, and owned a well-managed farm, on which improved stock was kept. He was at one time editor of "The Review," of Peterboro', and was for several years the representative of one of the ridings of Peterboro' County in the Ontario Legislature. Mr. Carnegie was a man of fine attainments, kindly manner, and exemplary character.

Eastern Ontario Live-stock and Poultry Show.

With the largest entry of a higher class quality of stock than ever before, the Eastern Ontario Live-stock and Poultry Show was officially opened by the Hon. Jas. Duff, Minister of Agriculture for the Province, in the Howick Pavilion, at the Exhibition Grounds, Ottawa, on Tuesday, January 18th. The large lecture-room was filled to overflowing when the President of the Association, Peter White, of Pembroke, arose and introduced the Minister, who appeared in a happy mood, and spoke with a very optimistic view of the future of the live-stock interests of Ontario. In the magnitude and quality of the exhibits, this year's show totally eclipses any previously held, in several respects, notably in the export-steer and bacon-hog classes, where the Guelph show was beaten by a mile.

The paid admissions to the show were 50 per cent. ahead of last year, and the Farmers' Institute passes issued were more than 50 per cent. ahead, so that the attendance this year was probably from fifty to seventy per cent. better than a year ago.

CATTLE.

Taking the export-steer class, the prize list called for three export steers, and seven lots came forward for comparison, with not a cull among them, A. A. Armstrong, of Fergus, being particularly strong. Following are the order of the awards:

Three Export Steers.—1 and 2, A. A. Armstrong, Fergus; 3, B. Slattery, Ottawa; 4, W. F. Batty, Brooklin; 5, A. Dynes, Ottawa; 6, A. A. Armstrong.

SHORTHORNS.—The cattle classes were particularly well filled, and in almost every instance with animals that were a credit to both their breeders and feeders, the pure-bred Shorthorn classes bringing out a number of high-class representatives of the breed. Following are the awards in the various classes, with remarks following each class of awards:

Shorthorn steer, 2 years and under 3—1, 2 and 3, A. A. Armstrong; 4, Wm. Ormiston & Sons, Columbus, Ont. This was the weakest of any of the Shorthorn classes, the entries not showing any special fitting or excellence of type.

Shorthorn steer, 1 year and under 2—1 and 2, B. Slattery; 3, W. C. Edwards & Co., Rockland; 4, James Leask, Greenbank; 5, A. A. Armstrong. This class brought out the Guelph grand champion steer, and also the steer that won second at

Guelph, which were placed in the same order, third and fourth being a choice pair, and both well fitted, the class making a quartette of excellence seldom seen in a Canadian show-ring.

Shorthorn steer, under 1 year.—1, James Leask; 2, Peter White, Pembroke; 3, B. Slattery; 4 and 5, A. A. Armstrong. A considerable disparity of size came out in this class, some appearing to have made a most phenomenal growth, which appeared to influence the judge's decision to a more or less extent, although the first and second were particularly well fitted and brimful of quality.

Shorthorn heifer, 2 years and under 3—1 and 2, W. C. Edwards & Co.; 3, B. Slattery; 4, A. A. Armstrong. The representatives of the Rockland herd in this class were of a high standard of excellence, strictly modern in type, and grand examples of the master-fitter's art. Third and fourth were well brought out, and could have won in less-illustrious company.

Shorthorn heifer, 1 year and under 2—1 and 2, W. C. Edwards & Co.; 3 and 4, B. Slattery. Excellence of type and fitting were the predominating features in this class, the first being an especially choice beast.

Shorthorn heifer, under 1 year—1 and 2, W. C. Edwards & Co.; 3, Jos. W. Barnett, Brooklin, Ont. Competition was not so strong in this class, the Rockland entries being easy winners.

Special, best beef Shorthorn—1, W. C. Edwards & Co. This was a gold medal, and was won with the first-prize heifer in class 2 years and under 3.

Special, best pure-bred Shorthorn steer—1, Jas. Leask; 2 and 3, B. Slattery, Ottawa. Great interest was manifested in this class, in a great measure due to the fact that the competitors were the Guelph grand champion, the Guelph second-prize steer, and the yearling that was first in his class here. With an absolute perfection of fitting, the trio presented a truly pleasing sight, an object-lesson to the many interested spectators as evidence of what can be accomplished by intelligent and judicious breeding and feeding. The awarding of first place to the yearling over the Guelph winners, appeared to give universal satisfaction, principally on the grounds that the champion showed a decided falling off in flesh and bloom since his success at Guelph, and the other looked entirely overdone.

Special for best grade steer sired by pure-bred Shorthorn bull—1 and 2, A. A. Armstrong; 3, James Leask. The prizes in this class were de-

rated by the Dominion Shorthorn Breeders' Association, and the winners were an exceptionally strong lot.

GRADES AND CROSS-BREDS.—In the classes for grades or crosses, any breed, the same high-class standard was maintained throughout, Armstrong and Slattery showing a number of high merit, Leask coming in frequently with choice things of his own breeding. Following is the order of awards in the various classes:

Grade or cross of any breed, steer, 2 years and under 3—1, A. A. Armstrong; 2, B. Slattery; 3 and 4, A. A. Armstrong; 5, W. F. Batty.

Steer, 1 year and under 2—1, B. Slattery; 2, 3 and 4, A. A. Armstrong; 5, A. Dynes.

Steer, under 1 year—1 and 2, James Leask; 3, Jos. W. Barnett; 4, A. A. Armstrong; 5, Alex. Dynes.

Heifer, 2 years and under 3—1, James Leask; 2 and 3, A. A. Armstrong; 4, Wm. Ormiston & Sons.

Heifer, 1 year and under 2—1, A. A. Armstrong; 2, James Leask.

Heifer under 1 year—1 and 3, James Leask; 2, A. A. Armstrong; 4, B. Slattery; 5, Jos. W. Barnett.

OTHER BEEF BREEDS.—In the following classes, A. A. Armstrong, and D. McCrae, of Guelph, had things all their own way. In only one class was there opposition, the McCrae winnings all being won with his noted herd of Galloways.

Hereford or Aberdeen-Angus, steer or heifer, 2 years and under 3—1, A. A. Armstrong. Steer or heifer, 1 year and under 2—1, A. A. Armstrong. Steer or heifer under 1 year—1, A. A. Armstrong. Cow or heifer, 3 years or over—1, A. A. Armstrong.

Galloway or Devon, steer or heifer, 2 years and under 3—1, Teller Bros., Milton; 2, D. McCrae. Steer or heifer, 1 year and under 2—1 and 2, D. McCrae. Steer or heifer, under 1 year—1 and 2, D. McCrae. Guelph. Cow or heifer, 3 years or over—1 and 2, D. McCrae, Guelph.

Special, for best export steer—1, B. Slattery. This was a gold medal donated by Orme & Son, Ottawa, in the awarding of which, the judges, John Gardhouse, Highfield, Ont., and Duncan Anderson, Orillia, Ont., looked horns. A considerable number of entries came forward for competition, which were soon narrowed down to two, one of them the white second-prize steer at

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Guelph, now the property of Mr. Slattery, of Ottawa, the other a two-year-old roan, the property of A. A. Armstrong, of Fergus, Ont., Gardhouse holding for the Armstrong entry, and Anderson for the Slattery entry. Finally, A. W. Smith, M. P., was called in, and decided in favor of the white steer. We personally asked the opinion of a number of leading farmers as to the award. The answer in every case was that the white steer was altogether too well fitted and mellow for export purposes; that, on a 3,000-mile journey, he would certainly fade to a very great extent, and land in a condition unfit to command the highest market price. On the other hand, the roan steer was in good, firm, thriving condition, where he would go on improving every day, and land much better than the other one. This is a question of far-reaching importance to the feeders of Canada, and certainly the weight of evidence appeared to the writer to be in favor of the roan.

SHEEP.

The sheep exhibit was away ahead of any former year, many of the entries being winners at the late Guelph show, and representatives of the leading Ontario flocks. The awards were placed by A. W. Smith, M. P., of Maple Lodge, Ont., and resulted as follows:

Cotswold wether lamb—1, 2 and 5, J. Lloyd-Jones, Burford, Ont.; 3, J. W. Lee & Sons, Simcoe, Ont.; 4, Edward Ward, Greenbank, Ont. Three Cotswold wether lambs—1 and 3, Lloyd-Jones; 2, Lee & Sons; 4, Ward. Cotswold ewe lamb—1, 3 and 4, Lloyd-Jones; 2, Telfer Bros., Paris; 5, Ward. Three Cotswold ewe lambs—1, Lloyd-Jones; 2, Ward.

Lincoln ewe lamb—1, Telfer Bros.
Leicester wether lamb—1, Lee & Sons.
Oxford wether lamb—1, 2 and 5, Lee & Sons; 3 and 4, W. E. Wright, Glanworth, Ont. Three Oxford wether lambs—1, Lee & Sons; 2, Wright; 3, A. A. Armstrong, Fergus. Oxford ewe lamb—1, 2 and 3, Lee & Sons. Three Oxford ewe lambs—1, Lee & Sons, Simcoe.

Shropshire wether lamb—1 and 5, Lloyd-Jones; 2, 3 and 4, J. & D. J. Campbell, Woodville, Ont. Three Shropshire wether lambs—1, Campbell; 2, Lloyd-Jones. Shropshire ewe lamb—1, 2 and 3, Campbell. Three Shropshire ewe lambs—1, Campbell; 2, Lloyd-Jones; 3, Wm. A. Wallace, Kars.

Southdown wether lamb—1, 2 and 4, Lloyd-Jones; 3, Telfer Bros.; 5, Geo. Baker, Simcoe, Ont. Three Southdown wether lambs—1, Lloyd-Jones; 2, Telfer Bros.; 3, Baker. Southdown ewe lamb—1 and 2, Telfer Bros.; 3 and 4, Baker. Three Southdown ewe lambs—1, Telfer Bros.; 2, Baker.

Dorset Horn wether lamb—1, 2 and 4, R. H. Harding, Thorndale, Ont.; 3 and 5, W. E. Wright. Three Dorset Horn wether lambs—1, Harding; 2, Wright. Dorset Horn ewe lamb—1, 2 and 3, Harding. Three Dorset Horn ewe lambs—1, Harding.

Hampshire or Suffolk wether lamb—1, 2 and 3, Telfer Bros., Paris. Hampshire or Suffolk ewe lamb—1, 2 and 3, Telfer Bros. Three Hampshire or Suffolk ewe lambs—1, Telfer Bros.

Grade wether lamb—1 and 4, Lloyd-Jones; 2, Campbell; 3 and 5, Baker. Three grade wether lambs—1, Baker; 2, Lloyd-Jones; 3, Campbell; 4, Geo. R. Bradley, Carsonby, Ont. Grade ewe lamb—1 and 2, Campbell; 3 and 5, Lloyd-Jones;

4, Baker. Three grade ewe lambs—1, Campbell; 2, Lloyd-Jones; 3, Baker.

SWINE.

Swine, though not so numerous as in some former years, were of a considerably higher quality, the bacon classes being particularly strong. In fact, the judge, D. C. Platt, of Hamilton, said he never saw so strong a lot, nor one that showed so careful fitting. In the class for three purebreds, 1, 3 and 4 went to J. Featherston & Son, Streetsville, Ont.; 2 and 5 to A. Dynes, Ottawa; 6, to A. H. Foster, Twin Elm, Ont.; and 7, to W. A. Wallace, Kars, Ont. Grades or crosses—1 and 2, Featherston; 3, R. A. Heron, Billings' Bridge; 4 and 5, Dynes. In the breeding and grade classes, the awards were as follows:

Yorkshires.—Barrow, 6 months and under 9—1 and 2, Dynes; 3 and 4, Featherston & Son; 5, Foster. Barrow under 6 months—1 and 2, Featherston & Son; 3, Foster. Sow, 6 months and under 9—1, Dynes; 2 and 3, Featherston; 4, Foster. Sow under 6 months—1, 2 and 3, Dynes; 4 and 5, Featherston.

Berkshires.—Barrow, 6 months and under 9—1 and 2, Dynes; 3 and 4, Wallace. Sow, 6 months and under 9—1, Wallace; 2, Dynes. Sow under 6 months—1 and 2, Dynes; 3, Wallace.

Tamworths.—All prizes awarded won by Alex. Dynes.

Grades.—Barrow, 6 months and under 9—1 and 2, Featherston; 3, Dynes. Barrow under 6 months—1 and 2, Featherston; 3, Robert A. Heron. Sow, 6 months and under 9—1, Dynes; 2 and 3, Featherston; 4, Dynes. Sow under 6 months—1 and 4, Featherston; 2 and 3, Heron.

DAIRY TEST.

Name of Animal and Exhibitor.	Pounds Milk.	Per cent. Fat.	Points for Fat.	Points for Solids not Fat.	Points for Lactation.	Total Points.
Class 40, Section 1—Ayrshire cow, 48 months and over:						
1. Spottie; H. & J. McKee, Norwich	158.6	3.8	150.65	43.82	.6	195.140
2. Sarah 2nd; H. & J. McKee, Norwich	167.5	3.3	138.175	45.474	1.9	185.549
3. Victoria; H. & J. McKee, Norwich	135.6	4.2	142.375	38.064	4.2	180.439
Class 40, Section 2—Ayrshire cow, 36 months and under 48:						
1. Queen Jessie of Spring Hill; H. & J. McKee, Norwich	126.6	4.4	133.75	33.999	3.5	171.249
2. Star's Sarah; H. & J. McKee, Norwich	129.	3.5	112.875	36.339	2.7	151.914
Class 40, Section 3—Ayrshire heifer, under 36 months:						
1. Scottie's Sarah; H. & J. McKee	109.1	4.6	125.45	32.106		157.556
2. Peggie Murphy; H. & J. McKee	109.	3.6	98.10	30.999		129.099
Class 41, Section 1.—Shorthorn cow, 48 months and over:						
1. Lady M. Glory; A. H. Foster, Twin Elm	24.8	3.8	118.55	36.690		155.240
Class 41, Section 2.—Shorthorn cow, 36 months and under 48:						
1. Maid of Braeside; S. Bray, Enfield	118.7	3.6	106.825	33.507		143.320
Class 43, Section 1.—Holstein cow, 48 months and over:						
1. Rhoda's Queen; N. Sangster, Ormstown	251.7	3.0	188.325	62.070	1.2	251.595
2. Sherwood Daisy; T. A. Spratt	186.1	3.6	167.475	49.575	1.8	218.850
3. Maud De Kol; T. A. Spratt	83.5	3.7	77.225	22.242	10.	109.467
Class 43, Section 2.—Holstein cow, 36 months and under 48:						
1. Pauline Posch; N. Sangster	181.7	3.0	136.275	46.278		182.558
2. Queen E.; T. A. Spratt	133.7	3.6	120.325	38.544	1.5	160.369
Class 44, Section 1.—Jersey cow, 48 months and over:						
1. Regia's Flower; N. Sangster	82.9	6.4	132.625	25.167	6.9	164.692
Class 45, Section 1.—Grade cow, 48 months and over:						
1. Maggie; T. A. Spratt	209.5	3.6	188.550	55.683		244.233
2. Dora; N. Sangster	222.5	3.2	178.000	56.937	6.4	241.337
3. Nancy; R. A. Heron	181.8	3.7	168.150	49.794	1.9	219.844
1. Brownie; R. A. Heron	175.2	3.5	153.300	48.405		201.705
5. Rosella; R. A. Heron	80.7	3.4	153.595	47.811		201.406
Class 45, Section 2.—Grade cow, 36 months and under 48:						
1. Peg; R. A. Heron	140.3	3.3	115.747	39.246	2.5	157.493
2. Tiny; R. A. Heron	39.2	3.3	114.825	37.269		152.094
3. Dinah; A. H. Foster	95.7	3.9	93.300	27.042		120.342
Class 45, Section 3.—Grade heifer, under 36 months:						
1. Laura; T. A. Spratt	119.3	3.6	107.350	31.707		139.057
2. Flo; R. A. Heron	87.7	4.0	87.700	26.808		114.508
3. Baby; Alex. Dynes	89.1	3.5	77.950	25.284	10.	113.233

DRESSED CARCASSES.

Dressed Carcasses—Pure-breds—1 and 5, A. Dynes; 2, 3 and 4, Featherston. Most remarkable was the fact that the only change in the awards alive and dressed was that the first-prize pair alive were second dressed, and the second pair alive were first dressed.

Grades or Crosses.—1 and 4, Featherston; 2, G. Bradley, Carsonby; 3, A. Dynes. In this class, first alive was first dressed, second alive was fourth dressed, and second dressed were unplaced alive. Prof. Grisdale, Ottawa, and Mr. Grey, of Hull, Que., made the placings.

In the sale of dressed carcasses, the prices paid were: For beef carcasses, 10 to 15 cents; for swine carcasses, 12 to 12½ cents; for mutton carcasses, 12 to 17½ cents. Poultry—Chickens, 20 cents; turkeys, 25 cents; geese, 12 cents.

The sale of Shorthorn cattle was largely attended, and some animals of high merit were offered. The prices for bulls ranged from 37 to

90 dollars, and for females from 67 to 150 dollars.

The Poultry Show was the best ever held in Eastern Ontario, there being over 200 more birds than on any former occasion, and the standard was exceedingly high.

HORSES.

The entries in the Horse Department numbered 108 head, by far the greatest number of which were Clydesdales, although all the lighter breeds were represented. The calling-out of the various classes, through the efficient management of Ringmaster Bright, went off without a hitch. Many of the classes presented a big entry that showed a remarkable uniformity of type that taxed the ability of the judge, John Gardhouse, of Highfield, Ont., but to his credit be it said that he did his work with a care, despatch and thoroughness that left little cause for complaint among the unbiased.

CLYDESDALES.—The entry of Clydesdales was

a large one, of a class of horses that would do credit to any show-ring in the world, well fitted, well groomed, and well handled. In the class for stallions foaled in 1906, the awards were as follows: 1, Royal Gretna (imp.), by Royal Citizen, exhibited by Smith & Richardson, Columbus, Ont.; 2, Viscount Lothian (imp.), by Luffness, exhibited by Robert Ness & Sons, Howick, Que.; 3, Sir David (imp.), by Prince of Brunstane, exhibited by Adam Scarf, Cumming's Bridge, Ont.; 4, Cecil (imp.), by Mac Ara, exhibited by R. Reid & Co., Ottawa; 5, Silver Strand (imp.), by Silver Cup, exhibited by B. Rothwell, Ottawa; 6, Baron Russell (imp.), by Baronson, exhibited by Smith & Richardson; 7, Diadem (imp.), by MacRaith, exhibited by B. Rothwell. This was a particularly strong class, the first and second-prize horses being very uniform, with not much to choose between them, except in weight, which was in the winner's favor. The third place was won by a horse of superior style and quality, but lacking in size, compared with the others.

Clydesdale stallions foaled in 1906.—1, Lord Aberdeen (imp.), by Netherlea, the entry of T. B. Macaulay, Hudson's Heights, Que.; 2, Woodend Chief (imp.), by Up-to-Time, the entry of Robt. Ness & Sons; 3, Dunure Acknowledgment (imp.), by Baron o' Buchlyvie, the entry of Smith & Richardson; 4, Look Again (imp.), by Durbar, the entry of Smith & Richardson; 5, Captain Vasey (imp.), by Silver Cup, also from the Columbus stables; 6, Selburne (imp.), by Pride of Blacon, the entry of Dr. D. McEachren, Ormstown, Que.; 7, Royal Hall (imp.), by Montrave Ronald, the entry of C. W. Barber, Gatineau Pt., Que. This class was remarkable for uniformity of type, the decisions being made principally from the standpoint of quality, first showing a little more weight than the second. The only exception to type was in the sixth, which was a big, upstanding horse, of superior quality and action, an easy winner but for a slight halt in one leg, due to an injury. Third, fourth and fifth were a compact, smooth lot of horses, with ideal action, but not so flash.

Stallions foaled in 1907.—1, Bowhill Baron (imp.), by Baron's Pride, the entry of Robert Ness & Sons; 2, Dunure Goldlink (imp.), by Baron o' Buchlyvie, the entry of Smith & Richardson; third was won by the same firm on Dunure Souter (imp.), by Baron o' Buchlyvie; fourth also went to the Columbus stables on Dunure Shapely (imp.), by Baron o' Buchlyvie; fifth, Ingleson (imp.), by Everlasting, the entry of Robt. Ness & Sons; 6th, Baron Onslow (imp.), by Baron's Pride, the entry of Smith & Richardson; 7th, Danpbail (imp.), by Agax, the entry of Robt. Ness & Sons. Rather remarkable in this class was the fact that the seven prizes were divided between the Columbus and Howick stables. For first place, there was room for a divergence of opinion, the second showing a much greater range of substance, but the first beat him out in masculine character, and probably went a bit closer behind. The entire class was a most representative one, the blood of the great Baron o' Buchlyvie being most conspicuous among the winners.

Stallions foaled in 1908.—1, Baron Crawford (imp.), by Blacon Sensation, Smith & Richardson; 2, King's Edict (imp.), by Benedict, Smith & Richardson; 3, Attractive Tom (imp.), by Attractive Prince, Smith & Richardson; 4, King's Counsel (imp.), by Benedict, Robt. Ness & Sons. Quality of underpinning was the standard of awards in this class, with no great margin to decide on.

Clydesdale or Shire mares, foaled previous to January 1st, 1907.—1, Queen Minnie (imp.), by Baron Solway, Smith & Richardson; 2, Marchioness (imp.), by Margellus, B. Rothwell, Ottawa; 3, Savona (imp.), by Lothian Again, R. Ness & Sons; 4, Bright Gem (imp.), by Royal Blind, Adam Scharf, Cumming's Bridge, Ont.; 5, Jane Austin (imp.), by Rozelle, W. Cochrane, Ottawa. The first-placed mare was an easy winner. She is one of the best types of the breed alive. Second was equally as easy a winner for her place; a right big good one she is. The same might be said for third place, as well as the lower awards. The judge had things easy in this class.

Clydesdale or Shire mare foaled in 1907.—1, Hetty (imp.), by Everlasting, Robert Ness & Sons; 2, Bell Priam, by Prince Priam, Smith & Richardson; 3, Newbigging Beauty (imp.), by Atahualpa, W. F. Batty, Brooklin, Ont.; 4, Winsome Queen (imp.), by Baron Winsome, Robt. Ness & Sons; 5, Constantia (imp.), by Pride of Blacon, Robt. Ness & Sons. In the placings in this class there was room for difference of opinion. Many would prefer the more rangy conformation of probably either the second or third places. When judging mares for breeding purposes, in the matter of quality of underpinning and action, there was little to choose between them.

Clydesdale or Shire mares, foaled on or after January 1st, 1907.—1, Song Thrush (imp.), by Scottish Crest, Robt. Ness & Sons; 2, Lady Electa, by Baron Elect, Smith & Richardson; 3, Black Beauty (Shire), by Admiral Togo, John Johnston, Elliott; 4, Lady Brae, by Prince Royal, J. L. Wilson, McGarry. First in this class had the advantage in respect to size, and was a little better on the ground.

Canadian-bred Clydesdale or Shire stallions, foaled previous to January 1st, 1908.—1, Koyama, by The Rejected, Robt. Hunter & Sons, Maxville, Ont.; 2, Baron Acme, by Baron Richardson, Smith & Richardson; 3, Bladnock, by Imp. Bladnock, G. Ormiston, Enfield, Ont.; 4, Glenbloom, by Whinbloom, Smith & Richardson; 5, Baron McGregor, by Baron Montague, J. W. Barnett, Brooklin, Ont.; 6, Stanley Prince 2nd, by Stanley Prince, D. G. Boyd, Kars, Ont.; 7, Royal Montrose, by Stanley Prince 2nd, W. R. McLachlan, Gatineau Pt., Que. Competition in this class was between first and second, both Ottawa champions, Koyama winning first and championship at this show in January, 1909, and Baron Acme winning first and championship at the fall show last year. Both are ideal types of Clydesdale perfection, both move true and straight, but the first has a slight advantage in his wonderful dashy quality of underpinning.

Canadian-bred Clydesdale or Shire stallions, foaled on or after January 1st, 1908.—1, Baron Carrick, by Baron Richardson, Smith & Richardson; 2, Baron Toity, by Baron Williamson, G. A. Hodgins, Carp; 3, Baron's Kid, by Ace of Spades, W. Cochrane, Ottawa. The superior fitting, coupled with his splendid draft character, easily placed Baron Carrick first. Second was given to a well-put-up colt, that will likely be heard from in the future.

SHIRES.—Shire stallion, any age—1, Admiral Togo, by Mars, J. Johnson, Elliott. Although there was no competition, Admiral Togo is a big, deep, massive horse, that has won high honors in a Toronto show-ring.

HACKNEYS.—Stallions foaled previous to January 1st, 1907.—1, Derwent Performer (imp.), by Rosador, G. H. Pickering, Brampton, Ont.; 2, Dainty Duke of Connaught (imp.), by Garton Duke of Connaught, B. Rothwell, Ottawa; 3, Terrington Lucifer (imp.), by Copper King, T. B. Macaulay, Hudson's Heights, Que. The superior education of the winner, coupled with his stylish, breezy appearance, brought him to the top. The second is typical in conformation, with more substance, but not so well educated. The third was a natty-going horse, of breezy conformation, but was not so good an actor as either of the others.

Mares any age.—1, Ophelia's Heiress (imp.), by Polonius, T. B. Macaulay; 2, Waverley Marion (imp.), by Royal Denmark, G. H. Pickering; 3, Lady Linnett (imp.), by Ruby, F. W. Batty, Brooklin, Ont.; 4, Ophelia's Fashion (imp.), by Polonius, T. B. Macaulay; 5, Mabel Vane, by Candidater, Dr. R. E. Webster, Ottawa. A most representative class, breezy in appearance, and perfect in type. The awards were placed on action merit, the first being of superior merit. Senator Robt. Beith, of Bowmanville, placed the awards.

STANDARD-BREDS.—Stallion, any age—1, Imperial Jr., by Wilfred Cecil, Fred Garbut, Lambton Mills, Ont.; 2, Prince Ambrose, by Ambrosail, A. H. Seure, Carleton Place, Ont. First was the more breezy, while second possessed the more substance.

THOROUGHBREDS.—Stallion, any age—1, Valjean, Dr. R. E. Webster; 2, Kirkfield, Dr. R. E. Webster; 3, Cormorant, J. Bovaird & Sons, Brampton, Ont.; 4, Perse, D. McCrae, Guelph. First was an easy winner, a right good type of the breed; the others were placed in their order of merit.

HEAVY-DRAFT.—Geldings or mares shown in single harness, 3 years old or over—1, Harry, Smith & Richardson; 2, Punch, Smith & Richardson; 3, Nan (imp.), Charles Groat & Son, Brooklin, Ont.; 4, Bonny Jean, Charles Groat & Son; 5, Hattie McIntosh, Scharf Bros., Cumming's Bridge, Ont.; 6, Lily MacInnis 2nd, Scharf Bros.

Heavy-draft team in harness—1, Smith & Richardson; 2, Charles Groat & Son; 3, Adam Scharf; 4, Scharf Bros.; 5, Geo. Watson, Leonard.

Championship for best imported Clydesdale stallion—Royal Gretna (imp.), Smith & Richardson. Reserve—Bowhill Baron (imp.), Robt. Ness & Sons.

Championship for best Canadian-bred Clydesdale or Shire stallion—Koyama, Robert Hunter & Sons. Reserve—Baron Carrick, Smith & Richardson.

Grand champion Clydesdale, as best stallion at the show—Royal Gretna (imp.), Smith & Richardson. Reserve—Koyama, Robert Hunter & Sons.

Championship for best Clydesdale or Shire stallion, owned and exhibited by a resident of Gleggery County—Koyama, Robert Hunter & Sons. Championship for best Clydesdale or Shire mare—Queen Minnie (imp.), Smith & Richardson. Reserve—Hetty (imp.), Robt. Ness & Sons. Champion Hackney stallion—Derwent Performer (imp.), G. H. Pickering.

LECTURES.

Most of the lectures at the Eastern Live-stock and Poultry Show are substantially the same as those delivered at the Provincial Winter Fair, in Guelph. We present below, however, a few additional points, gleaned by our own correspondent.

SOILING CROPS FOR DAIRY CATTLE.

A. D. Harkness, of Irena, Ont., in speaking of "Soiling Crops: Their Value for the Summer Feeding of Dairy Cows," advocated the growing of alfalfa. He said that two-thirds of his farm was light, sandy loam, not suitable for pasture, and he could produce milk cheaper by soiling than by pasturing altogether.

His brother-in-law had been sending 900 pounds more milk to the factory in May than he did. His farm was clay, and more suitable for grazing. In the month of June his brother-in-law was sending 500 pounds more than he. Mr. Harkness then commenced to feed his cows clover and other soiling crops, and in July he was sending nearly 2,000 pounds more milk to the factory than his brother-in-law, who depended on pasture; and in August it was considerably over 2,000 pounds; and for the months of June, July, August and September and October he had 5,448 pounds more milk. He did not buy one pound of meal. He first fed clover, then peas and oats, and then sec-

ond crop of clover, and then corn. He grew improved Leaming, but found the cows did not eat the coarse stalks. He had a crop of sweet corn, and after the ears were taken off he fed the stalks to the cows, and found that they ate it up clean, and he intends growing sweet corn in the future to feed his cows. Last fall he grew sugarcane and fed to the cows, but found that the cows did not like it. He had tried pumpkins, but did not find them satisfactory. He believed alfalfa was the most valuable crop to grow for milk cows, and made an excellent feed, along with corn. When feeding soiling crops, he cuts three times a week, and feeds to the cows twice a day in the stable. He would not hesitate about cutting second crop of clover and putting it in the silo with the corn. His neighbor, who has only 25 acres of land, keeps 9 cows, and does not buy any grain, and yet he sends as much milk to the factory as another neighbor who has 14 cows and 100 acres. The man with the 9 cows feeds green crops, clover and corn, together with mangels, in the fall of the year. In concluding, he said: "If I could not grow soiling crops, with the present prices of grain and farm labor, I would go out of the dairy business." If farmers would lessen the cost of production by feeding more in the summer months, they would have no cause to fear a reduction in price of milk products.

J. H. Grisdale advocated the growing of more corn, and feeding the cows during the summer months, to supplement the pastures. He was of the opinion that the farmers of the Province of Ontario did not realize the importance of corn as a fodder crop, and until they did, they would not make the profits out of dairying that they should.

COW RECORDS AND RESULTS.

D. Drummond, of the Department of Agriculture, Ottawa, said the keeping of cow-records was having a marked influence on the dairy industry. A breeder of pure-bred dairy cattle in Western Ontario had secured 21,600 pounds of milk from one cow by using advanced methods of feeding and caring for the cow, and to-day, in that district, they have the three highest-testing cows in the Province. The effect of keeping records of the cost of feed, and the production of corn, was to create a business instinct in the farmers. Weeding out the poor cows was not all that was necessary. Better methods of feeding must be first tried, because, unless a cow was given a chance, she could not do her best. He gave, as an instance, the case of a farmer who practically gave away a cow because he thought she was a poor producer, and the purchaser had fed that cow and developed her until she became one of the record cows of the world. Better feeding, better methods, and better system, should be adopted.

VARIETIES OF CORN FAVORED IN LANARK COUNTY.

R. S. Hammer, of Perth, said the average in corn in Perth was six per cent. of the whole. The seed is a very important factor in the growing of corn, and should receive special attention. He advocated buying it in the ear, and testing it before sowing. He had sent out a number of inquiries, asking for information, in Lanark Co., as to the corn they preferred, and, out of 137 replies, 12 favored Leaming, 33 Longfellow, 18 White-cap Yellow Dent, 17 North Dakota, 17 Compton's Early, and 3 King Philip.

T. G. Raynor advocated the selection and breeding of seed grain. In examining 45 samples of oats at the Exhibition, not one wild oat was to be found. He saw no reason why the farmers could not grow their own red-clover seed. He advised the use of the fanning mill. He believed it would pay farmers in a district to club together and have a fanning mill run by power, so as to separate the best seed from the poor, and then plant only the very best seed.

WARNING TO SELD-BUYERS.

The regulations of the Seed Control Act, now in force, are intended to protect farmers who wish to sow only good clean seed, and are willing to pay the price, from having seed with a heavy mixture of weed seeds thrust upon them, as if of good quality. One excellent provision of the act is that seeds containing noxious weed seeds must be labelled with the name of the weeds contained. Of course, there is scarcely such a thing as absolutely pure seed, and so, in No. 1 seed, one weed seed to 1,500 true seeds is allowed; in No. 2 seed, which no one should buy, 5 to every 1,000 is permissible.

E. D. Eddy, of the Seed Branch, Ottawa, mentioned several things to be guarded against in purchasing clover, root and vegetable seeds. Unscrupulous dealers were trying to evade the Act. One way in which this was successfully done was to sell grain not as seed, but as feed, extra cleaned. Mr. Eddy claimed that if farmers availed themselves of the safeguards of the Seed Control Act, and purchased seeds early, and had them tested either at home, or free at Ottawa, it would be an almost perfect safeguard against the danger of weed contamination. He summarized his warnings to seed-buyers in five sentences:

1. If you have to purchase seed grain, see that

what you buy is sold as seed, and not as feed, and look for a label that will tell you if there are any weed seeds present.

2. When purchasing timothy, alsike and red clover seeds, insist on your dealer supplying you with No. 1 seed, and beware of "Government standard."

3. Place your orders early, and have your dealer's guarantee verified by having a sample of the seed tested, so that you may know exactly the nature and quantity of the impurities.

4. With root and vegetable seeds, purchase from the most reliable dealers, and insist on securing the best quality of seed obtainable.

5. Sow the seed early, and have it tested for vitality before seeding.

Last Call for Building Plans.

Readers are reminded that the plans and descriptions for our Building-plan Competition are due in "The Farmer's Advocate" office not later than February 3rd; so there is time for those who have not prepared and mailed them to do so. The prizes are limited to buildings erected in 1908 or 1909, and there are three sets of two prizes each: First in each case, \$10 worth of agricultural books (see list in present issue); and second, \$5 cash, or a choice of \$5 worth of agricultural books if preferred. The three sets are as follows:

A.—General barn, including storage for crops, and housing for dairy, fattening or other stock.

B.—Horse barn, including space for rigs, harness, etc.

C.—Farm dwelling-house, with special attention to modern improvements and domestic conveniences.

Plans and articles other than those securing prizes will be used and paid for at regular rates for accepted matter. The same person may compete in all three, providing the building was done by the same proprietor in 1908 or 1909.

Commission of Conservation.

A history-making event was the first annual meeting of the Commission of Conservation, held in Ottawa last week, January 18th to 21st. The inaugural address of the President, Hon. Clifford Sifton, was a masterpiece in its lucid presentation of essential facts. The commission is non-partisan and non-political. It is a commission created by Parliament, and entrusted with certain duties, upon the performance of which it is to report from time to time. Except in the matter of provision of funds, the work is wholly independent of the ordinary administration of affairs. The next annual meeting will be held in Ottawa, but a general meeting of the commission will be held in June. At the last session of the first meeting, the business consisted chiefly in receiving reports from various committees appointed, and crystallizing such information into plans for future effectiveness. The necessity of securing an inventory of the Dominion's resources was emphasized in every report.

Administration of the Forests.

"Prussia, with but a half of Ontario's forest acreage," said Dr. B. E. Fernow, at Ottawa, before the Commission on Conservation, "derives seven times Ontario's annual income from forestry, and leaves the capital to increase annually in value." It is high time Canadians woke up on the forestry question.

Dr. Fernow suggested several methods of ownership, of which Government ownership and management was the most profitable, the next best system being municipal ownership, with Government supervision. In Canada, State ownership largely prevailed already, and it only required a change of method, consequent upon a more-enlightened public opinion, to remove the menace of destruction from Canadian forests.

Adulteration of Bran.

At the Western Ontario Dairymen's Convention, in St. Thomas, the point was raised whether the addition of ground Western screenings to bran would be an infringement of the Commercial Feeding Stuffs Act. Inquiry by "The Farmer's Advocate" of the Department of Inland Revenue, elicits reply from Deputy Minister W. J. Gerald, to the effect that if the ground screenings were added to bran, the resultant product would be, in his opinion, a "feeding stuff" within the meaning of the Act, and could not legally be sold without being covered by a registration number, nor until the necessary license to sell had been obtained from the Department of Inland Revenue.

The West Northumberland Agricultural Society, in its annual meeting, at Cobourg, Ont., passed a resolution asking the Ontario Association of Fairs and Exhibitions to urge upon the Provincial Government an increase of the Legislative grant from \$70,000 to \$100,000.

Value of an Agricultural Education

Editor "The Farmer's Advocate":

The real necessity for an agricultural education for the farmer is as yet unrecognized by the great majority of our rural population. This is regrettable. Does it stand to reason that classics, arts and commercial learning are the best for the boy, man or woman who intends to follow agriculture as a profession? True, they have their place, but the man who has limited time and means with which to secure an education, should, if agriculturally inclined, seek the agricultural college and press. Farming is a business which is daily becoming more specialized, more intensive.

The difficulties of the present situation, and the indifference which farmers and educators exhibit toward agricultural education is due to their failure to conceive the true principles upon which the business rests. The questions of Why and How are the two all-important queries which the would-be learner should ask. For instance, should it not be usual for the country child to wonder at and question: how the grass grows? why plants produce flowers? how they bear seed? of what use some of the many varieties of birds and insects are? and on and on to a multiplicity of surprisingly sensible questions, which only the child can ask, if his mind is stimulated to it by correct and sensible answers.

How many young men are there on the average farm who have asked themselves the following or similar questions, or who could answer them, elementary as they are? What is air, its use to plants and animals; and of what is water com-

posed? This is the question above all others that needs solution at the present time. For the past fifty years there has been a profound contempt in the mind of the average farmer for so-called scientific agriculture. He no more believed that it was possible to secure better results from the soil through a knowledge of its composition and physical properties than he believed it was possible to turn night into day. If his son was to receive an education he was to become a professional man, for in this field only could honor, wealth and position be obtained. How very unfortunate, how utterly out of harmony with the facts, are these conceptions of the farm and the farmer.

Is it not remarkable that thousands of farmers should cultivate the soil year after year without knowing why they do it, and without understanding what the elements of plant food are, without knowing the relations of these elements of plant food to plant life? However, this is the case, and is it at all strange that the soils in many sections have become so impoverished as to render their further cultivation unprofitable?

Put shall our conception of agricultural education end with the soil? Not by any means. A farmer should have some intelligent conception of the many principles of physics; he should understand how water moves through the soil; he needs to know about capillarity; he must understand how he can control the movement of soil water, and how by changing the physical nature of his soil through the addition of vegetable matter, he can increase its capacity for holding and storing water so as to make it resistant to the sudden drouths that visit our country.

Surely Professor Soule writes wisely. There is not only much to be understood about the soil, plants, their nature and growth, but there is also the stock upon the farm. How little we, the farmers of this country, who breed, feed and use the horse and other farm stock, know of their anatomy! The farmer's son would, most assuredly, be better employed studying the veterinary subjects of anatomy, materia medica, pathology and obstetrics, than cramming Greek, Latin and ancient history during his Collegiate course. But such opportunities are as yet not available to him; so is there any wonder that he at length goes home "doomed to the farm," as he says, and becomes a believer in some or all of the fake causes and treatments for sick animals and soil, and plays the game of patent-medicine grab?

W. H.

Bounding Trade Increase.

Canada's trade for December last shows a record increase of over 40 per cent., as compared with the preceding December. There was an increase of \$15,563,386 in exports of domestic produce, and of \$8,598,262 in imports. For nine months of the fiscal year, the total trade has been \$512,186,678, a comparative increase of \$83,288,506.

Alphonse Verville has again introduced into the Dominion Parliament, this session, his bill, which aims to provide a compulsory eight-hour day for laborers on all Government contracts or Government work directly undertaken. The Canadian Manufacturers' Association has been making a strong, organized protest. At a meeting last Friday, of a special committee of the House of Commons, appointed to consider the Bill, it was decided to appoint Prof. Skelton, of Queen's University, to make research into legislation affecting the hours of labor in other countries, for the information of the committee.

The second annual banquet of the members of the Holstein-Friesian Association of Canada will be held on Wednesday, February 9th, at 7.30 p. m., at "Nasmith," 150 Bay Street, Toronto. C. C. James, Deputy Minister of Agriculture; Prof. Day, O. A. C.; J. A. Ruddick, Dairy Commissioner; G. A. Putnam, Director of Dairying for Ontario, and others, are invited to deliver addresses. All members and others interested in Holsteins are invited. This banquet is held the evening prior to the annual meeting, which will be on the 10th.

The Worcester Chamber of Agriculture has been discussing the meat-warranty question, and considers it practically dead. Nothing has been heard of it during recent months. Farmers all over England ignored the warranty demand, and in those markets where an attempt was made to force the demand, the whole business has been quietly dropped.

"Farm Underdrainage: Does it Pay?" is the title of a striking bulletin (No. 174), by Prof. Wm. H. Day, O. A. C., Guelph. Bulletin No. 175, on "Farm Drainage Operations," is a sequel to it, and may be had on application to the Department of Agriculture, Toronto, Ont.



Farmhouse in Chilliwack, B. C.

After three years' time, already a fine hedge and lawn.



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MARKETS.

Toronto.

LIVE STOCK.

At West Toronto, on Monday, January 24th, receipts numbered 36 cars, comprising 835 cattle, 8 hogs, 46 sheep, 7 calves; quality of cattle medium to good; trade easier; exporters held for Tuesday. Prime picked butchers', \$5.75 to \$5.85; loads of good, \$5.25 to \$5.60; medium, \$4.90 to \$5.15; common, \$4.25 to \$4.75; cows, \$3 to \$4.75; milkers, \$35 to \$55; calves, \$3 to \$7.25. Sheep—Ewes, \$4.50 to \$5 per cwt. Hogs—Easier, \$8.50, fed and watered at market, and \$8.25, f. o. b. cars at country points.

REVIEW OF LAST WEEK'S MARKET.

Cattle trade brisk throughout the week in spite of heavy supplies on Thursday. Prices held up well; in fact, they have never been steadily better since last spring. Not many exporters coming in. The total receipts of live stock at the City and Union Stock-yards for last week were as follows:

	City.	Union.	Total.
Tars	225	175	400
Cattle	3,884	2,967	6,851
Hogs	3,926	974	4,900
Sheep	1,865	926	2,791
Calves	217	54	271
Horses	1	245	246

Exporters.—Export cattle sold from \$5.60 to \$6.15; bulls, \$4.60 to \$5.25.

Butchers'.—Choice stock sold as high as \$6.15, not many, except the poorer class, going below \$5; common, \$4.50 to \$5. Cows averaged \$4 to \$4.50, range \$3.80 to as high as \$5.25; canners, \$2 to \$2.50.

Stockers and Feeders.—Very little doing in this class; prices ranged from \$3 to \$4.50.

Milkers and Springers.—Fair supply and demand, at \$38 to \$60, one good cow going as high as \$68.

Veal Calves.—Good calves in rather tight supply, at \$3.50 to \$7 per cwt.

Sheep and Lambs.—Ewes, some as low as \$4, but mostly \$4.40 to \$5; rams around \$4; lambs, \$6.50 to \$7.50.

Hogs.—Market somewhat uncertain. The

price was \$8.65, for hogs fed and watered in Toronto, and \$8.90 off cars, at country points; \$8.40, f. o. b. was being paid.

Horses.—Demand active. Shipping to the West continued. Drafters sold up to \$220; general-purpose, \$150 to \$175; expressers, \$140 to \$200; drivers, \$100 to \$200, and serviceably sound, \$25 to \$80.

HAY AND MILLFEED.

Hay.—Baled, car lots, on track, Toronto, No. 1, \$13.50 to \$14.50; No. 2, \$12.50 to \$13.

Straw.—Baled, car lots, on track, Toronto, \$7.50 to \$8.

Bran.—Car lots, on track, Toronto, \$21 to \$22 per ton.

Shorts.—Car lots, on track, Toronto, \$23 to \$25.

SEED MARKET.

Alsike, No. 1, per bushel, \$6 to \$6.25; No. 2, \$5.25 to \$5.75; red clover, per bushel, No. 1, \$7.50 to \$8.25; containing buckhorn, \$5.50 to \$6; timothy, bushel, \$1.40 to \$1.60.

BREADSTUFFS.

Wheat.—No. 2 white, \$1.07; No. 2 mixed, \$1.06. Manitoba—No. 1 northern, \$1.12; No. 2 northern, \$1.10, track, lake ports. Rye—68c., outside. Barley—No. 2, 58c.; No. 3X, 55c. to 56c.; No. 3, 50c. to 51c., outside. Oats—Canadian Western, No. 2, 41c., lake ports; No. 3, 40c.; Ontario, No. 2, 37c., at points of shipment. Buckwheat—No. 2, 51c. to 52c., outside. Corn—New kiln-dried, 74c.; new No. 3 yellow, 73c., Toronto freight. Peas—No. 2, 86c., outside. Flour—Ontario, for export, \$4.50, sea-board. Manitoba first patents, \$5.60; second patents, \$5.10; strong bakers', \$4.90.

COUNTRY PRODUCE.

Butter.—Farmers' dairy, 25c. to 28c., at St. Lawrence market; creamery prints, wholesale, 27c. to 28c.; creamery solids, 26c.; separator prints, 25c. to 26c.; large rolls, 21c. to 23c.

Cheese.—Prices unchanged, 13c. to 13½c.

Eggs.—Prices, if anything, weaker; new-laid, 35c. to 37c.; held, fresh, 26c. to 28c.; storage eggs, 27c. to 30c.

Potatoes.—No change, car lots, per bag, 45c. to 50c.

Beans.—Hand-picked, \$1.80 to \$1.90; prime, firm, at \$2.10.

Poultry.—Chickens, in particularly good demand, at 15c. to 17c.; fowl, 11c. to 13c.; turkeys, 17c. to 19c.; geese, 14c. to 15c.; ducks, 14c. to 15c.

HIDES AND WOOL.

No. 1 inspected steers and cows, 12½c.; No. 2 inspected steers and cows, 11½c.; No. 3 inspected steers and cows, 10½c.; country hides, 9c. to 10c.; calf skins, 12c. to 14c.; horse hides, No. 1, \$2.75; horse hair, per lb., 32c.; tallow, 5½c. to 6½c.; sheep skins, \$85c. to \$1 each.

Chicago.

Cattle.—Steers, \$5 to \$8.40; cows, \$3.50 to \$5.50; heifers, \$3.40 to \$6; bulls, \$4 to \$5.10; calves, \$3 to \$9.75; stockers and feeders, \$3.75 to \$5.50.

Hogs.—Choice heavy, \$8.65 to \$8.70; butchers', \$8.60 to \$8.70; light, mixed, \$8.65 to \$8.75; choice light, \$8.45 to \$8.55; packing, \$8.50 to \$8.60; pigs, \$7.65 to \$8.25; bulk of sales, \$8.45 to \$8.60.

Sheep and Lambs.—Sheep, \$5 to \$6.50; lambs, \$7 to \$8.85; yearlings, \$4.25 to \$8.25.

Buffalo.

Cattle.—Prime steers, \$6.65 to \$7.

Veals.—\$6 to \$11.25.

Hogs.—Heavy, \$8.90 to \$9; mixed, \$8.85 to \$8.95; Yorkers, \$8.75 to \$8.85; pigs, \$8.75 to \$8.80; roughs, \$8.20 to \$8.35; dairies, \$8.70 to \$8.85.

Sheep and Lambs.—Lambs, \$5.25 to \$8.40; yearlings, \$7.50 to \$7.75; wethers, \$5.75 to \$6.40; ewes, \$5.50 to \$6; sheep, mixed, \$3 to \$6.

British Cattle Markets.

London and Liverpool cables quote live cattle (American) at 12½c. to 14½c., dressed weight; refrigerator beef higher at 10½c. per pound.

Montreal.

Live Stock.—The local cattle market last week held about steady, showing little or no recession from the strength of the previous week. Some seven loads of Manitoba stall-fed cows and heifers were offered, the rest of the stock being from Ontario. There were a number of out-of-town buyers present, in addition to local butchers. As high as 6½c. per lb. was paid for a few specially fine steers, fine being about 6½c., good about 5½c. to 6c., medium at 4½c. to 5½c., and common down to 3½c. Prices of sheep and lambs held firm also, lambs being in good demand at 6½c. to 7c. per lb., and sheep at 4½c. to 4¾c. per lb. Calves continue to range from about \$3 to \$12 each. The market for hogs is strong, but rather disposed to fluctuate, owing to the high prices. As high as 9½c. and more was paid, and purchases were also made at 9½c., this being for selected stock, weighed off cars. Stock from west of Toronto received the preference by perhaps ½c. per lb.

Prices showed no alteration, and, if demand was not very active, supplies were not excessive. Heavy draft horses, 1,500 to 1,700 lbs., \$225 to \$300 each; light draft, 1,400 to 1,500 lbs., \$180 to \$240; small horses, 1,000 to 1,100 lbs., \$100 to \$150; broken-down horses, \$50 to \$100 each, and fine saddle or carriage animals, \$350 to \$500 each.

Dressed Hogs and Provisions.—The market for dressed hogs showed practically no change, being firm, at 13c. to 13½c. per lb., for fresh-killed, abattoir-dressed hogs, and 12½c. to 13c. for country-dressed. Extra large hams, weighing from 25 lbs. upwards, sold at 14½c., and large ones, 18 to 25 lbs., brought 15½c., while smaller ones sold at 16c. Rolled hams, boneless, quoted at 17c. per lb. for large, and 17½c. for small. English, boneless, breakfast bacon, selected, at 17c., thick being 16½c., Wiltshire sides 17c., and Windsor backs 17½c., spiced rolls and picnic hams 14½c. Barrelled pork, firm in tone, at \$28.50 to \$32, beef \$15 per barrel. Lard compound steady, at 12c. to 13½c. per lb., while pure lard was in good demand at 16½c. to 17½c., according to quality. The entire market was firm.

Poultry.—Interest in poultry has gradually decreased. Prices were about a cent a pound lower all round. This put nicest turkeys at 18c. to 19c. per lb., geese at 12c. to 13c.; ducks, not in much demand, and almost unobtainable, at 16c. to 17c., and finest chickens at around the same figure, all depending upon quality. Fowl, 10c. to 12c.

Apples.—The market held around \$2.50 to \$3 per barrel for No. 1 stock, \$1.90 to \$2.25 for No. 2, and \$1.40 to \$1.75 for No. 3. These were auction prices.

Potatoes.—The stock that arrived from New Brunswick was very nice. Dealers, however, had a hard time in getting more than 55c. per 90 lbs., carloads, for nice, ripe stock. Purchases of ordinary stock could be made at even less.

Eggs.—Market very firm. Now-laid stock very scarce, and selling in a wholesale way at 45c. to 50c. per doz. It is possible that select held eggs would have brought 35c., though some quoted 32c.; No. 1 eggs, 28c.

Butter.—Market, if anything, easier, at 23½c. to 24c. Choicest held stock, however, was steady, selling at 25½c. to 26c. per lb. Dairies, 21c. to 23c. per lb.

Cheese.—Prices range from 11½c. to 11c. or 12c., to cover all qualities.

Grain.—Prices for oats raised more than a cent, tone firm. No. 2 Western Canadian oats, 45½c. to 45½c. per bushel, carloads, in store, Montreal; No. 3, 44½c. to 44½c.; No. 2 white Ontario, 43c.; No. 3, 42c.; No. 4 white, 41c. No. 2 barley sells at 68c. to 69c., and Manitoba fed barley, 53c. to 55c.

Flour.—Market 10c. higher on Manitoba spring wheat flour, at \$5.80 per barrel for first patents; \$5.30 for seconds, and \$5.10 for strong bakers. Ontario winter wheat patents, \$5.50 to \$5.60, and straight rollers, \$5.10 to \$5.20.

Millfeed.—Millers sold Manitoba shorts at \$23 per ton, bran at \$22, while Ontario bran was \$22.50 to \$23, and middlings \$23.50 to \$24, pure gram meal \$31 to \$33, and mixed meal \$27 to \$29. Gluten meal was quoted at \$31 to \$32, and oil cake at \$35.50 to \$36 per ton.

Hay.—The market advanced about \$1 per ton, and was firm, at \$14 to \$14.50

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per ton for No. 1 baled, \$13 to \$13.50 for No. 2 extra, \$12 to \$12.50 for No. 2, \$11 to \$11.50 for clover mixed, and \$10 to \$11 for clover.

Hay Seed.—Dealers reported paying \$7.50 to \$8.50 per bushel, f. o. b., shipping points, for alsike, and \$5.50 to \$6.50 for red clover.

Hides.—Prices unchanged, at 10c., 11c. and 12c. per lb. for hides, 12c. and 14c. for calf skins, per lb., \$1 each for sheep skins, and \$1.75 and \$2.25 for horse hides, each. Rough tallow, 1½c. to 3½c. per lb., and refined, 5c. to 6c. per lb.

GOSSIP.

Directum, 2,054, for seven years champion trotting stallion, and one of the greatest harness horses the world has ever known, died recently of blood poisoning. Next to him on record stands Cresceus, as the greatest trotting stallion.

Wm. Barnett & Sons, Living Springs, Ont., write: We have had a very successful year in our Oxford Down sheep business, making a great many sales all over Ontario, and also to Quebec and United States. This firm advertises in "The Farmer's Advocate."

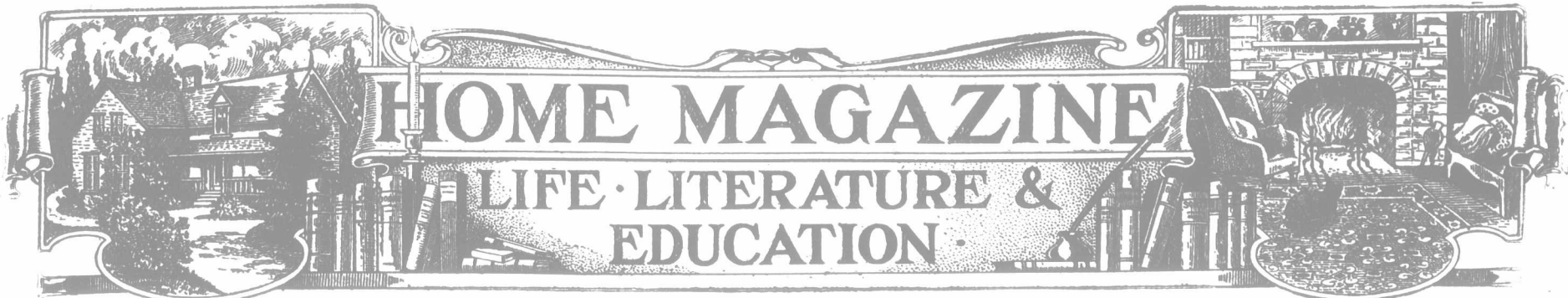
Sheep, it is reported, are dying by the thousands in Dakota and Wyoming, owing to fierce snow storms and extremely cold weather. Some owners have sold their large flocks of sheep for 50 cents a head. One man bought 3,000 sheep for \$1 each, but got only 300 of them to safety. The loss is most severe in the vicinity of Lander, Wyo., the blocking of the railroads in that section having prevented the sheepmen from securing feed.

S. Lemon, Poplar Lodge Stock Farm, Kettleby, Ont., who advertises Short-horns, Southdowns and Berkshires, writes: "I have sold all stock I had for sale. Am now booking orders for spring sales. The demand for Berkshires is unlimited, exceeding the supply, due to advertising in 'The Farmer's Advocate.' Will have some good stuff in spring litters from my stock boar, Polgate Prince."

The English Royal Agricultural Society held its annual meeting during Smithfield Show week, and there was a large attendance. A satisfactory financial position was shown—altogether different to the disastrous Park Royal days—in spite of the small deficit on the Gloucester Show.

Prospects for a successful show at Liverpool in 1910 are excellent. A strong local committee has arrangements well forward, and subscriptions are coming in well. A well-known Lancashire landowner, Sir Gilbert Greenall, of Warrington, was elected president of the society for 1910.

A deaf but pious English lady, visiting a small country town in Scotland, went to church armed with an ear trumpet. The elders had never seen one, and viewed it with suspicion and uneasiness. After a short consultation one of them went up to the lady, just before the opening of the services, and, wagging his finger at her warningly, whispered, "One foot, and ye're out."



Out of the thousands of new English books published during the past year, "The Nation," of London, distinguished by the discriminating quality of its reviews, selects but sixty-four as worthy the description, "more notable." The guiding principle in compiling its list was to include only books of some permanent value as contributions to the subjects with which they deal. The numbers in each of the nine classes were as follows: Biography, 7; Criticism and Belle Lettres, 12; Drama, 4; Fiction, 7; History, 10; Philosophy and Theology, 10; Poetry, 5; Sociology, Economics and Politics, 7; and Travel, 2. The autobiography of H. M. Stanley, and two books of travel, "Trans-Himalaya," and "The Heart of the Antarctic," mentioned on this page last week, are included among the notables. The literary scrapheap of "The Nation" is, therefore, an enormous one, but, since reviewers are not infallible, let us hope that more volumes of the output of 1909 will have literary vitality sufficient to survive the test of time.

One great theme at a time seems enough to exercise the public mind. For a month past it has been the British-Budget election. Else, how are we to interpret the almost cheerful indifference with which the Naval Bill, before Parliament at Ottawa, has been received. Public opinion works slowly in Canada, and is non-demonstrative. The real sentiment of Canada is not the war-spirit of jingoism that for various ends glorifies and exploits militarism, and would fasten conscription on the people, and compulsory military drill in the schools. Many dissent in toto from military expenditures beyond what is needed to properly police the land, or, in a naval programme, beyond what will police the fisheries. They strongly hold that Canada would do better to set a shining example to the world, along a new pathway, by abstinence from militarism, and devoting her energies to the arts of peace and the multiplying duties of industrialism and agriculture, now undermined. The people are for peace, business, and general improvement. With these, war is the direct antithesis. Think of the enormous and growing trade of Canada, the United States, and Great Britain. Who dare contemplate a war that would paralyze all that? The keen and strenuous competition of the trader is enough, without a conflict of arms with our neighbors in the United States, Germany, or Japan. War among these peoples would be an unthinkable tragedy, treason to humanity, destruction to commerce and to industry. All will admit this. The trading highways of the British Empire are upon the great waters, and her ports open on every sea, for the ostensible defence of which, under contingencies that might arise, a naval system is in existence. That is the fact. Were a foreign power to declare war upon Great Britain, that power, it is assumed, would be at war with Canada, and Australia, New Zealand and South Africa. Canada is an autonomous constituent of that aggregation, and, de facto, the British navy is at her service. For one hundred years we have happily got on well without its aid in conflict being required, and costing us nought. It is not what is called militarism, nor ambition, nor the cupidity of prospective contractors, or those who would enjoy volunteer places in the

naval service or the naval college, but a spirit of national self-respect, in these prosperous times, that ungrudgingly concedes a \$12,000,000 outlay for naval establishment, and \$3,000,000 a year for maintenance, with little regard for the hazards of being armed, and the practical certainty of greater future liabilities. In short, the Government, accepting the situation, as it is, for Canada, as part of the Empire, undertakes a naval programme on the lines agreed at the Imperial Conference in England last summer. If emergency arose in Great Britain, and it were needed, a monetary contribution would go from Canada; but she will build her own navy, and adhere to the principle of taxation with representation. The Bill provides that the navy shall not proceed to conflict outside of Canada without the express mandate of the Canadian Parliament as the voice of the Canadian people. That such a mandate may never be given, is not an idle dream. Every day, and everywhere, the spirit of democracy, the principles of peace, and the spread of intelligence are winning their way as deterrents to the war-lords of Europe and every other land.

Wireless telegraphy is face to face with one of the problems of modern progress—amateur interference. To illustrate what is meant, nearly every United States passenger steamboat of any size, many freight boats, every ship in the navy, including colliers and revenue cutters, are equipped with the wireless system, and carry operators. The U. S. Naval Department has a line of shore-stations all the way around from Maine to Alaska. It is estimated that there are also over 4,000 amateur wireless-telegraph stations in operation. Boston, alone, is the headquarters of some 500 amateur operators. School-boys have taken up the scientific fad, and are setting up apparatus in all directions. Many of their equipments are very efficient, and amateur operators have learned the commercial and naval codes, so that they can read Government wireless messages as promptly as those for whom they were intended. Furthermore, the operation of amateur stations interferes with the reception of the more public and important messages. As the reader may understand, wireless messages radiate in all directions through the ether of space from the transmitting apparatus in the form of electro-magnetic waves, at the rate of 186,000 miles per second. The receiving station is fitted up with apparatus sensitive enough to detect and record the dots and dashes of the wireless code, so that the electric waves are converted into intelligible signals. The farther distant from the transmitting station, the weaker the electric waves become, and the fainter the message. Consequently, if a coast station were receiving a message from far out at sea, and a near-by amateur or other private station began to transmit messages, these would go radiating more strongly through the air, actually drowning out the incoming message from sea. The amateur instruments are not, as a rule, powerful ones, so the trouble caused does not extend to long distances from them, but they do seriously interfere with the nearby stations. Official operators frequently have to request amateurs to "break," or cease operating, until their messages are received. A writer in The Outlook relates that a Boston

amateur, lately, when told by a naval operator to "butt out," replied, "Say, you navy people think you own the ether. Who ever heard of the navy, anyway? Beat it, you, beat it!" Some of the aerial chat that goes on for hours resembles the messages over a newly-installed rural telephone line. Here is a sample:

"How do you get me to-day? I am using my new transformer, and my helix is fixed up different. How are your batteries holding out? Say, old man, I get you as fine as silk. You have the navy skun a mile. My aerial came down last night, but I have it fixed up again. Did you go to the show last night? Have you got any No. 32 copper wire? Thought you would drop over last week. Say, I met your lady friend yesterday. Ha! Ha! Quit your kidding. Say, do you know that fellow who is putting up a new station out your way? I think he is a ham. Will call you up in ten minutes. Must go to supper now, but will be on the rest of the night. O K, O K. See you later."

It is expected that instruments more highly improved scientifically will overcome some of the interference, and also that the law will have to interfere, so that naval or commercial interests will not suffer through amateurs' tomfoolery. The situation is unique.

The Sheep-dogs of Wales.

By Lawrence Irwell.

Wales is a great peninsula in the west of the Island of Britain. Its area is about seven thousand four hundred square miles. Although it contains the highest mountain in Great Britain, Snowdon, this peak is only 3,500 feet above sea-level. Wales is, however, a hilly country.

To those who have never visited the United Kingdom, the utility and sagacity of Welsh sheep-dogs are little known. Moreover, unless one has seen these animals at work, one is not likely to realize the remarkable extent of their capacity; but the Welsh farmers know the value of their dogs, and they thoroughly appreciate their assistance in sheep-herding.

It is a common habit to depreciate what at first sight is not beautiful, especially if the subject is an animal, but animals, like their owners, although deficient in beauty, may be of far greater use than the possessors of it. Such is often the case with the sheep-dogs of Wales.

The dogs chosen for sheep-herding are very seldom of pure breed, but they always have a strain of Collie blood in their veins; and a strong, docile young animal, while he may be entirely free from any claims to the "points" that win prizes at shows, is likely to satisfy the needs of his owner, provided his intelligence appears equal to the demands that are sure to be made upon it.

While young, the dogs are taken by the shepherd to the hills, where their first lesson takes place. In training these novices, various methods are employed, but almost invariably the trainer calls upon his old and trusted dogs for assistance. A popular method is that of fastening the beginner to his comrade, who fully understands what is expected of him, and so he trots along, aware of the serious responsibility that has been placed upon him, and determined to make the youngster as wise and skillful as he is in matters pertaining to the care of sheep. In this way the juvenile animal soon becomes ac-

quainted with the work, and, after a few lessons, he will probably begin to understand the meaning of the various calls, whistles and motions of the hands by which the shepherd gives directions.

In the hilly districts of Wales, sheep-dog "trials" are held annually, and crowds of spectators gather to witness these conspicuous displays of animal skill and sagacity. What the writer saw at three of these "trials" impressed him as being both interesting and instructive.

The dogs are sent to the hills where the sheep are scattered. After a run of three or four miles, or more, they probably come upon them peacefully nibbling the short grass—little grows on the Welsh hills but grass and heather—and quite unaware of the fate that awaits them. The dogs are required to gather the sheep and drive them into their respective folds at the foot of the hills. Sometimes one perverse animal will leave all the other sheep, and will run far away. Then a chase ensues, in which the dog, after more or less trouble, comes off victor, and the wanderer is brought back to the flock. Appearances suggest that a single sheep occasionally hides from the dogs among the rocks that abound on the mountains of Wales.

A Welsh sheepfold is a square enclosure made of hurdles, and the sheep must be driven into it through a space made by removing a single hurdle. This needs great caution, as every experienced dog knows. When the flock has been brought to within a few hundred yards of the fold, the animals are allowed by the dogs to proceed at their own pace, but great care is taken to keep them closely packed together. All the sheep approach the entrance slowly until they are very close to it, when, quite suddenly, the leaders scent what they consider danger, and they cease to move. The dogs seem to be prepared for this, and they cautiously wriggle around the flock on their bodies, while the sheep on the outside press on, pushing those in front, until at last they are on the very threshold of the opening. Then the leading dog jumps up, gives a loud and joyful bark, and the frightened sheep rush headlong on, turning neither to right nor left, and the shepherd closes the opening space with a hurdle. Every action, except the last-named, has been performed by the dogs, although they may have been instructed, when sufficiently near, by their owner or his employe.

Welsh farmers usually take pleasure in relating the feats that have been performed by their favorite dogs.

An experienced farmer, whose farm comprised many acres of hill country, once owned a dog who was the envy of the whole district for miles around. On one occasion this animal was left on the side of a mountain to guard two sheep, while his owner went in search of the remainder of the flock which had wandered far away. Before the man could get back to his faithful dog, a violent storm came on, and he was obliged to remain overnight at the nearest place of shelter. Next day he returned to the spot where he had left his dog in charge, and to his astonishment and pleasure he found that the intelligent creature had not moved from his post, nor had he allowed either of his charges to escape, although he was stiff with cold, and starving for want of food.

This same farmer also owned a dog that could take sheep from place to place quite alone. One morning he

started for a fair, to be held at a town eight miles from his home. Before leaving his house he informed his family that he would not return till the next day, but that he intended buying some sheep and sending them to the farm in the care of the dog. He requested his son to open a certain gate at a specified time, in order that the dog might drive the sheep through it into a field that had been prepared for them. At the proper hour the boy opened the gate, and saw the sheep in the distance, accompanied by the dog, who eventually steered them into the field. The farmer, after buying the sheep, accompanied them and the dog to the outskirts of the town, taking care to start them at such an hour that they would be likely to arrive at the open gate at about the appointed time. After instructing the dog, he turned his horse around and went back to the town. This was entirely an experiment on the part of the farmer to test his dog's capacity to work by himself, and so efficient did the creature prove himself that when his owner reached his home on the following day, he found all the sheep in the field; not one was missing!

Welsh sheep-dogs that have a modicum of ability to "count" sheep are not very uncommon. A dog may be sent to a certain field to make sure that none of the animals have escaped from it. When he gets back, the person who sent him will count from "one" to the number of sheep from the field ought to contain, and the dog, after each number has been called, will bark that number of times, unless a sheep is absent. If that is the case, he will remain silent, however many times the word may be spoken. Nevertheless, unless the questioner—probably the farmer or shepherd—begins at "one," and gives the dog an opportunity to bark the requisite number of times up to the number of sheep the field ought to contain, no information can be obtained from him, notwithstanding persistent efforts on the part of numerous dog-owners. In other words, sheep-dogs seem unable to understand the meaning of, for example, "fourteen," unless they have previously listened to the spoken sound of every number from "one" to "thirteen."

The above are merely a few of the many apparently authentic stories that the writer has listened to when in the company of Welsh farmers. Even if some of them are exaggerated, they show to what a great extent the instinct of dogs may be developed. If, however, any American who is visiting the United Kingdom will attend some sheep-dog "trials" on the hills of Wales, taking with him a satisfactory field-glass, he is almost certain to conclude that the accounts of the capabilities of dogs which he has read, or heard related, are probably strictly accurate.

Our English Letter.

II.

Although even the very last echoes of Christmas, as it has been spent in the dear old Dominion, will have died away by the time this letter finds its way into the Home Department of our "Farmer's Advocate," yet how can I wholly refrain from making the blessed season in part my topic, whilst the sound of its joy-bells are still ringing in my ears, whilst the real old red-berried prickly holly decorates the walls of the room which I call my temporary home, and the columns of our daily papers are telling us how, from one end of England to the other, the sick in hospitals, the aged and infirm poor (of whom in the London Workhouses alone are 50,000), the waifs and strays, the unowned children of the slums of the metropolis and other large cities, have once more, by means of the spirit of Christmas which is abroad, been fed and comforted, and, as far as possible, given an opportunity to forget their sorrows, and realize that Christmas is not only a holy, but a humanly merry season?

Perhaps seldom in the history of the dear old Motherland has this spirit of Christmas, irrespective of its

material benefactions and its more tangible joys, been more sorely needed or more heartily welcomed than at this political juncture. By mutual consent, opposing parties have agreed to a truce. "It is Christmas," say they; "let us lay aside our weapons of offence and defence; let us cease our thrusts and counter-thrusts, and let us hie away to our homes and gather our young folks about us, and forget, at all events, while Christmas lasts, the vexed question of the Budget. Let us recall the olden times of simple faith, when the birthday of the Saviour was a day to be kept free from strife, when hatreds must be laid aside, the Yule-log dragged to the fire, and quaint carols sung:

"God save ye, merrie gentlemen,
Let nothing ye dismay,
Remember Christ our Saviour
Was born on Christmas Day."

And judging by the more temperate tone of the press on both sides, each party has, to some degree, held itself pretty well in leash, and Christmas peace has not been without its blessed influence. From one of the papers, which usually "fights without gloves" for Lloyd-George, his Budget and his methods, I have clipped the following rhymes, the first under date of December 24th:

PEACETIDE.

Peacetide is here,
Peasant and Peer,
Cease from your Babel,
Fly the white flag,
Tether your "nag"
Under the table.

Man is at truce,
Fall on the goose,
Turkey and capon;
Snapdragon flame,
Deadiest game,
Yokels may gape on.

Peacetide how brief!
Breath of relief,
Then to your quarters,
Orators hoarse,
Running their course,
Steaming reporters.

Tariff and Free,
Let us agree
Hatchets to bury;
Calumet smoke,
Chatter and joke;
Christians, be merry!

The second, dated (to-day) December 28th, seems to show that the dogs of war are again let loose, and are not likely to be kennelled again until the story of the eventful January of 1910 is known to the world. It runs thus:

DA CAPO.

After the splendid
Remission of toil,
When we suspended
The fight for the spoil—
After cessation
Of struggle and strain,
Each in his station,
We're at it again.

Carelessly throwing
Our troubles behind,
What we were owing
We put from the mind—
Bills ceased to torment—
Hope flattered in vain,
A day or two dormant,
They're at it again.

Hushed was the rattle
Of shrapnell and shell,
When on the battle
The Peace-message fell;
Now we are bursting
To slay and be slain—
For victory thirsting,
We're at it again.

I would not presume to offer an opinion upon so grave and complicated a topic, even if I were not aware that, whatever the result of the coming elections, you in Canada will know all about it as soon as we know it ourselves in England. I content myself with hoping that the future may surely have a wise pro-

vision made for it, without breaking wholly with the past, and that a way may be found to combine the two systems of heredity and election. This sounds somewhat like "sitting on the fence," I am afraid, but it is in just that somewhat ignominious position I have to confess myself left, even when I have tried my hardest to understand the point of view of one friend or another of opposing convictions. If the Budget, as a straight proposition to obtain an even balance, were the simple point at issue, even "the illogical mind" of a mere woman might be able to form an opinion; but it seems to have so many ramifications, so many underground passages and overhead bridges, so many electric-switches, so to speak, which must either be touched or carefully avoided, that perhaps excuses may be found for those amongst us whose attitude towards the momentous questions of the day can only be that of the refrain in the old songs, now revived, with charming illustrations, "The Bells of London Town":

"I am sure I don't know,
Says the Great Bell of Bow—"

Certainly, the crisis through which England is passing is one of most serious import, alike to herself, as the mother country, and to her children overseas; but as has so often happened before in the history of nations, "Man's necessity" may be God's opportunity," and we may be thankful that it is in the hands of One who knows the end from the beginning, and not in ours, that the final issue must rest. H. A. B.

Hope's Quiet Hour.

Editor "Hope's Quiet Hour."

I see so many inspiring thoughts in your column, dear Hope, that I thought I should also do something to help the cause along. The cause of self-improvement has lately been brought to my notice so strongly that I have decided to say a few words through your column. I think self-development is something everyone should take an interest in. To improve ourselves is one of the very first and most important liberties, duties and purposes of our being. The more you meditate upon this subject, the more its importance becomes apparent. As a rule, improvement of self is left to the very last, in fact, hardly ever thought of. It is a cornerstone that is neglected, but upon which the whole structure of life's successes depends. We improve our farms, houses, surroundings, bank books, etc., but how little real effort is made to improve ourselves. The subject of self-development or character-building should be our first and highest endeavor. The great importance of first drawing the beam out of our own eyes, before trying to improve others, cannot be conveyed in mere words. It is a matter that belongs strictly to oneself, and must be viewed by oneself. We are none of us perfect. We are not even as we wish ourselves to be, let alone perfect. Just take a few minutes off and devote a little thought to this subject, and see if you "fill the bill" as you would like it to be. Do this often, but, instead of stopping here, see yourself, in imagination, filling the bill. Follow your ideals, and try to fill them. Do not attempt to fulfill all your ideals at once. It can't be done. Remedy one fault at a time, and remember you were created to be perfect. Try as near as possible to come up to your ideal, and start in the work NOW. "To-morrow never comes!" A. E. W.

Editor "Hope's Quiet Hour."

Christmas is past, and so is New Year's Day! As you are to me now "The Preacher," I thought I would write to you to cheer and comfort you in your labor. I am 78, the hearing is almost gone, also partly sight. With spectacles on, and hand-glass in hand, I do not read fast. I go to church every other Sunday, walking often 14 miles there,

and the same back. I like it better, because you have time to think and meditate. I go to the vestry to the minister; he gives me the readings and text, and Psalms and Hymns; and, if not there in time, comes down out of the pulpit and gives them to me. I like the singing, and know a good many of the tunes and words of Hymns by heart.

Your text was very good this week, and thoughts also. I could not but think of the words in Prov. 25: 11.—"A word fitly (kindly) spoken, is like apples of gold in pictures of silver." The kind gift given and the helping hand in need, are the same thing. These will long remain in memory's store, years and years after, and will be often spoken of to others.

Illustration:

1. In 1844 my Sunday-school teacher took the stage-coach to a city or town twenty-five miles away (at or near Christmas), and gave to me a little book, writing these words in it: "For good learning and behavior." I was 12 years old. I have received many a gift of a book, but that one is treasured.

2. In my youthful days, I gave to a young lass of 16, a little pocketbook of stamped leather for holding needles, as she was learning dressmaking. We had a little tiff and parted. I did not see her again for many years. I called to see her and her husband, who had been sick. We were talking, and she came and sat down between us, sewing in hand, and gave to me in my hand the pocketbook of high 50 years. Truly, I think she had not used it very much. I guess it was like my teacher's book—treasured.

3. Seven years ago my neighbor (a farmer) took sick and died. He was a helpless sort of man, big enough, but no gumption in him. His wife had often to go out to the field, fix harness, or plow for him. She also drove the mower and reaper for him. The season was at its close. Potatoes and turnips to take up, and five small children to look after. I went over to her, cleaned the stable, which had not been cleaned out for a week, went out to the turnips, and started. Two neighbors came to help, and in two days all were under cover. She had a hard winter, scarcity of firewood and other things. I used to go once a week to help. Her brother came out from Scotland (a strong young man). Some months afterwards she presented me with a large gift cup, for kind help in her helplessness. I refused at first, but I saw she was grieved, so I took it. There it stands on the dresser, as her token of remembrance.

You have been asking "Why is it that people will not go to church any distance?" If well, I may answer it in my view. Maybe I am too late. I am not a subscriber to "The Farmer's Advocate." I live with my son on the old homestead of 77 years. The birds have all left the nest, and mother lies in the churchyard ten years.

No names, please, you will put me off my balance; not even where it came from.

I am sure all our readers will enjoy this letter, written by a farmer who has nearly reached fourscore. The poem—"Kinship of a Word"—which he enclosed with the letter, is—I think—his own composition, though he does not say so. If he has scattered seeds of kindness all the way, the harvest will be grand indeed. But I am sure the greatest joy awaiting him will be the Master's approval: "Well done, good and faithful servant! Inasmuch as you have shown kindness to my brethren, you have shown it unto ME." HOPE.

Kinship of a Word.

Would you say a kindly word,
Better say it;
A sure thing, 'tis we can't afford
To delay it;
It is easier said to-day
And may not come again our way,
Better speak it while we may
And not betray it.

Kindly words, when fitly spoken,
Dry many tears;
Binding Chords, so often broken
In passing years,
Lonely hearts are oft distressed,
Longing for a friend's caress,
Whose loving act of love express,
Even in sad fear.

I like it better, be-
stry to think and medi-
readings and text,
and, if not there
out of the pulpit
I like the sing-
many of the tunes
y heart.

Surely 'tis not much to give
So small a thing;
If we are aiming so to live
And help to bring
A helping hand to needy one,
In life's hard battling alone,
O'er its rugged paths a-stoned,
With broken wing.

The list of friends we count on most
Are those who love,
And aye to me a passing host,
On ready move;
Seeking where to lend a hand,
And help some fallen one to stand,
Knowing it is God's command
Sent from above.

How much richer earth would be
If kindness reigned;
Then better days we all would see—
Paradise regained;
All selfishness and pride would die,
Without a resurrection hope would lie,
No broken hearts or wailing cry,
Or grief soul stained.

An English Review of "The Vision of His Face."

"A charming volume, written by a
Canadian authoress. One is glad to
think that such good, attractive and in-
teresting reading is provided for families
dwelling on the lonely Canadian farms.
We welcome this English edition, and
commend it as excellent for Sunday read-
ing and meditation."—The Preacher's
Magazine, Jan., 1910.

"The Vision of His Face," by Dora
Farcomb. The William Weld Co., Lon-
don, Ont. Price, \$1.00; 224 pages;
cloth.

The Ingle Nook

[Rules for correspondents in this and
other Departments: (1) Kindly write on
one side of paper only. (2) Always send
name and address with communications.
If pen-name is also given, the real name
will not be published. (3) When enclosing a
letter to be forwarded to anyone, place it
in stamped envelope ready to be sent on.
(4) Allow one month, in this department,
for answers to questions to appear.]

A woman of my acquaintance is much
exercised to know what to do with her
son, a boy of some fourteen years of age,
who has no especial predilection for any
kind of work. "It would be so dread-
ful," she says, "if I started him on a
wrong line,"—and thereby she shows her
realization of her responsibility as a
parent.

Her dilemma is by no means confined to
herself, nor her fears. Even those who
are not parents can understand what a
calamitous thing it is to start a human
life out on a wrong line. What, then,
must be a parent's anxiety? To start a
boy on a career in which he may be
unsuccessful, one in which he will be
unhappy, over which he will waste
years of this short life, and which he may
finally desert when it is too late, per-
haps, to begin at the A B C of anything
else,—this is what a mistake may mean.

On the farms, when there is land enough
to go round, and all the boys are con-
tented to farm, the question does not
perhaps, press heavily; but when these
conditions do not exist, there it stands,
perplexing as in any city, perhaps more
so.

The other day I overheard someone say
to this friend of mine, "Let Frank go on
with two or three years of general edu-
cation first. That will stand him in
good stead, no matter what he does, and
by the end of that time he may have
some idea as to what he wants to do
himself."

As Frank had just passed the entrance,
the advice seemed reasonable and wise.
The more I think of it, the wiser it
seems; for what does an education not
mean. True, people may "get along"
without it; that is, they may make a
living; may even get rich without it, and
yet just as surely have they missed a
great deal of the cream of life. I have
never met an educated man or woman
yet who would give up one iota of his
or her education, were such a thing pos-
sible, for any consideration whatever.
Life means more than bread and butter
and possessions. Education helps us to

realize how much more it may mean;
education adds to "ourselves."

But education, to be true education,
must add to efficiency. Ex-President
Eliot, of Harvard, writing on this sub-
ject recently, defines such education as
"effective power for work and service
during a healthy and active life," and he
notes especially a point which is too
often overlooked, viz., that "education is
not an affair of youth, but, really, should
be the work of a whole life; efficiency in-
creasing with a man's active years."
This assertion he bases upon the observa-
tion, during over fifty years at Harvard,
of successive ranks of men, with the con-
clusion that the comparison of the edu-
cated man of sixty with the same person
at twenty, is "wonderfully encouraging
and stimulating with regard to the aver-
age effects on human beings of education
and the discipline of life." At the same
time, he by no means overlooks the fact
that the grand start in education is
made, preferably, during early years.

Professor Eliot is very much impressed
with the influence of the "bodily excel-
lences and virtues" as agents of the best
development. In reviewing the life fail-
ures of men whom he has known, he ob-
serves that "the only cases of hopeless
ruin were those in which the body had
been first ruined through neglect or vice."

And he defines how true education is to
be obtained. It should first train the
bodily senses, including care of the body.
An extraordinary neglect in education
heretofore, he believes, has been the fail-
ure to train the senses of sight, hearing,
smell, and taste. We should be much
more observant than we are, much keener
and brighter. Next ought to be trained
our power of concentrated attention,
"without which there can be no true
economy of time." A man in whom this
faculty is trained, will work quickly and
effectively, no matter what his work may
be. He "will do in one minute, work
which an inferior man will not do in less
than five minutes, or five hours."

The will-power must be developed, and
is developed in the man who is truly edu-
cated. To be efficient, a man must be
able, not only to think for himself, but
to think hard and long and consecutively,
following out from premise to conclusion,
from cause to effect, that which he has
in hand. And he must be enthusiastic.
"A life without a prevailing enthusiasm,
is sure not to rise to its highest level.
The youth has a vision of the life he
would like to live, of the service he
would choose to render, of the power he
would prefer to exercise; and for fifty
years he pursues this vision. In almost
all great men, the leading idea of the
life is caught early, or a principle or
thesis comes to mind during youth which
the entire adult life is too short to de-
velop thoroughly. Most great teachers
have started with a theory, or a single
idea, or a group of ideas, to the working
out of which in practice they have given
their lives. Many great preachers have
really had but one theme. Many archi-
tects have devoted themselves, with inex-
haustible enthusiasm, to a single style in
architecture. Some of the greatest sol-
diers have fought all their battles by one
sort of strategy adopted in their youth.
Many great rulers have harped all their
lives on only one string of national or
racial sentiment. Among men of sci-
ence, the instances are innumerable in
which a whole life has been devoted to
the patient pursuit of a single vision seen
in youth."

I do not know how all this appears to
you, but to me it seems very good rea-
soning. We must be specialists, whether
we specialize in farming or gardening, or
housekeeping, or teaching, or what not,
but first we need the general education
which will enable us to make a choice,
which will open to us glimpses of all the
ways, so that we may know which one
calls to us most strongly. . . . And then,
education is not merely "knowing"
things. The mere exercise of learning
them, the application and thought neces-
sary in plowing through the perhaps dis-
tasteful exercises of algebra and geome-
try, etc., during school-days should be
developing in us concentration and will-
power and system, and the power to
think and judge, things that must stand
us in good stead all the days of our
lives, enabling us to do, perhaps, in one
minute what must require one not so
trained, five minutes. This aspect of

education is not always, I believe, suffi-
ciently clear.

Nor is the right balance in regard to
the subjects to be studied always recog-
nized. One man, for instance, runs crazy
on technical education. He will have
nothing to do with literature, or the
classics. Now, too much classics and
literature may, it is true, develop refine-
ment and the imaginative and expressive
faculties at the expense of manual dexter-
ity. Yet it is equally true that too
much technical education may develop
dexterity at the expense of power to
think, for imagination is a strong factor
even of mathematics and science. The
well-balanced course, so far as general
education goes, should surely embrace
enough literature and kindred subjects to
develop refinement and appreciation, as
Ruskin says, of "the beautiful and the
good"; enough of mathematics and sci-
ence to develop habits of order, accuracy,
investigation, and the wonder which Car-
lyle regards as akin to worship, and
enough technical education to make the
hands dexterous, and give the brain such
development as that class of work may
require. Schooling will not, of course,
invariably make a boy efficient, or develop
him into an efficient man. The lad who
is naturally "scatterbrained," who is wil-
fully inattentive, or who goes through
with wrong ideals, may prove but a fail-
ure; perhaps he would be so in any case,
or perhaps technical education and man-
ual labor is what he needs, without a
long preliminary course,—common sense
must be the guide as to this. But in
the case of the boy who will "take it,"
it is almost invariably true that a good
schooling, a good general course to begin
with, proves to be the best start in life,
no matter what trade or profession he
may apply himself to afterwards. Spe-
cialization can follow at will.

This early start, too, is the best guar-
antee of that continuous education which
is to be, in Professor Eliot's words, "the
work of a whole life." Seldom indeed,
when once enthusiastically started, whether
in early life or later, does this process
come to an end. Few there be who,
once convinced of the value to life of
education, can ever stand still. D. D.

A Letter from Aunt Nan.

Dear Dame Durden and Ingle Nook
Friends,—It is too bad we fail to show
our appreciation of the good Dame's
efforts in our behalf, but I feel like For-
get-me-not, that it is not lack of appre-
ciation, but the old difficulty of pro-
crastination that prevents so many from
writing to our helpful corner of a most
helpful magazine.

I wonder what the majority of them
are doing those lovely evenings. I'll
tell you what I am endeavoring to do,
and then will expect to hear from each
of the rest.

There are so many kinds of odds and
ends in housework that are left till we
are not so busy. Now is the time, if
there ever will be a chance, so make the
most of it, Nookers.

I make cushion covers, curtains for the
shelves, cover window seats, re-line the
worn quilts, paint the worn chairs, and,
in fact, get as many of those things done
that require time and patience, as pos-
sible, so that when housecleaning comes
one will not need to be troubled or
hurried, as is often the case. I find it
pays to make several covers for the pil-
lows on the kitchen lounge, of some
pretty, good washing materials, then,
when soiled, they can be washed in the
regular wash, and it's only a few min-
utes' task to sew up the opening by
hand in the evening, and the satisfaction
is worth a good deal.

I hope to hear of a great variety of
lunches for the school children, for that
has been a source of anxiety to me.
What a pity there is so little accommo-
dation for them having a hot drink at
noon, especially these cold days, when
they get chilled going to school, and feel
the effects of it more or less all day.
Why couldn't a kettle be provided to heat
water, and we could send chocolate, or
cocoa, all prepared, with them in their
lunch pails, or even tea or milk, and they
would feel refreshed, I'm sure, and enjoy
their cold dinners so much more.

What a pity, Forget-me-not, that we
had not some badge of distinction, for I,
too, was at London Fair two days, and
see what we missed. No doubt we
should have made such good use of the

time, that the Nook would have received
a stimulus that would not have faded
yet.

Surely, before the all-important fair
comes off again, we may devise some plan
whereby all the old aunts and mothers
and lassies may enjoy a genuine chat,
and be sure to have D. D. in the midst
to restore order when the din becomes
deafening, and save us from the "Bob-
bies."

I am looking for that recipe, and will
enclose it for Ingle Nook readers, if I
find it before this is mailed.

Now, I hope we, each and all, will re-
solve to be more content with our posi-
tion on the farm this year, and it stands
to reason we will be a great deal hap-
pier. This, for you, too, D. D.

Oatmeal Gems.—2 cups flour, 2 cups
oatmeal, 1 cup cream, ½ cup buttermilk,
1 teaspoon soda, a little salt.

AUNT NAN.

You don't tell us how to manipulate
these ingredients, Aunt Ann. Will "An
Ingle Nook Reader" know how to use
them? What fun it would be to arrange
for a meeting at the next fair, for all
Nookers who might be there. Do you
suppose Dame Durden would be able to
keep order?

Oatmeal Cookies.

Dear Friends of the Ingle Nook,—I take
my place among you again; this is my
second call. The old year is past, with
all its cares and disappointments and
failures of one kind or another, but the
past is gone never to be recalled, so dear
friends of the Nook, let us enter 1910
with our hopes renewed, with a deter-
mined assurance that our Creator will
help us to if we try to be bright and
cheerful, and try to look on the bright
side of everything as far as possible. I
wish all the sisters with babies, health
and happiness, for the little ones, and a
Happy New Year to all. There is only
one way for each of us to make it so,
and that is by trying to help and en-
courage others by deeds of kindness and
words of love and sympathy. There are
not many of us that can do great things,
but let us do what we can; after all, 'tis
the little things that count, for they are
so numerous. We are assured that a cup
of water given in His name shall not
lose its reward. Let us look around us
to see what we can do for someone else,
and not be stuck on ourselves too much,
but try in our little circle how much we
can help to cheer others. I will send the
recipe for the cookies. I take my leave,
and bid you all adieu for this time.

Oatmeal Cookies.—½ cup of butter and
lard, ½ cup of sweet milk, 1 egg, 1 cup
sugar, 1 teaspoon of soda, 1 cup of white
flour, 2 cups of rolled oats.

If it is not quite stiff enough, add more
of both flour and rolled oats, till it will
roll thin. Turn a large baking pan bot-
tom up, and roll it on the pan, as you
cannot lift it from the board, trim off
the edge, and bake. When done, cut ex-
actly across as soon as from the pan.
This will make two. Then make a fill-
ing with one cup of raisins chopped, one
cup of currants, one of sugar, a little
water, and cook till tender, and thicken
with a little flour. Spread this on one
half of each cake and lay the other on
top. Cut in squares about 1½ inches,
or as large as you wish. Have the fill-
ing ready to put on as soon as it comes
from the oven, as it becomes brittle when
cold, and will not cut so well, but is
liable to break. This is good; worth
while trying. DAWN.

A Timid Newcomer.

Dear Dame Durden,—I agree with many
of your readers, that the Ingle Nook is
one of the most interesting and useful
departments in "The Farmer's Advoca-
te." I have long wished to enter the
charmed circle, but felt rather timid
about seeking admittance to such a
"goodly company," but here I am at
last; sure of a welcome, too; for you ex-
tend the glad hand to all. I should like
so much to join "The Farmer's Advoca-
te" Literary Club, and enter the com-
petition, but, alas! I fear I am not up
to the writing of a prize essay. I am
enclosing one of my poor attempts
at essay-writing, which I hope may be
of use to you.

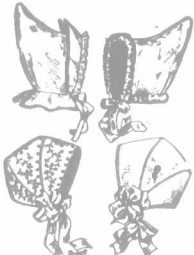
Good luck, and a Happy New Year to
Dame Durden and all Ingle Nookers.

M. J. H.

Welcome, indeed. As for joining "The

"Farmer's Advocate" Literary Club, just try some of the essays, and, even if you do not win a prize, it will be good practice for you to put your thoughts and ideas into shape on paper; and no one knows what one can do till one tries (What a lot of "ones"). Judging from the essay enclosed in your letter (which will be used shortly), we would not be at all surprised if you were to capture a prize some day. Just try. Thanks for your good wishes.

The "Farmer's Advocate" Fashions.



6551 Child's Caps, 2 to 6 years. 478 Embroidery Pattern.



6553 Girl's Dress, 6 to 12 years.



6543 Girl's Tucked Dress, 8 to 14 years.



6548 House Gown or Wrapper, 34 to 44 bust.



DESIGN BY MAY MANTON. 6523 Misses' Box Plaited Waist. 6421 Misses' Skirt.

Above patterns will be sent on receipt of ten cents per pattern. State bust measure for house-gown, and age of child for numbers 6551, 6553 and 6543; also state number of pattern. Address: Fashion Dept., "The Farmer's Advocate," London, Ont.

Current Events.

Nearly \$75,000 were paid for fishing licenses in Ontario last year.

Russia's wheat crop for 1909 amounted to 783,000,000 bushels, the largest crop ever harvested by any one country.

The British Admiralty has just placed orders for the building of three more Dreadnoughts and one battle-ship-cruiser.

A native Chinese missionary has been appointed by the Presbyterian Foreign Missionary Committee to work among the Chinese in Toronto.

The first aviation meeting, just held in Los Angeles, has been most successful. The attendance has averaged 30,000 a day, and receipts estimated at nearly \$20,000 per day.

Five automobiles were recently seized at Winnipeg for under-valuation at the Customs House. Four of these were sold, and the owner of the fifth paid a fine of about \$4,000, and kept his machine.

A new comet, visible by day, has been discovered by Prof. Drake, at Johannesburg. Comets sufficiently bright to be seen by daylight are very rare, only three or four appearing in a century.

A Russian officer, Lieutenant Shikitsk, has just completed a ride of over 2,100 miles without change of horse. He rode nearly 50 miles a day, and took fifty days for the journey. Both horse and rider finished in good condition.

The Roundabout Club

Winter Night.

By John Greenleaf Whittier.

[This poem was written in the winter of 1829-30, and was printed in the Haverhill Gazette. It was found by S. T. Pickard, in a scrap book kept by Mr. Whittier's sister, and is now republished in the Independent Magazine. It was never in any collection of the poet's works.]

Silent and full of stars, the awful Heaven Is looking down on slumber. There is not

The breathing of a solitary breeze Upon the cheek of winter. It is still As when the shapeless attributes of Earth

Slept in the night of Chaos, and the win Of a most heavy darkness hung upon The unformed solitude. The trees stand up

Without the show of motion; and the stars

And the uprising of the holy moon Make visible the silvery of frost Among their naked boughs. Even the tall grass

Around their trunks is flashing, like the spears

Of fairy multitudes; the snowy tops Of all the hills are quivering with gems— The jewelry of winter.

I have gazed

Upon the things around me, until all The grossness of reality is gone, And I can feed my fancy with the thought

Of a most glorious vision. I can cast The veil of Earth aside, and send my gaze

Into the land of fairy; and look through Groves of unearthly beauty. I can see The golden pillars and the fretted roof Of wizard palaces; the grottoes where The elfin spirits of the unseen world,—

The winged and mysterious messengers From the far land of spirits,—shake their plumes

And white wings in the moonlight. I can tread

The jeweled pathway, where a magic wand

Hath changed the unseemly pebble to a gem—

The gray sand into gold.

There cannot be

A vision lovelier in the flowery time Of the revealing spring, nor in the sun And glory of the summer. It is as The blissful Paradise of Yemen's sons— The flowery gardens of enchanted Gul.

Poetry As a Study.

It has been truly said that our future depends on how we spend our leisure.

We become like our associates, therefore let us make friends with the great. In choosing friends among the English poets, there is no danger of making a mistake and becoming intimate with one who will prove in any way our undoing.

These men have stood the test of years, and have been subject to the criticisms of the greatest minds, and we need have no hesitancy in making them our dearest friends.

We, of the country, are apt to envy our city friends their many advantages, but amid the glitter and glare, their real opportunities are let go by, and they feed on the froth and bubbles. But here in the quiet country home, "far from the madding crowd," we can do real studying, and, taken all round, we have as much leisure as any other class of working people.

We should make it a part of our duty to ourselves to take up some particular line of study every winter, and thus enrich our lives with knowledge from the world's greatest minds.

No young men or women should be content with themselves until they have a general knowledge of the works of the great English poets, and they should then continue by studying carefully such works as appeal most strongly to them.

Why do we study poetry? One reason is because of its soothing effect on our nature. We must live in the world, and we all feel more or less strife and discord of the great masses of humanity.

All have felt at times, with Wordsworth:

"The world is too much with us,—late and soon."

How comforting, then, to sit in the quiet of our country homes and

"Read from some treasured volume The poem of our choice, Till the night is filled with music, And the cares that infest the day, Shall fold up their tents like the Arab, And silently steal away."

And who knows what the study of poetry may produce in ages to come. It is the belief of some that all the sorrow and evil in the world is caused by the lack of harmony. Poetry is harmony. Poetry may become a part of our lives, and, since

"Our echoes roll from soul to soul, And grow forever and forever,"

it may be a means of hastening the millennium. One writer has said that poetry is the record of the best and happiest moments of the happiest and best minds, and the very image of life expressed in its truth. And these are ours for the taking, not only to give us pleasure, but to become a part of our nature, lifting us to higher planes of thought and life.

Every English poet had a mission, some great lesson peculiarly his own, to offer to his readers. Each has some central idea which has given unity to all his works.

Shakespeare, always acknowledged the king of our poets, has taught us, above all things, to know the world, to know our fellow men, to learn, rather, how to live, than how to die, and that our duty to our Creator is in doing our duty to those among whom he has placed us.

Milton proclaims the power and sublimity of the spirit world.

Byron stands for passion and liberty, and to those who study Byron there are to be enjoyed all the pleasures of art and travel. In Childe Harold's Pilgrimage, one is taken over the most beautiful parts of Europe, and sees, painted in glowing colors, many of the world treasures of art.

Again, we may go with Coleridge on a trip to the South Seas, and experience, with his Ancient Mariner, all the terrors of being becalmed in the tropics, where, he says,

"Day after day we lay, without breath or motion,

As idle as a painted ship upon a painted ocean."

And what joy is there for the reader of Sir Walter Scott. We are transported to the wild-beautiful Highlands of Scotland, and who could help but be entranced with that beautiful description of a sunset in the mountains:

"The Western rays of ebbing day,

Rolled o'er the glen their level ray,

Each purple peak and flinty spire,

Were bathed in floods of living fire;

But not a gleam of light could glow Within the dark ravines below,

Where twined the path in shadows hid, Round many a rocky pyramid."

A few minutes later we are given a most vivid description of Loch Katrine, and make the acquaintance of Ellen, the Lady of The Lake.

How real to us is the meeting of James Fitz James and Roderick Dhu, and who has not held his breath as he awaited the result of the combat between these two brave men.

In reading Tennyson's poems, we make the most delightful acquaintances. We are carried back to

"Days of old, when knights were bold, And barons held their sway."

Here we may mingle with King Arthur, and the knights of the "Round Table." The beautiful lives and high ideals of these men might be an inspiration to the young men of to-day.

Now must we neglect to mention Robert Burns, so dear to the hearts of Scotchmen the world over. How the very name brings to mind his poems of love and home, and we honor him for the struggle

he made against poverty and evil influences.

Then the study of Longfellow's poems must appeal strongly to us, since the scenes are laid in our own land. We can all delight in the great feats of Hiawatha, and all have loved the gentle Minnehaha, Laughing Water.

And what beautiful thoughts and pictures have we enjoyed while reading the tenderly-beautiful story of Evangeline. Thousands of hearts have followed her in her lonely wanderings, and have believed in

"Affection that hopes and endures and is patient."

And in the strength and beauty of woman's devotion.

And there are many others, not only in the old land, but here in our own Canada, who have added much to the wealth of English verse.

But I had thought to speak particularly of the study of the poems of William Wordsworth, that friend of the wise and teacher of the good.

Wordsworth should be the friend of all country people. All his life was spent in the country, and he loved Nature above everything else. He can teach us to love Nature. We are constantly surrounded by a wealth of beauty, but many of us are like Peter Bell, of whom Wordsworth said:

"A primrose by the river's brim,
A yellow primrose was to him—
And nothing more!"

while to the poet.

"The meanest flower that blows can give
Thoughts that do often lie too deep for tears."

And of this love of beauty, Ruskin has said:

"It is the essential part of all healthy human nature, and though it can long co-exist with states of life in many other respects unvirtuous, it is in itself wholly good, the direct adversary of envy, avarice, mean worldly care and cruelty. The men in whom it has been most strong, have always been compassionate, the lovers of justice, and the earliest declarers and discoverers of things conducive to the happiness of mankind.

To Wordsworth, all Nature spoke of the Divine. He tells us to look for the image of the Creator in the trees and flowers.

No one can study "The Ode to Duty," or "The Ode on Intimations of Immortality," without having for the remainder of life that which will attract great thoughts and repel vulgar and commonplace views.

Wordsworth lived uneventfully, plodded on cheerfully, and despised luxury, and because of this, thousands of his readers have felt that life was better worth living, and plodding less irksome, and simplicity more charming; and surely, the best a poet can do is to make people regard their daily commonplace existence as being beautiful and worthy of them, and even ideal.

And let me say, in closing, that since the fields for mental activities are so wide, and so much is to be gained by gleaning in them, we should make use of our every opportunity.

"We have not wings, we may not soar,
But we have feet, to scale and climb,
By slow degrees, by more and more,
The cloudy summits of our time."

"The heights by great men reached and kept,
Were not attained by sudden flight,
But they, while their companions slept,
Were toiling upward in the night."

Medina, Ont. EUGENIA.

At a court of justice in Australia much frequented by Chinese, a newly-appointed crier was ordered by the judge to summon a witness to the stand.

"Call for Ah Song," was the command.
The crier was puzzled for a moment. He glanced shyly at the judge, and found him quite grave. Then he turned to the spectators.

"Gentlemen," he asked, "would any of you favor His Lordship with a song?"—Galveston News.

The Golden Dog

(Le Chien D'Or.)

A Canadian Historical Romance.

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CHAPTER XLVIII.—Continued.

"Oh, all the rest, with its mistress included, for the reason that what is good enough for me is good enough for you, Pierre," said she, gaily.

"You little economist! Why, one would say you had studied housekeeping under Madame Painchaud."

"And so I have. You do not know what a treasure I am, Pierre," said she, laughing merrily. "I graduated under mes tantes in the kitchen of the Ursulines, and received an accessit as bonne menagere which in secret I prize more than the crown of honor they gave me."

"My fortune is made, and I am a rich man for life," exclaimed Pierre, clapping his hands; "why, I shall have to marry you like the girls of Acadia, with a silver thimble on your finger and a pair of scissors at your girdle, emblems of industrious habits and proofs of a good housewife!"

"Yes, Pierre, and I will comb your hair to my own liking. Your valet is a rough groom," said she, taking off his hat and passing her finger through his thick, fair locks.

Pierre, although always dressed and trimmed like a gentleman, really cared little for the petit maitre fashions of the day. Never had he felt a thrill of such exquisite pleasure as when Amelie's hands arranged his rough hair to her fancy.

"My blessed Amelie!" said he, with emotion, pressing her finger to his lips, "never since my mother combed my boyish locks has a woman's hand touched my hair until now."

Leaning her head fondly against the shoulder of Pierre, she bade him repeat to her again, to her who had not forgotten one word or syllable of the tale he had told her before, the story of his love.

She listened with moistened eyelids and heaving bosom as he told her again of his faithfulness in the past, his joys in the present, and his hopes in the future. She feared to look up lest she should break the charm, but when he had ended she turned to him passionately and kissed his lips and his hands, murmuring, "Thanks, my Pierre, I will be a true and loving wife to you!"

He strained her to his bosom, and held her fast, as if fearful to let her go.

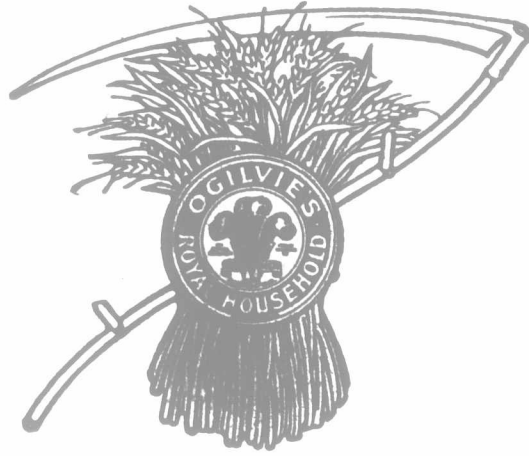
"Her image at that last embrace,
Ah! little thought he 'twas the last!"

Dim twilight crept into the valley. It was time to return home. Pierre and Amelie, full of joy in each other, grateful for the happiest day in their lives, hopeful of to-morrow and many to-morrows after it, and mercifully blinded to what was really before them, rose from their seat under the great spreading elm. They slowly retraced the path through the meadow leading to the bridge, and re-entered the highway which ran to the city, where Pierre conducted Amelie home.

CHAPTER XLIX.

The Market-Place on St. Martin's Day.

The market-place then, as now, occupied the open square lying between the great Cathedral of Ste. Marie and the College of the Jesuits. The latter, a vast edifice, occupied one side of the square. Through its wide portal a glimpse was had of the gardens and broad avenues of ancient trees, sacred to the meditation and quiet exercises of the reverend fathers, who walked about in pairs, according to the rule of their order, which rarely permitted them to go singly.



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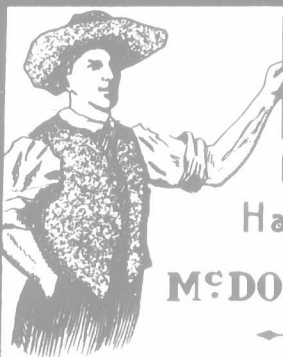
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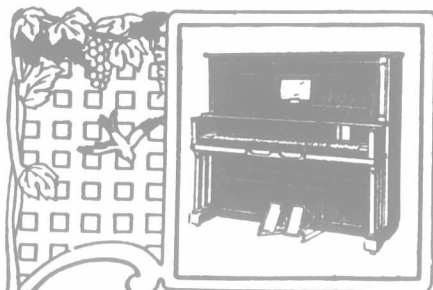
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The market-place itself was lively this morning with the number of carts and stalls ranged on either side of the bright little rivulet which ran under the old elms that intersected the square, the trees affording shade, and the rivulet drink for man and beast.

A bustling, loquacious crowd of habitants and citizens, wives and maid-servants, were buying, selling, exchanging compliments, or complaining of hard times. The market-place was full, and all were glad at the termination of the terrible war, and hopeful of the happy effect of peace in bringing plenty back again to the old market.

The people bustled up and down, testing their weak purses against their strong desires to fill their baskets with the ripe autumnal fruits and the products of field and garden, river and basse cour, which lay temptingly exposed in the little carts of the marketmen and women who on every side extolled the quality and cheapness of their wares.

There were apples from the Cote de Beupre, small in size, but impregnated with the flavor of honey; pears grown in the old orchards about Ange Gardien, and grapes worthy of Bacchus, from the Isle of Orleans, with baskets of the delicious bilberries that cover the wild hills of the north shore from the first wane of summer until late in the autumn.

The drain of the war had starved out the butchers' stalls, but Indians and hunters took their places for the nonce with an abundance of game of all kinds, which had multiplied exceedingly during the years that men had taken to killing Bostonnais and English, instead of deer and wild turkeys.

Fish was in especial abundance; the blessing of the old Jesuits still rested on the waters of New France, and the fish swarmed metaphorically with money in their mouths.

There were piles of speckled trout fit to be eaten by popes and kings, taken in the little pure lakes and streams tributary to the Montmorency; lordly salmon that swarmed in the tidal weirs along the shores of the St. Lawrence, and huge eels, thick as the arm of the fisher who drew them up from their rich riverbeds.

There were sacks of meal ground in the banal mills of the seigniories for the people's bread, but the old tinctures of yellow butter, the pride of the good wives of Beupre and Lauzon, were rarely to be seen, and commanded unheard-of prices. The hungry children who used to eat tarts of bread buttered on both sides, were now accustomed to the cry of their frugal mother as she spread it thin, as if it were gold-leaf: "Mes enfants, take care of the butter!"

The Commissaries of the Army, in other words the agents of the Grand Company, had swept the settlements far and near of their herds, and the habitants soon discovered that the exposure for sale in the market of the products of the dairy was speedily followed by a visit from the purveyors of the army, and the seizure of their remaining cattle.

Roots and other esculents of field and garden were more plentiful in the market, among which might have been seen the newly introduced potato—a vegetable long despised in New France, then endured, and now beginning to be liked and widely cultivated as a prime article of sustenance.

At the upper angle of the square stood a lofty cross or Holy Rood, overtopping the low roofs of the shops and booths in its neighborhood. About the foot of the cross was a platform of timber raised a few feet from the ground, giving a commanding view of the whole market-place.

A crowd of habitants were gathered round this platform listening, some with exclamations of approval, not unmingled on the part of others with sounds of dissent, to the fervent address of one of the Jesuit Fathers from the College, who, with earnest

in hand, was preaching to the people upon the vices and backslidings of the times.

Father Glapion, the Superior of the order in New France, a grave, saturnine man, and several other fathers in close black cassocks and square caps, stood behind the preacher, watching with keen eyes the faces of the auditory, as if to discover who were for and who were against the sentiments and opinions promulgated by the preacher.

The storm of the great Jansenist controversy, which rent the Church of France from top to bottom, had not spared the Colony, where it had early caused trouble; for that controversy grew out of the Gallican liberties of the national Church and the right of national participation in its administrations and appointments. The Jesuits ever fiercely contested these liberties; they boldly set the tiara above the crown, and strove to subordinate all opinions of faith, morals, education, and ecclesiastical government to the infallible judgment of the Pope alone.

The Bishop and clergy of New France had labored hard to prevent the introduction of that mischievous controversy into the Colony, and had for the most part succeeded in preserving their flocks, if not themselves, from its malign influence. The growing agitation in France, however, made it more difficult to keep down troublesome spirits in the Colony, and the idea got abroad, not without some foundation, that the Society of Jesus had secret commercial relations with the Friponne. This report fanned the smouldering fires of Jansenism into a flame visible enough and threatening enough to the peace of the Church.

The failure and bankruptcy of Father Vallette's enormous speculations in the West Indies had filled France with bad debts and protested obligations which the Society of Jesus repudiated, but which the Parliament of Paris ordered them to pay. The excitement was intense all over the kingdom and the Colonies. On the part of the order it became a fight for existence.

They were envied for their wealth, and feared for their ability and their power. The secular clergy were for the most part against them. The Parliament of Paris, in a violent decree, had declared the Jesuits to have no legal standing in France. Voltaire and his followers, a growing host, thundered at them from the one side. The Vatican, in a moment of inconsistency and ingratitude, thundered at them from the other. They were in the midst of fire, and still their ability and influence over individual consciences, and especially over the female sex, prolonged their power for fifteen years longer, when Louis XV., driven to the wall by the Jansenists, issued his memorable decree declaring the Jesuits to be rebels, traitors, and stirrers-up-of-mischief. The King confiscated their possessions, proscribed their persons, and banished them from the kingdom as enemies of the State.

Padre Monti, an Italian newly arrived in the Colony, was a man very different from the venerable Vimont and the Jogues and the Lallemands, who had preached the Evangel to the wild tribes of the forest, and rejoiced when they won the crown of martyrdom for themselves.

Monti was a bold man in his way, and ready to dare any bold deed in the interests of religion, which he could not dissociate from the interests of his order. He stood up erect and commanding, upon the platform under the Holy Rood, while he addressed with fiery eloquence and Italian gesticulation the crowd of people gathered round him.

The subject he chose was an exciting one. He enlarged upon the coming of Antichrist and upon the new philosophy of the age, the growth of Gallicanism in the Colony, with its schismatic progeny of Jansenists and Hometes Gens, to the discouragement of true religion, and the endangering of immortal souls.

His covert allusions and sharp in-

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nuendoes were perfectly understood by his hearers, and signs of dissentient feeling were rife among the crowd. Still, the people continued to listen, on the whole respectfully; for, whatever might be the sentiment of Old France with respect to the Jesuits, they had in New France inherited the profound respect of the colonists, and deserved it.

A few gentlemen, some in military, some in fashionable civil attire, strolled up towards the crowd, but stood somewhat aloof, and outside of it. The market people pressed closer and closer round the platform, listening with mouths open and eager eyes to the sermon, storing it away in their retentive memories, which would reproduce every word of it when they sat round the fireside in the coming winter evenings.

One or two Recollets stood at a modest distance from the crowd, still as statues, with their hands hid in the sleeves of their gray gowns, shaking their heads at the arguments, and still more at the invectives of the preacher; for the Recollets were accused, wrongfully, perhaps, of studying the five propositions of Port Royal more than beseeemed the humble followers of St. Francis to do, and they either could not or would not repel the accusation.

"Padre Monti deserves the best thanks of the Intendant for his sermon," remarked the Sieur d'Estebé to Le Mercier, who accompanied him.

"And the worst thanks of His Excellency the Count! It was hold of the Italian to hear the Governor in that manner! But La Galissonniere is too great a philosopher to mind a priest!" was the half-scolding reply of Le Mercier.

"Is he? I do not think so, Le Mercier. I hate them myself, but egad! I am not philosophic enough to let them know it. One may do so in Paris, but not in New France. Besides, the Jesuits are just now our fast friends, and it does not do to quarrel with your supporters."

"True, D'Estebé! We get no help from the Recollets. Look yonder at Brothers Ambrose and Daniel! They would like to tie Padre Monti neck and heels with the cords of St. Francis, and bind him over to keep the peace towards Port Royal; but the gray gowns are afraid of the black robes. Padre Monti knew they would not catch the ball when he threw it. The Recollets are all afraid to hurl it back."

"Not all," was the reply; "the Reverend Father de Béréy would have thrown it back with a vengeance. But I confess, Le Mercier, the Padre is a bold fellow to pitch into the Honnetes Gens the way he does. I did not think he would have ventured upon it here in the market, in face of so many habitants, who swear by the Bourgeois Philibert."

The bold denunciations by the preacher against the Honnetes Gens and against the people's friend and protector, the Bourgeois Philibert, caused a commotion in the crowd of habitants, who began to utter louder and louder exclamations of dissent and remonstrance. A close observer would have noticed angry looks and clenched fists in many parts of the crowd, pressing closer and closer round the platform.

The signs of increasing tumult in the crowd did not escape the sharp eyes of Father Glapion, who, seeing that the hot-blooded Italian was overstepping the bounds of prudence in his harangue, called him by name, and with a half-angry sign brought his sermon suddenly to a close. Padre Monti obeyed with the unquestioning promptness of an automaton. He stopped instantly, without rounding the period or finishing the sentence that was in his mouth.

His flushed and ardent manner changed to the calmness of marble, as, lifting up his hands with a devout oramus, he uttered a brief prayer and left the puzzled people to finish his speech and digest at leisure his singular sermon.

CHAPTER L.

"Blessed They Who Die Doing Thy Will."

It was the practice of the Bourgeois Philibert to leave his counting-room to walk through the marketplace, not for the sake of the greetings he met, although he received them from every side, nor to buy or sell on his own account, but to note with quick, sympathizing eye the poor and needy, and to relieve their wants.

Especially did he love to meet the old, the feeble, the widow, and the orphan, so numerous from the devastation of the long and bloody war.

The Bourgeois had another daily custom which he observed with un-failing regularity. His table in the House of the Golden Dog was set every day with twelve covers and dishes for twelve guests—"the twelve apostles," as he gayly used to say, "whom I love to have dine with me, and who come to my door in the guise of poor, hungry and thirsty men, needing meat and drink. Strangers to be taken in, and sick wanting a friend." If no other guests came, he was always sure of the "apostles" to empty his table, and, while some simple dish sufficed for himself, he ordered the whole banquet to be given away to the poor. His choice wines, which he scarcely permitted himself to taste, were removed from his table and sent to the Hotel Dieu, the great convent of the Nuns Hospitalieres, for the use of the sick in their charge, while the Bourgeois returned thanks with a heart more content than if kings had dined at his table.

To-day was the day of St. Martin, the anniversary of the death of his wife, who still lived in his memory fresh as upon the day he took her away as his bride from her Norman home. Upon every recurrence of that day, and upon some other special times and holidays, his bounty was doubled, and the Bourgeois made preparations as he jocularly used to say, "not only for the twelve apostles, but for the seventy disciples as well!"

He had just dressed himself with scrupulous neatness in the fashion of a plain gentleman, as was his wont, without a trace of foppery. With his stout gold-headed cane in his hand, he was descending the stairs to go out as usual to the market, when Dame Rochelle accosted him in the hall.

Her eyes and whole demeanor wore an expression of deep anxiety as the good dame looked up in the face of the Bourgeois.

"Do not go to the market to-day, dear master!" said she, beseechingly; "I have been there myself and have ordered all we need for the due honor of the day."

"Thanks, good dame, for remembering the blessed anniversary, but you know I am expected in the market. It is one of my special days. Who is to fill the baskets of the poor people who feel a delicacy about coming for alms to the door, unless I go? Charity fulfills its mission best when it respects the misfortune of being poor in the persons of its recipients. I must make my round of the market, good dame."

"And still, dear master, go not to-day; I never asked you before; I do this time. I fear some evil this morning!"

The Bourgeois looked at her inquiringly. He knew the good dame too well not to be sure she had some weighty reason for her request.

"What particularly moves you to this singular request, Dame Rochelle?" asked he.

"A potent reason, master, but it would not weigh a grain with you as with me. There is this morning a wild spirit abroad—people's minds have been excited by a sermon from one of the college fathers. The friends of the Intendant are gathered in force, they say, to clear the market of the Honnetes Gens. A disturbance is impending. That, master, is one reason. My other is a presentiment that some harm will befall you if you go to the market in the midst of such confusion."

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"Thanks, good dame," replied the Bourgeois calmly, "both for your information and your presentiment; but they only furnish an additional reason why I should go to try to prevent any disturbance among my fellow-citizens."

"Still, master, you see not what I see, and hear not what I hear, and would not believe it did I tell you! I beseech you, go not to-day!" exclaimed she, imploringly, clasping her hands in the eagerness of her appeal.

"Good dame," replied he, "I deeply respect your solicitude, but I could not, without losing all respect for myself as a gentleman, stay away out of any consideration of impending danger. I should esteem it my duty all the more to go, if there be danger, which I cannot believe."

"Oh, that Pierre were here to accompany you! But at least take some servants with you, master," implored the dame, persisting in her request.

"Good dame, I cannot consult fear when I have duty to perform; besides, I am in no danger. I have enemies enough, I know; but he would be a bold man who would assail the Bourgeois Philibert in the open marketplace of Quebec."

"Yet there may be such a bold man, master," replied she. "There are many such men who would consider they did the Intendant and themselves good service by compassing your destruction!"

"May be so, dame; but I should be a mark of scorn for all men if I evaded a duty, small or great, through fear of the Intendant or any of his friends."

"I know my appeal would be in vain, master, but forgive my anxiety."

She looked at him fixedly for a moment. He saw her features were quivering with emotion, and her eyes filled with tears.

"Good dame," said he kindly, taking her hand, "I respect your motives, and will so far show my regard for your forecast of danger as to take my sword, which, after a good conscience, is the best friend a gentleman can have to stand by him in peril. Please bring it to me."

"Willingly, master, and may it be like the sword of the cherubim, to guard and protect you to-day!"

She went into the great hall for the rapier of the Bourgeois, which he only wore on occasions of full dress and ceremony. He took it smilingly from her hand, and, throwing the belt over his shoulder, bade Dame Rochelle good-bye, and proceeded to the market.

The dame looked earnestly after him until he turned the corner of the great Cathedral, when, wiping her eyes, she went into the house and sat down pensively for some minutes.

"Would that Pierre had not gone to St. Ann's to-day!" cried she. "My master! my noble master! I feel there is evil abroad for him in the market to-day." She turned, as was her wont in time of trouble, to the open Bible that ever lay upon her table, and sought strength in meditation upon its sacred pages.

(To be continued.)

The annual meeting of the Canadian Jersey Cattle Club has been postponed to Thursday, February 3rd, at 10 a. m., at the Board Room of Street Railway Company, Toronto, corner of King and Church Streets. R. J. Fleming, Presi-

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Canadian-bred class—Stallion, 3 years and under 4, 1st; 2 years and under 3, 2nd; 1 year and under 2, 1st.

Hackneys—Stallion, 4 years and over, 15-2 hands and over, 2nd; stallion, 4 years and over, under 15-2, 2nd; 3 years and under 4, 1st; 2 years and under 3, 1st.

Championship for the best ten horses owned by one exhibitor.

OTTAWA.

At the **Central Canada Exhibition**:

Clydesdales—Stallions, 4 years old and over, 1st, 2nd and 3rd; 3 years and under 4, 1st; 2 years and under 3, 1st; 1 year and under 2, 1st and 2nd.

Championship stallion, any age.

Hackneys—Stallion, 4 years and over, 1st and 3rd; 3 years and under 4, 1st; 2 years and under 3, 1st.

Championship stallion, any age.

THE FOUR GREATEST SHOWS IN AMERICA DURING 1909



NEW YORK.

At the **National Horse Show**:

Clydesdales—Stallion, 4 years and over, 1st and 3rd; stallion, 3 years and under 4, 1st and 3rd; stallion, 2 years and under 3, 1st and 3rd.

Mares—1st and 2nd.

Championship stallion, any age, and Reserve Championship.

Championship mare, any age, and Reserve Championship.

CHICAGO.

At the **International Show**:

Clydesdales—Stallions, 4 years and over, 1st, 2nd and 5th; 3 years and under 4, 2nd; 2 years and under 3, 3rd; 1 year and under 2, 1st and 2nd.

Championship stallion, any age.

American-bred stallions—3 years and under 4, 1st; stallion, 2 years and under 3, 1st.

Championship stallion, any age.

Don't forget the address, and that CLAREMONT is only an hour's run from Toronto.

GRAHAM BROTHERS, Cairnbrogie Stock Farm, **CLAREMONT, ONTARIO.**



Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted, and Pet Stock.

TERMS—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

FOR SALE—Seed barley, O. A. C. No. 21. Good sample. Duncan Campbell, North Bruce, Ont.

FOR SALE—100,000 feet iron pipe—good as new—for water, steam, fencing and fence posts, drains, etc. Any size. Write for prices, stating sizes. Imperial Waste & Metal Co., 13 Queen St., Montreal.

O. A. C. NO. 21 BARLEY—Prize seed. Guelph Winter Fair, Professor Zavitz says this great barley is destined to become generally grown. It has yielded eight bushels per acre more than Mandscheuri. Price, \$1.25 per bushel. Emmer 75 cents per bushel. Bags extra. H. R. Nixon & Sons, St. George, Ont.

VANCOUVER Island offers sunshine, mild climate; good profits for young men with small capital in business, professions, fruit-growing, poultry, farming, manufacturing lands, timber, mining, railroads, navigation, fisheries, new towns. For authentic information, free booklets, write Vancouver Island Development League, Room A 102, Law Chambers Bldg., Victoria, B. C.

WANTED—Mother's help, to assist with light housework in small family; one accustomed to country preferred. Good salary to suitable person. Apply: Box P, Farmer's Advocate, London, Ont.

Delhi Tannery Custom robe and fur tannery. If you have a cow hide or horse hide you want tanned or made into a robe or a fur coat, or have any kind of hides, skins or furs you want tanned, send them to me and have them dressed right. B. F. BELL, DELHI, ONT.

MEN ON SALARY \$150 A MONTH and expenses or liberal commission to introduce and sell the wonderful

King Separator & Aerator Sells on sight to every owner of a cow. Costs less than other machines—does better work and quicker work. Thousands of endorsements. **FREE SAMPLE** and exclusive territory to hustlers. Sold by our Agents only. Business established eight years. **DE KING MFG. CO., Dept. G., CHICAGO.**

For Sale: REGISTERED HACKNEY STALLION, COCK ROBIN. Three years old; 15½ hands; chestnut; hind feet white. Sire Commodore 3rd, imp., (6695) by Chocolate Jr. (4185). Dam Ada Adair (181), by Robin Adair 2nd, imp., (3907). For description, terms, etc., address: **G. W. CLEMONS, ST. GEORGE, ONT.**

When Writing Mention The Advocate

GOSSIP.

McDonald's seed catalogue for 1910, as advertised in this paper, will be mailed free to those applying for it. See the advertisement of Kenneth McDonald & Sons, Ottawa, and write at once for the catalogue. It is the part of wisdom to secure seed early, from reliable dealers, and be ready to sow when the season arrives.

S. J. Pearson, Son & Co., Meadowvale P. O. and Station, C. P. R., near Toronto, write, ordering a change in their advertisement of Shorthorns, in which they offer for sale show animals with choice pedigrees, and refer to the Xmas Number of "The Farmer's Advocate" for description of the Valley Home herd of Shorthorns.

The attention of sheep-breeders is directed to the advertisement of dipping tanks, by Wm. Cooper & Nephews, Toronto. These dipping tanks have become a necessity, not only for treating sheep for ticks and lice, but for prevention of scab, and to conform to the regulations for shipping to the United States, our best market for sheep.

LAST CALL FOR TORONTO SALES.

The single-fare railway rates to Breed Society meetings in Toronto, tickets on the convention certificate plan being good going January 27th to February 4th, and returning up to and including February 8th, will no doubt mean a large attendance at the annual meetings, and at the great Shorthorn sales at the Union Stockyards February 2nd, 3rd and 4th, when over 200 head of cattle, selections from a dozen high-class herds, will be disposed of. It is safe to say, that never before have so many first-class cattle been offered at one place in one week anywhere in America. The contributors to these sales have been holding their best young stock for this event, and it goes without saying that the offering will be up to a high standard of individual merit and desirable breeding. These sales will afford a fine opportunity for making selections of young bulls and heifers that will im-

prove the value of the herds they go into. Let there be a grand rally of breeders and farmers at the Toronto sales.

BREED SOCIETY ANNUAL MEETINGS.

Following are the dates announced for the holding of the annual meetings in Toronto of the breed societies named. Those indicated by the asterisk are suggested dates, not confirmed by official communication at time of going to press:

*Annual meeting Canadian Thoroughbred Society, January 25th.

Canadian Ayrshire Association—Directors' meeting, Walker House, January 25th, 10 a. m.; annual meeting, January 26th, 10 a. m., Walker House.

Canadian Clydesdale Association, January 31st.

*Canadian Hackney Society, January 31st, 7:30 p. m.

Dominion Shorthorn Breeders' Association, February 1st.

Canadian Shire Horse Association, February 1st, 4 p. m.

*Canadian Pony Society, February 3rd, 8 p. m.

Ontario Horse-breeders' Association, Walker House, Toronto, February 1st, 7:30 p. m.

Dominion Cattle-breeders' Association, Walker House, Toronto, February 2nd, 7:30 p. m.

Directors' meeting, Dominion Swine-breeders' Association, Walker House, Toronto, February 3rd, 9:30 a. m.

Dominion Swine-breeders' Association, Temple Building, Toronto, Room 1, 4th floor, February 3rd, 2 p. m.

Directors' meeting, Dominion Sheep-breeders' Association, Walker House, Toronto, February 3rd, 7:30 p. m.

Annual meeting Dominion Sheep-breeders' Association, Temple Building, Toronto, Room 1, 4th floor, February 4th, 9:30 a. m.

Annual meeting Ontario Sheep-breeders' Association, Temple Building, Toronto, Room 1, 4th floor, February 4th, 2 p. m.

Canadian Holstein Association, Temple Building, February 10th, 9 a. m.

Canadian Jersey Cattle Club, February 3rd, Board Room Street Railway Company, corner King and Church streets.

POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at two cents per word each insertion. Each initial counts for one word, and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 30 cents.

AT REASONABLE PRICES—Houdan cockerels, full brothers to first Guelph. Rose-comb Minorca and Barred Rock cockerels. Single-comb Minorca and Barred Rock pullets. Our winnings this season: nine firsts, five seconds and one fourth. Mrs. C. Day, Highgate, Ont.

BROWN and White Leghorn cockerels and B pullets for sale. Grand laying strain and prize-winners. Arthur Master, Highgate, Ont.

BARRED ROCK and R. C. R. I. red cockerels. Fred Baldwin, Colchester, Ont.

BARRED ROCKS—First winners at Canadian National and Western Fair. High-grade stock at low prices. Write me. Leslie Kerns, Freeman, Ont.

FOR SALE—M. B. turkeys. Fine heavy birds, bred from first-prize winning stock. R. G. Rose, Glanworth, Ont.

FOR SALE—Barred Rock and Silver-gray Dorking cockerels. One yearling Dorking cock. Garland Bros., Pinkerton, Ont.

TRADE TOPIC.

FLYING MACHINES FOR MILITARY PURPOSES.—A prize of \$25,000 is offered by the Commonwealth of Australia to the inventor or designer of the Flying Machine which is adjudged by the Minister for Defence to be, subject to the conditions set out in the form (on file in his office), the best and most suitable for military purposes. Entries for the prize must be made on the printed form provided, and such entries must reach the Secretary, Department of Defence, on or before the 31st day of March, 1910. Every entry must be signed before a Justice of the Peace, and must contain a declaration verifying the statements therein. Dated, the 8th day of September, 1909. S. A. Pothebridge, Acting Secretary, Department of Defence. For forms of entry, apply to Egerton R. Case, Temple Building, Toronto.

Agricultural Books

The very best obtainable on their respective subjects, and latest editions published. These are sold for cash at prices named, or given as premiums to our present subscribers for sending in new subscriptions to "The Farmer's Advocate and Home Magazine."

- Any book valued under \$1.00, for one new subscriber.
- Any book valued from \$1.00 to \$1.50, two new subscribers.
- Any book valued from \$1.50 to \$2.00, three new subscribers.
- Any book valued from \$2.00 to \$2.50, four new subscribers.
- Any book valued from \$2.50 to \$3.00, five new subscribers.

LIVE STOCK.

- BREED PRODUCTION—Mumford. \$1.50.
- FARMERS' VETERINARIAN—Burkett. \$1.50.
- THE STUDY OF BREEDS (cattle, sheep and swine)—Prof. Shaw. 400 pages, 60 engravings. Postpaid, \$1.60.
- HORSE BREEDING—Sanders. 422 pages. Postpaid, \$1.60.
- HORSE BREAKING—Capt. Hayes. "Far and away the best on this subject." (The Field.) \$5.00.
- POINTS OF THE HORSE (3rd edition)—Capt. Hayes. \$10.00.
- LIGHT HORSES—Breeds and Management. (Vinton Series.) 286 pages. Postpaid, \$1.05.
- HEAVY HORSES—Breeds and Management. (Vinton Series.) 219 pages. Postpaid, \$1.05.
- PIGS—Breeds and Management. Sanders. 175 pages. Postpaid, \$1.05.
- FEEDS AND FEEDING—Henry. 600 pages. Postpaid, \$2.15.
- DISEASES OF SWINE—Craig. Postpaid, 55c.
- BOOK ON SWINE—G. E. Day. Postpaid, \$1.35.
- LIVE-STOCK JUDGING—Craig. The only work on this subject. Postpaid, \$2.10.
- PONIES: PAST AND PRESENT—Sir W. Gilbey. Postpaid, \$1.05.
- HORSE BOOK—Johnstone. Postpaid, \$2.15.
- TROTTERS AND PACERS—Geers. Postpaid, \$2.00.
- SHORTHORN CATTLE—Sanders. Postpaid, \$2.00.
- PRIVATE HERD REGISTER—Postpaid, \$2.20.
- SHEEP FARMING IN AMERICA—Wing. Postpaid, \$1.00.
- MODERN SHEEP (Breeds and Management)—Shepherd Boy. Postpaid, \$1.50.

GENERAL AGRICULTURE.

- AGRICULTURAL BACTERIOLOGY—H. W. Conn. \$2.50.
- FORAGE AND FIBRE CROPS IN AMERICA—Hunt. \$1.75.
- BOOK OF ALFALFA—F. D. Coburn. Very complete. 350 pages. Illustrated. Price, \$2.00.
- SUCCESSFUL FARMING—Rennie. 300 pages. Postpaid, \$1.55.
- SOILING CROPS AND THE SILO—Shaw. 386 pages. Postpaid, \$1.60.
- CLOVERS—Shaw. Postpaid, \$1.10.
- PHYSICS OF AGRICULTURE—King. 604 pages. Postpaid, \$1.90.
- A BOOK ON SILAGE—Woll. Paper cover. Postpaid, 25 cents.
- FARM MACHINERY AND FARM MOTORS—Davidson & Chase. Postpaid, \$2.00.

POULTRY.

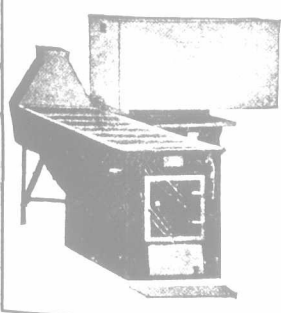
- TURKEYS—Care and Management. 75c.
- PROGRESSIVE POULTRY CULTURE—Brigham. \$1.50.
- POULTRY CRAFT—Robinson. Postpaid, \$2.05.
- AMERICAN STANDARD OF PERFECTION—Postpaid, \$1.60.
- SQUABS FOR PROFIT—Rice & Cox. Postpaid, 60 cents.
- COMMON-SENSE POULTRY DOCTOR—Robinson. Postpaid, 50 cents.

DAIRYING.

- DAIRY BACTERIOLOGY—Russell. \$1.10.
- SCIENCE AND PRACTICE OF CHEESE-MAKING—Van Slyke. \$1.75.
- TESTING MILK AND ITS PRODUCTS—Farrington & Woll. 255 pages. Postpaid, \$1.05.
- CANADIAN DAIRYING—Dean. 260 pages. Postpaid, \$1.05.

There is no easier or more economical way in which to secure these books than by securing new subscribers. Write for sample copies of "The Farmer's Advocate."

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



PERFECT Maple Evaporator

Price low—quality high—product the best possible—the kind you like syrup—it retains its maple taste—all unnecessary expense and middlemen's profits cut out. Sold at a price the poorest man can buy. Every one guaranteed. Write for pamphlets and recommends. Do it now.

Steel Trough & Machine Co., Tweed, Ont.

Please Remember to Mention "The Farmer's Advocate" When Writing

QUESTIONS AND ANSWERS. Miscellaneous.

TONGUE LOLLER.

I would like to know, through your columns, if there is any way to prevent a colt getting his tongue over the bit and allowing it to hang out of his mouth.

A. W.

Ans.—This is a habit for which we know of no cure. If any of our readers have solved the problem, we shall be pleased to publish their experience.

VALUE OF CRANBERRY LAND.

Kindly let me know something of the value of unimproved cranberry soil.

W. B.

Ans.—So far as we know, there has been no particular demand for soil for cranberry culture in Ontario, hence its suitability for this purpose would not add to its value in case of sale. The price of such land would be governed largely by the price of similar unimproved lands in the neighborhood.

H. L. HUTT.

RATION FOR MILCH COWS.

Please inform me, through the columns of your paper, the best grain ration for milking cows. Am making butter. Have silage and hay only.

M. E. K.

Ans.—What kind of hay? That makes quite a difference in deciding what should be added to balance up a ration. Supposing it is clover hay, we should suggest, for good cows, in flush of milk flow, something like the following, each cow being given, of course, all the roughage she wants, and the amount of meal being varied according to the response:

	Lbs.	Digestible protein.	Digestible carbohydrates.	Digestible ether extract.
Corn silage	40	.360	4.520	.280
Clover hay	10	.680	3.580	.170
Bran	2	.244	.784	.054
Oil cake	2	.586	.654	.140
Corn meal	2	1.156	1.334	.086
Oats crushed	2	.184	.946	.084
Peas	1	1.168	.518	.007
	59	2.378	12.336	.821

Nutritive ratio, 1:5.96.

Various changes might be made in the above, according to the exigencies of markets, and other factors. For instance, barley might be used instead of corn, gluten meal instead of oil cake, etc. Neither of these changes would seriously affect the balance of the ration. If your hay is timothy, you would probably have better results by substituting peas for the corn, and increasing the oil cake by half a pound, or a pound. Where the roughage consists totally of carbonaceous feeds, special attention should be paid to securing concentrates carrying a liberal proportion of protein. Such feeds are cottonseed meal, oil cake, gluten meal, peas and bran. In adopting a new ration, always make gradual change from the one you have been feeding.

GOSSIP.

S. F. Johnston & Son, of Ashburn, Ont., write: Our Shorthorns are doing finely. We have sold, since last writing, one bull to F. Bonycastle, Campbellford, a big, sappy Stamford; a Gloucester cow and calf to A. Dawson, Cannington; to Hortop Bros., Balsam, a young bull; to H. Thompson, St. Mary's, a fine young bull; to Geo. Amos & Son, Moffat, one grand heifer; to John Garbutt & Sons, Peterboro, a good show bull, that will be heard from later. We have still one of the best young Gloucester bulls we ever raised, 15 months old; others 10 months and 9 months old, and a fine bunch of two-year-old heifers—Gloucesters, Broadhooks, Lavenders, etc., in all, 13—and several three- and four-year-olds, all sired by Ben Lomond (Imp.). Ashburn P. O., C. P. R. or G. T. R., 1 1/2 miles distant.

Mr. Pugh—"Never saw such a crowd at our church before."

Mrs. Pugh—"New minister?"

Mr. Pugh—"No; it was burnt down last night."

To Breeders of Pure-bred Sheep.

To assist breeders to conform to American Dipping Regulations when exporting sheep, we offer a limited number of the famous

COOPER DIPPING TANKS AT COST PRICE.

These tanks are strongly made of best galvanized iron, perfectly tight, and will swim two sheep, hold 200 gallons; 8 feet long at top, 4 feet at bottom, depth 4 feet.

For a limited period ONLY.

Price, \$11.00 f.o.b. Toronto.

WM. COOPER & NEPHEWS, TORONTO, ONTARIO.

HIGHEST FOOD-VALUE.

Epps's Cocoa is a treat to Children. A Sustenent to the Worker. A Boon to the Thrifty Housewife.

EPPS'S COCOA

BREAKFAST SUPPER

In strength delicacy of flavour, nutritiousness and economy in use "Epps's" is unsurpassed.

Children thrive on "Epps's."

One can sympathize with the English gentleman whose exquisite refinement was jarred at a week-end shooting party. "Oh, I say," he remarked, "one don't mind roughing it a bit, you know—luncheon without a hand, and all that—but fawncy drinking claret out of champagne glasses."

HE IS THANKFUL HE HEARD OF THEM

That's What Antoine Cottenoire Says of Dodd's Kidney Pills.

They Cured His Diabetes After the Doctors Had Failed to Give Him Relief—What Dodd's Kidney Pills Do and Why.

St. Pie de Guire, Yamaska Co., Que., Jan. 24.—(Special.)—That there is one sure cure for deadly Diabetes, and that cure is Dodd's Kidney Pills, is proved once more in the case of Mr. Antoine Cottenoire, a well-known resident of this place.

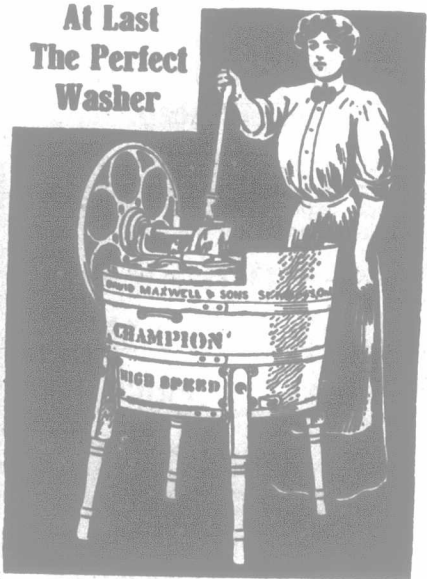
"I am thankful I ever heard of Dodd's Kidney Pills," Mr. Cottenoire states. "They cured me of Diabetes. I suffered with Backache. I always felt drowsy. I had severe headaches, and my limbs would cramp. I had a dizzy feeling, and felt tired in the region of the kidneys, with a dragging, heavy sensation across the loins.

"I was treated by the doctors, but got no benefit from them. Then I heard of cures made by Dodd's Kidney Pills, and made up my mind to try them. I took in all three dozen boxes of Dodd's Kidney Pills. To-day I am free from Kidney trouble of all kinds.

"Dodd's Kidney Pills also cured me of stomach trouble, from which I suffered for twenty-five years."

Diabetes is one of the most deadly forms of Kidney Disease. But Dodd's Kidney Pills cure any form of Kidney Disease. They also, by curing the Kidneys, cure all those diseases that come from disordered Kidneys, such as Rheumatism, Lumbago, and Heart Disease.

At Last
The Perfect
Washer



Our "Champion" is easily the champion of all washing machines. All cogs and machinery covered. Lever and High Speed Balance Wheel operating together simply cut the work of washing to the lowest possible point. Don't think of buying a washing machine until you have seen the "Champion". If your dealer can't show it, write us for booklet. 76 DAVID MAXWELL & SONS, - ST. MARY'S, ONT.

SEED OATS FOR SALE

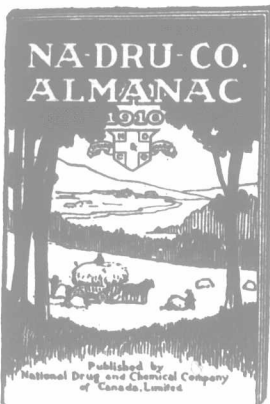
A quantity of American Banner Oats, grown from pedigreed stock; and Dew Drop, a splendid early white oat that has done well for me for several years, was tested at O. A. C., Guelph, last season, and the report was very favorable. Also a few bushels Regenerated Banner, grown from imported seed. Samples, prices and full particulars on application to the grower.

A. FORSTER, MARKHAM, ONTARIO.

For Sale: 100,000 Apple Trees

75,000 Pears, Plums, Cherries. Complete assortment of other stock. Guaranteed first grade and TRUE TO NAME. Agents wanted immediately where we are not now represented. THOS. W. BOWMAN & SON CO., LIMITED Ridgeville, Ontario

NA-DRU-CO ALMANAC



- FREE -

Full details of our word contest \$200. in cash prizes
Three pages of sprays for fruits and vegetables
Tables of Measures
How to preserve eggs
A mine of information

"Na-Dru-Co" Almanac for 1910 is the handsomest and most useful book of its kind ever distributed to the Canadian farmer and his wife.

It is a miniature encyclopedia, containing useful hints for every member of the family.

Calculations are made for your district.

In order to familiarize everyone with the name "Na-Dru-Co", we have inaugurated a novel word contest in which we will present cash prizes amounting to \$200, to the winners. Full particulars in the Almanac.

Na-Dru-Co Almanacs for 1910 are now being distributed by Druggists throughout the country. If your druggist should not have a supply, write direct to the National Drug & Chemical Co., on the coupon attached and a free copy will be sent you by return mail.

THIS AD WILL NOT APPEAR AGAIN.
SEND COUPON TODAY.

Name _____ Address _____
CUT HERE
Mail to Advertising Department
NATIONAL DRUG & CHEM.
CO. OF CANADA
LIMITED.
Montreal.
ABC
12

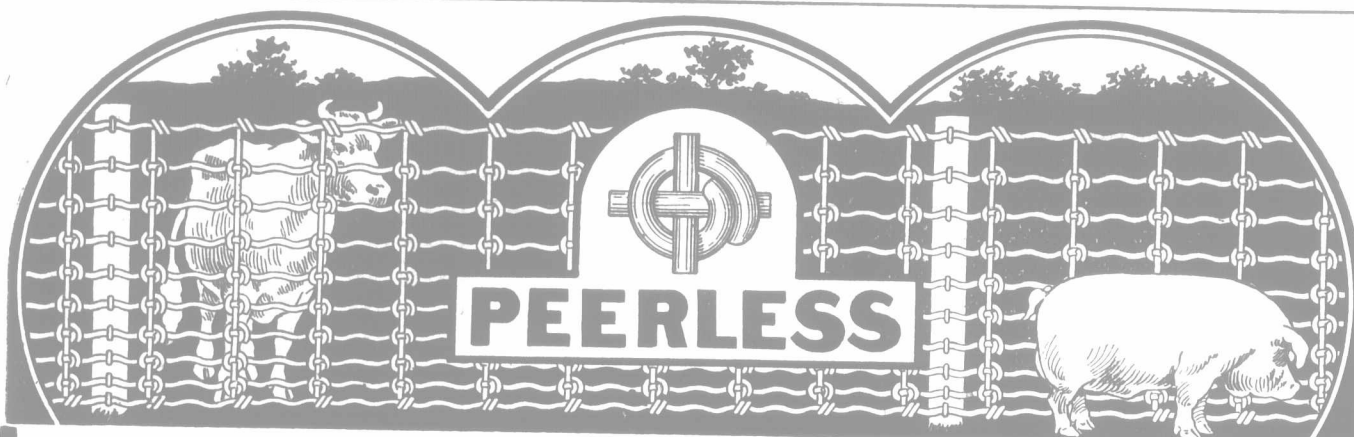
TRADE TOPICS.

HORSES OF THE EMPIRE.—The recent publication by Walter Southwood & Co., of London, England, of two imposing volumes, entitled, "Horses of the British Empire," places within the reach of lovers of the horse the most complete history extant of the various breeds of light and heavy horses that has yet been placed upon the market. The separate articles by experts in the handling of the different breeds, are ably written, showing very complete acquaintance with the origin, history and characteristics of the class, while the volumes are profusely illustrated with high-class photogravures and reproductions of paintings of the early representative breeders, and their most notable horses. The books are large, and elegantly bound and printed. The price, which is \$17.88, at this office, may appear high, but the books are remarkably well-filled and finished, the illustrations alone numbering some 700.

WINNERS IN "POULTRY-FOR-PROFIT" CONTEST.—The names of prizewinners in the unique "Poultry-for-Profit" Contest recently held by the Lee Manufacturing Company, of Pembroke, Ontario, have just been announced. The competition took the form of an offer of cash prizes, aggregating over five hundred dollars, to the most successful poultry-raisers in the Dominion. In awarding the prizes, A. G. Gilbert, Poultry Manager, Central Experimental Farm, Ottawa, wrote the Lee Manufacturing Company as follows: "Herewith, I beg to hand you the list of prizewinners in the Peerless Poultry-for-Profit Club contest, in which your firm offered \$510, divided into 103 cash prizes, for the most successful results in poultry-raising. I desire to first express my appreciation of the manner in which you so honorably carried out the arrangements made between us when I consented to act as judge of the contest, that you should not even suggest the method of judging, or interfere in any way whatever with the awarding of the prizes. The winners have, therefore, been named on the merits of their work. . . I consider the competition a complete vindication of the stand I have, for years past, taken as to the almost absolute necessity of the incubator and brooder to the exigencies of all farmers or other poultry-raisers. This contest effectually disposes of the carping opposition as to artificial hatching and rearing." The success which these winners have met, effectually proves that it is possible to make poultry-raising pay, provided it is set about properly. The winner of the first prize in the contest was D. L. Boice, of Violet, Ont., who pocketed an even hundred dollars as the result of his excellent work. The second prize of fifty dollars, was awarded to J. W. Russell, 313 North Norah street, Fort William, Ont.; Jacob Whiting, of Workman, Sask., took the third prize, twenty-five dollars. Ten prizes of ten dollars each were won by the following: H. C. Whitton, Trenholmeville, P. Q.; A. H. Graham, Hawthorne, Ont.; Oscar Petterson, Lac de Bonnet, Man.; Jas. Carmichael, Davis Mills, Ont.; Mrs. S. G. Irish, Sedgewick, Alta.; Mrs. Jas. Naylor, Arrow Park, B. C.; Geo. H. King, Korah, Ont.; W. S. Phillips, McAulay, Man.; Reuben Aylesworth, Bruce, Alta.; Mrs. J. Steward, Dolmeny, Ont. Besides these, there were twenty prizes of \$5, twenty of \$3, twenty-five of \$2, and twenty-three of \$1 each, won by competitors from nearly every Province in the Dominion. On request, our readers can secure the full text of Prof. Gilbert's letter that accompanied his decision, together with a valuable free book, "When Poultry Pays," by writing to the Lee Manufacturing Company, Limited, 451 Pembroke street, Pembroke, Canada.

GOSSIP.

The noted English Shire stallion, Menestrel 11180, died in the last week in February, at the age of 19 years. He was foaled in Lord Redesdale's stud, and died in Lord Middleton's stud, at Bird-sall, York. He was probably the most famous of Hitchin Conqueror's sons, and there was no finer type of the wearing draft horse than Menestrel. He was the sire of Lord Rothschild's Bird-sall Menestrel, a London champion.



Don't Buy Any Wire Fence Till You Know It Will Last and Give Good Service for Years

TEST IT. PROVE IT.

We have always exercised great care in regard to the quality of wire entering into the construction of our PEERLESS Fencing. Our product is evidence of this.

We have spent much time and money experimenting with different kinds and makes of fence wire. We are now prepared to give our customers the benefit of our experience.

We find that English-made wire (that is wire made by English manufacturers expressly for our purpose) is superior to any fence wire made in this country. This is specially so in regard to the galvanizing. It will stand more than double the endurance, when sub-

mitted to what is known to the "ACID TEST," as compared with American or Canadian made wire.

English manufacturers are noted the world over for their thoroughness. In the manufacture of wire they are past masters—they are not new beginners—they have made galvanized wire to stand the salt, foggy English climate—they have a hundred years' experience back of them. American or Canadian made wire, under like conditions, rusts in a few months' time.

We have used this English wire to a limited extent for some time past. We are now making our all No. 9 PEERLESS Fence from this wire, and will,

at your request, be pleased to send you samples of this wire, and give you full particulars as to how you may test it, or any other wire you may choose.

TEST and PROVE any wire fence to your own satisfaction before buying it.

Buy a fence that you know will LAST. Don't be deceived into investing in a fence with any soft or light wire in it. "A chain is only as strong as it is at its weakest link."

Our No. 9 PEERLESS Fence is made from heavy, hard steel wire for both the upright and horizontal wires, with a No. 9 lock—neat, compact and non-slipable.

PEERLESS, THE FENCE THAT PROVES

BANWELL HOXIE WIRE FENCE COMPANY, LIMITED,

Makers of Farm, Poultry and Ornamental Fence and Gates,

DEPARTMENT A.

HAMILTON, ONT.

WINNIPEG, MAN.

PLEASE MENTION THE FARMER'S ADVOCATE.

EMPIRE.—The re-
Southwood &
of two impos-
Horses of the
within the reach
a most complete
arious breeds of
at has yet been
The separate
handling of the
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THIS IS A REAR VIEW OF The Humane Horse Collar

SOMETHING no thoughtful farmer can afford to be without at least ONE, if he owns one pair of horses, or TWO if he owns more. Now, why? you ask. FIRST, because owing to the high price of horses, and all products raised on the farm this year, above all others. It is absolutely essential from a monetary standpoint that the horse should be kept well and busy. THE HUMANE COLLAR is the only one made to-day that is guaranteed to do this. If your horse should be idle for one day, it will more than pay for the collar, but when he gets sore shoulders it takes more than one day to cure him.

SOLD BY OVER 5,000 HARNESS DEALERS.

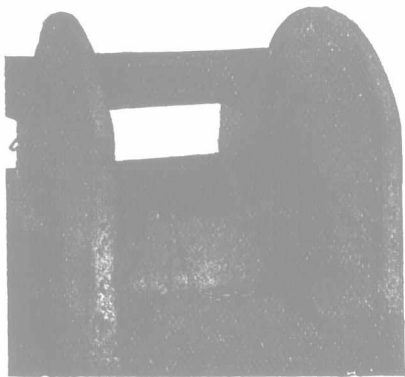
Over 60,000 sold in the U. S. last season. The Humane Horse Collar has 40 square inches of pulling surface to 10 inches on the old-style collar. The pulling is all done where the shoulder is the strongest, and where it is best protected by heavy layers of muscles. NO grinding from one shoulder to the other. NO pressure on top of the neck. NO hot sweat pads to chafe the horse. NO choking on going up hill. No sweened horses, and NO sore shoulders or necks with THE HUMANE HORSE COLLAR.

It is adjustable to any horse from 16 to 26 inches, and is put out on 15 days' free trial; if not entirely satisfactory your money cheerfully refunded.

Write to-day for free catalogue describing and giving testimonials, then order one from your dealer for the spring work. If he cannot supply you, order direct from us. Address:

**The Whipple Horse Collar Co., Limited,
HAMILTON, CANADA.**

THE ADJUSTABLE, COLLAPSIBLE Stable Moulds



Have solved the problem. Patented Oct. 26th, 1909, and sold by

A. D. SCHMIDT, North Woolwich, Ont.

Build your mangers, partitions and water system of concrete. It will last for centuries if properly built. It will cost only a trifle more than the wooden system, but here you get the water system in also. A continuous high-up water trough can always be kept in good order. Send your order in early, as only a limited number will be manufactured this season. It makes a sanitary dairy stable. For further information apply to

**A. D. SCHMIDT,
North Woolwich, Ontario.**

GOSSIP.

THE ARTHUR JOHNSTON SALE.

Among the very good ones in the Arthur Johnston sale of March 9th may be mentioned the imported Killelean Beauty cow, Beauty 41st, and her three daughters, Beauty Queen, Beauty Blend and Beauty Princess, all red, and all good ones of choicest breeding. Beauty 41st was bred by the same breeder, and got by the same noted sire, as the champion show cow, White Heather, and is almost full sister to that great cow, which, in the hands of Deane Willis, of Wapion Manor, won first prize at the English Royal Show three times, besides an unbeaten record at other leading British shows. She is also very closely related to Mr. Willis' Royal champion bull, Count Beauty, and many other great ones. Her daughter, Beauty Queen, by Imp. Cyclone, is of equal quality, a show cow in any land; thick, massive, and near the ground, probably the best cow in the herd. Beauty Blend, by Imp. Royal Bruce, is also an extra-good one. Following these two excellent daughters is Beauty Princess, a charming red heifer calf, still sucking. Besides the above three excellent daughters, the old cow, Beauty 41st, is carrying a calf to the present stock bull, Imp. Benholm Butterfly. Thus, there are at present five extra-good Killelean Beauties in the herd. Another valuable family will be found in the three exceedingly well-bred Cruickshank Lavenders, viz., the five-year-old red Lavender cow, Lavender Beauty 4th, with her two daughters, Lavender Lady and Lavender Gem. This young cow is carrying her fourth calf, though still under five years old. These Lavenders should make a fine proposition for the

The Lantern Foot-warmer.

Guaranteed to be satisfactory or money refunded. Keeps the feet warm while driving, furnishes light as the common lantern, and is attached to a wooden base, which prevents ordinary upsetting.



The above cut shows how the Lantern Footwarmer is used. It is a simple, safe, effective footwarmer and lantern, which every farmer and person who drives, as well as people that are required to sit in chilly stores, studies or rooms, should own.

The heat from the flame of the lantern is conducted by a copper strip to copper plates placed on the wooden base, at each side of the lantern. The driver regulates the strength of the heat by turning the wick up and down in the regular way—places the lantern in front of him, puts his feet one on each plate, and tucks the robe in around himself. No danger to the robe, no disagreeable odor, no cold feet—the entire body kept warm, and a lantern ready lit at the end of the journey.

Sold by mail complete—lantern, stand and attachments, for \$2.00. Use for seven days, and if dissatisfied we will return your money. Liberal discounts to the trade or agents.

**THE LANTERN FOOTWARMER CO.,
Cobourg, Ont.
(Sole owners of patent for Canada.)**

beginning of a herd of choicest breeding. Among the very nicely-bred ones may be mentioned the two beautiful Marr Claras, of choicest breeding, and equally choice individuality. These will be found worthy of the notice of the most critical judges of breeding, as well as being extra-good individuals. The Claras were one of Mr. Marr's favorite tribes. Another equally fashionably-bred tribe represented in the herd will be found in the Cruickshank Nonpareils, Nonpareil Countess and her beautiful yearling past red daughter, Nonpareil Beauty, both in calf. A splendid young red bull from this cow will be worth the attention of some breeder looking for a herd-header of fashionable breeding, best of colors, and a high-class animal. This family was long bred by the late Amos Cruickshank, from whose herd they are descended.

QUESTIONS AND ANSWERS. Miscellaneous.

UNJUSTLY DUNNED.

Butcher has sent out several accounts to farmers and people in the neighborhood for things which they never purchased, and insists on payment, and has given some bills to banks to collect, no matter how firmly they deny getting the goods.

1. Can he compel us to pay for goods never purchased?
2. How can we protect ourselves against such a nuisance? W. W. P. Ontario.

Ans.—1. No.

2. We would not advise your doing anything further unless sued, in which case you should, of course, defend.

DISTANT FROM SCHOOL.

What is the law regarding schools? I am over three miles from our school. Can I claim a school nearer by? If so, what would be the right way to go about it? If the Reeve and Council of the Township would not grant me a school, whom should I try next?

Ontario. A READER.

Ans.—We do not see that you are in a position to bring about what you suggest; but we would refer you to Sec. 70, of The Public Schools Act (Ontario Statutes, 1909, Chap. 89), which may meet your case satisfactorily. See, especially, sub-sections 1, 2, 3 and 5, of that section.

TREATMENT OF COW AT CALV-ING.

What is the proper way to handle cows at time of calving? I feed hay, corn fodder, and straw and chop, but never have milked till they came in, but sometimes their udder looked so full, their teats would look nearly blue. I only milk a little every few hours after coming in, for a few days, and I feed and water as usual, only their chop is fed with some bran, as a hot mash, two or three times after calving, and some dry bran before. Do you ever milk before coming in? If so, under what conditions, and how do you milk after, and how often? Do you feed special at that time; if so, what?

G. A.

Ans.—If the cow is in a healthy condition, and doing well, no change of feeding or watering is necessary at calving, except that we would not give very cold water. The food given should be of a laxative character, in order that the bowels may act freely. For this purpose, roots or bran, or both, should be given freely. We do not approve of milking before calving, and do not consider it necessary, even in cases of a caked or uncommonly extended udder, as the apparent swelling in such case is not due to overfulness of milk, the content being what is called colostrum, of quite different composition from ordinary milk, a provision of nature for clearing the bowels of the calf. There is, as a rule, no heat or inflammation in a caked udder, and it is rare that milk fever occurs under such conditions, unless the udder is emptied too soon after calving. We would not milk cut clean for three or four days, but if the udder is swollen or caked, would apply often and freely, goose oil, or a mixture of lard and spirits turpentine, and massage well with the hands.

Was All Run Down. Weighed 125 Lbs. Now Weighs 185.

Mrs. M. McGann, Debec Junction, N.B., writes:—"I wish to tell you what Milburn's Heart and Nerve Pills have done for me. Three years ago I was so run down I could not do my own work. I went to a doctor, and he told me I had heart trouble and that my nerves were all unstrung. I took his medicine, as he ordered me to do, but it did me no good. I then started to take Milburn's Heart and Nerve Pills, and had only taken one box before I started to feel better, so I continued their use until I had taken several boxes, and I am now strong and well, and able to do my own work. When I commenced taking your pills I weighed 125 pounds, and now weigh 185 and have given birth to a lovely young daughter, which was a happy thing in the family. When I commenced taking Milburn's Heart and Nerve Pills, I could not go upstairs without resting before I got to the top. I can now go up without any trouble."

The price of Milburn's Heart and Nerve Pills is 50 cents per box, or 3 boxes for \$1.25 at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

"SAVE THE HORSE" SPAVIN CURE



Don't forget, Mr. Man, no matter what your case is, an investment in "Save-The-Horse" means that you simply cannot lose if you go at it right. QUE CONTRACT PROTECTS YOU.

SIMON & SON, Tailors, Richmond, Va., Nov. 20, 1909. TROY CHEMICAL CO., Binghamton, N. Y.: I used "Save-The-Horse" as you directed on the place where the horse was kicked and he recovered entirely from lameness. A week afterward he went lame in hind leg, and he was very lame. I had a doctor examine him and he said he had a blind jack. As I had did, and he is perfectly sound. This jack came on the leg that was sound, for, if you remember, he had a bone spavin on the other leg some time ago. I have had tough luck with this horse, but your remedy has always given him a cure. I thank you for your kindness, always willing to give advice, and I shall always recommend "Save-The-Horse" highly. NATHAN SIMON, Norway, Me., Oct. 19, 1909.

TROY CHEMICAL CO., Binghamton, N. Y.: I have a horse, etc. I have faith that "Save-The-Horse" will do as you say, because I have seen four cures, one bog spavin, and one enlarged tendon cured by it for other people. Please let me hear from you regarding my horse. Very resp., A. H. STAPLES, D. D. S. \$5.00 a bottle, with signed guarantee or contract. Send for copy, booklet and letters from business men and trainers on every kind of case. Permanently cures Spavin, Thoroughpins, Blisters (except low), Curbs, Splints, Capped Hock, Windpuff, Shoe Bell, Injured Tendons & all Lameness. No wear or loss of hair. Horse works as usual. Dealers or Exp. Agents: FROST CHEMICAL CO., 143 Van Horn St., Toronto, Ont., and Binghamton, N. Y.

Fistula and Poll Evil

Any person, however inexperienced, can readily cure either disease with Fleming's Fistula and Poll Evil Cure. Even bad old cases that skilled doctors have abandoned. Easy and simple; no cutting; just a little attention every fifth day—and your money refunded if it gives failure. Cures most cases within thirty days, leaving the horse sound and smooth. All particulars given in Fleming's Vest-Pocket Veterinary Advice. Write us for a free copy. Ninety-six pages, covering more than a hundred veterinary subjects. Durable bound, indexed and illustrated. FLEMING BROS., Chemists 75 Church St., Toronto, Ontario

Don't Have a Blind One

Wonderful
Discovery
"VISIO"



MOON BLINDNESS and all Diseases of the Eye successfully treated with this NEW REMEDY. Money Back if it fails to cure. \$2.00 per bottle postpaid on receipt of price. Visio Remedy Ass'n, Dept. 6, 1833 Wabash Av., Chicago, Ill.


For Sale: A Self-holding Buckle

Will hold leather without stitching or riveting. Will not wear or tear leather. We are having a new pattern made, which is superior to the old one, and will soon be in position to supply demand.

W. J. Boyd, Regina, Sask.

When Writing Mention The Advocate

HORSE OWNERS! USE
CAUSTIC BALSAM.
 A safe, speedy and positive cure. The safest, Best BLISTER ever used. Removes all lumps from Horses. Impossible to produce scar or blemish. Send for descriptive circulars.
 THE LAWRENCE-WILLIAMS CO., Toronto, Can.



Try a McPherson Climax Humane Speculum 30 Days FREE.



Every farmer, liveryman and veterinary surgeon should have a Climax Speculum for administering medicine or getting at the teeth or mouth of horses and cattle. Everyone agrees that it is more durable, more easy to use, more satisfactory in operation than any other on the market. We are so certain that you will be satisfied with it that we make this special offer. Send us \$6.50 by Post Office or Express Order and we will send you a Climax Speculum at once. If, after 30 days' trial, you are not convinced that it is the best speculum you could have, send it back to us, and we will refund the purchase price.

SEND FOR DESCRIPTIVE BOOKLET
Cluff Bros
 29 Lombard St. Toronto, Ontario

Dr. Page's English Spavin Cure

For the cure of Spavins, Ringbone, Curbs, Splints, Windgalls, Capped Hock, Strains or Bruises, Thick Neck from Distemper, Ringworm on Cattle, and to remove all unnatural enlargements. This preparation (unlike others) acts by absorbing rather than blistering. This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin or money refunded, and will not kill the hair. Manufactured by Dr. Frederick A. Page & Son, 7 and 9 Yorkshire Road, London, E. C. Mailed to any address upon receipt of price, \$1.00. Canadian agents:

J. A. JOHNSTON & CO., Druggists,
 171 King St., E. TORONTO, ONT.

DUNHAMS' PERCHERONS

Next large importation stallions and mares here FEBRUARY 10th, which, added to our present stock, offers intending purchasers the finest collection in America. If you want the best horses, horses with bone, quality, size, action and best breeding, stallions or mares; if you want fair and liberal treatment; if you want lowest prices consistent with good merchandise, visit Onkawn. Catalog shows the place and the horses.
W. S., J. B. & B. Dunham, Wayne, Ill.

Shoe Boils, Capped Hock, Bursitis are hard to cure, yet

ABSORBINE
 will remove them and leave no blemish. Does not blister or remove the hair. Cures any puff or swelling. Horse can be worked, \$2.00 per bottle, delivered. Book 6 D free. ABSORBINE, "J.B." (ranked, \$1.00 bottle.) For Bolls, Bruises, Old Sores, Swellings, Gout, Varicose Veins, Vorticosties, Allays Pain.
W. F. YOUNG, P.D.F., 258 Temple St., Springfield, Mass.
 LYMAN'S Ltd., Montreal, Canadian Agents.

NOTICE TO HORSE IMPORTERS
GERALD POWELL,
 Commission Agent and Interpreter, LILLE, FRANCE, will meet importers at any port in France or Belgium, and assist them to buy Percherons, Belgians, French Coach horses. All information about shipping, banking and pedigrees. Many years' experience; best references: correspondence solicited.

Ponies and Driving Horses!

PRESENT OFFERING: 14 PONIES 10 TO 13 HANDS. All guaranteed sound and reliable. Also a few choice young driving horses 15 1/4 to 15 3/4 hands. Matched pairs or single. Sound and gentle. Reasonable in price.

E. DYMENT COPETOWN, ONTARIO.

FOR SALE: Imp. Percheron Stallion

Dark brown. Six years old. Weight, 1,850 lbs. Quiet, sound and sure. Easy terms.
H. D. STANTON, THAMESVILLE, ONT.

QUESTIONS AND ANSWERS.
 Veterinary.

TOO MUCH WORK WHEN YOUNG

Clyde-bred colt has been regularly worked since he was two years old. He now seems run down, and he sweats and tires easily, and breathes short. I have been giving a tonic of equal parts sulphate of iron, gentian, ginger and nuxvomica for a month without apparent results. He eats well. R. J. M.
 Ans.—The colt was worked too young, and now the results are being shown. As you say, he is "run down." It is not probable he will ever be as good a horse as he should be. I am of the opinion his short breathing is simply due to debility. If he has contracted a chronic disease of the lungs, it cannot be successfully treated. All that you can do is to continue the tonic you mention, feed reasonably well on good hay, rolled oats, bran, and a little linseed meal, with a few raw roots. Keep comfortable. Give him a roomy box stall, or give a little exercise daily, but do not ask him to do regular work until forced to. It is possible his constitution is so broken down that it will take a long rest to restore it. V.

MARE SWEATS IN STABLE.

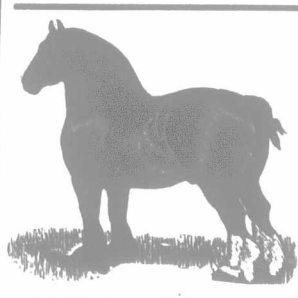
Clydesdale mare sweats freely about flanks when standing in stable. She raised a colt and has not done any work since spring. She was thin when turned on grass, and, although she eats well, she has not improved much in condition. The colt also eats well, but occasionally also sweats in stable. R. B.
 Ans.—Few mares improve much in condition when nursing a colt on grass unless fed liberally on grain, in addition. The sweating need not alarm you. No doubt both mare and colt have long coats, and this, especially if the stable is warm, causes perspiration. This sweating can be checked by daily rubbing well into the skin a solution of corrosive sublimate 15 grains to a pint of water. Feed both mare and colt well, give both regular exercise, and no doubt they will improve in condition. Feed good hay, rolled oats, bran, and a little linseed meal, with a few raw carrots, turnips, or a mangel, once daily. Internal medicines are not indicated. V.

GOSSIP.

ALEX. HUME'S AYRSHIRES AND YORKSHIRES.

The Menie herd of imported Ayrshire cattle, the property of Alex. Hume, Menie, Ont., has for years been recognized as one of Canada's leading herds, now considerably reduced, owing to the active demand for Ayrshires, and many sales effected, being only about fifty strong, all either imported, imported in dam, or bred from imported sire and dam. The phenomenal success of representatives of this herd at the leading shows, year after year, stamps them as second to none in type and quality; and their records in official and private tests show them to be among the best in the country as producers. The main stock bull is Lessnessock Royal Monarch (imp.), a proven sire of natural producers of show-ring quality. Second in service is Spicy Sam, Jr., imported in dam, whose breeding is unexcelled, and whose superior individuality will certainly capture the tri-colored ribbon some day. During the last year Mr. Hume has sold a large number of Ayrshires that were distributed from ocean to ocean, many of them going to grace the rich pasture-lands of Sunny Alberta. There are still for sale, females of all ages, including a number of heifers from one to two years of age, which will be sold to make room for the 1910 importation. In young bulls, Mr. Hume is sold out pretty well, but could probably spare one more. The Yorkshires at Menie Farm are essentially up-to-date in the matter of type, the stock boar being a son of the 1909 Toronto champion, and looking like a coming champion himself. Just now, for sale, are several young sows ready to breed, and others coming on. In boars near fit for service, there is only one left. Mr. Hume's farm is connected with long-distance Bell 'phone.

22 Imp. Clydesdale Stallions



Just landed, ages from 2 to 5 years old. A number of them are premium horses. Several are over the ton, or will make it. A number of them are grandsons of Baron's Pride. All are for sale. Prices are reasonable. Intending purchasers will find it to their interest to see these horses before purchasing. Farm two miles from the end of street-car line.

O. SORBY, Guelph, Ont.
 Long-distance 'phone.

20 Imp. Percheron Stallions 20



Our 1909 importation of 20 Percheron stallions, from 1 to 5 years of age, are now in our stables. Up to over a ton in weight. Big, stylish, choke-full of flashy quality, and faultless movers. Prizewinners among them. The best lot ever imported to Canada. All are for sale on terms to suit.

HAMILTON & HAWTHORNE, Simcoe, Ontario.



UNION STOCK - YARDS Horse Exchange WEST TORONTO, CANADA.

The Greatest Wholesale and Retail Horse Commission Market.
 Auction sales of Horses, Carriages, Harness, etc., every Monday and Wednesday. Horses and harness on hand for private sale every day.
 The largest, best equipped and most sanitary stables in Canada. Half-mile of railway loading chutes at stable door. Quarter-mile open track for showing horses. **Northwest trade a specialty.** HERBERT SMITH, Manager. (Late Grand's Repository.)

CLYDESDALES AND FRENCH COACHERS

We have still on hand a few choice Clydesdale stallions—all young—that for size, style and quality will stand inspection. We have also a few Clyde fillies—imported and Canadian-bred, and two French Coach stallions. Correspondence and inspection invited. Our prices are easy and terms to suit. 'Phone connection.

R. NESS & SON, HOWICK, QUEBEC.

Clydesdales and Percherons

To my many friends, and the public generally, I wish to say that in my stables at Weston, Ont., I have my 1909 importation of 10 Clydesdale and 8 Percheron stallions; a lot that for true draft character, faultless underpinning, choice quality and breeding were never surpassed. Terms to suit and prices right.

J.B. Hogate, Weston, Ont., & Brandon, Man.
 W. B. COLBY, MANAGER WESTON, ONT.

Imported Clydesdales
 I have lately landed an importation of 4 young stallions and 5 fillies, whose breeding is unsurpassed. They are the kind the country wants. Big, smooth, stylish, full of quality and straight movers. Will be sold right and on easy terms. **Geo. G. Stewart, Howick, Que.** 'Phone.

HIGH-CLASS French Coach, Hackney and Clydesdale Stallions.

HENRY M. DOUGLAS, Box 48, Stayner, Ont.

Clydesdales Home from the Shows

Intending purchasers would do well to see them before buying. Prices moderate.
Myrtle, C. P. R. SMITH & RICHARDSON, Columbus, Ont.
Brooklin, G. T. R.

ORMSBY GRANGE STOCK FARM, Ormstown, P.Q.

DUNCAN McEACHRAN, F. R. C. V. S., D. V. S., Proprietor.
 Importer and breeder of high-class pure-bred Clydesdales. Farmers or ranchmen starting breeding Clydes., pure or grade, specially invited to correspond.

Clydesdales, Percherons and French Coachers

My 1909 importation of Clydesdale stallions and fillies, Percheron stallions and fillies, French Coach and Hackney stallions are now in my stables. In this lot I can supply the most exacting. Size, style, character, quality and breeding. Will sell on terms to suit. 'Phone connection.
T. D. ELLIOTT, BOLTON, ONTARIO.

Imported Clydesdales

1910 have arrived. They were selected to comply with the Canadian standard, combining size, style, quality and faultless underpinning with Scotland's richest blood. They will be priced right, and on terms to suit. **C. W. BARBER, GATINEAU PT., QUEBEC**

CLYDESDALES and HACKNEYS

We have for sale a few choice Clydesdale mares, imported and Canadian-bred; also some Canadian-bred Clydesdale stallions. Hackney stallions and mares for sale always. Long-distance 'phone. **Hodgkinson & Tisdale, Beaverton, Ont.** G. T. R. and C. N. R.

High-class Imported Clydesdales!

I have lately landed at my stables at Milverton, Ont., an exceptionally choice selection of Clydesdales—stallions and fillies. They are all prizewinners at the leading shows in Scotland. From one to five years of age. Full of quality and royally bred.
Jno. Semple, Milverton, Ont.

Imported Clydesdales

We have a number of newly-imported stallions on hand in our stables in London, Ont., including some very large and heavy horses, several prizewinners. Another collection, stallions and fillies, sailed Saturday, October 16th, from Glasgow.
DALGETY BROS., LONDON, ONTARIO.

MY NEW IMPORTATION TO HAND.

In my new importation of 4 Clydesdale Stallions and 6 Clydesdale Fillies, I have material that will stand comparison with anything ever imported. They have great size, beautiful mould, full of quality, right fashionably bred and perfect action.
JOHN A. BOAG & SON, QUEENSVILLE, ONTARIO.

GOSSIP.

Imports of faxseed into the United States during the ten months ended Oct. 31st, 1909, amounted to 922,632 bushels, as compared with 34,587 bushels during the same months a year ago.

GEO. G. STEWART'S CLYDESDALES.

"The Farmer's Advocate" field man recently paid his periodical visit to the breeders of the great pure-bred stock County of Chateauguay, Que. There is probably no other county in this Dominion in which so many pure-bred registered animals are found, particularly Ayrshires and Clydesdales, as in this county, and no other in which conditions are more favorable for stock raising, the land being a rich clay loam that produces abundantly, corn doing particularly well. The first call was made on Geo. G. Stewart, the well-known importer of Clydesdale horses, and, as usual, his stables were found well stocked with an exceptionally strong selection of imported Clydesdales, comprising three stallions and six fillies. Breeding, are the predominating features throughout, the fillies being an extra-choice lot. Nellie Darnley, a brown three-year-old, in foal to Warlaby, is sired by Darnley Again, dam by the great Prince of Albion, granddam by Macgregor. There is no better breeding than this, and she is a big, thick, strong filly. Chattan Princess is a brown two-year-old, by Royal Chattan, dam by Prince of Kyle, granddam by Darnley. Beechaut is a bay two-year-old, in foal to Auchencrieve, sired by Baron Ruby, dam by Prince of Brunswick, granddam by Straithendrick Jock. Violet McEwan is a brown two-year-old, in foal to the same sire, got by Royal Favorite, dam by Prince of Albion. Spicy is a bay two-year-old, by Atahualpa, dam by Brooklyn, granddam Prince Lawrence. Baron's Rose, a brown two-year-old, is by Baron's Best, dam by MacVicar, granddam by His Royal Highness. We would strongly recommend parties wanting high-class breeding mares to correspond with Mr. Stewart, as these are a kind not often imported. The stallions are Stratharn King, a brown four-year-old, by Petruchio, dam by Royal Erskine. This is a thick, smooth horse, of the cart-horse type. Loyal Hero is a black two-year-old, a corner sure, that will make a high-class show horse. He is sired by the champion, Revelanta, dam by Copestone, granddam by Loyalist. He is a beautifully-turned colt, and his bottom is faultless. Earl of Ancaster is a brown two-year-old, smooth to a turn, and full of character, sired by Royal Chattan, dam by Mains of Airies, granddam by Prince of Kyle, great-granddam by Darnley. From the above, it will be seen that Mr. Stewart knows what is royal and fashionable in Clydesdale blood, and selected a vast amount of it.

TRADE TOPICS.

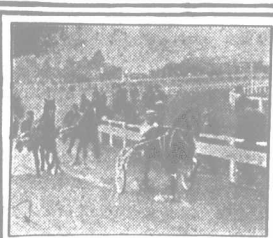
"A branch of the Traders Bank of Canada has just been established at the Union Stock-yards, Toronto, and will be open for business on market days. Drivers may exchange their checks at this branch for safety checks payable at their home towns."

We have heard only good reports of Visio, the horse eye remedy advertised in these columns, that has been before the public but a little over a year. It is claimed to be a great cure for moon blindness, cataract, and other eye troubles of horses. It is a guaranteed preparation, a measure that no proprietors of a quack remedy would dare to adopt. It is said to cure any eye complaint that can be cured. Its price is \$2 per bottle, and the money, it is promised, will be returned if it fails to effect a cure.

He was a temperance lecturer, more remarkable for homeliness of feature than eloquence.

"Yes, my dear friends," he said, "I was young then; but since that time I have shunned the glass."

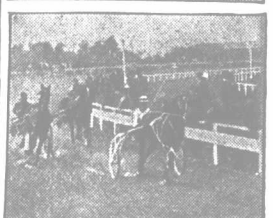
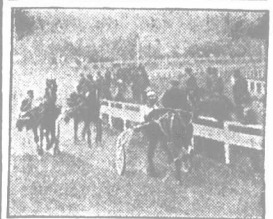
"I believe yer, guv'nor," shouted a voice from the back; "if I was only 'arf as ugly as you, I shud be afraid ter ketch sight of me face in a pail o' water."



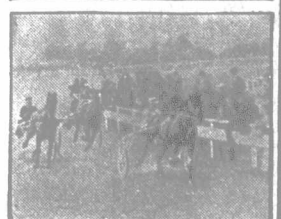
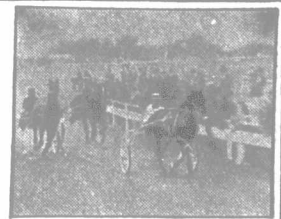
MOVING PICTURES

OF THE WONDERFUL WORLD CHAMPION DAN PATCH 1:55

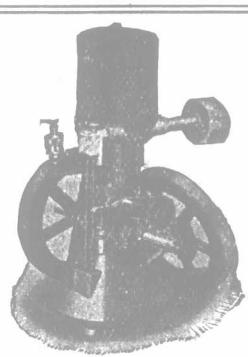
ABSOLUTELY FREE TO STOCKOWNERS



It is a New Invention that you can carry in your pocket and show your friends instantly, day or night, either once or a hundred times and without a machine, curtain or light. The original is the first successful moving picture ever taken of a World Champion Horse in his wonderful burst of speed. A MILE OF 2400 MOVING RACE PICTURES OF DAN PATCH 1:55 and every picture shows the King of all Horse Creation as plainly as if you stood on the track and actually saw Dan Patch 1:55 in one of his Thrilling Speed Exhibitions for a full mile. 2400 distinct moving pictures taken of Dan in one minute and fifty-five seconds means twenty-one pictures taken every second all of the way around the entire track from the back seat of a high power automobile. You can see Dan shake his head to let his driver know that he is ready for a supreme effort and then you can watch every movement of his legs as he flies through the air with his tremendous stride of 29 Feet. You can see his Thrilling Finish as he strains every nerve to reach the wire, you can see his driver dismount and look at his watch while thousands of people crowd around, you can see his care taker force his way through the crowd and throw a beautiful woolen blanket over Dan to prevent his catching cold and then you can follow him up the track before the Madly Cheering Multitudes. As a Study Of Horse Motion it is better than the actual speed mile because you can see Dan right before you for every foot of the entire mile. When first shown to the public this marvelous picture caused this Remarkable Moving Picture is the Most Realistic and the Most Thrilling ever presented to the public. I have taken a part of the Original 2400 Wonderful and Sensational Pictures and made them into a Newly Invented Moving Picture that you can carry in your pocket and show to your friends at any time, day or night. It does not need a machine, it does not need a curtain, and it does not need a light.



MY NEW MOVING PICTURES MAILED FREE TO STOCKMAN, postage prepaid, IF YOU ANSWER THESE THREE QUESTIONS 1st. In what paper did you see my Moving Picture Offer? 2nd. How many head Each of Horses, Cattle, Sheep, Hogs and Poultry do you own? 3rd. How many acres of land do you own or how many acres of land do you rent? IF YOU ARE NOT A STOCKOWNER AND WANT THE MOVING PICTURES SEND ME 25 CENTS FOR POSTAGE. For Packing, etc., in Silver or stamps and I will mail you this Wonderful Moving Picture of Dan Patch 1:55, The Fastest Harness Horse The World Has Ever Seen. Address - - - INTERNATIONAL STOCK FOOD CO., E. B. SAVAGE, Proprietor, TORONTO, CANADA. 49

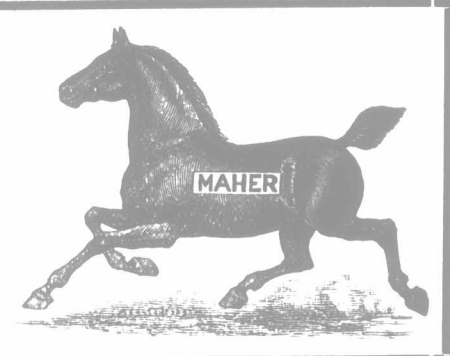


DO NOT SAVE YOUR MONEY!

Cut out this ad. and mail it to us for OUR SPECIAL ADVERTISING OFFER, which will show you how WE WILL DO IT FOR YOU. This month only.

"LONDON" GAS OR GASOLINE ENGINES 1 1/2 TO 5 H. P.

SCOTT MACHINE CO., Ltd., London, Can.

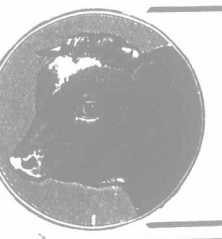


Maher's Horse Exchange

Is to 28 Hayden Street (Near cor. Yonge and Bloor) TORONTO AUCTION SALES OF Horses, Carriages, Harness, etc., every MONDAY and THURSDAY at 11 a.m. PRIVATE SALES every day. We have always a large quantity of horses on hand for Auction or Private Sale. We have the biggest and best sale ring and stables in Canada. We hitch and try all horses for out-of-town buyers, and guarantee satisfaction. WE SELL STRICTLY ON COMMISSION. P. MAHER, Proprietor. GEO. JACKSON, Auctioneer.

T. H. HASSARD'S NEW IMPORTATION!

MY NEW IMPORTATION OF Clydesdale Stallions and Fillies are now in my stables at Markham, Ont., and, as usual, I have a big range for selection, of a type, breeding and quality seldom equalled, never excelled, by any previous importation. Call and see them. Phone connection. T. H. HASSARD, Markham, Ont.



30 HEIFERS AND 29 BULLS PRESENT OFFERING.

Bred right, made right and at prices to make you feel right. Come early and get your choice. List of these, with catalogue, will be mailed to those who ask for them.

H. CARGILL & SON, CARGILL, ONT.

H. SMITH, EXETER, ONTARIO. Scotch Shorthorns

Extra choice young bulls and heifers for sale. Write for what you want. Farm adjoins town.

SHORTHORNS Belmar Parc.

Valley Home Shorthorns and Berkshires FOR SALE: Three show bulls and five choicely-bred pure Scotch bulls of extra good milking strains; some show heifers, young cows and heifers of good milking families, and choice Berkshires of both sexes. Our prices very reasonable, considering quality. Visitors welcome. \$ J. PEARSON, SON & CO., Meadowdale P.O. and Sta., C.P.R.

SALEM SHORTHORNS!

Young bulls and heifers, sired by the great show and breeding bull, Jilt Victor (imp.) at J. A. WATT, SALEM, Ont. ELORA STATION, G. T. R. and C. P. R. Long-distance Telephone.

Mr. A. J. Hickman, Court Lodge, Egerton, Kent, England.

Exports Pedigree Live Stock of Every Description to all Parts of the World. During the spring months the export of horses of the light and heavy breeds will be a specialty. Write for prices, terms and references.

Hereford Bulls!

2 YEARLINGS, in fine order; good individuals and from prize stock. Also choice bull calves, 8 to 10 months old. H. D. Smith, Hamilton, Ont. "INGLESIDE FARM."

MIDDLEBROOK ABERDEEN-ANGUS. I am now offering for sale three choice young bulls; also a few females, either bred or with calf at foot to Hundred grand champion Angus bull at Toronto this year. JOHN LOWE, Flora, Ont., P. O. and Station

At Dominion Exhibitions, Halifax, Nova Scotia, in 1906; Sherbrooke, Que., 1907; Calgary, Alta., 1908, our Aberdeen-Angus herd won all the champion and grand champion prizes. Out of a possible of 42 first-prizes our herd won 40. We have a good graded show herd for sale. Also single animals, bulls and females. JAMES BOWMAN, Elm Park, Guelph.

Homestead Aberdeen-Angus

Some extra good bull calves, 6 to 8 months old; also females, all ages. Parties looking for cattle, either sex, should write, or come and see them. William Ische, Sebringville, Ont. Long-distance Phone.

ABERDEEN - ANGUS

Will sell both sexes; fair prices. Come and see them before buying. Drumbo station. WALTER HALL, Washington, Ont.

Aberdeen-Angus Cattle

MALES AND FEMALES FOR SALE. APPLY: Geo. Davis & Sons, Alton, Ont.

Geo. D. Fletcher, Binkham P.O., Ont., offers four choice Shorthorn bulls, 10, 13 and 18 months old, with both breeding and quality for herd-heads. Prices easy. Stock bull, Benachie (imp.) = \$954 =; also Shorthorn females and Yorkshire sows. Erin shipping station, C.P.R.

SHORTHORNS FOR SALE.

Choice young bulls of grand quality and breeding, from good milking cows; also females bred from prizewinners. Prices very cheap for quick sale. Write, and come and see them. STEWART GRAHAM, PORT PERRY, ONT.

OLD MELDRUM We are offering three very SHORTHORNS! choice young bulls, old enough for service; also several extra nice heifers. All in good condition, and bred to make money. A. F. & G. AULD, Eden Mills P. O. Ont. 5 miles from Guelph.

Shorthorns and Leicesters. For sale: Choicely-bred young bulls, old and young cows; also females bred from prizewinners. All got by Imp. sires, and out of grand milking dams. And Leicester rams and ewes of all ages. W. A. Douglas, Tuscarora, Ont., Caledonia Station.

When Writing Mention The Advocate

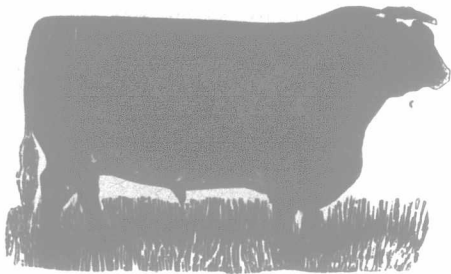
Established 1867

BY AUCTION

ONE OF THE OLDEST-ESTABLISHED

Shorthorn HerdsIn Canada, the property of **MR. ARTHUR JOHNSTON,**
Greenwood, Ont., at the farm, 7th Con., Pickering Tp., on

Wednesday, March 9th, 1910



THE HERD will be found in the very nicest condition, and consisting of about **40 females**, including several show-yard propositions, and **9** extra nice young bulls of breeding ages and show-yard character, including the first-class imp. three-year-old Butterfly bull—a show bull from the ground up. The tribes represented will include such well-known and fashionable families as follows: Kilblean Beauties, Cruickshank Lavenders, Duchess of Glosters, Butterflies and Villages, Marr Claras, Kinellar Nonpareils, Minas and Clarets, Bruce Mayflowers, Miss Ramsdens and Crimston Flowers, together with half a dozen high-class English milking cows and heifers imported by myself. For full particulars apply to:

ARTHUR JOHNSTON, Greenwood, Ontario.

FEBRUARY 4TH

61 SHORTHORNS 61
BY AUCTION

At the Union Stock-Yards, West Toronto, Ontario,

Commencing at 1 p. m., on **FRIDAY, FEBRUARY 4TH, 1910**, there will be sold 61 head of choicely-bred Scotch and Scotch-topped Shorthorn cattle, comprising the well-known herd of **Messrs. Walker's Sons, Walkerville, Ont.**, and the **Dumrobin Herd, Beaverton, Ont.**, the property of the late **Donald Gunn**. Among this lot are many of the choicest cattle in Canada; immensely thick and soggy, and bred on the most fashionable lines. All must positively be sold. Nearly all are eligible for American registration. Terms cash. For catalogues write:

R. E. GUNN, BEAVERTON, ONT.,
Manager of Sale,or **CAPT. T. E. ROBSON, 2 Becher St., London, Ont., Auctioneer.****Dispersion Sale of Scotch Shorthorns**AT THE UNION STOCK-YARDS, WEST TORONTO, ON
THURSDAY, FEBRUARY 3rd, 1910,

Commencing at 7 p. m., **Mr. A. D. Schmidt & Sons, of Elmira, Ont.**, will hold a dispersion sale of their entire herd of Scotch Shorthorns, numbering 13 head. They are most richly and fashionably bred, are strictly up-to-date in type, and are in splendid condition. Included in the lot is their champion stock bull, imp. **Deedsie Chief**. Terms cash. Also four head from the herd of **F. W. Nicholson, Flesherton, Ont.** Catalogues on application to:

A. D. SCHMIDT & SONS, ELMIRA, ONT.

Capt. T. E. Robson, Auctioneer.

FOR SALE OR EXCHANGE: **Shorthorn Bull** BRAVE YTHAN = 273763 = 308801 =. Aged 2 years. Would exchange for a good cow in calf or yearling heifers. Eligible for American record. **H. M. VANDERLIP, CAINSVILLE, ONT.** PHONE.

Maple Hall Shorthorns

Are bred on most fashionable Scotch lines, and are of high-class individuality. For sale are 6 young bulls from 6 to 10 months of age. A low, thick, sappy lot. Also 10 yearlings and 10 two-year-old heifers. Show material in this lot. Telephone connection. **DAVID BIRRELL & SON, GREENWOOD P. O., ONT., CLAREMONT STATION.**

The Human Side of Twine

When we drive home from the implement dealer with our little load of Sisal twine for the coming harvest, we do not often realize that we are giving that twine its final lift on the journey of many thousand miles which it has taken months to make. Seldom do we appreciate when we give it its final resting place in the binder box, that the first hands which touched it were those of a Maya boy or girl in far-off tropical Yucatan, whose ancestors were a great civilized people, with temples and literature, centuries before Columbus came ashore in his red velvet suit.

Or, if it is Manila twine, the first step in its long pilgrimage was under the guidance of a barefooted, brown-skinned little Filipino savage, who perhaps never heard of a binder, and whose views of agricultural implements are a pointed stone or a crooked stick.

Yet, if it were not for the industry of these two widely-separated nations, the farmers of this rich country would still be obliged to bind their grain with old-fashioned wire, which never worked, or with untrustworthy cotton strand. In fact, the problem of twine was the problem of successful binding for years after the self-binder was an established fact.

It took many years and thousands of dollars to eliminate this primary drawback to the early grain-growers of the country. One manufacturer alone spent \$15,000 trying to make twine out of grass, \$35,000 using paper as a substitute, and \$43,000 on straw—all in the end to be discarded as unsatisfactory. Then, after searching the world with a close-tooth rake, as it were, it was found that two fibres could be made to do the work—Manila and Sisal. The Manila—long, soft and even—had generally been used in multiple strands for making cable and cordage; while the Sisal—strong, pliable and smooth—was found to lend itself perfectly for the manufacture of a single-strand cord, such as the self-binder necessitated.

Then commenced a merry struggle between the distant races for the honor of supplying the twine which was to make His Majesty, the American farmer, the greatest food producer in the world. At first, owing to the established position of the Manila hemp trade caused by the cordage industry, the little brown brother in the Philippines forged ahead, but he made no progress in his methods of production, using the knife and block, and other simple methods followed by his primitive forefathers in extracting the fibre. It was soon seen that Sisal would either be the ultimate material to supply this demand, or the demand would not be filled. At this point of the race, a number of clever, aggressive Yucatecans, educated in the sciences in this country and abroad, sprang into the game. They saw the future commercial possibilities of the neglected Sisal plant. At their own expense they built railroads into the arid, dry territories where henequen grew. They invented new machines, capable of cleaning 100,000 leaves a day, and soon began to compete on an equal basis with the Manila fibre.

The Spanish-American war temporarily advanced the price of Manila fibre to such an extent that good grades of Sisal fibre commanded a price which was practically prohibitive for binder twine. Therefore, manufacturers of binder twine concentrated their energy and genius in the production of a perfect binder twine from Sisal. This required some adjustment of machinery, and some change in methods, but manufacturers of twine succeeded so that the twine made from Sisal has for some years been very satisfactory. This has resulted in the increased use of Sisal, until during the past season it is claimed that not less than 85 per cent., and possibly 90 per cent., of the material which went into the manufacture of binder twine in the United States was Sisal fibre.

First-class binder twine is made from high-grade Manila fibre, but it is difficult to make even a reasonably-good article of binder twine from low-grade Manila. Before the American occupation of the Philippine Islands, the Spanish officials at times exerted their arbitrary power for the purpose of maintaining the quality of the fibre which was produced by the natives. It was not an uncommon thing for the governor of a district

HEADACHE

AND

Burdock Blood Bitters.

The presence of headache nearly always tells us that there is another disease which, although we may not be aware of it, is still exerting its baneful influence, and perhaps awaiting an opportunity to assert itself plainly.

Burdock Blood Bitters has, for years, been curing all kinds of headaches, and if you will only give it a trial we are sure it will do for you what it has done for thousands of others.

Headache and Constipation Cured.

Mrs. John Connor, Burlington, N.S., writes:—"I have been troubled with headache and constipation for a long time. After trying different doctors' medicine a friend asked me to try Burdock Blood Bitters. I find I am completely cured after having taken three bottles. I can safely recommend it to all."

For sale by all dealers.

Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

ELECTRIC BEANS

ARE A BRACING

BLOOD & NERVE TONIC.

They are unequalled for Biliousness, Sick Headache, Constipation, Heart Palpitation, Indigestion, Anemia. Write for sample and booklet of testimonials. 50c. a box at all dealers, or THE ELECTRIC BEAN CHEMICAL CO., LIMITED, Ottawa.

A. Edward Meyer

P. O. Box 378, Guelph, Ont.,

Breeds **SCOTCH SHORTHORNS** Exclusively. Twelve of the most noted Scotch tribes have representatives in my herd. Herd bulls: **Scottish Hero (imp.) = 55042 = (90065) 295765 A. H. B.**; **Gloster King = 68703 = 283804 A. H. B.** Young stock for sale. Long-distance phone in house.

Shorthorn Cattle

Would price my stock bull, Star Prince = 53900 =. Red. It would pay anyone wanting a bull to come and see his produce. Oldest bull I have left by him will be a year old in February. A winner in Toronto and London. Females of all ages. Some very good heifers in nice condition. All reds or good roans. **J. T. GIBSON, DENFIELD, ONT.**

Geo. Amos & Sons, Moffat, Ont.

Cattle bred by us have won grand champion females, Toronto, 1907, 1908, and junior champion 1909. American grand champion 1908, grand champion, A. Y. P. E., Seattle, Wash., 1909; also won five firsts at Toronto, 1908, in groups our own breeding. For sale: several good young bulls, cows and heifers at very moderate prices for sake of room for coming calves.

Farm 11 Miles East of Guelph, C. P. R.

Scotch Shorthorns

At Toronto Exhibition this fall yearling bulls bred by us won 1st and 3rd in class and junior champion. We also bred the sire of these bulls. The grand champion steer at Guelph was sired by a bull of our breeding. We have 10 young bulls for sale now, bred the same. Write for breeding and prices.

John Miller, Brougham P. O., Ontario.

Claremont Stn., C. P. R., 3 miles.

For sale: 8 good bulls, 6 red and 2 roan, some sired by Royal Sovereign. Bred by the late S. Campbell, Aberdeenshire, Scotland. Most of them by Lord Gordon, bred by A. Watson, Elgin, Scotland.

J. & W. Russell, Richmond Hill, Ont.**Spring Valley Shorthorns.**

Herd headed by Clipper Chief (imp.) = 64220 = (94673). If you want to get an imported bull, or a good Canadian-bred one to head your herd, be sure and write, or come and see them. Long-distance telephone.

KYLE BROS., AYR P. O., ONT.**HIGH-CLASS SHORTHORNS**

I have on hand young bulls and heifers of high-class show type, pure Scotch and Scotch topped, sired by that sire of champions, Mildred's Royal. If you want a show bull or heifer, write me. **GEO. GIER, GRAND VALLEY P. O. AND STA., ALSO WALDEMAR STA.**

CHE

Bitters.

he nearly always another disease not be aware of its influence, opportunity to

has, for years, headaches, and if we are sure it is done for thou-

John Connor, Kingston, N.S., "I have been troubled with headache and constipation long time. After trying different medicines a friend gave me Blood Bitters. After having it safely recom-

dealers. The T. Milburn

BEANS

ING E TONIC.

Business, Sick Headache, Indigestion, and booklet of all dealers, or THE LIMITED, Ottawa

Meyer

Exclusively. Tribes have representatives: Scottish Hero A. H. B.; Gloster Young stock for

Cattle

Prince = 53900 =. A bull to come will have left by him winner in Toronto ages. Some very reds or good roans.

Moffat, Ont.

grand champion and junior champion 1908, grand champion, 1909; also won groups our own good young bulls. Prices for sale of

Guelph, C. P. R.

Shorthorns

yearling bulls bred junior champion bulls. The grand red by a bull of our bulls for sale now, and prices.

P. O., Ontario.

ale: 8 good bulls, and 2 roans, some by Royal Sovereign. Bred by the late and. Most of them on, Elgin, Scotland.

Shorthorns.

(imp.) = 64220 = imported bull, or a your herd, be sure m. Long-distance

YR P. O., ONT.

SHORTHORNS and heifers of high-bred Scotch topped. Mildred's Royal heifer, write me. P. O. AND STA. STA.

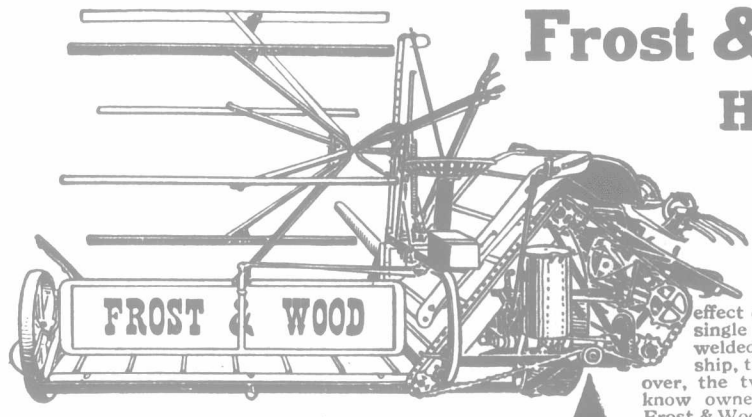
to seize a quantity of inferior fibre and publicly burn it in the middle of the plaza. This was an object lesson to the natives to produce better grades of fibre. However, since the Americans have taken possession of the Philippine Islands, no authority has been exercised, and no influence exerted by the officials in connection with the quality of fibre. The result is a greater proportion of low-grade fibres. Those who attempt to use twine made from this low-grade Manila fibre will have troubles of their own. There may never be a famine in twine, but it is rather to the farmer's interest always to keep a weather eye on the future, and in this particular instance to secure his twine supply, whether it be Sisal or Manila, at as early a date as possible.

GOSSIP.

ORMSBY GRANGE CLYDESDALES.
A recent call was made at Ormstown, Que., to Ormsby Grange Stock Farm, the splendid home of Dr. D. McEachren. Ormsby Grange is destined in the near future to hold a prominent place among the best of the many luxuriantly and elegantly equipped stock farms for which the Province of Quebec is so noted. With a life's experience in the framing of laws of sanitation and ventilation, Dr. McEachren is now drawing on his vast storehouse of knowledge in perfecting the arrangements of his farm buildings for the comfort, convenience and health of his splendid stud of Clydesdales. The season 1909 saw two importations of Clydesdale stallions and fillies, a number of which have been sold and distributed to various parts of the country, and, with the increased accommodation at the farm, the 1910 importations will be on a much more extensive scale. Those still on hand for sale are two stallions and five fillies. Selborne [8564] is a massive, big three-year-old, sired by Pride of Blacon, dam by Orlando, granddam by Superior. This is one of the good ones, big, stylish, and drafty, with abundance of quality; a show horse of a high order, with numerous winnings to his credit. Dr. Jim [8563] is a brown three-year-old, a thick, smooth cart horse, heavy quartered, with a grand depth and spring of rib, and just the right kind of underpinning, sired by Pride of Blacon, dam by Prince Macgregor, granddam by Prince of Kyle. Prominent among the fillies is Lintlithgow Lass, a bay five-year-old, sired by the champion, Everlasting, dam by Sir Everard. The type, quality and character of this great mare can best be indicated by her show record. In 1905, she was first and champion at Falkirk, first at Stirling, Bathgate, and Lintlithgow, where she also won the Cup. In 1906, 1907 and 1908, she won first and championship all around the circuit. Out of her, sired by Sir Hugo, is a most promising filly foal, rising one year old. Bess of Knockstable [17953] is a bay three-year-old, by Gartley Cashier, dam by Gregor Macgregor, granddam by Prince David. Peggy of Kintyre [17954] is another bay three-year-old, by Knight of Angus, dam by Right at Last. Mary o' Argyle [15910] is a bay three-year-old, by Knight of Angus, dam by William the Conqueror, granddam by Prince of Kintyre. Kintyre Belle [15911] is a bay three-year-old, by Gartley Cashier, dam by Florizel, granddam by Gay Everard. These are a lot of fillies of draft character, and right proper underpinning, the kind this country needs, and all are for sale.

TRADE TOPIC.

Only those familiar with the matter can appreciate the great demand that exists to-day for competent men to fill the positions of railway brakemen and firemen, and electric motormen and conductors, nor the fact that competent men in these lines are always sure of their positions, and make far more money than the average professional or business men. The Wenthe Railway Correspondence School, of Freeport, Ill., guarantees its graduates who are mentally and physically competent, positions, and makes its guarantee under legal bond. We suggest that those who want a good position, write at once to the Wenthe Railway Correspondence School, General Office, 349 Freeport, Illinois, for full particulars.

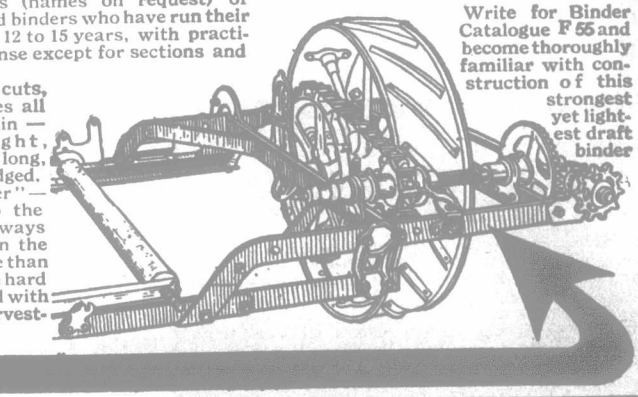


Frost & Wood No. 3 Binder Has a Strong "Back Bone"

"Canadian" conditions are "different" from those prevalent in other countries. It is well for the "Canadian" farmer to remember this. He will find it will pay him to purchase from a Canadian Company who know the requirements of the different sections and who build their machines accordingly. The Frost & Wood Co. have been manufacturing Farm Implements for the last 70 years and have the very best and most prosperous farmers as customers. Frost & Wood organization covers Canada from Atlantic to Pacific. Branch Warehouses in New Westminster, Calgary, Edmonton, Regina, Brandon, Winnipeg, Toronto, London, Ottawa, Sherbrooke, Montreal, Quebec, St. John, Truro and Charlottetown. Your local agent can thus on shortest notice obtain for you (if he hasn't it on hand himself) any Frost & Wood Machine or part thereof that you may desire.

Dropping into a furrow harder than intended, or accidentally striking a boulder, does not "wreck" our No. 3—because it is built to stand more "hard knocks" than a binder is commonly supposed to encounter. The No. 3 Main Power Frame—the binder's "back bone"—consists of heavy pieces of steel firmly rivetted together. The Platform is connected to the Main Power Frame by a Double Steel Brace (see illustration). Hard work and rough ground have no effect on this brace. Certainly, no possibility of it sagging. Indeed, every single part of the No. 3 is of the best material, securely bolted, rivetted or welded to some other part. It's the QUALITY, in material and workmanship, that we put into our binders that enables them to beat, by five times over, the two or three seasons' durability-record of other binders. Why, we know owners (names on request) of Frost & Wood binders who have run their machines for 12 to 15 years, with practically no expense except for sections and oil.

The No. 3 cuts, binds and ties all kinds of grain—whether light, heavy, short, long, broken or lodged. It's no "quitter"—never goes to the fence. You always can count upon the No. 3 to do more than its share of the hard work connected with Canadian Harvesting.



The FROST & WOOD CO. Limited SMITH'S FALLS, CANADA

FREE TO YOU—MY SISTER FREE TO YOU AND EVERY SISTER SUFFERING FROM WOMEN'S AILMENTS.



I am a woman. I know woman's sufferings. I have found the cure. I will mail, free of any charge, my home treatment with full instructions to any sufferer from women's ailments. I want to tell all women about this cure—yes, my reader, for yourself, your daughter, your mother, or your sister. I want to tell you how to cure yourself at home without the help of a doctor. Men cannot understand women's sufferings. What we women know from experience, we know better than any doctor. I know that my home treatment is a safe and sure cure for Leucorrhoea or White discharge, Ulceration, Displacement or Falling of the Womb, Profuse, Scanty or Painful Periods, Uterine or Ovarian Tumors or Growths, also pains in the head, back and bowels, bearing down feelings, nervousness, creeping feeling up the spine, melancholy, desire to cry, hot flashes, weariness, kidney and bladder troubles where caused by weakness peculiar to our sex. I want to send you a complete 10 days' treatment entirely free to prove to you that you can cure yourself at home, easily, quickly and surely. Remember, that it will cost you nothing to give the treatment a complete trial; and if you should wish to continue, it will cost you only about 12 cents a week, or less than two cents a day. It will not interfere with your work or occupation. Just send me your name and address, tell me how you suffer, if you wish, and I will send you the treatment for your case, entirely free, in plain wrapper, by return mail. I will also send you free of cost, my book—"WOMAN'S OWN MEDICAL ADVISER" with explanatory illustrations showing why women suffer, and how they can easily cure themselves at home. Every woman should have it and learn to think for herself. Thousands of women have cured themselves with my home remedy. It cures all, old or young. To Mothers of Daughters, I will explain a simple home treatment which speedily and effectually cures Leucorrhoea, Green Sickness, and Painful or Irregular Menstruation in Young Ladies. Plumpness and health always result from its use. Wherever you live, I can refer you to ladies of your own locality who know and will gladly tell any sufferer that this Home Treatment really cures all women's diseases and makes women well, strong, plump and robust. Just send me your address, and the free ten days' treatment is yours, also the book. Write to-day, as you may not see this offer again. Address: MRS. M. SUMMERS, Box No. 821. WINDSOR, ONT.

Shorthorns

FOR SALE! Several choice Canadian-bred bulls ready for service; also a good imp. two-year-old bull of the Braith Bud family. A number of cows and heifers of different ages of right type and quality. Write or call on H. J. DAVIS, Woodstock, Ontario. Long-distance Bell' phone. C.P.R., G.T.R. main lines

Willow Bank Stock Farm SHORTHORNS AND LEICESTERS. Herd established 1855; stock 1848. The great Duthie-bred bull, imp. Joy of Morning = 32070 =, and the Missie bull, Royal Star = 72502 =, heads my herd. Choice selections to offer at all times in both bulls and females. JAMES DOUGLAS, CALEDONIA, ONTARIO.

HAWTHORN HERD OF DUAL-PURPOSE

Shorthorns 15 heifers, 6 bulls present offering; bred right; priced right. Come early and get a choice. WM. GRAINGER & SON, London, Ont.

275 BURLINGTON SHORTHORNS 275

3 Choice Imported Scotch Shorthorn Bulls—yearlings. 1 Imported 2-year-old Bull, red—an extra sire. 10 Bulls, 9 to 16 months old—all by imported sire. 30 Choice Young Cows and Heifers—mostly bred or have Calves at foot. Long-distance telephone. Farm 1/4 mile from Burlington Jct. Sta., G. T. R. J. F. Mitchell, Burlington, Ont.

SHORTHORN BULLS

We are offering 15 choice young of serviceable age. Among them are high-class herd-headers. We can supply females of all ages. Farms close to Burlington Jct., G.T.R. W. G. PETTIT & SONS, FREEMAN, ONT.

INVERNESS SHORTHORNS I can supply Shorthorns of all ages, with richest Scotch breeding and high-class individuality. W. H. EASTERBROOK, Freeman, Ont.

Imp. Scotch Shorthorns—When looking for Shorthorns, be sure to look me up. Young bulls fit for service, and females all ages; bred in the purple, and right good ones. A. C. Pettit, Freeman, Ont.

Maple Leaf Shires, Shorthorns, Hampshire Hogs 1- and 2-yr.-old Shire stallions, females from yearling fillies up; Shorthorns, both bulls and heifers; a choice lot of young Hampshire pigs, both sexes, beautifully belted. PORTER BROS., APPLEBY P.O., BURLINGTON STA. Phone.

Choice Scotch Shorthorns Mayflowers, Lancasters, Miss Ramsdens, Stamfords and Broadhokes. High-class show heifers among them. Also a few extra good young bulls. S. F. Johnston & Son, Ashburn P. O., Myrtle Station.

I am offering 5 young bulls of choice breeding and color, all sired by the champion bull, Royal Chief 65495. R. F. Duncan, Carluke P.O., Ont.

ROWAN HILL SHORTHORNS

3 bulls fit for service; 1 fifteen months' roan from imp. sire and dam; 1 thirteen months' roan from imp. sire and English Lady dam; also 10 yearling and two-year-old heifers. Write us, or call and see us before buying. J. WATT & SON, Salem P. O., Ont. Elora Sta.

IRVINE SIDE SHORTHORNS

One choice young Lady Fanny bull for sale—good herd header; also several young heifers. A few prizewinning Berkshires, both sexes. Write or come and see them. Prices moderate. ISRAEL GROFF, ELMIRA, ONTARIO.

SHORTHORN BULLS

I have some choice young bulls, from imp. sire and dams. Good ones at reasonable rate. Come and see them. Prices right. Also some choice heifers. J. Brydone, MILVERTON, ONTARIO. G. T. R. and C. P. R. Station.

1854—Maple Lodge Stock Farm—1909

Shorthorn bulls and heifers of extra quality and breeding, and from best milking strains. Leicesters of first quality for sale. Can furnish show flocks. A. W. SMITH, Maple Lodge P.O., Ontario. Lucan Crossing Sta., G.T.R., one mile.

CATTLE FATTEN QUICKER—take on weight faster—make better beef—when dehorned. Cows give more milk—and half the danger in shipping by rail or boat is eliminated. KEYSTONE DEMORNER does the work in 2 minutes. Cuts from 4 sides at once. Write for free booklet. R. W. MOYER, 219 Robert St. Toronto, Ont. Lots of Fries, Ont.

SHORTHORNS AND SHROPSHIRE. Young bull, heifers and calves of good type and breeding. Dams all from a milking strain. Shropshire shearing rams and lambs. JOHN RACEY, Lennoxville, Quebec.

SHORTHORNS BERKSHIRES One choice young Lady Fanny bull for sale—good herd header; also several young heifers. A few prizewinning Berkshires, both sexes. Write or come and see them. Prices moderate. ISRAEL GROFF, ELMIRA, ONTARIO.

Scotch Shorthorns Five red bulls, 8 to 15 months, by Protector, imp., and out of imp. dams, Also Clydesdales, and a two-year-old Hackney filly. All at reasonable prices. McFarlane & Ford, Box 41, Dutton, Ont.

Boog Spavin

Cure the lameness and remove the bunch without scarring the horse—have the parts looking just as it did before the blemish came.

Fleming's Spavin Cure (Liquid) is a special remedy for soft and semi-solid blemishes—Bog Spavin, Thorouphpin Splint, Ourb, Capped Hock, etc. It is neither a liniment nor a simple blister, but a remedy unlike any other—doesn't irritate and can't be limited. Easy to use, only a little required, and your money back if it ever fails.

Fleming's Vest-Pocket Veterinary Adviser describes and illustrates all kinds of blemishes and gives you the information you ought to have before ordering or buying any kind of a remedy. **Mail free if you write.**

FLEMING BROS., Chemists
75 Church St., Toronto, Ontario

THE SUMMER HILL HERD OF HOLSTEINS

is making some wonderful records. This year it has produced the champion Canadian-bred butter cow for 7 days record 29.16 lbs. Also the champion 2-year-old in yearly production. We have some younger ones that promise to be just as good. We offer for quick sale ten fine heifers, all in calf to an imported bull. Come AT ONCE and make your selection. Prices are right, and everything guaranteed just as represented. Trains met at Hamilton if advised.

D. C. Flatt & Son,
Farm Phone Bell 2471, Hamilton, Millgrove, Ont.

AVONDALE HOLSTEINS

Offers for sale high-class Holsteins all ages. Herd headed by Prince Hengerveld Fietje, a son of Fietje 22nd's Woodcrest Lad, out of Princess Hengerveld, a daughter of Hengerveld DeKol, with record of 20.34 lbs. butter at 23 months. We also offer some fine young Yorkshire pigs of choice breeding.

ARTHUR C. HARDY, BRUCKVILLE, ONTARIO

HOLSTEINS AND YORKSHIRES

Young bulls for sale from such cows as Snowflake Queen De Kol of Minster, testing 4.8; Queen De Kol, 4.4, and others equally good. Cows giving 12,000 to 15,000 lbs. yearly.

RICHARD H. NEY, BRICKVILLE, ONT.
Northumberland Co.

HOMewood DAIRY

Offers two beautiful bull calves, sired by a son of Lady Aaggie De Kol, sweepstakes winner and a four-per-cent. cow. Price \$100 each. Six cows in calf to the richly-bred bull, Prince Abbe Kirk Mercena. Write for particulars.

M. L. & M. H. Haley, Springford, Ont.

Holsteins—Maple Grove offers a few richly-bred young cows, safely in calf to Sir Abbe Kirk De Kol 2nd and Mercena's Sir Posch; also young stock sired by above bulls. For description and prices write

H. BOLLFRIT, Cassel, Ont.

DON'T Buy a HOLSTEIN BULL till you get my prices on choice goods from thirteen months down, from best producing strains. "Fairview Stock Farm." **FRED ABBOTT, Harrietsville Ont.**

For Sale—7 Holstein bulls; Tamworth pigs from 2 to 6 months old. White Wyandotte cockerels and Buff Orpington hens. **BERTRAM HOSKIN, The Gully P.O., Ont.**
Phone connection via Cobourg.

EVERGREEN STOCK FARM offers choice young Holstein Bulls, from 10 to 12 months, sired by Sir Mercena Fa orite, whose dam and gr. dam averaged 80 lbs. milk per day, and 24.60 lbs. butter per week. Their dams also in A. R. Also choice females for sale. **F. E. Pettit Burgessville, Ont.**

"Your services are no longer needed," said the boss.
"What's the matter?" asked the clerk.
"Don't I do my work all right?"
"Yes," answered the employer, "you do your work all right, but I'm sick of having you tell me how I ought to do mine."

DODD'S KIDNEY PILLS

FOR ALL KIDNEY DISEASES

CURES RHEUMATISM BRIGHT'S DISEASE DIABETES BACKACHE

PREPARED BY DR. J. C. DODD

NO. 23 THE PR...

QUESTIONS AND ANSWERS. Miscellaneous.

SEED FOR ORCHARD.

Which is the best kind of grass seed to sow in an orchard to cut for hay, and for pasture in the fall?

A. B. M.

Ans.—Any kind that will not grow. Do not think of seeding in this way. You will lose far more in fruit than you will gain in hay and pasture. Read the article, "Does Apple-growing Pay?" in "The Farmer's Advocate" Christmas-Number for 1909.

SHOULD CORN GROUND BE PLOWED?

Which gives the best results for spring crop, corn ground plowed, or seeded without plowing? A READER.

Ans.—If the corn ground has not been plowed in the fall, then it is usually better, or, at least, more profitable, to put in the seed without plowing in the spring. If the land for corn had been broken out of sod, plowing, even in fall, is seldom of advantage. It is different, however, when corn has been grown on land that had been under cultivation in previous years. Some soils, under such conditions, run so solidly together that fall plowing is expedient.

RETURNS FROM STRAWBERRIES.

1. About how much will an acre of strawberries return if sold at 15c. a box?
2. What kind of soil is best suited for them?

J. P. B.

Ans.—At the Ontario Fruit-growers' Convention at Toronto last November, a yield of 8,000 boxes per acre was reported by one man. Yields much higher than that have been claimed, but in this country the half of it is commonly considered a good crop, and the quarter of it would probably be reckoned fair in most places. At 15 cents per box, 2,000 boxes would bring \$300.

2. Good sand or clay loam. They do well, however, on a great variety of soils, if properly cultivated and mulched.

COST OF KEEPING SHEEP.

1. Please give what you think a fair estimate of the cost of keeping one sheep or more for one year, providing they got half-pint of grain each (oats) twice a day, clover hay or pea straw, and two turnips per day for four months, and pasture for eight months of the year, just what they can find?
2. What would be a fair division if taken on shares? SUBSCRIBER.

Ans.—1. Valuing oats at 40 cents per bushel, turnips 6 cents per bushel, hay at \$9 per ton, and pasture at 20 cents per month, the year's keep of an ordinary sheep would be worth about \$3.80.
2. The person who feeds and cares for the sheep should have at least two-thirds of the revenue.

WOOD ASHES AS FERTILIZER.

1. What class of farm crops are most benefited by wood ashes?
2. What is the average percentage of potash in hardwood ashes, (a) unleached (b) leached?
3. When and how should ashes be applied to crops, for best results?
4. What is the approximate value of unleached and of leached ashes, as a fertilizer? T. K.

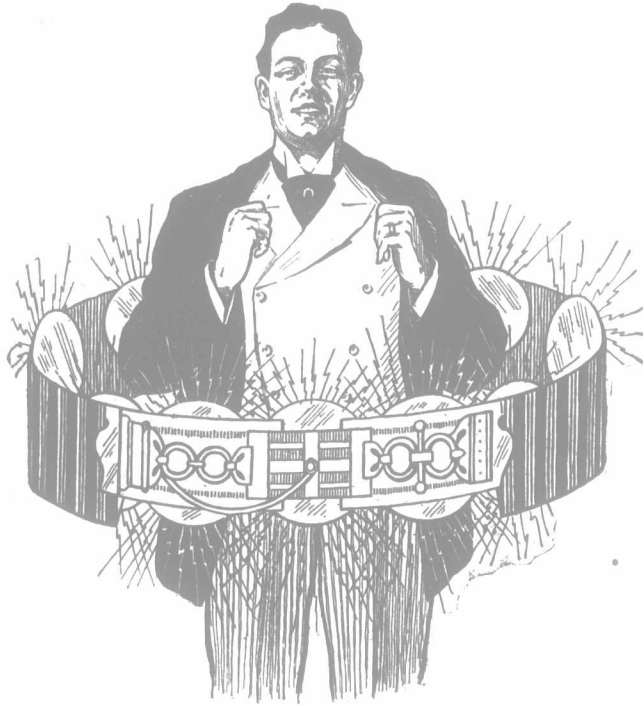
Ans.—Legumes, fruit trees, potatoes, mangels, etc.

2. Average wood ashes contain about 6 to 8 per cent. of potash, 1 to 2 per cent. phosphoric acid, and about 40 per cent. of lime. The composition of the ash from different varieties is, however, quite variable.

3. Generally speaking, they should be broadcasted evenly, and harrowed into the land early in the spring, or some time before the crop is to be sown.

4. It depends upon how thoroughly the ashes have been leached. We should not like to venture a positive opinion on this point, but would suggest that the leached ashes ought to be worth a third as much as the unleached.

FREE UNTIL CURED



Not One Penny in Advance or on Deposit

Forty years ago, when I first discarded drugs and devoted my whole attention to the study of Electricity, I could not afford to do business on to-day's basis, but I have so perfected my Electrical Appliances, and the knowledge I have gained from all these years of experience and research is so great, that I will now give my world-famed Dr. Sanden Electric Belt, with Electric Suspensory, to any man who suffers from Nervous Debility, Varicocele, Lost Vigor, Rheumatism, Lamé Back, Stomach, Liver and Kidney Troubles, absolutely

FREE UNTIL CURED

I don't ask you to pay or deposit one cent until I convince you. Simply call or write for a Belt and wear it for two months, and if cured pay me the usual price. If not cured, return the Belt, and that ends the matter. Be sure you get the genuine. My great success has brought forth many imitators, and I must caution the public against their worthless, blistering imitations.

Call to-day and take a Belt along, or write for one and my two valuable books on Electricity and its medical uses. Sent, sealed, free by mail.

DR. A. F. SANDEN, 140 Yonge St., Toronto, Ont.
Office Hours—9 to 6; Saturdays Until 9 p. m.

CENTRE AND HILLVIEW Holsteins

140 head, 45 females in R. O. M. Herd headed by Brookbank Butter Baron, Bonheur Statesman and Sir Sadie Cornucopia Clothide. The average of dam, sire's dam and grandam is: milk in 7 days, 662.85 lbs.; butter in 7 days, 30.53 lbs. We have bulls born Mar., '09, to two weeks old for sale, from Record-of-Merit dams. Long-distance telephone. **P. D. Ede, Oxford Centre, Ont. Woodstock Sta.**

Fairview Herd

offers for sale a son of Rag Apple Korndyke. His dam is a daughter of Pontiac Korndyke, with an A. R. O. record of 13.08 lbs. butter in 7 days at two years. Price, \$150.00.

E. H. Dollar, Heuvelton, N. Y.
NEAR PRESCOTT.

Holsteins

FOR SALE; COWS AND HEIFERS

All ages. Also bull and heifer calves, including daughter and granddaughters of Pieterje Hengerveld Count De Kol, whose TWO famous daughters made over 32 lbs. butter each in 7 days, and sire of day, over 10,000 lbs. in 100 days. Also for sale daughters of De Kol's 2nd Mutual Paul, sire of Maid Mutual De Kol, which gave over 31 lbs. butter in 7 days, also granddaughters of Hengerveld De Kol. Other leading breeds represented. Putnam station, near Ingersoll.

H. E. GEORGE, CRAMPTON, ONTARIO.

Maple Hill Holstein-Friesians

FOR SALE—Julia Arthur 2nd, calved Aug. 1st, 1905, 9,219 lbs. milk and 312 lbs. fat in one year; calving in Aug. at 3 yrs. 8 days old. Freshened Oct. 19th, '09. Price \$200 cash. Also bull calves.

G. W. CLEMONS, ST. GEORGE, ONT.

High-class Holsteins

—Head of herd, Pieterje Korndyke Lad. Two nearest dams average 26.09 lbs. butter in 7 days. His sire's dam, Pieterje 22nd, has a record of 31.62 lbs. butter in 7 days. Present offering: 2 heifers, due to calve in April, at a bargain before Dec. 1 to make room; also 2 bull calves by Mannor Johanna DeKol, out of officially-tested cows.

WM. C. STEVENS, PHILLIPSVILLE, ONT.

Lakeview Holsteins

Herd headed by Count Hengerveld Payne De Kol, son of Pieterje Hengerveld's Count DeKol, who has five daughters averaging over 30 lbs. butter in 7 days, and whose dam (26.30 lbs. in 7 days) has down from this sire for sale. G. T. R. and Hamilton Radial close to farm. Visitors met by appointment. **E. F. OSLER, BRONTE, ONTARIO.**

THE MAPLES HOLSTEIN HERD

of Record-of-Merit cows, headed by King Posch De Kol. Only two sons of our old Record-of-Merit stock bull, Lord Wayne Mechthilde Calamity, left for sale, from cows with good official backing; also a few bull and heifer calves sired by King Posch De Kol and from Record-of-Merit dams.

WILBURN RIVERS, FOLDEN'S, ONTARIO.

Maple Glen HOLSTEINS

For sale: Two 3-year-olds, bred to a son of Brown Bros. 30-lb. cow, due to freshen next March. Netherland Johanna Mercedes, a 15.70-lb. Jr. 2-year-old, due last of December to King Payne Segis, a son of world's champion cow. Also two bull calves, from tested dam, born last June, sired by King Payne Segis. **G. A. GILROY, Glen Buehl, Ont.** Long-distance 'phone.

Silver Creek Holsteins

—Have official records from 17 to 22 lbs. for 4-olds, 11 lbs. butter-fat for 2-year-olds. My stock bull has high official backing. For sale are a number of heifers and heifer calves, and 12 bulls, from 1 to 15 months of age, all sired by S. B. and out of Record cows; a high-class lot.

A. H. TEEPLE, Currie's P.O. Woodstock Sta. 'Phone connection.

GOSSIP.

During the ten months ended October 31, 1909, there were imported into the United States 7,536,033 bushels of potatoes, against 389,140 bushels during the same time in 1908; the domestic exports amounted to 788,881 bushels, as compared with 730,861 bushels in the corresponding ten months of 1908.

THE FROG AND THE PUDDLE.

George R. Peck, the general counsel of the Chicago, Milwaukee & St. Paul Railroad, lived in Topeka, Kansas, in his early days as a lawyer, and, while living there, made his first visit to England.

Of course, he bought some English clothes, as does everybody. When he got home to Topeka, he put on one of his English suits and started down the street. He soon found that the waistcoat was too big, the coat too low in the collar, and too large, and four or five inches too big about the chest.

Peck wriggled and twisted about in his clothes, and finally said to a friend: "By George, I don't know what's the matter with this suit of mine. It fitted me all right in London."

"You must remember," replied the friend, "that you are not so big a man in Topeka as you were in London."



AYRSHIRES AND YORKSHIRES

Can fill orders for car lots of Ayrshires, or for good grade dairy cows. Young bulls, cows, heifers or calves of choice breeding. Orders taken for imported stock for 1910. A few young Yorkshires. Write us for anything you need in above lines.

Long distance Phone ALEX. HUME & CO., MENIE, ONT.

Cherry Bank Ayrshires

I am now offering young bulls and heifers true to type and high in quality. Some with imp. sire and dam; also will spare a few older females.

P. D. McARTHUR, North Georgetown P. O., Que. Howick station, Que.



Hillview Ayrshires!

For sale: Females of all ages, bred for dairy purposes, with large teats, deep milkers, and large in size. Also a few extra good young bulls on hand. Winchester station, C. P. R.

A. Kennedy & Son, Vernon, Ont. "HILLSVIEW FARM."

Stonehouse Ayrshires

all ages. Am now booking orders for bull calves.

Hector Gordon, Howick, Quebec.

36 head to select from. All imported or out of imported sire and dam. For sale: females of



STOCKWOOD AYRSHIRES

Are producers of milk testing high in butter-fat. In my herd I have a range of selection, either imp. or Canadian-bred, of either young bulls or females, unexcelled in Canada. Price and terms to suit purchaser. D. M. WATT, ST. LOUIS STA., QUE.

Ayrshire Cattle Imp. and Canadian-bred cows and heifers. Heavy producers. Yearling bulls and bull calves. Very cheap, considering quality, for quick sale. Satisfaction guaranteed. Also 7 grand Norfolk sheep, \$30. WM. THORN Lyndoch, Ont., Trout Run Stock Farm.

Ayrshires—Four young bulls, all bred on dairy lines, out of famous dams; fashionable in color, as well as in breeding. Will be sold worth the money. Females all ages. N. DYMENT, Clappison's Corners, Ont.

Springhill Ayrshires

We can please you in all ages and sexes.

Robt. Hunter & Sons, Maxville, Ont.

Headed by two bulls whose dams have the highest official records in Scotland. Order a bull calf out of our best cows.

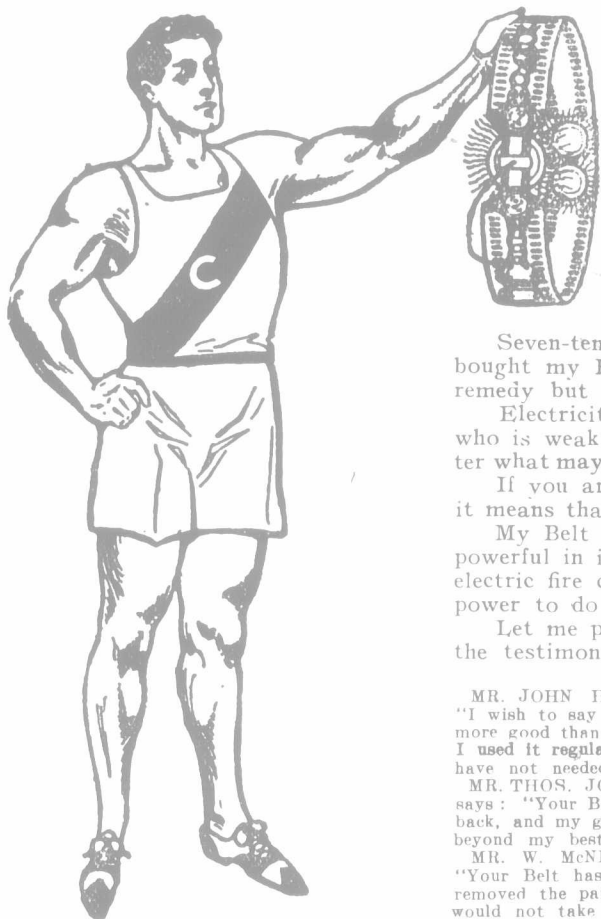


Yearling Hereford bulls, and bull calves nearly a year old, are advertised for sale by H. D. Smith, Ingleside Farm, Hamilton, Ont.

While ordering a change of advertisement of Shorthorns, J. F. Mitchell, Burlington, Ont., writes: "We recently sold the good yearling imported bull, Prince of Characters, to Jas. Thompson, Glammis, Ont. He is a Marr Red or Roan Lady. He should prove a good sire, as he has a lot of show blood in him. His sire is a Missie, bred by Mr. Duthie, and winner of many prizes. The dam of Prince of Characters, now an aged cow, has been a consistent producer of show material. We have also sold to A. & J. Drummond, Clifford, Ont., Diamond Mine, an extra well-bred yearling bull, possessing quality and style that should guarantee him a good sire. His dam is a big imported cow, and an extra milker. Among the bulls I offer for sale now are two imported yearlings, that have a lot of show blood in them; they are choice individuals, and good enough to head any high-class herd. Will also sell one of my herd bulls, one of which is an imported two-year-old, red; a choice individual, and an extra sire. Some of his get were winners at the Canadian National last fall. Also have some good calves of my own breeding, and, on account of not having enough box-stall room, will sell at most reasonable prices."

AN ELECTRIC WONDER

DOCTOR'S INVENTION CURES WHEN DRUGS FAIL



What joy to the man who is weak and broken down to find himself again a Man among Men!

Like the famous "Old Guard" of Napoleon, the vast army of men who are wearing my appliance are my strongest support; they are carrying the fame of my Electric Belt into all quarters of the world!

Men and women have come to me in all stages of nervous and physical breakdown, and I have cured them with my Electric Belt.

Seven-tenths of the people I cure have sought help through the use of drugs and other remedies before they bought my Belt, and this fact proves that it is a positive cure for hundreds of cases that will yield to no other remedy but Electricity.

Electricity is Life! Electricity applied right is the grandest remedy of the age! Give me a man or woman who is weak and broken down—who has lost vitality through overwork, worry, excesses or dissipation—no matter what may be the cause of their downfall, with my Belt I can give them back the strength and vigor they have lost.

If you are sick or weak. If you have Rheumatism, Lumbago, or Stomach, Liver, Kidney or Bowel Trouble, it means that some part of your body machinery needs electric energy. My Belt will restore it.

My Belt is a scientific appliance for saturating the body with Electricity while you sleep. The current is powerful in its action, but is soothing and pleasant to the nerves. For hours at a time it sends the glowing electric fire coursing through the nerves and vitals, renewing their energy and giving to every weak organ the power to do its work as nature intended.

Let me prove to you that Electricity does all I claim for it. What better evidence could you ask for than the testimony of honest men and women whom it cured?

MR. JOHN HUNT, Davisville, Ont., says: "I wish to say that your Belt has done me more good than all the medicine I ever took. I used it regularly for three months, and I have not needed it since."

MR. THOS. JORDISON, Chatsworth, Ont., says: "Your Belt worked wonders with my back, and my general health is built up far beyond my best expectations."

MR. W. McNEIL, Colborne, Ont., says: "Your Belt has strengthened my back and removed the pain and soreness entirely. I would not take \$100 for it if I could not get another."

Dr. McLaughlin: Dear Sir,—A short time ago I purchased one of your Belts. I am very pleased to say that I have received great benefit from it in every way. My varicocele is almost gone, and my back is much better. Before using your Belt my nerves were in a pretty bad shape—so bad that it had interfered with my work. Any man can easily know what this means to me, as my health is greatly improved also, and I feel better than I have for the last five years, and only wish I had had one of your Belts before. I have spent a considerable sum of money one way or another for different drugs, and to tell you the truth I never thought there was a cure in the world for varicocele except an operation, as that is what a doctor told me in a London, England, hospital. I thank you for your kindness and all you have done for me. You are at liberty to make any use of this you like in any of the papers, as I know it is all true, as I have proved it for myself. I intend to recommend your Belt whenever I get a chance, as I think it is a Godsend to any person to be in good health. Wishing you every success with your Belt, I remain, Yours respectfully, ALBERT RALPH.

VARICOCELE—WEAK BACK—NERVES.

Keelo, Ont.

If you haven't any confidence in Electricity, let me treat you, at my risk. I will give you the Belt on trial, without one cent of risk to yourself. Give me reasonable security, and I will take your case, and you can

PAY ME WHEN CURED

My Belt has proved a complete and lasting cure for Indigestion (Dyspepsia), Constipation, Headache, Drowsiness, Rheumatism, Neuralgia, Lumbago, Sciatica, Weakness of the Back, General Debility, Sleeplessness (Insomnia), also Inflammation, Bearing-down Pains, Dizziness. It improves the blood circulation; it restores lost vitality; it corrects every sign of mental impairment and physical breakdown in Men and Women.

FREE BOOK

Call at my office and let me explain my Belt to you. If you can't do this, cut out this coupon, send me your name and address to-day, and I'll mail you, closely sealed, my elegantly illustrated 80-page book, which is FREE. My FREE BOOK for women is now ready. All men and women who are interested in recovering their health should read these books, for they point the way to Health and Happiness.

FREE BOOK COUPON

DR. M. S. McLAUGHLIN 112 Yonge Street, Toronto, Canada.

Dear Sir,—Please forward me one of your Books, as advertised.

NAME

ADDRESS

Office Hours—9 a.m. to 6 p.m. Wednesday and Saturday until 9.00 p.m.



Think Only of Permanency

When buying fencing FORGET about the NOW cost. Do as the railways. Think only of PERMANENCY. Select the fence with the quality, weight, stiffness and strength to give longest service. And three or four years from now you will shake hands with yourself because you were shrewd enough to see eye to eye with the railways and buy IDEAL woven Wire Fence.

This Lock makes "IDEAL" FENCE Strongest in Existence

No fence has a simpler lock than the IDEAL. Yet the railways have proven to their entire satisfaction that the IDEAL lock has the greatest gripping-tenacity. Other things being equal, the impossible-to-release grip of this simple lock makes IDEAL fence strongest in existence. But other things are not equal. IDEAL Woven Wire Fence has the best quality of hard drawn elastic steel wire laterals. It has the stiffest uprights. The galvanizing is the smoothest and heaviest—most rust-proof. The scales prove IDEAL the weightiest woven fence. What further reason do you need to prompt you to buy IDEAL fence? Well, here is another: IDEAL Fence will cost you no more than other fences that you will not buy if you think only of permanency. Our fence and gate booklet shows different styles for horses, cattle, hogs, etc. Write for your copy.

JOIN OUR STAFF OF AGENTS and increase your income. The weight, quality and strength of IDEAL fence make it easiest to sell.

THE MCGREGOR-BANWELL FENCE CO., LIMITED, WALKERVILLE, ONT.

GOSSIP.

Upward of 2,800,000 bushels of beans valued at over \$4,000,000, were imported into the United States during the first ten months of the past calendar year, during the corresponding period in the preceding year the imports were not quite 2,000,000.

H. Smith, Exeter, Ont., in ordering a change of advertisement, writes: "Any Shorthorn breeder wishing to increase the scale, flesh and thickness of his herd, will find in Royal Lancaster, a young roan bull that will materially assist him in accomplishing his purpose. He is a son of old Gold Drop—4372—a bull that has sired more Toronto prize winners than any other bull in Canada in recent years."

Chas. Gray, the efficient Secretary of the American Aberdeen-Angus Breeders' Association, in a circular recently issued, says: "The values at 1909 sales, held by the various breeders and the Association, have ruled much higher than those of the past few years. Inquiries are constantly being received at the office of the Association, which indicate that a greater number of farmers are turning their attention to the breeding of Aberdeen-Angus cattle, and the veteran breeders are giving their breeding operations more careful attention. The records of the Association show that the breed is constantly migrating to new fields, and falling into the hands of enterprising cattlemen. Probably the most striking instance of this was revealed by the Rosenfeld & Siverly Sale, which was held November 3, 1909. At this auction, Senor Don Carlos Guerrero, from the Republic of Argentina, and James D. McGregor, of Brandon, Manitoba, Canada, were present, and both were liberal buyers of the top-notchers. Pride's Prince, a sensational bull calf, bred and raised by Rosenfeld & Siverly, was purchased by Senor Don Carlos Guerrero, at \$2000. The creditable exhibit the breed made at the Alaska-Yukon-Pacific Exposition, Seattle, Washington, has already borne much fruit, with prospects of a greater future."

CHURCH BELLS
CHIMES AND PEALS
MEMORIAL BELLS A SPECIALTY
FULLY WARRANTED
McSHANE BELL FOUNDRY CO.,
BALTIMORE, Md., U. S. A.
Established 1865



BRAMPTON JERSEYS

Canada's greatest Jersey herd offers male or female stock; imported or home-bred; show type or producers; one or a carload. 150 for sale. Phone. B. H. BULL & SON, BRAMPTON, ONT.

A PERFECT HOG FOOD

You can save time and money by feeding

Imperial Hog Food

The only exclusive hog food on the market. Once used always used. Write for booklet.

The Imperial Stock Food Co.
KINGSVILLE, ONT.

MAPLE GROVE YORKSHIRES.

To make room for the natural increase in our herd, we now offer for immediate disposal: A FEW CHOICE YOUNG BOARS (big type) ready for use. 10 sows, bred and ready to breed. 75 Sept. pigs, pairs not related. Mostly all sired by M. G. Champion—20102—, champion and silver-medal boar at Toronto in 1907, and first as a three-year-old in the aged class in 1908, a grand stock getter. Many of our sows are prizewinners, and are of the best Yorkshire blood in England and Canada. A fair and square deal to everybody is our motto. We are putting prices low, because we must sell. Satisfaction guaranteed. H. S. McDIARMID, Fingal, Ont. Shedden Station. Long-distance phone in house.

Newcastle Herd of Tams and Short-horns—For quick sale at very reasonable prices. 6 sows sired by Imp. Cholderton Golden Secret, bred to farrow in Jan., Feb. and March, to a Toronto prize boar. Nearly all my brood sows are sired by that noted prize hog, Colwill's Choice, or Newcastle Warrior, champion boar at Toronto, 1901, '02, '03 and '05. I also offer 50 boars and sows, from 2 mos. to 4 mos. old. Two bull calves one year old. Half-a-dozen heifers, from 1 to 3 years old. Long-distance Bell phone in home. A. A. COLWILL, Box 9, NEWCASTLE, ONT.

Tamworths A grand lot of young boars from 2 to 4 mos., also young sows (dandies). Some just bred. Some in farrow to first-class boars from best herds in England. Prices reasonable. Chas. Currie, Morriston, Ont.

When Writing Mention The Advocate


Hillcrest Tamworths are second to none in America for type and quality. For sale are both sexes and all ages, from sows bred and boars fit for service down to youngsters. Herbert German, St. George, Ont.

SUNNYSIDE CHESTER WHITE HOGS. I am now offering some very choice young things of both sexes, of breeding age. A few Shropshire sheep of both sexes. A number of Bronze turkeys and toms, and Red Cap cockerels and pullets. W. E. WRIGHT, Glenworth P. O., Ont.

MONKLAND YORKSHIRES
With very nearly 100 sows in breeding, of modern type and high-class quality, our herd will stand comparison with any in Canada. We are always in a position to fill large or small orders with despatch. Long-distance phone. JAMES WILSON & SONS, FERGUS, ONT.




MAPLE LEAF BERKSHIRES
For sale: Young sows bred and ready to breed; boars fit for service; also young pigs farrowed in March and April. Imp. sires and dams. Pairs not akin. C. P. R. and G. T. R. Joshua Lawrence, Oxford Centre P. O., Ontario.



DUROC - JERSEY SWINE
Imported and home-bred. Sows ready to breed. Boars fit for service, and younger ones either sex. Also Embden geese. MAC CAMPBELL & SONS, HARWICH, ONT.

OHIO IMPROVED CHESTER WHITES—Largest strains. Oldest-established registered herd in Canada. Young sows in farrow. Choice pigs 4 weeks to 6 months old. Pairs furnished not akin. Express charges prepaid. Pedigrees and safe delivery guaranteed. E. D. GEORGE, Putnam, Ont.

Willowdale Berkshires!
Young sows ready to breed, boars ready for service, young pigs just weaned, all choice stock and bred in the purple. Everything guaranteed as represented. Long-distance phone. J. J. WILSON, Importer and Breeder, Milton P. O. and Station. C. P. R. & G. T. R.



ESTABLISHED 1865
RAW FURS
E. T. CARTER & CO.
84 Front St., East, TORONTO, ONT.

WRITE FOR OUR LATEST PRICE LIST
SHIP US NOW!
HIGHEST PRICES PAID FOR ALL KINDS OF RAW FURS. PROMPT RETURNS. WE PAY EXPRESS.

FAIRVIEW SHROPSHIRE OFFERED.
12 high-class two-shear ewes, sired by grand champions; Bred to grand champions. Every one has proved a fine breeder. Considering their breeding and Excellent quality, prices are low. Send for prices and circular to: J. & D. J. Campbell, Fairview Farm, Woodville, Ont.

SPRING BANK OXFORDS
Rams and ewes of all ages at a great reduction for next 30 days. Order at once and get the pick. WM. BARNETT & SONS, LIVING SPRINGS P. O., ONT. FERGUS STA., G. T. R. and C. P. R.

MAPLE VILLA OXFORDS AND YORKSHIRES.
Present offering: Excellent ewes, choice rams, and the best lot of lambs I ever offered; all sired by imported rams. Yorkshires of both sexes and all ages. Boars fit for service. Sows ready to breed. A high-class lot. Satisfaction assured. J. A. CHEESWELL, BOND HEAD P. O., ONT., BRADFORD or BEETON STAS.

When Writing Mention The Advocate

POPLAR LODGE SOUTHDOWNS AND BERKSHIRES—For sale: A high-class show flock of Southdowns, also shearing rams and ewes, and ram and ewe lambs. Berkshires of both sexes and all ages; right good ones. An honest representation is my motto. SIMON LEMON, Kettleby P. O., Ont., Aurora Station.

Shropshires, Shires and Clydesdales—High class Shropshires, shearing rams and ewes, ram lambs and ewe lambs, from imported and Canadian-bred stock, show stuff; Shire and Clydesdale fillies; White Wyandotte cockerels and pullets. Prices right. W. D. Monkman, Bond Head P. O., Bradford or Beeton Stations.

I HAVE GREAT, THICK, ROBUST SHROPSHIRE YEARLING AND TWO-YEAR-OLD RAMS
dale mares, and a few beautiful Welsh ponies will also be priced at attractive figures.

and a lot of grand Shropshire and Cotswold ram lambs, ewes and ewe lambs of high class, both breeds, and all of the best breeding. Will sell them in large lots or singly at prices you can afford to pay. Short-horn bulls and heifers, two good registered Clydesdales.

American Shropshire Registry Association.

HENRY L. WARDWELL, PRESIDENT.
Largest membership of any live-stock organization in the world. Vol. 21 of the Record published. Write for rules. J. M. Wade, Secretary, LaFayette, Indiana.

FARNHAM OXFORD DOWNS.

The Champion Flock, The Oldest Importers, The Largest Breeders in America.
In American Oxford Down Record. We are offering a number of first-class yearling ewes from imported sires, and bred to champion imported ram; also a number of ram and ewe lambs. Prices reasonable. HENRY ARKELL & SON, Arkell, Ont. Arkell, C. P. R.; Guelph, G. T. R. and Telegraph.

WM. STEWART & SON'S AYRSHIRES.

A short visit to the farm of Wm. Stewart & Son, Menie, Ont., by a "Farmer's Advocate" representative, found that herd of Ayrshires going through the winter in good, thriving condition. This is one of the oldest-established herds in Canada, and their 25 years of competition at the leading Canadian shows make the herd so well known that they need no comment, other than to say that never in their history were they up to so high a standard of excellence as at present, due, in a great measure, particularly the younger ones, to the superior prepotency of the present stock bull as a sire, stamping his get with remarkable uniformity of type, color and quality. He is Queen's Messenger of Springhill 21164, a son of the two well-known champions, Lessnessock King of Beauty (imp.), for sire, and Garclaugh Queen of the Sonsies (imp.), for dam, the latter with a milk record of 63 lbs. a day of 4-per-cent milk. His lieutenant in service is Springhill Cashier, by Lessnessock Durward Lely (imp.), whose dam has a Scotch milk record of 47 lbs. 8 ozs. a day, for eight months, testing 4.5 per cent. His dam is that great cow, Edith of Lessnessock (imp.), whose milk record is 13,000 lbs. in one year, made when 13 years of age. On producing lines, this is certainly one of the richest bred young bulls in Canada, and, coupled with the daughters of the old stock bull, the produce should certainly be a most desirable lot. Many of those in milk have given 40 lbs. and over of milk a day, and 10,000 lbs. and over in the year. For sale are several young bulls, some of them fit for service, all sired by the old stock bull, and females of all ages, including granddaughters of that famous cow, Jean Armour, some of which are in the Record of Performance. Mr. Stewart reports an active demand for Ayrshires, he having shipped during the year, to several States of the Union, and from Quebec to British Columbia; a number going to Alberta. Mr. Stewart's farm is connected with long-distance Bell phone.

THE SPICE OF LIFE.

The late Governor Johnson of Minnesota was a witty as well as a wise man," said a resident of Minneapolis. Once, at a dinner, a New York millionaire said about his taxes: "I've got a little piece of property that brings me in a fair rental, and the tax gatherers haven't spotted it yet. I don't know whether I ought to tell them or not. What would you do, Governor Johnson?" The Governor's eyes twinkled. "It's the duty of every man," he said, "to live unspotted. Still, if I were you, I'd pay up."

When Senator Vance was running for Congress, he called on an old negro, who in early life served the Vance family. After his health, the negro replied, "I'm mighty po'ly in this worl', but it's all over yander." "Do you believe in the doctrine of election?" asked Vance, with a great solemnity. "It's the doctrine of the Bible," answered the old man. "Uncle Ephraim, do you think you been elected?" asked Vance again. "Massa Zeb, I'd a leetle ruther you didn't draw that question. I'm too old for the grave to tell a lie, but do fac' I never yet knowed nor hear tell of no man bein' elected what wan't a candi-"

Dennis O'Flaharty was roadmaster of a division of a Western railroad which included several tunnels. Dennis was out in the morning on a tour of inspection, in company with his friend, Pat Donough, who had just arrived from the Emerald. Nearing one of the tunnels, they heard the shrill whistle of the limited and stepped aside till it should pass. Pat stood in open-mouthed wonder, as the fast train neared, passed, and entered the tunnel at the rate of fifty miles an hour.

"Mon, Pat," said Dennis, as the last disappeared, "ain't it foine? Talk about the wundhers of nachur—where'll ye see anything purtier thin thot?" Pat stood in awe for a moment, then, turning to Dennis, said slowly, "Yis, anis, 'tis foine; but I was jist thinkin' that a turrible thing 'twould be if it could miss the hole."

For a long time his wife had been in need of a new muff, and after hinting to her lord that her happiness would never be complete till she owned a new muff, he at last decided to gratify her desire. He went to the shop and picked out a couple, one of which was cheap, and the other very expensive. Upon these he changed the price-tickets, putting the cheap price-mark on the expensive muff, and then took them home.

For a long time the good wife pondered, and at last said: "Now, dear, the expensive muff is a beauty, and it is really very good of you to allow me my choice. Some women could take it without a word, but really don't think we can afford the expensive one; and, besides, I think the cheap one is more stylish, too. Why, dear, what is the matter? Are you ill?" But "dear" had fled into the night, here, alone and unseen, he could kick himself.

Some years ago, an expedition from the University of Pennsylvania was sent to one of our Southern States for the purpose of observing a solar eclipse. The day before the event one of the professors said to an old colored man belonging to the household wherein the scientist was quartered:

"Tom, if you will watch your chickens to-morrow morning you'll find that they'll all go to roost at eleven o'clock." Tom was, of course, skeptical; but at the appointed hour the heavens were darkened, and the chickens retired to roost. At this, the man's amazement showed no bounds, and he sought out the scientist. "Perfessor," said he, "how long ago did you say them chickens would go to roost?" "About a year ago," said the Professor, smiling. "Well, you don't beat all!" was the man's comment. "Perfessor, a year ago dem chickens didn't even hatch."

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Any Subscriber May Have Date On His Own Label Advanced Twelve Months By Sending Us the Names of Two New Subscribers and \$3.

Every Premium We Offer Is Exceptionally Good Value. We Give Greater Value in Our Premiums Than If You Were Paid a Cash Commission. Note the Following List:

BARON'S PRIDE. Handsome picture of the Champion Clydesdale. Size, 17 x 13 in., including margin. Suitable for framing. **1 new subscriber.**

NICKEL WATCH. Good timekeeper. This watch has taken well. **3 new subscribers.**

MOUTHORGANS. Best German make. Keys, A, C, D, E. Two instruments. **1 new subscriber.**

BIBLE—Old and New Testaments in beautifully clear, legible type; references; concordance to both Old and New Testaments. Index to names of persons, places and subjects occurring in the Scriptures. Twelve full-page maps, all excellent in type and outline. This book is of most convenient size, being 7 x 10 inches when open; weight 23 ounces; with strong and flexible binding; and would sell at regular retail price for \$1.00 or over. Sent postpaid to any subscriber for sending in only **2 new subscriptions accompanied by \$3.00.**

40-PIECE AUSTRIAN CHINA TEA SET, handsome and dainty in shape, coloring and design; ordinarily retailing from \$4.00 to \$6.00, depending on locality. **4 new subscribers.**

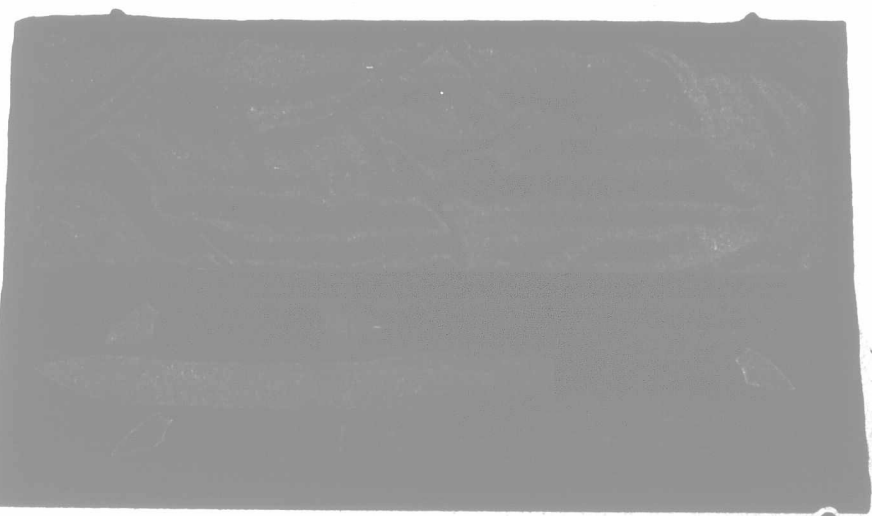
FARMER'S ADVOCATE KNIVES, manufactured by Jos. Rodgers, Sheffield, England. Jackknife and Penknife, both nickel-handled and having two blades. These knives were manufactured specially for the Farmer's Advocate. Worth, retail, \$1.00 each. **1 new subscriber for each knife.**

DICTIONARY. An indispensable volume in every home. The Chambers' Twentieth Century Dictionary. Cloth bound, contains 1,200 pages, profusely illustrated, printed on superior quality of paper. **2 new subscribers.**

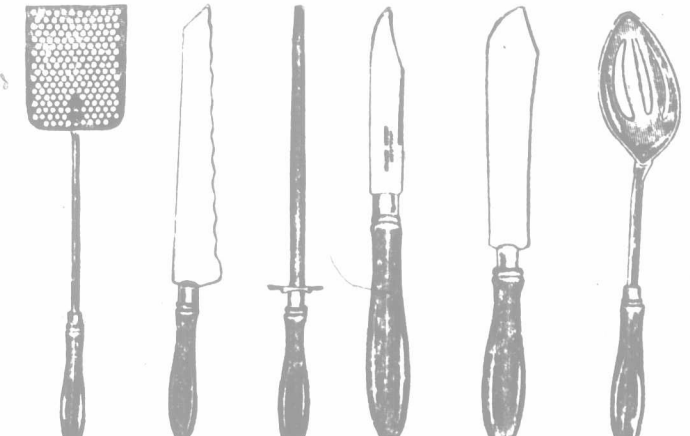
"CARMICHAEL": A Canadian Farm Story. Bound in cloth, illustrated. Just the thing for Christmas or Birthday Gift. "Far above the ordinary run of fiction," says the Buffalo Courier. "Should be in all the homes of the people," Toronto World. **2 new subscribers; or cash, \$1.25.**

We must have honest workers. Changing the name from one member of the household to another, or deception of any kind, will not be allowed. If discovered, the premium will be withheld.

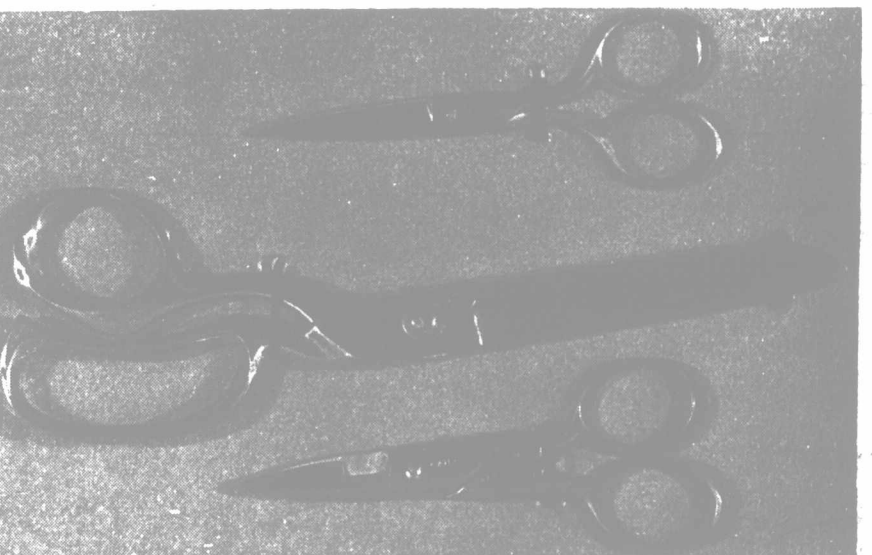
These premiums are given only to our present subscribers for sending in bona-fide new yearly subscriptions, accompanied by \$1.50 each.



SET STAGHORN CARVERS. High-class goods. First quality of steel, and staghorn handles and handsome nickel mounting. These carvers will retail at \$3.50 to \$5.00 per set. **4 new subscribers.**



A COMPLETE KITCHEN EQUIPMENT. A UTENSIL FOR EVERY PURPOSE. All made of the highest grade of crucible steel, carefully tempered, ground and polished by the latest improved process. Rubberoid finished hardwood handles, mounted with nickel-plated ferrules. Now is your opportunity to supply your kitchen with a complete cutlery outfit. All six articles sent to any subscriber for sending in only **1 strictly new subscription and \$1.50.**

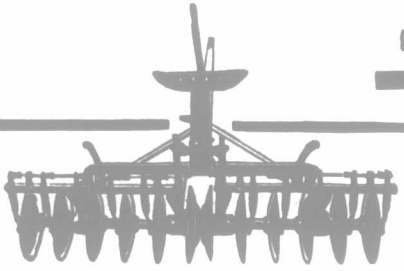


SET SCISSORS.—One self-sharpening scissors, one embroidery scissors, one buttonhole scissors—will cut buttonhole any size. All good quality steel. For only **One New Subscriber** to The Farmer's Advocate. Must be sent by present subscriber.

Send Postal for Sample Copies and Agent's Outfit and Start to Canvass at Once.

The William Weld Company, Limited,
LONDON, ONTARIO.

Be Sure It's a "Cockshutt" Then Harrow



No. 3 Out-throw Disc Harrow

WE have great pleasure in offering to our patrons this harrow which we believe to be the best out-throw harrow manufactured.

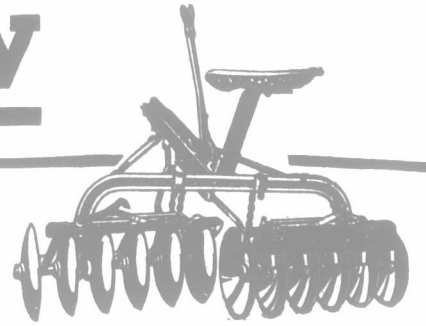
We desire particularly to draw your attention to the spring pressure which is applied to the boxings at the inner end of the discs. The users of out-throw harrows no doubt have experienced great difficulty in keeping the harrow cutting level when set at the full angle as the outer end of the harrow will have a tendency to go in deep, leaving the inner ends out. The spring pressure we have on these harrows prevents that, and this spring pressure is regulated by the use of a convenient lever. The amount of pressure to be applied can be easily adjusted, which insures the gangs cutting evenly no matter at what angle they are set.

We oil these harrows with tubes from the top of our scraper holders, and we use hard maple boxings in these harrows which we have found will outwear any other style of boxings in an out-throw disc harrow. Besides they are easily and cheaply replaced in case it is necessary to do so after years of wear.

We wish to call your attention to the bracing of this harrow. The hitch is very close to the work, and is in a class by itself with regard to any out-throw made. Samples of this harrow you will find at your nearest Cockshutt agency, and we believe if you would see one that you would purchase it in preference to any other.

Drop us a post card and we will send you our Catalogue free so that you can read all about these Harrows and also get acquainted with the full line of Cockshutt Implements.

HERE are two of the lightest draft Disc Harrows made anywhere. For a simple, sturdy piece of durable machinery, neither of them can be equalled. They are made of the very best materials, and we can assure every farmer that, no matter how rough or uneven the soil may be, these Harrows will do the work better, quicker and with less strain on the horses than any other Harrow.



No. 4 In-throw Disc Harrow

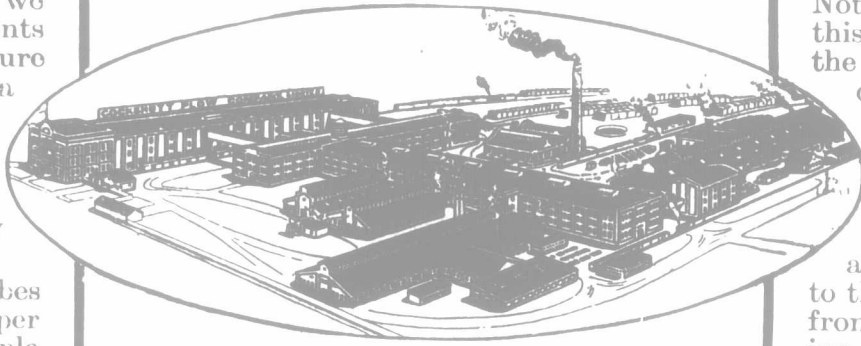
WE sold a great many thousands of these harrows last year—every buyer was highly pleased.

Before commencing the manufacture of this new In-throw Disc Harrow, we noted all the merits and defects of disc harrows and we have combined in this one all the good features of all disc harrows, with many of our own which we have proven to be beneficial.

The frame is made of channel bar steel—strong enough to stand the strain under all conditions.

Notice how the braces are set on this harrow—also how convenient the lever for setting the harrow to cut at any desired angle. Notice the chains attached to the beam for regulating the depth of the harrow and preventing it from going too deep at inner end when harrow is set at full angle. Oil is conveyed to the bearings by tubes running from top of scraper holders, keeping the bearings dust proof and making them last longer.

Steel balls, accurately turned and perfectly polished, run in chilled bearings—this relieves end thrust of sections and makes draft very light. Cast balls (commonly used) soon wear flat on one side and bearings then become useless. With a touch of the foot, scrapers can be set to clean the harrow in heavy or sticky soils. Notice the shape of the discs—they are made to cut and turn all the soil. This is not only the best looking disc harrow but the best working disc harrow—examine it at any of our dealers.



About the Cockshutt Plant

IF the farmers of Canada—if you—could spend only one day going through our great plant at Brantford, you would get some idea as to why "Cockshutt" implements are shipped to every country in the world. From the time raw materials come into the yard, until the

finished products are put on the freight cars, every process of manufacture is under the watchful eye of some inspector. Not men who have spent their lives at an office desk—but practical expert mechanics—men who have actually lived on farms—men who know the farmer's needs—specialists in agriculture.

Every man suggesting, improving, inventing—trying to make the farmer's task easier and his work more profitable. Not only do we use the best materials and workmanship, but we strive to put conscience into our implements, not as a matter of policy, but honesty—the principle of giving 100 cents value for every dollar received.

Send us a postcard today and we will send you a Catalogue of Cockshutt Implements

COCKSHUTT PLOW COMPANY LIMITED **BRANTFORD**