

J. H. Griedale, Editor, Jan 15, 02

# THE FARMER'S ADVOCATE

AND HOME MAGAZINE

PERSEVERE AND SUCCEED FOUNDED 1880

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

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EDITORIAL.

**Reciprocity and Canadian Resources.**

Reciprocity in trade with the United States is a question now out of the field of heated political party strife in Canada. Its history may be studied with advantage. Foremost among its exponents was the Hon. John Charlton, M. P. A native of New York State, he early removed to Canada, where he has been successfully and extensively engaged in mercantile pursuits and lumbering. A member of the Canadian House of Commons for many years, a publicist of great ability and independence of thought, a recognized authority in financial matters, and a member of the Anglo-American Joint High Commission, he is peculiarly well qualified to review this subject, which he has done in a recent issue of *The Forum*, one of the leading monthly American periodicals. Readers of the "Farmer's Advocate" will appreciate a synopsis of his article:

Geographical relations and a common origin of peoples had suggested to Canadians that liberal trade relations would be natural and mutually advantageous. In 1854 a reciprocity treaty for twelve years was negotiated, but notice of its abrogation was given in 1865 by the United States. It was contended that the treaty gave to Canada the greater advantages. But Canada was willing to modify its provisions, and sent envoys to Washington to seek a continuance of fraternal relations. Their reception was a rebuff—cold, positive, and absolute. The day of choice went by. Canada at once set about the confederation of the British North American Provinces, accomplished in 1867, July 1st being our natal Dominion Day.

In twelve years the treaty had more than quadrupled trade between Canada and the States. The importation of American manufactures into Canada had largely increased and the war between the North and South created an abnormally great demand for Canadian farm products. In 1866, Canadian exports to the States amounted to over \$44,000,000 worth, and our exports to Great Britain but \$16,800,000 worth. Of farm produce and animals and their produce, we sent over \$25,000,000 worth to the States and but \$3,500,000 worth to Britain.

Following the abrogation of the treaty, the States imposed almost prohibitory duties upon farm products, probably with the utterly mistaken idea that exclusion would force political union. Their policy had precisely the opposite effect. The Canadian was put upon his mettle, and began to cast about for new markets. All the while Canada maintained a moderate tariff policy towards the United States. Repressive American duties kept Canadian exports to the States at a standstill, while Canadian imports from the States increased till in 1901 they were four times what they were in 1866. Canada is now the third largest customer the States has in the world.

The quest of the Canadian for new markets proved successful. The conditions of 1866 do not prevail to-day. Rapid and improved transportation has outdone geography. Canada is not now dependent upon the United States for a market for her agricultural products, and the sooner the American appreciates this fact the better for him. The total export of farm products the produce of Canada to the States in 1901 was \$8,239,581,

while to Great Britain the export of farm products the produce of Canada was \$66,523,700.

Of the \$63,000,000 worth of manufactures purchased by Canada from the States in 1900, the farmers took about \$30,000,000 worth. In return they were permitted to send the dole of \$8,239,000 worth of farm products over the U. S. tariff wall and to see \$19,500,000 worth of free farm products imported from the States. Naturally, the farmer begins to consider if it would not be better to have the goods manufactured in places where he could furnish the operatives with the food they consume and with some of the raw materials required in their production.

Some of the facts set forth in the article are summarized by the writer as follows: (1) The Canadian tariff rates are less than one-half those of the United States. (2) The Canadian exports of farm products to the United States are only one-third as much as in 1866. (3) Canadian imports from the United States are now four times what they were in 1866. (4) Canadian imports from Great Britain have increased less than 10 per cent. since 1866. (5) Canadian exports of farm products to Great Britain have increased twenty-fold since 1866. (6) Canada buys three times as much from the United States as she sells to that country, leaving out precious metals. (7) Without including raw cotton, Canada buys from the United States two and one half times the amount of farm products that she sells to that country. (8) Canada buys at least \$10,000,000 more manufactures from the United States than from the rest of the world. (9) Canada finds her chief market for farm products in Great Britain. (10) Of the total imports of Canada, 63 per cent. comes from the United States. (11) Canada gives the States a free list of \$56,884,000, or 73 per cent. of her entire free list. Included in the free list from the United States are \$39,000,000 of free farm products, free forest products and free manufactures. (12) Canada receives practically no free list from the United States except the precious metals.

To what conclusion, then, has the stern logic of facts and the march of events driven Hon. Mr. Charlton? This, that Canada cannot afford to continue the present state of trade relations with the United States. They do not serve to promote her prosperity. Her purchases from the United States must be paid for in large part from the proceeds of sales of her products to other countries. If she is to be a hewer of wood and drawer of water she wants the privilege at least of selling the wood. The United States could easily give a kind of reciprocity that would put matters upon a proper basis. Failing that, by simply adopting the American tariff Canada can make the imports from the States as lean and hungry as our exports to it. Mr. Charlton gives a hint of the vast natural resources (timber, minerals, coal, etc.) of Canada, and points out, as has been done in Ontario with sawlogs and lumber manufactures, Canada can compel such manufacturing as paper from pulpwood, etc., to be done in Canada. He discerns a great industrial future for the Dominion. He shows that Canada can afford to be self-confident, and that it is a country to be proud of. It possesses the great stretches of the fertile land of North America still unoccupied, from 250,000,000 to 450,000,000 acres of land in Western Canada alone awaiting to respond with bountiful harvests to the invitation of the plow, where as many as 50,000,000 people may find homes and

sustenance. He does not suggest retaliation, but leaves the American reader to draw his own wise conclusions. Canada is taking stock of its own immense resources, looking toward the day when its people will number 100,000,000. Upon the model of the British form of government, which serves its purpose well, it is working out its own national destiny.

**Prosperous Live Stock Associations.**

Never in the history of Canadian live-stock associations have they been in a more prosperous condition than at present. The statements made at the annual meetings of the several associations held in Ontario during the present month, and published elsewhere in this issue, show unquestionable and unprecedented evidences of progress and expansion. The marked increase of registrations in the records of nearly all the breed associations gives evidence of an increasing interest in the improvement of all classes of live stock. The steadily-increasing demand for good horses for breeding purposes, as well as for work horses and saddlers and drivers, has raised the standard of prices for these to a very gratifying extent, while the extensive purchases of army horses, at fair prices for that sort, have cleared the country of a very large number of a class that can well be spared, and has made room for a better class, making the outlook for breeding the better kind decidedly encouraging. Importations of stallions, especially of the heavy-draft breeds, have been more extensive than for many years, while the character of the animals brought out has been generally good, combining size and quality in high degree, while carriage and saddle stallions have also been liberally patronized.

Steps should be promptly taken by the Government to check the importation of Western States bronchos that are flooding Canada with scrub horse stock, to the great detriment of future breeding interests.

The present good prices and the promising outlook for advanced prices for beef cattle and the improved demand for the best class and quality of cattle for export have increased the demand for good pure-bred bulls, and the best class of bulls of the beef breeds are now selling at good prices. The same may be said with regard to both bulls and females of the dairy breeds, which, in sympathy with the very satisfactory prices prevailing for dairy products, are being freely taken at better prices than at any time in recent years, while the by-products of the dairy—the skimmed milk and whey—are very profitably utilized in pork production, for which such very satisfactory prices are being obtained as to make this branch of farming probably the most paying of any.

While it is true that the spread of the influence of good blood in the improvement of the live stock of the country is lamentably slow, it is yet satisfactory to know that progress is being made in an increasing ratio, and it is to be hoped that a constantly increasing number of the farmers of Canada may soon become convinced that the only way in which we can secure the best prices in the meat markets of the world, as well as of the markets for all farm products, is by producing the best quality and offering it in a highly-finished condition and in attractive form. The larger the proportion of farmers that can be induced to improve their stock the sooner shall we secure and hold the position in the world's best markets that the resources of the country are capable of filling.



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JOHN WELD, MANAGER.

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### Postal Reform.

To the Editor "Farmer's Advocate":

Sir,—I thank you for your excellent leader, entitled "Injurious Copyright and Postal Regulations," in the current issue of the "Farmer's Advocate." With such forceful advocacy in Canadian periodicals, the active co-operation of the Hon. Wm. Mulock, M.P., Postmaster-General, and of influential newspapers and members of Parliament in the motherland, the removal of the postal anomalies complained of must surely soon be achieved, notwithstanding the proverbial inertia of British officialdom. I am forwarding my copy of your article to John Leng, M.P., editor of the Dundee Advertiser, which is doing yeoman service in this cause.

Yours faithfully,

G. H. HALE.

Office Orillia Packet.

### Getting at the Truth.

Two practical features of this issue of the "Farmer's Advocate" that should arrest the thought of every farmer are the letters on securing a clover catch, and Dr. Saunders' article on handling stable manure. Clover seeding is costly, and the crop is a grand stock food, enriches the soil and improves its mechanical condition. Dr. Saunders' letter, based on ten years' investigation, is to many an eye-opener. The immense losses to manure as usually handled, and his conclusion that fresh manure, weight for weight, is equal to rotted, challenge consideration and discussion.

### The Best Premiums.

I received by mail to-day the premium, No. 3 gun-metal watch, for which please accept my hearty thanks. Last year I received as a premium the teacher's Bible. I get premiums from different publishers, but the ones from "Advocate" far excel any others.

S. H. BRADLEY.

King's Co., N. B.

### Centralized Rural Schools in Ohio.

As our readers are aware, Sir Wm. Macdonald, of Montreal, is supplying funds for a couple of trials of the plan of consolidating groups of from say five to ten small rural schools in a given district into one graded central school. In many parts of the States it has been tried. Ohio has twenty-three townships centralized, and the movement is spreading over the State. This has been followed by forty townships in Indiana and twenty in Iowa. From the Canadian Teacher we reproduce the following details of how the plan was tried and worked in one district:

"In Gustavus township, Trumbull county, Ohio, it has been working since 1898, and has now secured such a hold upon the people that even those at first opposed now frankly admit the superiority of the central school.

"Gustavus township is exactly five miles square. The school building is located in the center of the township. It is a four-room school, having a principal and three assistants. The children of the township are brought to this central school in nine wagons.

"The wagons are provided with curtains, lap-ropes, soapstones, etc., for severe weather. The board of education exercise as much care in the selection of drivers as they do in teachers. The contract for each route is let out to the lowest responsible bidder, who is under bond to fill his obligations. The drivers are required to have the children on the school grounds at 8.45 a. m., which does away with tardiness, and to leave for home

wagons with the children of the lower rooms, and thus are able to be of service on the farm.

"The building is a frame structure, erected at a cost of \$3,000. It is heated by steam. The cost for fuel last year was \$50. The janitor's salary is \$12.50 per month. The principal gets \$80 per month. The wagons cost from \$60 to \$80 each, and men in Gustavus township are anxious to build wagons and bid for contracts for transportation. The drivers are under \$200 bonds for good conduct. In addition to bonds to insure proper discharge of duties, the board of education keep back one-half month's pay. Sick children are sent home at the board's expense. Before the adoption of the centralization, the average daily attendance was 125 pupils. It increased to 144 at the end of the second year. Before the schools were centralized the cost for the entire township was \$2,900. Now it is \$3,156, being an increase of only \$256 annually. And as to the character of the school, who will claim that the nine scattered schools were doing the work of a well-graded four-room school? There is absolutely no comparison. In order to keep up the school and pay off the school bonds, the township board of education made a levy of nine mills on a valuation of \$373,000."

### Graded vs. Ungraded Schools in Rural Districts.

To the Editor "Farmer's Advocate":

In presenting a few thoughts on the above topic, I shall do so without fully discussing them, as my time is limited, and I assume your space is also.

1. To have graded schools in rural districts we must have scholars, and these can only be secured by conveying them from different parts of the township to some central place.

2. The city and country may both have advantages and disadvantages in the development of the life and the prosperity of the people. The success and welfare of the one is bound up in that of the other.

3. In the educational life of each there should be equal privileges, although the courses may perhaps be to some extent different.

4. If the requirements of the country are disregarded, the town or city must suffer.

5. Every person has an influence for weal or woe, and there should be within the reach of each the best means of developing intelligent and useful manhood and womanhood.

6. The value and stability of our institutions and the prosperity of the nation will depend largely upon the human products of our rural schools.

7. In order that we may secure the largest returns for the money expended and for the brainwork of those engaged in the educational field, we must have increased efficiency in our rural schools, and this will be best obtained by graded schools.

The following are some of the advantages of graded over ungraded schools:

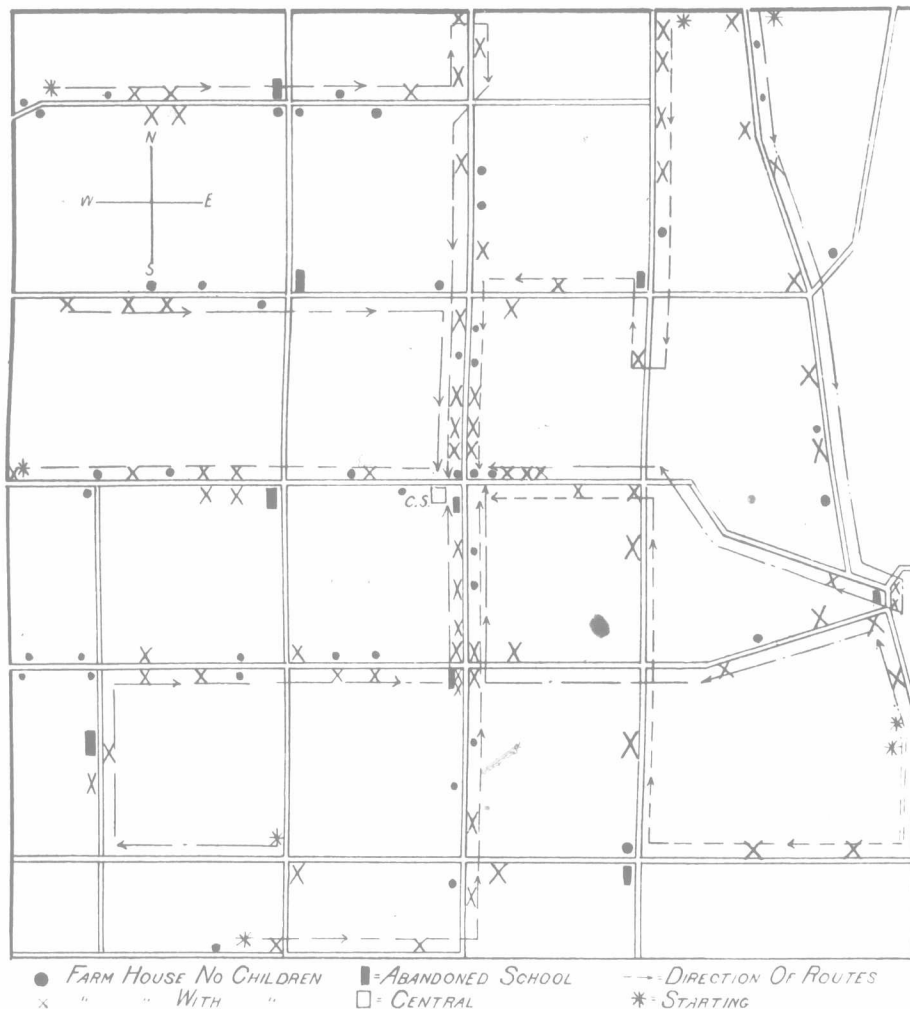
(a) We would have better school accommodation, because we would require only one building where we now require several, and as a matter of course the school equipment and supplies would be better and at less expense.

(b) We would have better teachers, because a smaller number would be required, and better remuneration could be given without additional cost to the individual ratepayer.

(c) We would have better classification. Under existing circumstances, the schools are so small that satisfactory classification is impossible, and even when a fairly satisfactory classification has been secured, it is soon interfered with by scholars leaving school at the opening of spring, and by others coming in about the same time, but not for the same classes, and hence additional classes must be formed, and the work of the teacher becomes almost individual rather than class work.

(d) A graded school would have a department in which advanced work could be done under the control of a thoroughly competent instructor, and hence many would stay longer in school than under present arrangements.

(e) The schools could be better adapted to the



at 3.45 p. m. The wagons call at every farmhouse where there are school children, the children thus stepping into the wagons at the roadside and are set down upon the school grounds. There is no tramping through the snow and mud, and the attendance is much increased and far more regular. With the children under the control of a responsible driver, there is no opportunity for vicious conversation or the terrorizing of the little ones by some bully as they trudge homeward through the snow and mud from the district school.

The routes pay as follows:

Route.	Amount.	Miles Travelled
No. 1	\$1.55 per day	5 miles
No. 2	.98 per day	3 1/2 miles
No. 3	.69 per day	2 1/2 miles
No. 4	1.25 per day	5 miles
No. 5	1.25 per day	3 1/2 miles
No. 6	1.45 per day	4 1/2 miles
No. 7	1.40 per day	4 miles
No. 8	1.48 per day	5 miles
No. 9	.95 per day	3 1/2 miles

Keep in mind that this school is not in a village and the children are scattered over twenty-five square miles of territory. The children are not tardy. How do they do it? you ask. Well, they do it and that is enough. This proves that here is the solution of the country-school problem. There is an organ in every room and the walls are being decorated with pictures. They have started a library. In the high school-room fifty-two are enrolled, with fifty present. Here is an opportunity for the big boys on the farm to get higher education and still be at home evenings secure from the temptations and dissipation of city life. They ride home in the





ROYAL INFIRMARY FLOCK, EDINBURGH.

**Cost of Pork Production.**

To the Editor "Farmer's Advocate":

In your paper of Jan. 15th, 1902, appears an article on pork production, which, with your permission, I would like to criticise. Mr. Wrenshall tells us he kept his brood sow for four months for \$1.50, and fed her 3 pints of oat chop and 1½ pints of cut clover, scalded, per day. Now, as I figure it, his sow would eat nearly six bushels of oats in the time, and oats were worth here in 1901, 25 cents in November; in January, 30; and in April, 35; so you see his \$1.50 is swallowed up in oats. Clover hay was \$6 per ton in November and \$10 per ton in March, and I should think 5 lbs. per day would not be too much for the sow. At that rate, she would eat about 600 lbs. of clover; at \$6 per ton, would be \$1.80. Now, what about the labor in feeding her? Suppose he takes 3-1-3 minutes to feed her and scald her feed, it would make ten minutes each day, which for four months would make two days of ten hours each. Here we cannot get men for less than 75 cents per day, and first-class men get \$1 per day, so you see his \$1.50 is gone again. His sweet milk he fed for three weeks he does not reckon at all. Query: How does he raise mangolds for five cents per bushel? I have been trying it for thirty years, and could never raise them for that. There are some other items to which exception might be taken, but the whole article seems to have been written by some capper for a pork-packing factory, rather than a practical farmer. How did he get his brood sow? She seems to have cost nothing. With shorts and other ground feed at one cent per pound, I never could raise pigs for less than five cents per pound, and have always fed skimmed milk, buttermilk and whey, mangolds, sugar beets and clover, and if others can produce it for less, I would like to know how they do it.

Lennox Co., Ont.

F. VAN DE BOGART.

needs of the community. The farmer, as a citizen, has similar needs and requirements as other citizens, and therefore must have training in the subjects of general education, but in addition he must be familiar with nature, and, therefore, nature study should form part of his course. In fact, the course of study should be such as would best qualify the individual for the profession or occupation which he intends to follow.

(f) A better library of good literature and reference books could be provided.

(g) A more regular and punctual attendance would be secured, because if the scholars were conveyed to a school in some central locality, there would scarcely be any trouble with absent or late scholars.

(h) The course of study for our rural schools could be much extended.

(k) The health, morals, intellectual development and progress would be proportionately higher than in our schools as at present constituted.

And lastly, the teachers thus engaged would, in all probability, remain for some years in the profession, very much to the advantage of the young and rising generation.

CHAS. A. BARNES,

Lambton Co., Ont. Inspector Public Schools.

**STOCK.**

**Breeding Tells in Feeding.**

In an able article written by Mr. T. F. B. Sotham, and published in the annual report of the Kansas State Board of Agriculture, he says: "Highly satisfactory results have been recorded from feeding the grades of all the beef breeds. What a significant lesson is taught by the pre-eminent fact that not one single instance of a profit with scrubs is recorded. Men who feed scrubs do not care to advertise their methods; a profit from them savors too much of sharp practices. Men who claim to have made money feeding scrubs are few, and they are sly in their operation. They buy anything cheap: bulls, which they castrate and dehorn; cock-horned, stunted three-year-olds are dehorned, in the expectation of palming them off as yearlings—anything to improve appearances. Yet the operations of these feeders, if carefully investigated, will show that they never get above market price for their corn, and men who have borrowed money to buy this sort of cattle and fed purchased corn invariably lost money, while for every dollar profit made on scrub feeding the same feed would have yielded far greater results if fed to good stock. If in isolated cases any real profit has been made from feeding scrub cattle, it has been invariably by owners of large tracts of rich corn lands feeding their portion of corn, which is mainly raised by renters. In a majority of years it is safe to say they do not receive through their cattle the market price for this corn, and in profit-yielding years they have such large numbers that a small average profit realizes a large sum. In this these big feeders of cheap cattle are like the packers, who, killing thousands of cattle per day, are satisfied with so small a profit that a small slaughterer cannot live in competition. Feeding scrub cattle is largely a speculation. Where feeder does not own the corn, debt free, he runs a dangerous financial risk. Scrub cattle should be allowed to fill the tins, off of grass, and that grass must be cheap grass, in a country where it is so plentiful and valueless that cattle can be kept the year 'round for a pittance. In such a section they may be kept with only the loss of the profits of what might have been had better stock been kept in their place."

**Care of Cows at Calving.**

I believe in having cows dry six weeks or two months before calving, and when thoroughly dry, feed liberally up to within a week of parturition. It is the greatest mistake, and the most common, to have cows thin in flesh before calving. A cow should be fed but lightly a week before calving and a week or ten days after calving, as her digestive organs have not recovered their normal power and there is also the great drain of motherhood upon the system. We have thus two weeks of light feed with a great drain upon the system, and if a cow is not in good "heart" before calving, she will be altogether too weak to do good work after. A cow has been likened to a steam engine. Well, we get up steam before we start the engine. A cow in proper condition before calving is, of course, likely to develop a large udder if she is any good. Feed lightly when the udder has developed to a "comfortable" size. The best feed I find is ensilage and a little bran and a cup of oil cake twice a day with some nice hay. A few days before calving, give 1½ to 2 lbs. of Epsom salts, 1 tablespoonful saltpetre, 1 cup black molasses, mixed in two quarts of water, as a drench, and the same a day or so before the calf is dropped. If the udder is a "leg spreader" or caked, give 1 tablespoonful saltpetre twice a day as long as you consider advisable. It is a mild purge and thins the blood.

There is nothing better to reduce a caked udder (before calving) than to put a halter on the cow and take her for a one-mile walk. If the weather is cold, be careful that she does not catch cold after her walk. Blanket her. I never milk before calving, not even if the udder is 6 or 7 feet around. Exercise and purges given as stated, and there is no danger of garget. To ward off milk fever, I have been giving, the past three years, 20 drops of pure carbolic acid twice daily, diluted in a pint or quart of water and mixed with bran feed. Give say six doses, commencing a week before calving, and a few doses before and after calving. This will also insure thorough expulsion of the afterbirth, and be a benefit to the cow's system, enabling it to sooner recover from the effects of parturition.

When calving, a cow should, of course, be in a box stall, with dry bedding, and temperature at about 60 degrees. After the calf is safely delivered, leave them alone for an hour or more. Then give a scalded bran mash, in the winter time, cooled no lower than the cow can take it; mix quite wet and add a good handful of salt. The cow will be very thirsty. Give her all the tepid water she will drink, say 25 lbs. every hour until her thirst is satisfied. This helps the bowels to move and flushes out the system. If the pen is lower than 60 degrees, put a blanket on the cow immediately after the calf is delivered. If very cold, put on two blankets. A difficult parturition or chill may cause retention of the afterbirth. In the summer time keep the cow as cool as possible. Sixty to seventy degrees is ideal temperature. Don't be in too big a hurry to milk; let the calf have a chance. Many good dairymen with heavy milkers do not milk clean at first, but take some away every two or three hours for the first twelve hours. After that, take out the last drop at each milking. Don't feed very heavy for first week. The system and digestive organs are weakened. Gradually increase feed. The excrements are the best guide as to the state of the digestive organs.

Oxford Co., Ont.

GEO. RICE.



RIVER SCENE AT MARYSVILLE, NEAR FREDERICTON, NEW BRUNSWICK.

Photo by H. F. Albright.



### Ayrshire Achievements.

To the Editor "Farmer's Advocate":

Sir,—We have been expecting for months (since the Pan-American test was concluded) to see some able penman or noted breeder take up the defence of that noble dairy breed, the Ayrshires. As there has been none forthcoming, we will try and say a word in their behalf. We presume the main reason for this silence (all the other dairy breeders have been heard from) is that they (the Ayrshire breeders) think the breed requires no booming, and, Scotch-like, prefer to let their cattle speak for themselves, which they are quite capable of doing. There appears to be a feeling of general satisfaction over the past year's record, even over the result of the Pan-American six-months' dairy test. While it is true the Ayrshire did not quite reach the top, yet she practically equalled the best, the difference per head being less than a dollar for the six months for butter and away ahead of those breeds in cheese products, and each breeder knows, in comparing with his own herd, they were an average lot only. Further, we have been informed that their position in the barn was not as favorable as those breeds that beat them, not having a supply of fresh air, and so suffered more from the heat, and it is quite possible that a saving might have been made in leaving out some portion of the most expensive grain ration.

We say without fear of contradiction that as a breed they are the most uniform in production, and that they cross better on other breeds or natives for dairy cows. When we come to the show-ring, we say it was a year of triumphs, as they clearly outshone all other dairy breeds. Never in the history of the breed did they attract so much attention and admiration. Allow us to quote freely from some of the leading agricultural and dairy papers published on the continent to substantiate this statement.

From "Farmer's Advocate," Sept. 16, 1901, issue, in writing of the dairy breeds at Toronto: "It was a spectacle for the gods to look upon with wonder and amazement, for it is doubtful if on a fair ground of any other country under the heavens could as good a collection of special-purpose dairy cattle be found as filed into the arena at Toronto." And in writing of the Ayrshires, it says: "It is not an invidious comparison to state that they were the most uniform in quality, type, and condition." Then, again: "The Ayrshires, among the dairy breeds, it is a question whether the display has ever been excelled in the history of exhibitions in Canada." Oct. 1st issue on the Pan-American: "While all were great, none will dispute that the Ayrshires made the grandest display of all—in uniformity of type and excellence of character. The modern Ayrshire cow as moulded by the canny Scot and perpetuated by Canadian breeders, sets the standard for the model dairy cow in style and conformation and in the size and shape of milk vessel and placing of teats. She is a thing of beauty, and also carries with her all the usefulness of a worker in the dairy. In this class, Canadian herds created a sensation, calling out unstinted expressions of admiration and commendation from all beholders. It was a sight never to be forgotten by those privileged to see it when the long line of twenty full-uddered and sprightly cows (aptly described by an enthusiastic admirer as 'the milky way') faced the judges."

Then, to quote from the Jersey Advocate, published in the interests of the Jerseys, in its notes on the Pan-American: "Anyone who was privileged to witness the grand array of that very useful breed, the Ayrshires, as they complacently chewed their cuds in the live-stock barn and as they were led into the show-ring, will never forget the sight. It was one long to be cherished in the heart and mind of a true lover of dairy stock, it matters not what breed is his preference. The exhibit of Ayrshires was truly magnificent—a finer collection has never been brought into the showing in this country. As the forty-five matrons were led in, in the aged-cow class, murmurs of admiration were heard on all sides. The spectators, as well as exhibitors of other stock at that time in the show-ring, paused to admire and comment upon this truly superb string. As they marched to their several places, with their beautiful silken hides, their straight backs and rumps, broad loins, deep bodies, and truly enormous udders of perfect shape, no one could fail to admire and appreciate them." Again, in same issue: "By their grand display at the Pan-American, the Ayrshires have won many friends and admirers." In another issue: "What a sight was the string of 40 superb Ayrshire cows ranged up to be judged at the Pan-American last week! They won the admiration of all. A grander sight has never been seen in any showing in this country."

Now, when an unprejudiced and popular paper like the "Farmer's Advocate" gives such commendation we appreciate it, but when a paper like the Jersey Advocate, published in the interests of another breed, writes so strongly in their favor, it speaks volumes for the breed. It must be quite evident to all that among the dairy

breeds in the show-ring, the Ayrshire is the queen of them all. The thanks of all the breeders are due to those gentlemen who loaned their cows to the Pan-American dairy test, to the gentleman who fed and cared for them, and to the breeders who contributed such splendid exhibits to Toronto, Buffalo, and elsewhere.

Northumberland Co., Ont. ALEX. HUME.

Note.—When Mr. Hume's letter was written, he probably had not received the last issue of the "Farmer's Advocate," on page 87 of which appeared an excellent letter from Mr. Steward Clelland, of Quebec, dealing with the achievements of the Ayrshires at the Pan-American Exposition.—Editor.

### The Dogie Business.

BY J. M'CAIG.

The condition of the ranch-cattle business illustrates the fact that booms are bad for any business. The jump in beef three or four years ago developed a feverish demand for stockers for the ranges in both United States and Canada, and at times yearlings in Ontario have sold as high as eighteen or twenty dollars each right at home. This was a good price, but buyers may be credited with knowing what they were doing. They had to figure on freight one way, interest on their money for two years, cost of care, but practically free feed, and subtract this and the cost of the cattle from the price delivered at the stock-yards near the range and he frequently had a profit of twenty-five per cent. on his side. It was generally at least fifteen, and he seldom got stuck unless through want of care of eastern stuff in exceptionally bad weather, and eastern yearlings demand considerable care the first winter.

Of course, this stimulated the breeding of stockers in the east. Every available female was turned into work, no matter what her type, age, or quality. When the demand for any commodity is high, the lower grades of the commodity acquire a higher relative value than they are entitled to. The whole mass of available supply is not scanned so nicely and carefully for quality. It is when the supply is great and demand low that buyers can afford to be saucy. Of course, with the large dairy interests of Ontario, it is natural to expect that even with Shorthorn bulls of good quality there would be a good many light-fleshed yearlings from Jersey or part Jersey or Ayrshire mothers and sometimes a few raw-framed Holsteins. There are few Western range bunches—that is, of dogie cattle—that have not an occasional fawn-lipped specimen or two. These dairy cattle, of course, are not good stuff for the ranges. They do not stand the outdoor system in winter as well as the fleshy-carcaused Hereford or Shorthorn. They are never as good quality at maturity, nor are they as good block cattle, for they have little meat on the places where it is most wanted—i. e., hams, loins and shoulders—and, besides, it takes them longer to mature.

The demand for cattle to convert the free grasses into beef led not only to a careless selection of dogies, but likewise to the bringing in of bulls of inferior quality. All the she stuff of the West was held for breeding, and eastern bulls were in sharp demand, and any old thing in the shape of a Shorthorn to which a pedigree could be attached (and there are those who think that the hunting of pedigrees called out considerable ingenuity) could be sold at a good price. The consequence was that the standard of young stuff bred in the Territories itself was not raised or improved. In fine, the boom operated as booms always do to increase the number of the commodity at the expense of the quality or average perfection.

Now, when a bit of a lull comes in demand, from slowness in the world market, the producer feels the ebb coming in the tide of prosperity that has been carrying him up. Conditions are adjusting themselves to normal by reaction, as is always the case, but the reaction is hard on the fellows who have been carried in too deep by the boom.

Slack demand means careful culling. Export stuff finds a market readily enough, but even then it must be in good finish and the cattle of good block type, with the best cuts prominent. Generally in the east, the existence of numerous towns makes it possible to consume the second and third grades of stuff at home. The prairies, however, have plenty of cattle of all grades, but few to the supply. The result is that with high cost in the first place and high freight on top of this, with slow demand, even free grass will not let the rancher out, and this is the first year for quite a while that there is any check to his prosperity. The rancher is frequently looked on as the most independent man and surest winner you can find. He gets more for nothing in a new country than anyone does. But though it seems a sure and a good one and his business, unlike most others, is subject to limitation rather than expansion as he goes on. The coming of neighbors is a check rather than an impetus to his prosperity. Fi-

nally, the idea is forced in on him that his business is influenced by competition like anyone else's, and his returns depend on movements in the larger commercial fabric of the world. It might seem almost unnecessary to call attention to this to anyone accustomed to eager and urgent business. Among all kinds of Western enterprises, however, that of ranching has been pretty free of care.

The business cannot be permanently hurt. There are large tracts of the Northwest Territories that are fit only for grazing by reason of being non-irrigable and of being short of sufficient natural rainfall for cultivated crops. The ranges, too, will support many more animals than at present, and it is a nice problem for the Government to regulate and adjust rivals for the range country. For the rancher the chief lesson is that he should try to improve the quality of his product. The "dogie" trade has had a check. If it is continued, as it doubtless will to some extent, nothing but the best should be brought out as to breed and type. Bulls, likewise, should be selected with more care. Satisfactory male animals cannot be raised under pure range conditions. Ontario, Manitoba, and the parts of the Territories where cereal and succulent crops can be grown will continue to furnish bulls. The irrigable lands will, of course, develop the breeding of stud animals also. These must all be of the best type, and inferior females as well as males must be weeded out. To many ranchers a cow is but a cow. Many have begun, and owing to early conditions have been fairly successful, without any knowledge of the business or of the good and bad qualities of beef stock. The time has come now for selection and breeding skill to shape the product. A knowledge of breeds and a study of beef type is highly necessary. It is often interesting to hear how experimental knowledge finds expression among the fellows who do not know anything of breeds. "The finest steer I ever sold was one off that big, long red cow and out of a bald (white)-faced bull o' Lem Pilkey's." The cow was a long, roomy, good grade of Shorthorn, and the bull, I presume, was a thoroughbred Hereford. Besides closer knowledge and more careful selection of breeding stock, there must be greater care. A little more hay for rough weather and a little more diligence and foresight will be necessary to keep up the condition, standard and finish of steers, especially as the range becomes more limited. Ranchers will soon be doing more feeding, and the cultivated and irrigable districts will soon be doing a good business in tame hay with the rancher. I suppose the hesitation of the C. P. R. to increase its rolling stock to a capacity to meet the transportation demands of the country will vanish with another railway: whether rates will decrease cannot confidently be predicted with the object lessons in wholesale amalgamations and combinations of big corporations before us. The railway problem must be more and more urged into Government regulation and control, for in no sense can our national railway be regarded as the property of the great corporation. The Canadian Pacific Railway has been built at the expense of the commonwealth and should be made to answer to popular needs in both the matter of accommodation and rates so far as is consistent with legitimate profits.

### Smithfield Cattle Carcasses.

Included in the reports of particulars of carcasses of Smithfield cattle that have appeared in the Live Stock Journal are those of 13 steers not exceeding two years of age, whose aggregate age was 9,004 days, with an aggregate live weight of 18,110 lbs., and a carcass weight of 11,631 lbs. These give the following average result for the whole of the 13 animals: Percentage of carcass to live weight, 64.22; average daily gain of live weight, 2 lbs. 0.19 ozs.; ditto carcass weight, 1 lb. 4.00 ozs. Last year the carcasses for the corresponding age gave 66.30 per cent. of carcass to live weight, with an average daily gain of 1 lb. 14.84 ozs. live weight, and 1 lb. 4.39 ozs. carcass weight. It will be of interest to note that the highest percentage of carcass weight in the statistics collected of animals of this age sold at the show was 67.91, and the lowest 60.09, whilst in the carcass test 68.57 was the highest and 61.35 the lowest.

Of steers over two years, particulars have been given of 38, whose aggregate age was 39,514 days, live weight 63,255 lbs., and carcass weight 41,435 lbs., which show 65.50 per cent. of carcass to live weight, and give an average daily gain of 1 lb. 9.61 ozs. alive, and 1 lb. 0.92 ozs. of carcass weight. The highest percentage of carcass to live weight was 71.79, and the lowest 58.86.

Particulars of 31 heifers have been given, whose aggregate ages were 31,061 days, live weight 44,407 lbs., and carcass weight 29,165 lbs., which give the following results: 65.67 per cent. of carcass to live weight, 1 lb. 6.87 ozs. average daily gain alive, and 15.20 ozs. carcass weight.



**Training a Collie.**

You can no more make a good farm dog out of a mongrel brute than you can "make a silk purse o'ot o' a soo's lug." You can get a mongrel to hunt cattle while it is fun for him, but when it comes to work, he will step aside in your favor, as he does not want to work. Almost any kind of dog with a dash of collie blood in him can be trained to drive and herd cattle, but I have always found them to be useless for anything like work. You cannot force them, and after a short time cannot coax them either. The only exception to this I know of is a cross between the collie and the old Highland staghound, which make the best of sheep dogs, often superior to the pure-bred collie. I imagine our best sables are not free from the influence of that cross.

Now for a few hints on raising the puppy. Where possible, keep him, in his puppyhood, away from stock and from being made a plaything of by children, as you will find it easier to teach him ten new things than to break him of one habit once it is contracted. At from 10 to 12 months old is soon enough to begin his education. Make him used to lead on a string, as it may come in useful afterwards. Next teach him to come to heel and stay there. He is now ready for a run after the cattle or sheep, as the case may be; as a rule, they do enjoy a chase round them. After he has "let some steam off," call him to heel. Then start him off again, say on the right-hand side; make a motion with that hand at the same time. It is well to choose a set of words or orders, and having chosen, stick to them, as the dog has to learn to connect a certain sound with a certain action. Remember that is the main point in training a dog successfully. When he has gone half way round on the right side call him back; repeat the lesson two or three times, and then give similar lessons on the other side. With sheep it is best to let the pupil run right round, as in stopping him half way he is apt to come too close in on them.

For the next lesson have him run from right to left, passing without stopping behind the cattle and in front of you; with sheep, always behind you, as you want him to run wide with sheep, which is not necessary with cattle. Next get him to pass behind cattle, stopping him when nearly up to you and sending back again, keeping this up until the stock are moving towards you. In a few days you will be able to send him for cattle some distance off. In starting out, make a motion with the hand and issue an order to keep well out from the animals until he gets well behind them, then get him back on his former lessons. He will soon learn to bring cattle towards you. It takes a lot of time and patience even with the easiest-trained dogs before you can give them a diploma. Do not be discouraged if he won't even look at the herd when you begin his training. Some of the best working dogs I have known seemed quite hopeless

cases at first. One I may mention, as an encouragement to any person who may have a hard one to start, was nearly two years old, and although nearly every day out with the sheep, could not be induced to go after them. One day, in shipping some sheep on board steamer, it was hard to get the first one on, as is usual in such cases. No sooner, however, had the first few jumped on board than the dog jumped on too, as if to prevent them going overboard on opposite

one "come to heel," a series of short, sharp notes meaning "hurry up," etc. I always think that puppies from trained parents are somehow easier trained, but would not like to give it as a fact.

By following the foregoing hints, and remembering that the well-bred collie, like his master, is always, to the end of the chapter, learning something, any person having the right material to begin with cannot fail in having a great and invaluable help in handling stock at the price of his board.

Where there are plenty of kitchen scraps, dogs do well on it. I feed mine on wheat chop run twice through the chopper, boiled into a porridge, with some milk or fat on it; a turnip boiled and mashed up with it once a week or so is beneficial. Dogs, like mostly all other animals, seem to do all right in Manitoba if they get plenty of feed.

EVAN McIVOR.  
Sifton Municipality, Man.



"READY!"  
Evan McIvor and his collie "Bell."

side. When they got to land and the sheep were running down the gangway, the dog was about the first to land and went to work rounding them up in fine style. An hour later, by the time they were in the sales-yard pens, he was a good dog. The same dog, shortly afterwards, was left on the road, on market night, twenty miles from home, with a mixed flock of black-faced sheep. He was home by morning, with not a sheep missing.

If you have to punish a dog (and the least done in that line the better), be sure you have a secure hold of him and do not allow him to get away from you for some time after. If he is of a shy, nervous temperament, you must be very careful with him—you must get his confidence first before you can do anything with him. If carefully handled, they make very nice working dogs, and as a rule are trustworthy.

The easiest dog for an amateur to handle is the bold, courageous, won't-take-offence kind of dog. A good whack now and then just seems to suit some of them; at least, it does not spoil them much. Of course, you will have your dog trained to whistle calls, such as one long one—"down," one long whistle, following with a short

**Black Lambs Accounted For.**

To the Editor "Farmer's Advocate":

Sir,—In answer to "Sheep Breeder," in your issue of Jan. 15th, I think it would be very unfair to charge damage to the breeders of the ram. In all probability there was a black sheep in sight of the ewes at mating time. Even if seen across the fence, especially by ewes not accustomed to black sheep, this would cause them to bring forth black lambs. This is no whim. I did not believe it myself until forced to by frequent and convincing examples. I know a breeder of prize sheep who once got caught by mating a fine ewe to a prize Leicester ram when a black ewe of a neighbor's passed by. His ewe had twins, one was white, the other solid black. They were equally good only in color. This is an old law of nature discovered by Jacob (Genesis xxx. ch.).

P. P. FOWLER.  
Shefford Co., Que.

**Card of Thanks.**

We, as students of the first stock- and grain-judging class, wish to express our appreciation of the instruction and valuable information we have received at the Ontario Agricultural College while taking the short course. The professors have taken all possible pains to give us the best information that could be given, and we testify that they have succeeded admirably. The lessons we have received will be of untold benefit to us in the future, especially along those lines in which we are more particularly engaged. Every branch of the work has been taken up thoroughly, and we feel our indebtedness to Dr. Mills and the professors for the manner in which they have used us. Signed in behalf of the students.

WM. HUDD, President.  
W. HARRIS, Vice-President.  
JAS. SMILLIE,  
A. D. ALTON,  
D. J. KENNEDY,  
W. R. FANSHER,  
Committee.



ROUND-UP, CATTLE RANCH, KAMLOOPS, B. C.



### What Grooming Means to Live Stock.

Grooming, or the application of the brush to the hairy coat of live stock, has results more far-reaching than is often dreamed of by the user of the brush. The skin is made up of layers upon layers of cells, among which are to be found small blood vessels, nerves and little pockets or foldings-in of the skin, known as glands—sweat and grease (sebaceous). One of the effects of grooming is to irritate the small ends of the nerves, which communicate the irritation to the small blood vessels, with the result of an increased blood supply to the skin surface. A result of the increased blood supply to the skin is the increased activity of the glands. The sweat glands get rid of waste material, and thus share the work of the kidneys and bowels. The organs of the body which have to do with the throwing out of waste material are the lungs, the skin, the kidneys, and bowels. All are designed to work together harmoniously for the common good, namely, the health of the animal, and if by any means one of these avenues of escape is stopped up, that work is thrown on the remaining excretory organs, and it is only a short time until the effect of overwork tells on the other organs and ill-health results. The grease glands when working well make the skin oily and mellow and the hair glistens, the result of the increased pouring out of the greasy matter from these sebaceous glands. A somewhat similar result comes from blanketing stock, due to the increased warmth, which dilates the blood vessels and thus causes an increased blood supply. The opposite effect on the skin results from exposure. Cold drives the blood away from the surface of the body and hinders the work of the skin glands, in addition to throwing heavier work on the kidneys. The reason that live stock will go through a winter un-groomed, with long coats of hair, and yet be apparently healthy, is due to the fact that the skin glands of such stock are practically resting from their labors, as owing to lack of exercise the skin is not called upon to work. Given work, however, calling the skin functions into play, and at once it is seen the handicap under which the long-coated, un-groomed animal suffers. In horses, this is recognized by practical men, who clip their charges. The exposed animal needs a long coat of hair, which nature provides, as the space between the outer ends of the hair and the skin is practically a dead-air space. This dead-air space is increased in animals when the "hair stands on end," as it is frequently termed, a condition usually associated with exposure to a greater or less degree. A great growth of hair is not without its disadvantages. It means a correspondingly greater draft on the body forces, or, in other words, expenditure of food. If food is used to grow hair, it cannot be used to build up or grow an animal to any great extent. The use of the brush will tend to remove dead-skin scales, thus preventing the blocking up of the gland entrances, besides stimulating the nerves controlling the blood supply to the skin. We can, therefore, reason quite easily that grooming means improved health to live stock and economy of production to owner.

### HORSES.

In the British House of Commons, the War Secretary, Mr. Brodrick, said that the number of horses purchased during the war totalled 446,088, of which 11,364 came from Canada and 77,101 from the United States. In addition, about 89,705 horses had been captured in South Africa.

### Shire Horse Breeders' Association Annual Meeting.

The Shire Horse Breeders held their annual meeting on Feb. 6th. at Toronto. In the absence of the President, Mr. W. E. Wellington, Mr. J. M. Gardhouse took the chair.

Thirty-one Shires were registered during 1901, a considerable increase over the number of pedigrees received in 1900. The first volume of the Shire Book has been issued. There is a small balance in hand after paying for the book.

The following are the officers elected: President, W. E. Wellington, Toronto; 1st Vice-President, J. M. Gardhouse, Highfield; 2nd Vice-President, W. Hendrie, Hamilton. Directors: W. Wilkie, Toronto; H. N. Crossley, Rosseau; O. Geiger, Hensall; Jas. Dalgety, London; J. Bawden, Exeter; Jas. Henderson, Belton; Jno. Gardhouse, Highfield. Delegates: To Horse Breeders' Association, J. M. Gardhouse and H. N. Crossley; Toronto Industrial, H. N. Crossley and Jno. Gardhouse; Western Fair, H. Wade and Jas. Dalgety; Ottawa, H. Wade. Judges approved for shows: W. Wilkie, Toronto; Jno. Davidson, Ashburn; Geo. Moore, Waterloo; Arthur Johnston, Greenwood; R. P. Stericker, East Orange; N. J.; J. A. Turner, Calgary, Alta.; Robt. Graham, Stouffville; Jas. Henderson, Belton; Thos. Graham, Claremont; A. McLaren, Aurora, Ill.; P. McGregor, Brucefield; J. T. Gilson, Denfield.

The meeting fell into line with the other Horse Breeders' Associations and agreed that a stallion-owner should have a lien on both the mare served by his horse and on the foal the produce of the service. The appointment of Mr. W. E. Skinner as Director-General of Live Stock at St. Louis was also favored.

### Saddle and Carriage Horse Breeders' Association Annual Meeting.

This society held its annual meeting at the Albion Hotel, Toronto, on February 5th. In the absence of President W. B. Fuller, Walter Harland Smith, the Vice-President, took the chair. The treasurer's report showed a small deficit. The corresponding secretary read a practical address, pointing out how the society might benefit horse breeders and owners. Two prizes of \$60 and \$50 were given last year, the first for the champion harness horse at the Canadian Horse Show, the second for the champion saddle horse at the Toronto Industrial. These were donated by Mr. W. H. Smith and Mr. Geo. Pepper, Toronto.

Two hundred dollars were subscribed in the room by four members, to be divided into four champion prizes for heavy harness, roadster, hunter, and saddle horses. The prizes must be won twice to become the property of the winner.

The constitution was revised, and the name of the Association changed to that of the "Harness, Hunter and Saddle Horse Association of Canada." This was done to include roadsters.

Walter Harland Smith was elected President; O. R. Sheppard, Toronto, 1st Vice-President; Thos. Crowe, Toronto, 2nd Vice-President. The directors are: W. C. Brown, Meadowvale; T. H. McCartney, Thamesford; S. B. Fuller, Woodstock; Dr. Andrew Smith, Toronto; E. W. Cox, Geo. Pepper, Toronto; W. Hendrie, Jr., Hamilton; W. T. Merry, Jas. Murray, Toronto; Adam Beck, London. Delegates to Horse Breeders' Association: Messrs. A. Beck and O. R. Sheppard. Messrs. Smith, Sheppard, Beck, Fuller and Merry were appointed a committee to increase the membership. W. H. Smith and W. T. Merry were elected delegates to the Toronto Industrial.

### Clydesdale Breeders' Association Annual Meeting.

The largest and most enthusiastic annual meeting in the history of Clydesdale Breeders' Association was held in the Albion Hotel, Toronto, on February 4th, under the chairmanship of the President, Mr. Peter Christie, Manchester, Ont.

The President's address was in a hopeful vein as to the progress of the Clydesdale industry. He referred to the high stand taken at the Pan-American and Chicago Expositions by the horses of Graham Bros. and others, and thought the future as regards prices for good horses was very promising.

The Secretary-Treasurer reported that 562 pedigrees had been recorded during 1901, or 226 more than in the year previous. A great many had been sent to the Northwest, a few to the United States, and a great many sold to go to the central portions of the country. Vol. II. is nearly ready for distribution. The balance on hand is \$887.96. Eighty-eight dollars was awarded as cup prizes at Calgary, Winnipeg, Brandon, and Halifax.

The question of introducing a lien bill in the Ontario Legislature was brought forward, and after some discussion, the feeling of the meeting was unanimously in favor of a lien on both the mare and foal. A vote of a similar amount of money as in 1900 for cup prizes for stallions was voted, and, in addition, cups for mares.

A discussion on the Association subscribing towards the prize list of the Spring Horse Show brought out the fact that a majority present considered that that show was held too late in the season. Some favored the holding of a show for draft horses as early as the end of February or the beginning of March, even if a separate show was held, and a motion was passed that the directors be instructed to take the necessary steps at once to hold a spring show at such time as will suit the breeders and farmers of Canada.

The following were elected officers: President, D. McCrae, Guelph; Vice-President, Jas. Dalgety, London; Vice-President for Ontario, O. Sorby, Guelph; Quebec, R. Ness, Howick; Manitoba, J. E. Smith, Brandon; Northwest Territories, Jno. A. Turner, Calgary, Alta.; and A. Mutch, Lamsden, Assa. Directors: Thos. Graham, Claremont; R. Beith, Bowmanville; P. Christie, Manchester; Wm. Smith, Columbus; J. Vipond, Brooklin; Jno. Bright, Myrtle; R. Miller, Stouffville. Delegates: To Toronto Industrial Exhibition, R. Beith and W. Smith; Western Fair, Alex. Innes (Clinton), J. Henderson (Belton); Ottawa, P. Christie and D. McCrae; Quebec and Sherbrooke, R. Ness and Geo. Stewart, Howick; Horse Breeders' Association, Jas. Dalgety and Thos. Graham.

The meeting approved of sending a signed memorial to the directors of the St. Louis Exposition, asking for the appointment of Mr. W. E. Skinner as Director-General of Live Stock at the St. Louis Fair.

The following names of judges at the various shows were approved of: Jas. Henderson, Belton; Alex. McLaren, Aurora, Ill.; R. Beith, Bowmanville; Alex. Galbraith, Janesville, Wis.; Jas. Lowry, Montreal; J. H. Kimball, Montreal; Geo. Moore, Waterloo; Jno. Davidson, Ashburn.

Mr. McCrae referred to the School of Instruction in Live Stock at the O. A. C., Guelph, where the score card and scale of points for Clydesdales and Shires was the same, with which he could not agree, and suggested that a small committee be appointed to draw up a scale of points for Clydesdales, with which the meeting agreed.

After the general meeting, a meeting of directors was held to consider the advisability of holding a stallion show early in the year.

### Canadian Hackney Horse Society.

This society held its annual meeting at the Albion Hotel, Toronto, on February 3rd. The President, Mr. Robt. Miller, Stouffville, being unavoidably absent, the chair was taken by Dr. Andrew Smith.

The Secretary-Treasurer's 10th annual report showed that 46 pedigrees had been registered during 1901, an increase of 14 over the previous year. There were now 354 stallions and mares recorded, or just enough to fill a small volume. It was for the meeting to say whether a reduction of membership fees was advisable. Seventy-five dollars was given in prizes last year. The balance in hand was \$300.04. It stated that Mr. Dryden intended to introduce an Act in the Legislature during the present session to give stallion-owners a lien on either the mare served by their stallion or on the foal, or on both, and wished to ascertain the feeling of the various Horse Breeders' Associations on this point. In Manitoba the lien is on the foal, and this lien overrides all other liens, chattel mortgages and executions. The meeting favored a lien on both the mare and foal.

In response to a letter from the English Hackney Horse Society, the Secretary was instructed to write Mr. Emen, the Secretary, and ask for a grant of Horse Show and \$50 to the Toronto Industrial Exhibition, to be awarded as prizes in the Hackney classes, as the directors of these shows may think fit. A suggestion that the society write to the Board of the St. Louis Exposition, asking for the appoint-

ment of Mr. W. E. Skinner, of Chicago, as Director of Live Stock at St. Louis, was not adopted. The printing of a studbook volume was laid over for another year, and it was decided not to reduce the membership fee at present.

The officers for the current year are: President, Thos. Graham, Claremont; 1st Vice-President, J. K. Macdonald, Toronto; 2nd Vice-President, E. C. Attridge, Goderich; Vice-President for Ontario, Robt. Davies, Toronto; Quebec, Jas. A. Cochrane, Hillhurst; Manitoba, M. McMillan, Brandon; Alberta, A. M. Rawlinson, Calgary; New Brunswick, J. R. Frink, St. John. Directors: H. N. Crossley, Rosseau; R. Beith, Bowmanville; E. C. H. Tisdale, Beaverton; W. Graham, Claremont; Dr. And. Smith, Robt. Bond, Geo. Pepper, Toronto; Robt. Miller, Stouffville. Delegates to shows: Toronto, H. Wade and Geo. Pepper; London, Adam Beck and E. C. Attridge (Goderich); Ottawa, R. Beith, Bowmanville; Montreal Spring Show, R. Ness, Howick; Woodbridge, J. K. Macdonald and Jno. Holderness (Toronto); Horse Breeders' Association, J. K. Macdonald and R. Beith. Secretary-Treasurer, H. Wade.

The following were recommended as judges at shows: Alex. Mair, Indian Neck, Staten Island, N. Y.; Wm. West, Burlington, Vt.; Hy. Fairfax, Aldie, Va.; Alex. Galbraith, Janesville, Wis.

No report was received from the committee appointed to confer with the American Society about amalgamation, so it may be considered to have died a natural death.

### Canadian Horse Breeders' Association Annual Meeting.

This Association, which corresponds to the Dominion Cattle Breeders' Association among cattle breeds, is formed of breeders of all classes of horses, with delegates from each breed, all appointed by the several Horse Breeders' Associations, except the two delegates for Standard-breds, who are appointed by the Horse Breeders' Association, as no Standard-bred association now exists. The annual meeting was held in the Albion Hotel, Toronto, January 6th. Dr. Andrew Smith presided.

The Secretary-Treasurer's report showed the balance in hand (which included a balance in hand from 1900 of \$2,905.07) to be \$3,568.10. There were 66 paid-up members last year. Among other expenditures was \$50 towards the expense of the man in charge of the Government car conveying registered stock to the West.

Messrs. W. E. Wellington and Geo. Pepper were elected to represent the Standard-breds and pacers. A discussion took place on the Lien Act now being drawn up by Mr. Dryden. The meeting was almost unanimous in recommending that the lien be put on both the mare and foal. The President and Secretary and J. A. McGillivray are to wait on the Government and explain the wishes of the Association. It was decided to again offer premiums on stallions, with a slight verbal change in the conditions, which now read that "not less than \$5 of the fee be paid at time of service." Fifty dollars was again voted as a contribution towards the expenses of the Government car.

The Secretary read a letter from Mr. Stewart Houston, stating that the Toronto Hunt Club would again join the Breeders' Association in holding a show this spring. This led to an animated discussion. Messrs. McCrae and Christie spoke decidedly that the show must be held earlier, or the heavy-horse men would hold a show of their own. The directors will try to accommodate them if the Hunt Club consent to the earlier date. If not, the Breeders will hold a show of their own. The first week in April was suggested as a suitable date this year. Next year it may be held earlier.

The election of officers resulted as follows: President, Dr. Andrew Smith, Toronto; 1st Vice-President, H. N. Crossley, Rosseau; 2nd Vice-President, T. Graham, Claremont; Secretary-Treasurer, H. Wade. Delegates: To Toronto Industrial Exhibition, W. Hendrie, Jr., Hamilton, and T. Graham, Claremont; London, Col. R. McEwen, Byron, and O. Sorby, Guelph. Committee for Horse Show: J. M. Gardhouse, W. Hendrie (Jr.), Dr. Smith, O. B. Sheppard, Geo. Pepper, H. N. Crossley, T. Graham, A. Beck, J. Macdonald.

At the directors' meeting a letter was read from the Secretary of the Manitoba Horse Breeders' Association, asking for the co-operation of the Association in getting the Dominion Government to increase the minimum value set on horses imported from the U. S. in order to shut out bronchos, and also to get the Government to provide the Indian Reserves with a better class of sires. The duty on horses, which is 20 per cent. on the cost price, is said to amount to only about \$2 a head on bronchos, and they are flooding the country. Messrs. McCrae and Beith were appointed to interview the Government on the matter. The question of date of the Horse Show will be decided this week.

### THE ASSOCIATION MUST EDUCATE THE BREEDER.

At the dinner given by the Association, on Thursday evening, Hon. Jno. Dryden gave a thoroughly practical address. After expressing his sympathy with the breeders he predicted a bright future for horses. What is most needed is for farmers to have a definite idea and purpose in view for breeding. That is the road to success. They must be educated. It is not the Government's duty to teach; that belongs to the Association. It is the medium for using the money furnished by the Government to the best of advantage. If he had any criticism to urge against the Association, it was that it does not impress itself enough on the people of the country. He did not believe in spoon-feeding by the Government. The Spring Horse Show, though it has become a somewhat fashionable event, is still an educational factor and is a provincial institution. He urged the directors to give the people of the country the information about breeding for which they are thirsting. So keen is this that at the judging class at the O. A. C. they were unable to accommodate all who wished to attend.

Canadians can breed good horses, if only farmers know what to breed and how. There would never be a time when horses would not be required. Col. Less was not opposed to the grant by the Legislature of \$2,000 to the Horse Breeders' Association for the Spring Show, but thought it ought to be supplemented by \$1,000 to the Toronto Industrial, \$1,000 to London, and the same to Ottawa shows, for prizes for three or four of the best classes.

Mr. Alex. Innes said that nothing would ruin a farmer quicker than breeding poor horses, or improve his condition quicker than breeding good horses. He would like the Minister of Agriculture to keep specimens of good horses and poor horses at the O. A. C. for object lessons to the students.

W. Hendrie, Jr., urged farmers not to breed army horses, as they did not pay at the prices paid. There were plenty of misfits even from good stock. He advocated the holding of horse fairs in county districts, as is now done at Orangeville, Ont.

Don't tie a horse too low down or too long, just so he can have the use of his head in lying down.



Standard of Excellence for the Standard-bred or Trotting-bred Stallion.

HEAD.—Ear of medium size and pointed, tips pointing towards each other when the ears are pointed forwards; Cranium nicely rounded; Forehead broad and flat; Eye large, prominent, and docile in expression; Bones of Nose straight in front and slightly dished laterally; Nostrils firm, large, and readily dilated; Muscles of Cheek well developed, but not too bulky; Lips firm; Mouth of medium depth; Muzzle fine and tapering; Branches of Lower Jaw well spread at their angles. 4
NECK.—Rangy, with Crest well developed, hard and whipcordy; Neck attached to Head in a graceful, angular manner, rather of the obtuse order; Clean, but not fine at the Throat; wide and muscular at the shoulder. 4
WITHERS AND BACK.—Withers may be continuous with the superior border of the neck (but a depression marking the point where the neck terminates and the withers commence is preferable, unless the animal be very fat), well developed but not too broad; Back straight and rather short; Loins broad and well muscled. 5
CROUP.—Rather long and somewhat sloping, with dock coming out high up and well clothed with hair of good quality; Tail to be carried straight and well out from the body in a graceful manner. 4
CHEST.—Ribs long and well sprung, with well-marked angles, deep through girth; Breast moderately broad, with well-developed muscles. 8
SHOULDER.—Oblique from above downwards and forwards; Blade bone well covered with muscles. 8
ELBOW.—Well muscled and lying close to chest. 2
FOREARM.—Rather long, well developed and strong; muscles well defined and extending well down the limb. 4
KNEE.—Straight, large and strong in all directions; free from malformations. 5
KNEE TO FOOT.—Cannon Bone rather short, broad, flat and clean, an absence of beefiness and long hair; Tendons and Ligament well defined and prominent; the limb must not be too much pinched or tied in below the knee; Skin lying close to bone and tendon; Fetlock joint strong and clean; Pasterns strong and of medium length and obliquity. 5
FOOT.—Of medium size, rather round, with strong wall of medium depth; Sole slightly concave; Frog large and well developed; Heels broad and strong and not too deep; must not turn the toes either inwards or outwards when standing; the feet must be of equal size. 10
HAUNCH OR UPPER THIGH.—Muscles well developed, deep through ham, quarters broad and strong. 4
STIFLE.—Strong, well muscled and compact. 2
GASKIN OR LOWER THIGH.—Muscles prominent, hard, and extending well down the limb; Hamstring prominent and whipcordy. 4
HOCK.—Large, strong and angular in all directions; all parts well developed, an absence of coarseness, puffiness and malformations; Point well developed; Posterior Border straight. 5
HOCK TO FOOT.—Cannon Bone rather short, broader and flatter than front one; an absence of beefiness and long hair; Tendons and Ligament well defined and prominent; the limb should not have a pinched or tied-in appearance below the hock; Skin lying close to bone and tendon; Fetlock joint large and strong; Pasterns strong and of medium length and obliquity. 5
FOOT.—Smaller and not so round as front one; Sole more concave; Frog well developed; Heels broad, strong, and not too deep; Feet must be of equal size. 10
COLOR.—Bay, chestnut, brown, black, roan, gray, with reasonable modifications; reasonable white markings not objectionable. 3
SKIN.—Soft, mellow and loose; not like parchment. 4
TEMPERAMENT.—Kind, docile, prompt, energetic, not vicious. 4
STYLE AND ACTION.—General appearance stylish and attractive; Action free and elastic; a good walker; may either trot or pace; must be perfect in whichever gait he takes; must not paddle nor roll his front feet; may go wide behind to a limited extent, but must not go close enough to interfere; must go level, without hitting himself in any place, and be able to go fast and show powers of endurance. 15
WEIGHT.—Say 950 to 1,200 lbs. 3
HEIGHT.—Say 15½ to 16½ hands. 3
SYMMETRY.—Well proportioned and graceful in all points. 8
Perfection. 130
The trotting- or pacing-bred mare or gelding

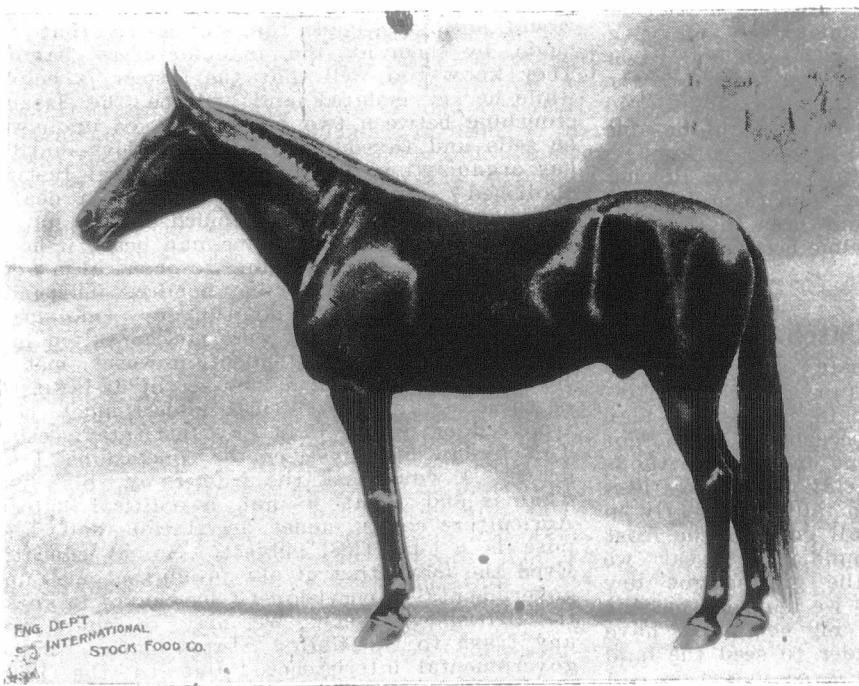
(not necessarily Standard-bred) should be of the same general type as the stallion, but not so masculine in appearance; the head, neck, withers and general physiognomy being the points which contribute to the more effeminate appearance. The neck should be more delicate and cleaner cut; the crest not so highly developed; the withers more pronounced and not so thick at the upper part, and there should be a line of demarkation between the neck and the withers. The general physiognomy should be milder, more gentle, and less impetuous. "WHIP."

Preparing Stallions for the Stud Season.

A majority of stallions used in the stud spend the greater portion of the year in comparative or complete idleness, and this is especially the case during the winter months. As the reproductive powers of any animal are largely influenced by his general health and condition, it is a matter of importance that stock horses that have been used as stated should be got into condition for the stud season. To do this properly takes time and attention. Judging from appearances, we are led to the opinion that many caretakers consider it necessary to have the animal very fat. This is a mistake. It is a recognized fact among those who pay particular attention to such points that very fat animals, either male or female, are not so potent as those in moderate condition. Breeding animals should be neither very fat nor very lean. As the recognized stud season commences on the first of May, there is now only two and one-half months in which to prepare the stallions. We think it unfortunate that the season should be practically limited to May and June. If the season could be extended to twice that length, there would doubtless be a much larger percentage of fertile services. But custom and convenience demand the limited season, and frequently a sire is bred to 100 or more mares during the two months, and to several of these twice or oftener. If we recognize what has been already stated, that a horse's potency depends upon his general health and constitution, we must also recognize that he should be in the pink of condition in order to enable his generative organs to perform with reasonable satisfaction the excessive duties required. In order to fit him for his work, we suggest the following treatment: Groom thoroughly twice daily. Feed good hay and oats, with a carrot or two or a turnip once daily; a feed of bran with a little linseed meal dampened with warm water twice weekly. He should get all the pure water he will drink. Exercise him regularly either in harness or on leading rein. If he has had no exercise during the winter, he should get little at first, say two miles walking exercise the first day or two and the distance gradually increased until ten to twelve miles daily is given. If a horse of the lighter breeds, the pace may also be increased, but if a draft horse it is not wise to go faster than a walk. Care should be taken to not tire him, but give sufficient exercise to develop and harden the muscles, which will also increase the activity of the digestive and respiratory organs. The quantity of food given should be in proportion to the amount of work performed. If, after having gradually increased his work until the maximum is reached, and having also attended well to the grooming, his coat is not shedding properly, it is good practice to cover him well with blankets some nice warm day and exercise him until he perspires freely; then rub him briskly until he is dry. Repeat this if necessary in two or three days, and it will be found that he will begin to shed. Keep the general treatment up daily (Sundays excepted, when the exercise should be dispensed with, as he requires one day's rest in the week), and by the time he is required to go on the route he will be in good condition. If he is standing in his own stable instead of going on the road, the daily exercise should be continued. Avoid giving medicine either to get him in condition or to cause him to perform the functions of a sire during the season. As with other animals, medicines should not be given except in cases where there is disease. If he should refuse to serve, let him have a few days' rest, and then do not overtax his generative powers. There are certain drugs that will increase venereal appetite and cause him to serve, but the service under such circumstances will be unfruitful, will not increase the revenue, and will give the horse the reputation of impotency. It is better to breed to a limited number of mares and produce a large percentage of foals than to breed to a large number and have the percentage small. "WHIP."

The Stallion Business.

At the present time abundant opportunities are being offered to private individuals or companies (syndicates) of farmers to become possessed of good draft and light stallions. The amount of money involved in the investment, and the scanty encouragement received from one's neighbors, often deters a farmer from investing in a first-class horse. Collections of stud fees are hard to make, people do not return mares regularly during the season, and often abuse the mares and thus militate against their chances of raising living foals. The company system in many cases works well. For example, we cite the Bradwardine Stock Company, which owns the Clydesdale Montauk. One of the essentials to be observed in starting a syndicate is to have one or two good judges in the company of the class of stallion required, and send them to select a horse. The other way of bringing a stallion to a district and then picking up the company does



DIRECTUM, 2,051. The champion four-year-old trotter of the world, also champion trotting stallion of the world for seven years. (See 'Gossip'.)

not give the syndicate any selection: on the other hand, all the probable members get a chance to see the stallion. In any case, the syndicate method opens the way for one man of the outfit to make a pull at the expense of his brother (!) farmers. The ideal way is undoubtedly private ownership and the avoidance of travelling of the stallion. Fees are hard to fix; about \$1.00 for every hundred invested will be found to be not very far astray. One difficult point of the company system is to get a reliable person to take care of the stallion. The Bradwardine people have hitherto had one member of the company look after the horse and do the collecting, for which he was paid \$200 a year. In the company system a higher price is always paid for the stallion than by a private person. A company can only be successful if made up of farmers who are business men of unquestioned financial standing, and whose opinions carry weight in the community in which they live. An aggregation of such men owning a good sure horse will be able to command such patronage as to make the venture a profitable one. The stallion-patronizing community cannot expect to get the services of a good stallion, whose colts will sell well, for nothing. Five dollars difference in stallion fees between a mongrel and a well-bred, well-built stallion often means a difference of fifty to one hundred dollars or more in favor of the progeny of the well-bred horse at maturity, yet both colts cost the same to raise to the selling or working age. The motto of all breeders should be, "The best is none too good!"

Two striking features proposed for the St. Louis World's Fair in 1903 will be a model town or city and a model farm connected by a model highway.



## FARM.

## Fall Wheat in Alberta.

Thinking some of the readers of the "Farmer's Advocate" would like to hear of the success of fall-wheat growing in Southern Alberta, and as it has been mentioned several times in the "Advocate," I contribute the following, that the great success of the fall-wheat crop may be better known and understood:

Having lived some thirty years in one of the best fall-wheat counties in Ontario, and fall wheat being one of our main crops, I have had a good deal of experience in growing and cultivating this important cereal. I came to the Pincher Creek district with the expressed intention of seeing for myself what success fall-wheat growers were meeting with, and after having seen the crops of 1900 and 1901 threshed, I am pleased to state I never saw such splendid crops, yielding from 40 to 60 bushels of fine plump grain per acre, and under what we in Ontario would call very poor cultivation. One piece, containing six acres, I watched with particular interest, as it was situated in one of the most exposed places in the district, with no shelter, except a barb-wire fence.

The land was broken in June, 1900, and wheat sown on 20th of July of same year, and was very poorly cultivated, but it yielded 47 bushels of fine wheat per acre.

Had this piece of land been broken the year before and backset, the yield would have been much heavier.

At the present time of writing, January 16th, many fine pieces of wheat can be seen as fresh and green as the same crop would be in Ontario in November, although it has not had a particle of snow to protect it; the climate and soil being admirably adapted to its growth, the soil never heaving nor the wheat icing over, which are the main causes of failure in Ontario. I might add that fall wheat has been grown for eight or nine years in succession by one party without a single failure, and at no distant day the Pincher Creek district will be as noted for its millions of bushels of fall wheat as it has been in the past for its large production of prime beef cattle.

Pincher Creek, Alta.

FARMER.

## The Clover Catch.

To the Editor "Farmer's Advocate":

Sir,—In reply to your enquiry re clover-growing, I have not yet succeeded in finding any plan that is always successful in securing a catch, nor am I satisfied with our present uncertain methods of seeding to clover on our clay lands. My best success has been in sowing on fall wheat early in spring, before the snow has all gone or the frost is completely out of the ground. Last year we harrowed the wheat, when the ground got dry enough, with good results, as we had an excellent catch. Quite a number of my neighbors have commenced growing rye in order to seed the land to clover, as the wheat crop is so uncertain. I want the clover, but not the rye. In seeding with spring crop, we should seed with the earliest crop sown, and I think we stand a much better chance of a catch if the land has been top-dressed with manure during the winter. I think that when we sow clover seed with the seeder attached to our drills, no matter before or after the hoes, much of the clover seed is buried too deeply. I think it would be better to roll the land after the drill, then sow the clover seed by hand or a hand-seeder, and then run a light harrow, or, perhaps, better still, a weeder over the ground to cover the seed. I have for some years been of the opinion that it would pay to seed our land to clover alone or with a very thin seeding of oats to be cut for fodder. This, I think, would be a pretty sure way of getting a catch, and we may find it necessary to adopt this plan in the future.

Peel Co., Ont.

J. PICKERING.

## The Farmer's Workbench.

The farmer of to-day needs to be something of a carpenter as well as a tiller of the soil. A workbench is essential, and also a set of good tools, which need not be costly. The following list of tools will be found to be ample, and yet contains only those essential to good and quick work: Hammer, crosscut saw (8 teeth to the inch), rip saw (6 teeth to the inch), steel square, chisels ( $\frac{3}{4}$ ,  $\frac{1}{2}$ ,  $\frac{3}{8}$ , and 1 inch), brace and bits ( $\frac{3}{4}$ ,  $\frac{1}{2}$ ,  $\frac{3}{8}$ ), keyhole saw, try-square, pair of dividers, gauge, jack-plane, fore-plane, smooth-plane, draw-knife, hand-axe, oilstone, and bevel-square. The entire outfit can be purchased at a hardware store for \$10. A well-equipped workshop means many an hour or trip to town saved when breakages occur. Once the outfit is secured, it should be put into a place of its own, and whenever tools are removed for any purpose they should be restored to their places as soon as the work is done. Little benefit will result from tools allowed to lie around anywhere.

## Why Was the Central Farmers' Institute Abolished?

To the Editor "Farmer's Advocate":

Sir,—Dr. Mills, who organized the Ontario Farmers' Institutes, knew well the importance of an agricultural education such as can be got at the Ontario Agricultural College, but he saw that not more than five or six in a hundred farmers would be able to come to the College. The next best thing was to bring the College to the farmer. The Farmers' Institute, then, should be looked upon as college extension, and in this respect it has been eminently successful. But as a farmers' organization its usefulness has been destroyed. The Institute, as first organized, had a head, or what was known as the Central Farmers' Institute, which was to meet once a year at Toronto, and was composed of delegates appointed by each local Institute, with an executive board. At the last meeting but one of the Central Farmers' Institute at Toronto, composed of 111 delegates, this resolution was adopted by 91 against 17: "We recommend that the Institute pass a resolution urging the Dominion Government, of whatever composition it may be after the approaching election, to promptly take all proper and possible steps to secure absolute free trade with the United States and Great Britain, believing this would be of immense benefit to the Canadian farmers." How far this resolution affected the next election, I do not know, but I do know that a Government pledged to protection was defeated and a party pledged to reciprocity and tariff for revenue only was elected. This Central Institute was the only organization where the farmers could speak as one man. It will be seen at once to be a dangerous body to any Government that wished to tax the farmers for the benefit of other organizations. If the Central Institute had not been abolished, Laurier, Fielding and Tarte would not have made the statements that were made by them at the manufacturers' banquet. They know too well that the farmer is helpless while he is isolated and will be the Issacher crouching between two burdens—taxed upon what he sells and taxed upon what he buys—until he has organization. Why was the Central Institute abolished? It does not require a great deal of sagacity to see that it is much easier for the Government to control a one-man head, if he has a comfortable salary, than to control a representative body of over one hundred independent men untrammelled by position or emoluments. The Farmers' Institutes were not consulted in the change. The Superintendent, however, met the Institute boards with a new set of by-laws. One of these was, "No political subject must be introduced or discussed in any Institute meeting." This by-law fully justifies the conclusions I have drawn. I would ask the framers of this by-law what is and what is not a political subject? Agriculture comes under legislation, and I suppose is a political subject. So is education. Even the marketing of our products comes under governmental supervision (if by chance it goes to the British market). We may, of course, send any trash to the United States market without governmental interference. But to the British market! On our bended knees we are to beg the Britisher to accept our very choicest beef, mutton, pork, and poultry, the choicest red apples and double-yolked eggs. Commissioners and assistant commissioners must plead for us. The Government, smilingly, with hat in hand, pulls down the great tariff bars. Now, in short, sum it all up, and tell us how much you have got for all your smiling, bowing, scraping, hand-licking and tail-wagging. Nothing—simply nothing. Our big brother Jonathan, without as much as touching his hat, has all the privilege in the British market that we have, and after he has devoured all our cull cattle and cull apples, we are still waiting for Washington to come to Ottawa. All this and more to preserve the dignity of the nation. I can think of nothing less dignified in parliament or press than this low, senseless drizzle of loyalty. Let us forever have an end of this miserable sham and get down to business. Be honest! Be courteous to all, but cringing to none!

Middlesex Co., Ont.

## Difficulty of Growing Clover.

To the Editor "Farmer's Advocate":

Sir,—I recognize the importance of your query. The difficulty of growing clover in this section (heavy clay) hampers our farm operations much. The general practice here in seeding is that of sowing broadcast or drilling on spring grain, harrowing after and sometimes rolling. The amount of seed sown per acre, owing to poor catches, no doubt is not as generous as would give best results. Sowing on fall wheat and rye has not met a much better fate than on spring grains. Top dressing with barnyard manure greatly aids the young plants in dry weather, especially when bedding is cut short. The practice of sowing in late fall or early winter (before snow falls) on some soils has been successful and deserves a trial.

Peel Co., Ont.

J. A. B. SLEIGHTHOLM.

## Speltz (Emmer).

To the Editor "Farmer's Advocate":

I noticed in your paper recently a good deal of interest shown in speltz. I have grown a considerable quantity of this grain the last two years, and have been well pleased with the results. During the season of 1900, when other grains, including oats, were a failure practically, a field of speltz averaged 1,750 pounds to the acre, against 950 of oats and 600 of wheat. Last spring I sold a considerable quantity for seed to farmers in this district, all of whom report to me very encouraging returns. Mr. K. McIvor's yielded 60 bushels per acre (48 pounds to bushel), and R. Langtry from 6 bushels of seed threshed 243 bushels. My own crop, while a good one, did not go quite so much, because I put the bulk of it on pretty rich land, and the straw grew so rank and long that a good deal of it became lodged. However, I had 50 bushels to the acre, and getting it threshed early, before the heavy rains set in, have a beautiful bright sample. I have been feeding it by way of experiment, and am very highly pleased with the results. I think horses and cattle will put on flesh more rapidly on speltz than on oats, and while I have not fed any to poultry, have heard it highly spoken of as well suited for all kinds of fowl. Have fed considerable of it to hogs, but found it necessary to crush it to get the best results, and I know of no other feed, if treated in this way, that will put flesh more rapidly on this animal. With horses, it is just as well to feed it whole, as the kernel is pretty well protected with a thick hull, causing the animal to chew it pretty thoroughly, with little tendency to bolt the food. With regard to the most suitable soils on which to sow it, I am in favor of a sandy loam. Indeed, it may be sown on a very light soil and produce a good crop, where oats on the same land would be almost a failure. It should not be sown later than the 10th of May, and the first of that month is even better. I found in my case it took a little longer than oats to mature. This grain is grown to a considerable extent in Dakota and Minnesota, and I believe is becoming popular there. Prof. Worst, of N. Dakota Agricultural College, told me that from a careful comparison made in feeding stock, that in nutrition it was fully equal to barley, while yielding 25 per cent. more. Prof. Zavitz, of Guelph College, made a similar statement to me when I visited there two weeks ago. I wrote Mr. S. A. Bedford, Supt. of Brandon Experimental Farm, and received the following letter from him:

Brandon, Dec. 28th, 1901.

Mr. H. S. Simpson:

Dear Sir,—Your letter of 24th inst. received. We have tested speltz for two years, and find that the yield is larger than that of any other grain grown by us. I enclose herewith a memo. giving the yield for each kind of grain this year as compared with speltz.

Yours truly,

S. A. Bedford, Supt.

## COPY OF MEMO.

## SPELTZ VS. WHEAT, OATS AND BARLEY.

Kind of Grain.	Weight of Grain per Acre.
Speltz.....	3,080
Mensury barley.....	2,320
Red Eye wheat.....	1,720
American Beauty oats.....	2,320

I may add, in conclusion, that I have found the straw an excellent fodder, and that both horses and cattle seem to prefer it to either oat or wheat straw.

HAVEY C. SIMPSON.

Wallace Municipality, Man.

## Beef Ring of 24 Members.

To the Editor "Farmer's Advocate":

In reply to your enquiry, I would say that for our beef ring I cut by a 16 chart, the beef being first divided as though there were but 16 members, then these 16 whole shares are divided and subdivided into halves or thirds, as required to supply the whole number of members in the ring. Some members may take a whole share, while others may take only half or one third share.

We slaughter 24 animals, and ring thus runs 24 weeks. Eight of the half or third share men draw tickets to supply the eight extra animals.

There are thirty-three persons getting meat from our ring. Each person, or member, is debited with number of pounds of meat he receives, credited with weight of animal put in ring; at end of season he is charged with or paid for at a fixed rate for the amount he is debited or credited with. Any member who does not supply a beef thus pays for total number of pounds he has received, at the fixed rate.

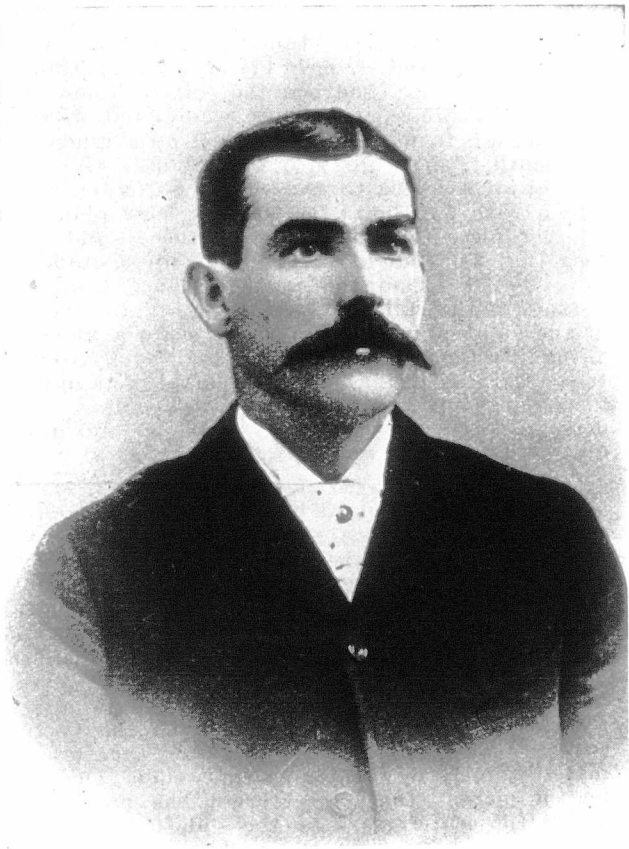
I know nothing whatever about a 24 chart, and can give no information as to how you can obtain such.

RICHARD PORTER

Simcoe Co., Ont.

Regularity in feeding is as essential during the idle time of horses as it is when they work hard. Feed wholesome food and at regular intervals.





MR. THOMAS R. BROWN, REGINA, N.-W. T.

One of the Wheat Kings.

As shown by the tabulated statement of some of the big crop growers in our Christmas issue, Thos. R. Brown, Regina, a portrait of whom is herewith reproduced, had a total crop of 27,640 bushels off an area of 1,072 acres. The following further statistics will be of interest. The custom in many parts of the Territories is to take two crops off after a summer-fallow without plowing, and this system Mr. Brown says gives them better results than either spring or fall plowing.

The second crop without plowing is called a stubble crop. Sometimes this follows backsetting, but generally a summer-fallow. The yields obtained by Mr. Brown on the several plans of cultivation are instructive, showing strongly in favor of summer-fallow.

WHEAT.			
Cultivation Given.	Acres.	Average.	Bushels
Summer-fallow.....	132	45	5,840
Breaking.....	160	36	5,760
Summer-fallow stubble.....	75	32	2,400
Breaking stubble.....	130	18	2,340
Total.....	497	33	16,340
OATS.			
Summer-fallow.....	45	90	4,050
Summer-fallow stubble.....	85	50	4,250
Breaking stubble.....	75	40	3,000
Total.....	205	60	11,300

These figures speak plainly enough, but we would just call attention to one item, that of the 160 acres of breaking yielding 36 bushels per acre. Allowing \$4.00 per acre for the breaking and backsetting, and \$7.00 for seeding and harvesting, it would leave \$7.00 per acre to pay for the land, the 36 bushels per acre being worth, at 50 cents, \$18.00. Now, there are thousands of acres all through the West of choice wheat land that can be bought for less than \$7.00, and that, if properly handled, will be as likely to produce enough wheat to pay for them in one year as in the above case. And this is only one instance of thousands that might be cited. Talk of the possibilities of the West!

Measuring Rows in Corn Cutting.

To the Editor "Farmer's Advocate":  
N. R. G. asks, in the "Advocate," for a rule to measure a field of Western corn.

For convenience in measuring the length of the rows, I have a string tied on the wheel of my corn binder, which measures off 10 feet every revolution it makes. I count the turns it makes while I am driving along. Multiply the number of turns by 10, and you have the length in feet. We use the average of 22 rows 40 rods long for one acre, then the distance the rows are apart does not make any difference. Example: If the wheel makes 33 turns, 33 x 10 equals 330 feet or 20 rods; 66 x 10 equals 660 or 40 rods. If the rows are 20 rods long, then 44 of them will make one acre. Eighty rods long will take 11 rows for one acre.

We usually charge \$1.00 per acre for Western corn, but if the rows are under 20 rods in length, or we have to drive one side without cutting, we charge \$1.25 per acre, the farmer supplying the twine or paying for it.  
A. M. S.  
Lennox Co., Ont.

As you train the colt to harness and saddle, train it to walk fast.

Farm Management.

Prof. J. H. Grisdale, Agriculturist, Dominion Experimental Farms, on January 25th, at Amherst, addressed the members of the Nova Scotia Farmers' Association on the subject of "Farm Management." The subject was well received and opened up an interesting and lively discussion, and a brief review of the address is here given:

Our conception of success in farming to-day is broader, our efforts, therefore, let us hope, shall be more happy in their results. Success to-day to the average farmer means: (1) An increasing income from his farm; (2) an increasing fertility of his farm; and (3) an increasing air of homelikeness, beauty and neatness about his farm. These three conditions, making up our ideal of success, are so closely interwoven in their bearings and connections as to be inseparable. Most things have a limit; the development of the farm, so far as I can see, is limited by no hard line. Like the horizon, the apparent boundary recedes as we advance and is ever in the dim, hazy distance, ever receding. Ours be the joy of hastening its retreat.

Just as the past history of Canadian agriculture has been summed up in the phrases, "grain growers," "soil robbers," so must the future history be epitomized in "clover growers," "farm builders."

Immediately under the dead leaves of our forests lies a more or less deep layer of black material. This is known as humus. The chief reasons why our arable soils are no longer as fruitful as of old is the lack of this humus. The influence of humus upon a soil is most startling. Consisting as it does of decayed vegetable matter, it is exceedingly rich in plant food in very available forms. Its presence prevents the escape of fertility from any soil through washing, and is, therefore, valuable to all soils, not alone as a substance rich in fertility itself, but as a retainer of fertility otherwise likely to be carried off by surface water or worked down beyond the reach of common roots by percolation. In brief, it improves the physical condition of a soil. Humus being so great a factor in soil fertility, how shall we get it? How shall we increase the store, and how retain what we gain? Farmyard manure is a fruitful source, but farmyard manure is scarce, and being scarce, it follows that the increase will be slow. Another source is sod. Everyone knows the rich soil giving such relatively heavy crops after a sod has been turned over. It seems odd that the average farmer has not, generally speaking, availed himself at shorter intervals and with more regularity of this evident means of increasing his crops. Lack of humus or irregular or uncertain treatment of a soil are the two most common and injurious mistakes of present-day agriculture in Canada, but both are easily remedied. The remedy is expressed in one word, rotation. A regular succession of crops. Let me suggest one. It is of four years' duration: 1st year—roots, ensilage corn, potatoes, and peas; 2nd year—grain seeded down to clover and timothy; 3rd year—hay (chiefly clover); 4th year—hay or pasture plowed in August.

Nature, you will observe, puts her humus on the surface. Judging by the rank growth of vegetable matter in our woods, it is a good plan. Experiment has proven time and again that it is the best plan. The earliest and most important root extensions of any plant are near the surface; the percolation of water tends to carry fertility downwards. Therefore, theory would say keep the rich soil on the surface, the lower soil will look after itself, especially where some deep-rooting plant, as clover, is grown at intervals. Nature, experiment and theory unite in recommending that the humus be kept near the surface. Then who shall be so bold as to say nay? The introduction of such a system of rotation and cultivation on any farm has many advantages. To be brief:

- 1—It increases the fertility or productive power. It has been known to double the returns in a short time.
- 2—It lessens to a minimum the danger of a failure to catch when seeding down.
- 3—It lessens the labor of cultivation, for there is only one shallow plowing to do once in four years.
- 4—It facilitates farm operations by having all the work of a certain kind in one field.
- 5—It lessens the cost of fencing, for there need be only four fields on the farm.
- 6—It is an incentive to orderliness, tidiness; a little bit of system induces more.

New Use for Windmills.

In a lecture before the students of the College of Commerce and Administration in Chicago, Mr. F. H. Head foreshadowed the establishment of a forty-mile circuit of windmills all around the city, running dynamos which would charge storage batteries with electricity to light the entire city. Edison's new storage battery is said to be capable of storing power successfully, and even though the wind were not constant, enough could be generated when it did blow to supply the electricity needed.

Clover Culture.

I would say that as a result of observation and some practical experience, the very first essential in successful clover culture is to have the soil in a proper chemical and mechanical condition. It is a common belief in this section that unless the soil be properly fertile a paying clover crop is impossible. But I am inclined to think that probably the mechanical condition has more effect than the lack of fertility. Removal of the forest, successive cropping and other causes have so changed the character of our soil that its moisture-holding power is at a minimum, consequently the natural conditions for the germination of seeds, particularly such fine ones as those of clover, are not present, and the result is a very low percentage of seeds sprout. I have frequently noticed on clover-seeded land that the only place there was any "catch" was in the fissures of the soil (caused by the drying process), where the ascending moisture had produced conditions which enabled the seed to germinate. Again, on our rolling land, it is the rule to find the hollows much better cropped than are the knolls, which, usually having less humus or vegetable matter, dry out more quickly. I have also noticed that damp weather during the germinating period has a wonderfully beneficial effect.

In view of these facts, I think that in the successful growing of clover we should by every means endeavor to increase the moisture-holding power of the soil. And it is probably owing to this cause that our best success in getting a catch is usually on winter wheat, the clover seed being sown on a light covering of snow, or at least before the ground dries up in the spring. This is particularly advisable for light land. On heavier soils in fair tilth, excellent results are often obtained by seeding with any of the spring grains, but particularly barley, following a hoe crop. This is a favorite method, but conditions as to soil and moisture must be right and cultivation careful.

The after treatment is of great importance. It is often during the hot days, just after harvest of the nurse crop, that the growth of the young clover is retarded. Too many are in the habit of letting the stock graze the life out of the young shoots the first year. Moderate grazing is not always detrimental, and sometimes may even be a help, and no doubt would be really advisable if we could only rely on its being evenly cropped, and not too closely, as it would tend to make the plant stool out more. For this reason, cutting high with the mower in autumn, after the grain harvest, is advisable, and it also leaves a mulch of leaves, stalks and stubble, which protect the tender roots from excessive drouth.

Protection at this time, causing vigorous growth, will also materially help to prevent heaving during the next winter and spring. But the best preventive of this is a well-drained soil.  
South Perth. J. H. B.

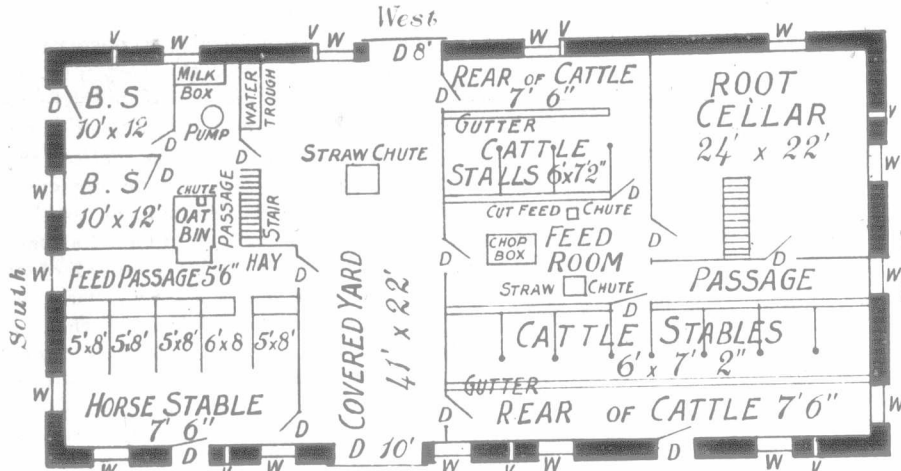
The Benefits of Fasting.

A majority of the diseases, excepting the contagious ones, are due in live stock to mistakes in feeding: sometimes too much feed, sometimes insufficient feed, and more often irregular feeding. As examples we find colic in horses, thumps in pigs, apoplexy and other troubles in poultry. In all cases due to overfeeding, one of the essentials to success in treatment is a fast. Sick horses should not be allowed to eat hay all day, as many of them will do and often hinder nature's efforts at repair. With sick fowls, when the cause and disease is unknown, place in a coop and fast for 36 hours.



MR. JOHN D. ROSS, ELGIN, MAN





BASEMENT PLAN OF MR. WM. H. WESTNEY'S BARN, ONTARIO CO., ONT.

**Combined Horse and Cattle Barn.**

The barn illustrated herewith was built by the late Stephen Westney, of Ontario county, in 1901. The short posts are 17½ feet, while the purlin posts are 26 feet. Barn is 93 x 45 feet. The cattle-stable floors are all cement, and also feeding passage for horses. The gutter behind the cattle is not a ditch, but drops about 5 inches just behind them, and then runs for about 22 inches level; then it raises 2 inches in the distance of 5 inches, and then runs with a gentle slope to the wall. The cement was finished rough with a wooden trowel and is not found slippery; the bedding remains on it even better than on plank. The racks are low and the mangers have cement bottoms, but raised about 2 inches higher than where the cattle stand. The places in the wall marked V are ventilators, and are 5-inch sewer pipe placed about 3 feet from the floor. They work very well except in windy weather, when they are stopped by butting in a handful of straw. The horse stable is planked with pine in the rear of horses and maple in the stalls, all bedded in mortar. All the manure is put in the covered yard and cleaned out when full, spreading it immediately on the ground. Several calves can be tied behind the cattle; several yearlings run loose in the covered yard, thus making room for over thirty head. The granary floor and sides are dressed hemlock, while the bin boards are basswood. The 10-foot space adjoining is a continuation of the granary, with open ends, which we use for the cutting box, grinder, etc. The straw chutes are coops built up about 3 feet high, with perpendicular doors hung from the top, so that when the straw is shoved against them they open. The basement is roomy and well lighted, twelve windows, containing eight 10 x 12 inch panes (one half sliding past the other), let in the light. They have a 2 x 4 inch support in the center. There are also fanlights over all the small doors. There are also windows above each of the east barn doors and tip doors in ends of barn.

WM. H. WESTNEY.

**A Vivid Idea.**

Dear Sir,—I have to thank you for sending me your Christmas number of the "Farmer's Advocate." I would have sent this acknowledgment before had I not been away on my holiday.

It certainly is a most creditable production, and for one who, like myself, was brought up upon a Canadian farm, the reading matter and the illustrations are alike deeply interesting. The copies of photographs are in many cases wonderfully good, and give a most vivid idea of what farming life is like in different parts of our wide-spread country. Work such as yours must help to make the life of the farmer, and especially of the farmer's boy, more interesting, and I know of few things more desirable for Canada than this.

With thanks for your courtesy, and with every good wish for your work in the future,

Believe me,  
Yours sincerely,  
GEO. R. PARKIN.

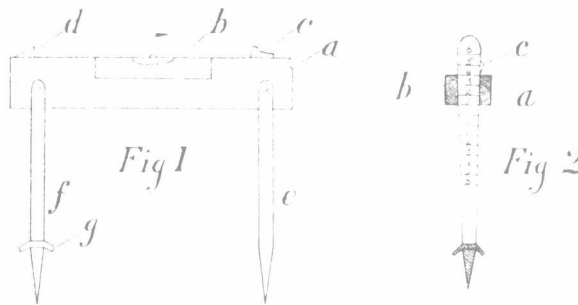
Upper Canada College, Toronto, Jan. 24, 1902.

**New Chief Veterinary Inspector.**

Dr. D. McEachran, of Montreal, has resigned his position as Dominion Veterinarian. He has been succeeded by Dr. J. G. Rutherford, ex-M. P. for Macdonald, Manitoba. The latter spent last year in Great Britain, testing for tuberculosis cattle intended for shipment to Canada. Dr. McEachran's services will be retained in an advisory capacity. He will act as honorary veterinarian, at a salary of \$1,000. Dr. Rutherford's salary will be the same as that paid to his predecessor, \$2,500 a year. For many years Dr. Rutherford was a successful veterinary practitioner at Portage la Prairie, is an enthusiastic horseman, taking at all times an active interest in the advancement of his profession, the breeding of improved live stock, as well as the public affairs of the country. A portrait of the Doctor appeared in our last Christmas number.

The value of underdraining is now so well understood that nothing need be said as to that point. Many a farmer who knows the value of drainage hesitates about undertaking to drain a piece of wet ground because the natural outlet for the water is through the land of some neighbor who is not willing to spend the money to drain his land. It may be because he has the land under pasture, or it may be out of pure "cussedness," and in the hope that his neighbor's necessity will afford him the opportunity to get his land drained largely at his neighbor's expense. In either case, the man whose land lies the highest, but is flat, often suffers for years rather than call in the services of the township engineer and risk incurring the enmity of the neighbor from whom, if he follows the natural water course, he must seek an outlet.

"I have known many such cases, and more than once have been able to afford relief to the sufferer without troubling the man through whose land the water would have gone to the natural outlet, and have, at the same time, given the man who sought the outlet a far greater benefit by taking the water off the natural course to a stream or large drain on his own farm. And I



DEVICE FOR TAKING LEVELS.

have seen very expensive lawsuits between neighbors—suits which cost more than the drains—which might have been avoided by the exercise of a little common sense. It frequently happens that the water from a piece of ground can be taken off in opposite directions with practically the same depth and size of drain. Draining in one direction, towards a neighbor's farm, may require only a few rods of drain to reach the line fence, but a great many to reach a natural outlet; while draining in the other direction may mean the digging of three times as many rods as the distance to the line fence, but to a good outlet on one's own land. In every such case, it is unwise to trouble the neighbor. Drain your own land with the labor you would have to expend in digging what the engineer would likely award as your share of the drain through your neighbor's land.

"First, you must ascertain that you have sufficient fall to your own outlet. Say the distance from the place you wish to drain to the outlet is 60 rods. You wish to have your drain two feet deep in the shallowest place. Find the place where the water stands deepest, and you have the place where your drain will be the shallowest. Take your level from this point to your outlet, and if you find that you have a fall of fifteen inches in the 60 rods do not hesitate to put in your drain.

"It is important that your levels be taken correctly, and as you have not a surveyor's instruments you must find some of your own. Get a piece of board seven inches wide and four feet long, 1½ inches thick; make the edges parallel (a, fig. 1); cut a gain in one edge, and fit in a good spirit level (b, fig. 1); cut a V sight at one end (c, fig. 1) and a pin sight at the other (d, fig. 1), taking care

**Draining, and Device for Taking Levels.**

So much draining is required, and so many improperly-laid tiles are wasted, that the accompanying article and cuts will be of interest to our readers.

A correspondent who has laid-out many drains writes: "There is no necessity for employing an engineer to take levels and settle disputes about drains if farmers are intelligent and agreeable.

that the bottom of the V is exactly the same height as the top of the pin. Make two legs (e and f, fig. 1) of 2½ x 2½ timber, 4 ft. 6 in. long; sharpen the ends of these and on f put a collar (g), or bore a hole and drive a pin through 6 in. from the point, as a guide for the depth it is to go into the ground. Gain out the top of each leg to receive a, and fasten e and f to a with two bolts, as shown; now plane out another piece of timber 1½ x 1½ inches and 8 ft. long (fig. 2); put a collar or pin for a guide, as in g, fig. 1. Find the exact distance from the bottom of the collar or pin (g, fig. 1) to the top of the sight pin (d, fig. 1), and make a mark on a (fig. 2) the same height from the bottom of the collar as d (fig. 1), and make and number inch marks up and down from this point; now make a target (b, fig. 2) to slide up and down, and hold in place with a wedge (c, fig. 2).

"Now, to find the amount of fall from the lowest point of land to be drained to the outlet, take the staff (fig. 2) to the outlet and drive it into the bottom of the water course the depth of the collar or pin, whichever is used. Take the level (fig. 1) to where you wish to commence your drain; force the front leg (f) into the ground to the collar and the rear leg (e) down until the bead stands in the center of the spirit level; look over your sights and direct your assistant to raise the target on the slide until the bottom edge is in line with your sights, and then let him fasten it there by tightening the wedge. The number of inches that the target has been raised above the center mark on the slide is the amount of fall you have from the surface of the ground where you wish to commence to the bottom of the water course which is to serve as your outlet. Deduct from this the depth you wish to have your drain at the upper end, and you have the true fall. Say this is 15 inches. Now divide the length of your drain into ten stations; this gives you an easy distance to sight—six rods—and a fall of 1½ inches for each station. At the first station you find that to bring the target level with the sights it has to be lowered 10½ inches below the center mark. This means that the surface of the ground here is 10½ inches higher than where you wish to commence your drain, and that to level the drain it must be dug 34½ inches deep at that point, and to give the necessary fall it must be 36 inches deep at station No. 1; drive down a picket here, marked No. 1, 36 inches. Now go to station No. 2 and set up the stake; move the level to No. 1 station and set the front leg in the hole left by the stake; level and sight as before, and make your calculations as before. Continue to the finish, and if care is exercised in doing the work, there is no fear of the drain not working."

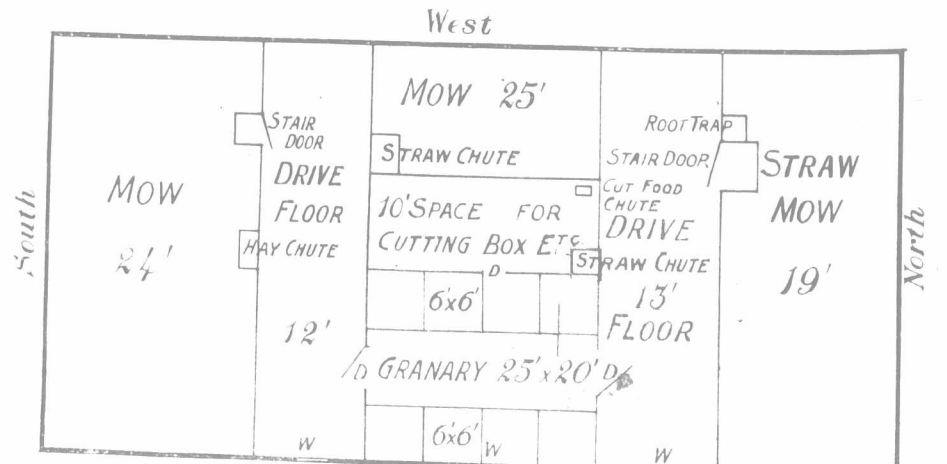
**Implement Manufacture in Canada.**

We notice by the local press that the Deering Harvester Company, of Chicago, some time ago secured the Mann Works, of Brockville, Ont., turning out seeding and tillage machinery for the Canadian and export trade largely in British possessions. The firm now purpose establishing, at some suitable Ontario center, entirely new works for that department of their business, comprising six large buildings, besides powerhouse, with 25 acres of land, and employing, to begin with, 1,000 hands, to be subsequently increased to 2,000 as the demands of business may require.

**The Harrow in Clover Seeding.**

We have had best results with clover when sown at same time as the fall wheat. We have also had good results by sowing in the early spring on the wheat field, and then using the harrow to cover the seed. On our land, which is rather light, we had poor results when we neglected to use the harrow. When seeding with oats we try to sow early, and have found ashes to be a great help in getting an even catch. Almost all the crops are fed and returned to the farm, and each year brings better results.

Middlesex Co., Ont. F. W. CREALY.



UPPER FLOOR PLAN OF MR. WM. H. WESTNEY'S BARN.



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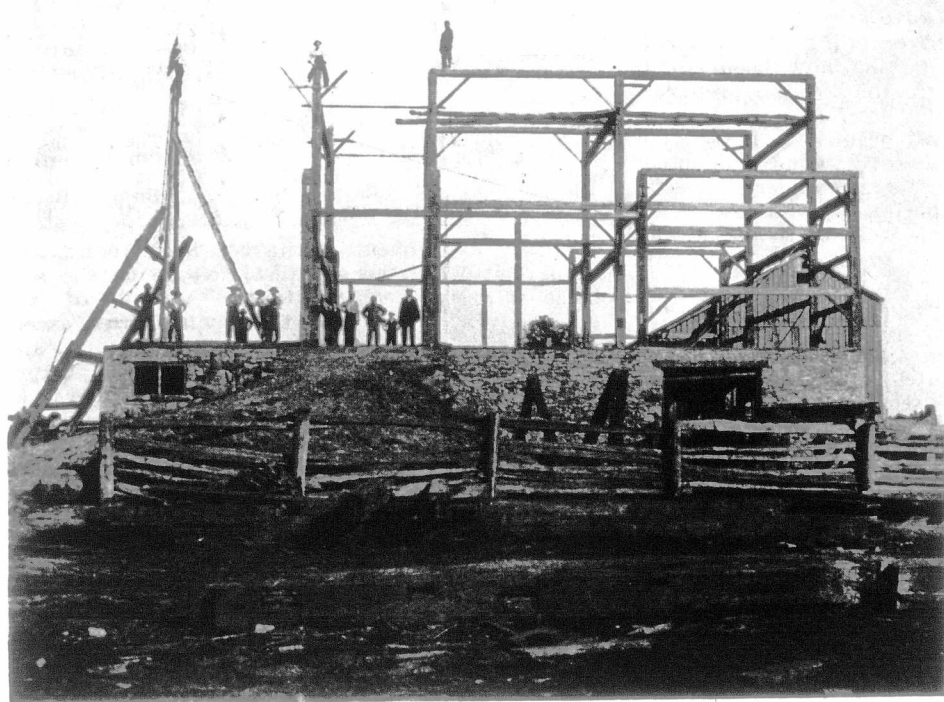
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NO. 1 MR. T. EARLY'S BARN RAISING, HALTON CO., ONT.

Modern Barn Raising.

BY JOHN D. M'GREGOR, HALTON CO., ONT.

In your issue of July 15th, 1901, I gave a short sketch of the method adopted by the farmers of Halton Co. for raising barn frames. Many farmers are just now planning for building next summer, and some light on this subject may be helpful to them. I have been favored by Mr. Grant Johnston, of Alloo, Peel Co., inventor and operator of the jerry with which the work is done, with a number of photos taken while at work. No. 1 is a building owned by T. Early, size 56x75, raised with the assistance of four men in eight hours. No. 2, owned by Mr. Griffen, size 56x80, raised in nine hours. No. 3 shows the work being done in a somewhat different way, the raising being done from the side, the cut showing a length of sixty feet being raised at once. The men owning the raising outfit bring the machine and four men. With the assistance of four men a barn is easily raised in a day. The cost is twenty dollars, and is a great deal cheaper than the old way.

While farmers appreciate this method for the upper story of their barns, many still take the old way of raising the lower foundation, or mud sills. When a large barn is being built and heavy timber is used, it generally takes a gang of 25 men to raise the mud sills, and if the wall is but recently built, there is danger of jarring it. This trouble can be easily avoided and the work accomplished better and quicker by two or three men. The following plan has been found to work well: Take three pieces of timber, 3x6 and 18 or 20 feet long, run a 3/4-inch bolt through one end of the pieces of timber, not making it too tight, so as to allow for spreading when raised. Now raise the three pieces and spread the bottoms so as to form a tripod. With a clevis attach a double block to the top of the tripod, the other block being attached to the timber. The single block through which the rope passes as it goes to the horses is attached to the bottom of one of the legs of the tripod. At the bottom of this leg a stake is driven firmly into the ground, and the chain which attaches the block passes around both stake and leg, and holds the tripod secure. The sill to be raised is drawn into proper position and the tripod raised over the middle of it. Attach the block to the sill, six inches nearer to the end that goes on the wall. Raise with the team, above the wall, swing into position and gently back the team. Then shift your block six inches to the other side of the center of the sill, and raise as before. The team can easily hold the timber until the posts are put into position.

When a sill has been raised the full length of the building, care should be taken to have only one leg of the tripod on the side from which the machine has to be moved. The moving then is easily done by tipping this leg over the sill. With a double block, two or three men can easily raise the sills of an ordinary barn in an afternoon.

Ontario Farmers' Institute Season.

From various points we are receiving encouraging reports of the large attendance and helpful nature of the Ontario Farmers' Institute meetings this season. Thoroughly practical subjects are presented and discussed in a manner well calculated to promote successful farming, and this is the object of the Institute system.

reproduced as are virtues. While it is often the part of wisdom, having found one to suit, to pay, if need be, a higher price for a bull than was intended, it does not follow that the

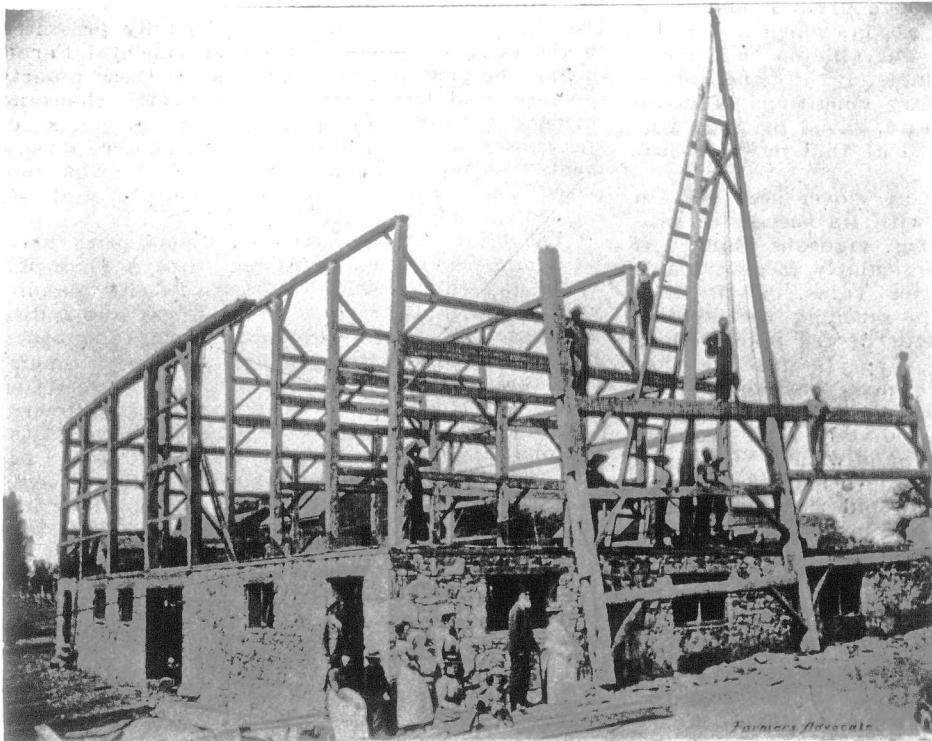
Buying a Bull.

If the bull is more than half the herd, which we understand is according to the revised version, special care should surely be exercised in the selection of a head for the harem. It may pay well to travel a long way and wait a good while to get the right type and quality of animal for a sire rather than take one that is near and is not what the herd requires in order to its continuous improvement. A sire weak in general character or in one essential point may do more damage to a herd in his term of service than can be undone in twenty years, as the weakness is liable to be perpetuated in his descendants to the third and fourth generation, and failings are as likely to be

stock shows in this country in recent years, in competition with pure-breeds, were not sired by bulls of middling quality or merit, but by champions in the show-ring at the leading exhibitions.

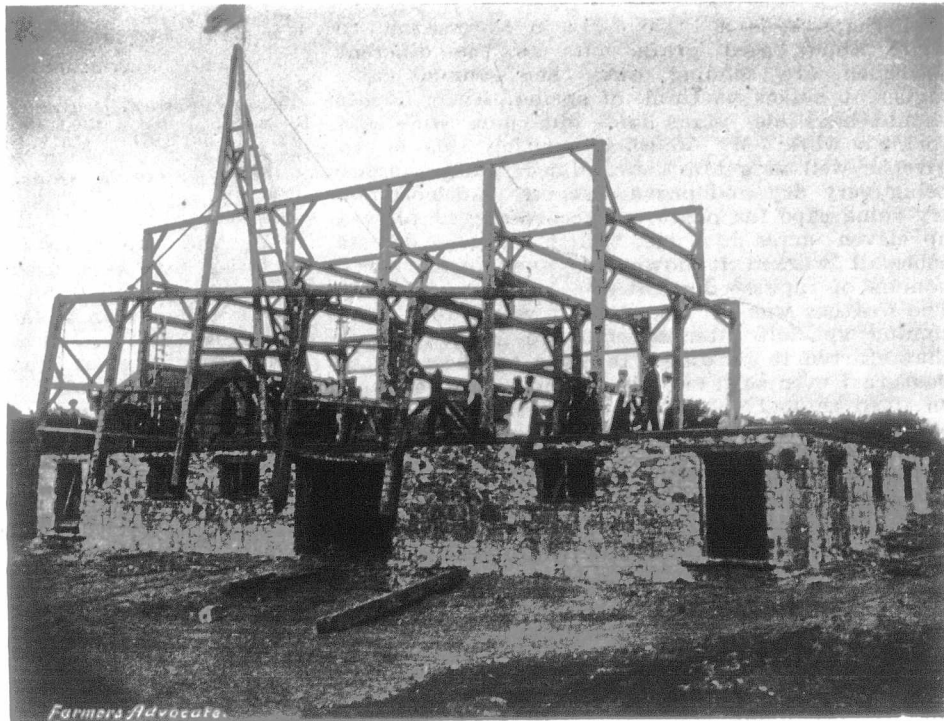
Most breeders, we presume, have an ideal in mind of the stamp of bull they prefer and require in order to the best results in the improvement of their herd, but it is often not an easy matter to find the animal that fills the bill, for first-class ones are by no means plentiful, and when found are sometimes beyond the reach of the seeker to obtain, owing to the price they are held at being higher than can safely be afforded. Let not the seeker be discouraged on this account and seek no further. It is probably true that there are as good fish in the waters as have ever been caught, and by looking further, another, if not as good in all respects, yet as good in most essential points, may be found that can be bought within the means of the purchaser, and if bred from good stock of the right stamp may give as good results as the other would. And this naturally suggests the thought that, as a rule, of course the best and safest place to buy a bull is at the home of the breeder, where the sire and dam can generally be seen, the character of other members of the family observed, and time taken to view him at leisure. There is no place where, as a rule, shipping of stock is so carefully done as from the home of the breeder, where feed and bedding is at hand and all the necessary precautions for ensuring safe and comfortable transportation can best be taken. Many a good young bull has been set back for months and not a few practically ruined by being taken from a warm stable in midwinter and compelled to walk for miles on a slippery road to the station, getting overheated, and then by standing, it may be, for hours in a station yard, exposed to the cold winds, and bundled into a drafty car without any covering in the way of a blanket. Every one professing to be a breeder should have a substantial cattle rack in which stock sold may be hauled to the station, especially in winter, when they should also be blanketed. The frequent complaints regarding purchased bulls being unsure breeders for a time after being removed from one place to another may well be traced to the long walk and the heating and cooling off incident to such changes, which upset the whole system and are apt to lead to lasting ills.

Wm. Peacock.—Replying to your enquiry re egg production, would recommend you to start on a small scale, and as you find it succeeding, use of the valuable information we publish on that subject. Try Plymouth Rocks or Wyandottes for a general-purpose bird, or Leghorns as egg-producers specially.



NO. 2.—VIEW OF MR. W. GIFFEN'S BARN RAISING, PEEL CO., ONT.

highest-priced is the best for you, nor that he is the best for any one except, perhaps, the seller. By looking a little further one may find a bull of the desired type that can be bought for much less money than is asked for others that would not suit the purposes of the purchaser nearly as well as the lower-priced one. The breeder who has a large herd of pure-bred females can afford to pay a higher price for a suitable bull, because he can use him to mate with so many, and thus secure a larger number of his progeny, but all the same the owner of a small herd cannot afford to buy a cheap bull if he is inferior or ranks no higher than mediocrity. Indeed, the farmer who has a herd of grades will make a serious mistake if he uses a pure-bred bull that is only middling in character and quality, for there is no place where a high-class bull shows his potency for good more clearly than in a herd of grade cows. The grades that have been winning the highest honors at the fat-



NO. 3.—MR. W. GIFFEN'S BARN RAISING.



**Fertility, Tillage and Clover Seeding.**

Clover, roots, and corn are yearly more and more becoming necessities in successful stock-raising, and in some respects clover is the most important, as usually it is easier to provide substitutes for the others, and the loss of a crop (partial or total) does not upset a rotation, as the failure of a clover crop will. Therefore, the ensuring of a good catch of seed is worth giving special attention to in our annual operations in the fields.

During the past ten years, not only with us but in the neighborhood generally, good stands of clover are the rule. Previously, it was different, and failures were not at all rare. In endeavoring to trace the cause or causes of improvement, three conditions come readily to mind, namely, fertility, tillage, and method of sowing. Soil generally is clay loam—medium to heavy—with considerable tile draining done in low-lying sections.

The increase of fertility has resulted from a complete change of system. Grain-growing and selling of grain have given place to (not less growing of grain in quantity, though acreage is reduced) a large increased feed production and the selling of nearly all of the productions in the finished products of beef animals, mutton, sheep, bacon hogs, butter, cheese, and poultry products. And the tillage has greatly improved; getting the land as fully prepared as possible in the fall, all plowing being then completed; the excellent implements provided by our manufacturers used freely to make a fine surface tith of two or three inches, making a proper bed for the clover seed to germinate in and quickly send out its rootlets to gather nutriment and strength to soon develop it so as to be beyond the danger of withering soon after the plant shows above ground, should a spell of heat and drought set in, which not infrequently happens. It is our opinion that many stands of clover fail completely at that stage simply because the necessary conditions of abundant plant-food and moisture, saved by good tillage, are wanting in the soil at that most critical time.

The place which the tiny clover seed gets in the soil has much to do with its success or failure in producing a strong, vigorous plant. If placed too deeply, and particularly in clay loams (which tend to crust after rains, or if tilled when damp), the effort in reaching the surface seems to exhaust the vigor of the plant, which often fails to get through. Because of that danger, for many years we have practiced sowing the grain and harrowing the land, getting it ready for the roller. Immediately after harrowing, the seeds are sown by hand with a "Cyclone" seeder, and rolled soon after. No matter how fine the soil is, the seeds will find their way into crevices sufficiently deep to insure germination, when packed down with the roller sent over the freshly-harrowed surface. Should rain pack the soil soon after, the harrow is sent over the field to break up the crust. Seeding is done invariably in the spring, with wheat, oats, or barley, and usually on land which grew roots or corn the previous season. It is important to not sow the grain too thick. Farmers some distance off, on loam and even light-loam farms, have reported most satisfactory results from hand-sowing seeds and simply rolling after, compared with machine sowing, when the seed falls among the hoes, and much of it gets deeply bedded in the soil.

Victoria Co., Ont. JOHN CAMPBELL.

**Good Results from Rape --- How About Spring Rye?**

Perhaps it is a little early in the season to write about seed grain, but as the different seedsmen are sending out their annual catalogues it makes us think of spring. Every farmer should have his plans laid out now for next spring's work. My object in writing this is to give as well as get a little advice. Last summer being very dry and pasture scarce, I decided to try some rape for pasture. Accordingly, I plowed up eleven acres in June, which was as dry as ashes. I worked it down fine and sowed sixty pounds of rape seed on it the last day of June. The weather was very dry and it was a long time coming up, but after a while we got a shower that started it growing. It made the best lot of pasture I ever saw, and the young cattle fattened on it so that I sold them to the butcher. The beauty of it is that it keeps green right up till winter, the frost not hurting it at all. I shall certainly try it again next summer, and would advise others to do so. It is said to be good to turn down for manure as well. So much for the advice given. Now, I would like to know what has been the experience of other farmers with spring rye, which I see advertised and would like to try? I thought the "Farmer's Advocate" would be the right place to apply to for information, as it reaches farmers all over the country, and no doubt some one of them has tried it. My land is clay loam.

R. HARTLEY, Welland Co.

**Management and Application of Barnyard Manure.**

To the Editor "Farmer's Advocate":

Sir,—The long-continued cropping of our farm land, that which I work having now been tilled steadily for over fifty years, makes the preparation and application of our barn manure an all-important question. I have been somewhat surprised to read that the investigations conducted under the direction of Dr. Wm. Saunders, Director of the Canadian Experimental Farms, went to show that, weight for weight, fresh stable manure was equal in value to rotted, and that the losses with the latter were very great. I will feel indebted to the Director if, through your columns, he will tell us if he has been correctly reported, particularly on the first-mentioned point, and upon what data he based his conclusion? My experience seemed to indicate a much better crop, and freer from weeds, where the rotted manure was applied. I would like, also, if the Director would state what he considers the preferable mode of applying manure to the land, whether spreading direct on the fields in winter or placing it in small or large piles to be spread in the spring, indicating, in a few words, the conditions under which he has demonstrated certain plans to be more advantageous. At the present time these two questions are not only reasonable but of vital import to thousands of your readers. I am not writing in a disputatious spirit, but to get at the truth.

"SON OF THE SOIL."

**DR. WM. SAUNDERS' REPLY.**

I take pleasure in replying to the enquiries of "Son of the Soil" as to the important question of the relative usefulness in crop-producing power of barnyard manure, fresh and rotted. This matter, so important in regard to economy in the use of barnyard manure, has been fully presented in the annual reports of the Experimental Farms during the past ten years, and since these reports have reached the homes of about fifty thousand farmers annually, distributed over all parts of the Dominion, and these barnyard-manure experiments having been much discussed, it was supposed that farmers had become fairly well informed on this subject.

The trials which have been made with barnyard manure, fresh and rotted, with a check plot alongside which has never received any manure, were begun in 1888 with spring wheat and Indian corn, and in 1889 with oats, barley and roots. Barnyard manure (mixed horse and cow manure) was used in 1888 on the wheat, in the proportion of 12 tons to the acre, and each year following, 15 tons per acre. To the oats and barley the manure was applied at the rate of 15 tons per acre; the corn was continued at 12 tons per acre, while the roots (turnips and mangels) have had an annual dressing in the proportion of 20 tons per acre.

No results were published until the end of five years, when the average crops for that period were given. Each year since then the annual reports have contained the results for the current year and the average for the whole period.

These annual dressings of fresh and well-rotted barnyard manure were continued until (and including) 1898, so that the trials were repeated for 10 or 11 years in succession, and at the end of that time the average crops stood as follows:

AVERAGE FOR ELEVEN YEARS.

Barnyard manure well rotted.		Barnyard manure, fresh.		Check plot, to which no manure has been applied.	
Grain.	Straw.	Grain.	Straw.	Grain.	Straw.
Bush. lbs. 20 36 4-11	lbs. 3,709	Bush. lbs. 20 52 4-11	lbs. 3,689	Bush. lbs. 10 16 4-11	lbs. 1,899

AVERAGE FOR TEN YEARS.

Barley:		Grain:		Grain:		Straw.	
Bush. lbs.	lbs.	Bush. lbs.	lbs.	Bush. lbs.	lbs.	Bush. lbs.	lbs.
31 31 7-10	3,051	35 21 1-10	3,280	13 32 5-10	1,591		
Oats:		Grain:		Grain:		Straw.	
Bush. lbs.	lbs.	Bush. lbs.	lbs.	Bush. lbs.	lbs.	Bush. lbs.	lbs.
48 11	3,235	51 17	3,467	30 23 5-10	1,531		

In the experiments with Indian corn, two varieties have been used each year: one a vigorous-growing and later-ripening sort, known as No. 1; the other a shorter-growing and earlier-maturing variety, known as No. 2; and the corn has been cut green each year when in the best condition for the silo.

AVERAGE FOR ELEVEN YEARS.

Barnyard manure well rotted.		Barnyard manure, fresh.		Check plot, to which no manure has been applied.	
No. 1.	No. 2.	No. 1.	No. 2.	No. 1.	No. 2.
Tons. lbs. 16 210 12 686	Tons. lbs. 17 721 11 785	Tons. lbs. 7 1278	Tons. lbs. 5 1001		
Turnips:		Mangels:			
Tons.	Lbs.	Tons.	Lbs.	Tons.	Lbs.
15 196	19 834	7 121			
Tons. 23	Lbs. 212	Tons. 22	Lbs. 269	Tons. 9	Lbs. 211

Similar experiments have been conducted for

eight years with carrots and on two series of plots with potatoes for five years, with the following average results:

Barnyard manure, well rotted.		Barnyard manure, fresh.		Check plot, to which no manure has been applied.	
Tons.	lbs.	Tons.	lbs.	Tons.	lbs.
Carrots: 19	758	21	20	11	1953
Potatoes: Bush. 266	lbs. 17	Bush. 272	lbs. 32	Bush. 111	lbs. 19

These experiments have been conducted throughout with the greatest care, with the sole object of arriving at the truth. A study of the figures given will show that with three exceptions—spring wheat, Indian corn No. 2, and mangels—the fresh manure has given the larger crops, and will, I think, convince the reader that the case has not been overstated when I have said that in our experiments covering 10 and 11 years, a given weight of barnyard manure, fresh, has shown itself to be equal in crop-producing power to the same weight of barnyard manure rotted.

Since 1898 these experiments with fertilizers have been modified, with the view of gaining information as to how long the good effects of these repeated applications will continue to influence subsequent crops, and all the fertilizers have been discontinued. For reasons given in the annual report, a crop of clover has been grown each year with the grain and plowed under, but as the results of this work have no direct bearing on the questions asked by your correspondent, I must refer those of your readers who may wish to pursue this subject further to the annual reports of the Experimental Farms.

With reference to increase of weeds where fresh manure is used, there is no doubt that where weed seeds are freely fed to stock in hay, straw, and grain, that a larger proportion of ungerminated weed seeds will be found in the fresh manure, but since manure is most generally used with a hoed crop, the presence of additional weeds is not a matter of much moment, for if the land is kept well worked, the cultivator and hoe will clean them out regardless of number.

As to the next point referred to by your correspondent, that of the loss which occurs in manure during the process of rotting, that is very large. The first experiments made at the Central Experimental Farm to determine this loss were conducted in 1895 by the Director, under ordinary farm conditions, when four tons of manure was used, two tons each of horse and cow manure. In three months the 8,000 lbs. uncovered in the barnyard was reduced to 3,947 lbs., and in seven months to 2,812 lbs. (See Ann. Rept., 1895, p. 42.) In a series of experiments subsequently conducted by the Chemist of the Experimental Farms (see bulletin 31 on barnyard manure), where the conditions were more favorable for preserving the manure from loss, the decrease in weight averaged about 60 per cent. By analysis it was shown that the loss also in organic matter, which in barnyard manure is so important as furnishing humus to the soil, was more than one-half. The following results were obtained:

RESULTS OF ANALYSIS OF BARNYARD MANURE THREE MONTHS ROTTED.

	Manure protected. Per cent.	Manure exposed. Per cent.
Loss of organic matter.....	55	60
" nitrogen.....	17	29
" phosphoric acid.....	none.	8
" potash.....	none.	22

It should be understood that the protected manure in this case was so thoroughly enclosed and sheltered that there was no possibility of any leaching, and the exposed manure was also under conditions more favorable as to preservation from loss than would be practicable for the average farmer to provide. The rotted manure which we have used from year to year in the experiments conducted at Ottawa has been rotted under the ordinary conditions of exposure found in the average farmyard.

From the facts and figures submitted, it is evident that barnyard manure loses during the ordinary process of rotting when exposed to weather, more than half its weight, more than half its organic matter, and a large proportion of its plant food. The potash and phosphoric acid can to a large extent be preserved if the manure is so protected as to prevent leaching, but even then the loss in nitrogen—the most expensive of all plant foods to buy—is large, and the loss in organic matter is almost as great as when the manure has been exposed.

The plan we have most generally adopted at Ottawa is to use the manure fresh on the land whenever practicable, and plow it under. During the winter it is usually distributed over the ground on which it is to be used, in small piles of about one-third of a cart-load each. These small piles are soon frozen through so that all fermentation is checked, and when spread in the spring and plowed under, it is practically in the same condition as when it left the barnyard. In the Ottawa climate there is very little danger of



loss from these small heaps by leaching. It might be better not to put manure out in this way on a hillside, but even in such case the inevitable loss of organic matter and nitrogen from rotting in the barnyard would probably involve more loss of valuable constituents than could occur from leaching.

This question is one which should engage the attention of every thoughtful farmer, and I am pleased to have had the opportunity of giving these explanations. Full details covering the experimental and research work carried on at the Dominion Experimental Farms for the advancement of agriculture in Canada will be found in the reports and bulletins published, which can be had by any Canadian farmer as long as the edition lasts, by application to the undersigned.

WM. SAUNDERS, Director.  
Experimental Farms, Ottawa.

**Aid for Consumptives.**

Dear Sir,—The Free Hospital for Consumptives, the only one of the kind in Canada, erected in Muskoka (not far from the Cottage Sanitarium), under the auspices of the National Sanitarium Association, is nearing completion, and we hope to have it ready for patients in a couple of months. Although the hospital is the gift of friends, the Sanitarium Association is carrying a large debt, and has therefore decided to appeal to the public to secure \$10,000 to equip and furnish.

If you kindly consent to receive and acknowledge subscriptions in your columns, I am sure a hearty response would follow. Several of the newspapers have kindly taken up the work in this way. Subscriptions will be gladly received from \$1 upwards; \$50 will furnish a cot.

It may be of interest for you to learn that over 500 patients have been treated in the Muskoka Cottage Sanitarium, and the majority of these have either been cured or so far helped as to be able to return to the activities of life. Patients have been received from every Province of the Dominion. The new Free Consumptive Hospital is located about a mile from the Sanitarium, and we will be able to accommodate in this hospital 100 poor patients. This will mean a very large outlay, not only for equipment, but for maintenance. Thanking you in anticipation, I am,

Yours faithfully,  
W. J. GAGE.  
Toronto, January 31st, 1902.

Note.—The "Farmer's Advocate" will gladly acknowledge and forward any contributions through this office, or they may be sent direct to Sir Wm. R. Meredith, Chief Justice, 4 Lampport Ave., Toronto; W. J. Gage, Esq., 54 Front St. West, Toronto; or The National Trust Co., Limited, Treasurer, 22 King St. East.—Editor.

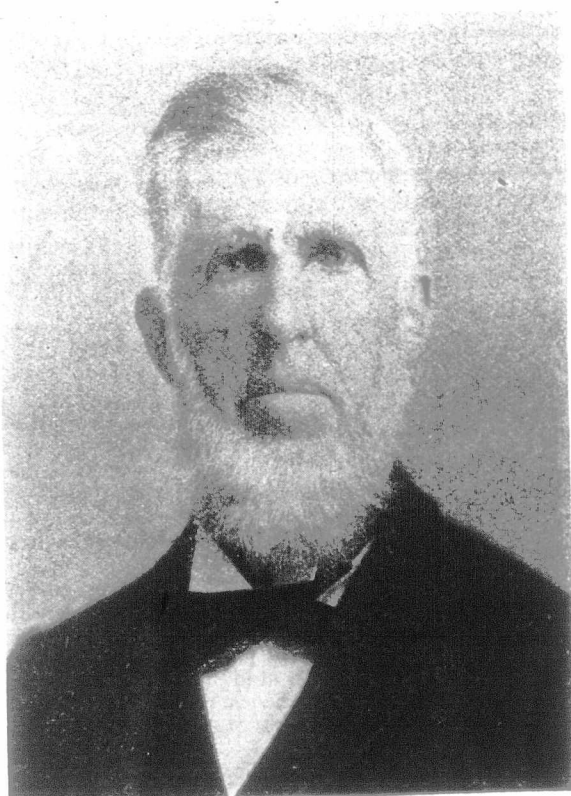
**DAIRY.**

**Length of Lactation Among Dairy Cows.**

Cows vary very considerably in the length of time which they continue in milk. Variation in this respect is characteristic not only of individual cows, but also of whole breeds, some strains being noted for having a much longer period of lactation than others. As a rule, the heavier the milker a cow is, the longer will she continue in milk. There are, of course, exceptions to this rule as to all others, but, speaking generally, it will be found to apply to the majority of dairy herds. The encouragement and cultivation of length of lactation is a point which is deserving of careful attention among dairy farmers. It is only natural that the longer a cow can be kept in milk, the greater will be the profit derivable from her—provided, of course, she is yielding milk in such quantity as to more than compensate for the food which she is consuming. It is a mistake to allow cows to go dry from three to four months before calving, if by the exercise of ordinary care and the display of a little liberality in feeding the milk flow can be maintained for eight or ten weeks longer. There is a special objection to allowing cows to run dry in this way in the case of heifers on their first calves. It is well known that if heifers are allowed to run dry at an early date after producing their first calves there is a natural tendency on the part of the animals to go dry at the same time after producing their next and subsequent calves. This being so, it would naturally appear that after a few years cows in which the tendency to run dry is encouraged in this way would very soon deteriorate into a disappointing race of milkers. In this matter, as in many others bearing upon farm stock-breeding, much may be done by careful selection and by breeding from heifers descended from cows of a good milking strain and known to be themselves capable of creditable work at the pail.—Farmers' Gazette.

**Death of Mr. E. D. Tillson.**

Readers of the "Farmer's Advocate" everywhere throughout Canada will learn with deep regret of the death, on January 31st, of Mr. E. D. Tillson, of Tilsonburg, Ont., head of one of the largest milling industries in the Province, and a farmer and dairyman of wide repute and marked success. Descriptions of his model farm and dairy buildings have been given in these columns, together with frequent letters from his pen on practical subjects, especially on his favorite theme—the breeding, feeding and general management of dairy cows. By their large productivity, his herd of pure-bred and grade Holsteins had become one of the most famous in Canada. He encouraged many to read the "Farmer's Advocate," and, though an extremely busy man, seemed always glad of the opportunity to give of his experience for the benefit of others. He exerted a very great influence in the direction of improved methods of agriculture. He had been mayor of the town, and postmaster for many years, and was an active member of the Methodist Church. His father, George Tillson, was founder of the town, settling there in 1825. Deceased was born on March 28th, 1825, and married Mary Ann VanNorman on July 4th, 1850. Mr. and Mrs. Tillson celebrated their golden wedding on July 4th, 1900. Upon his death, flags were flying at half-mast, and a general feeling of sorrow pervades the whole town. The name of Tillson is known from one end of Canada to the other, and no name stands higher in the estimation of the public for honesty and integrity. He leaves a family: George W. (overseer of the mills), Edwin V. (manager of the business), Mrs. (Dr.) L. C. Sinclair and Mrs. H. A. Harrison.



THE LATE MR. E. D. TILLSON.

**Preventing Milk Fever.**

A correspondent of the Farmer and Stock-breeder, of London, England, throws out an idea on this subject that may be worth considering and acting upon, for when we come to think of it, can we recall a case of milk fever where the calf was allowed to remain with its dam and draw milk at its pleasure and hers. The writer referred to says:

"Re milk fever, I cannot propose a cure, but my own experience is that it is possible to prevent it. Some three years ago I stated that I had followed a course for seven years without a single case in about 100 cows a year, and now I can say I have not had a case since—not even a shaky one, and I keep big, good cows and heavy milkers, and in high condition.

"My rule is that every cow (and make no exceptions) shall have 1 pint of raw linseed oil a few days before calving, and 1 pint without fail twelve hours after calving, with bran mash and light feeding for a few days, but the secret is in abstaining from milking for at least forty-eight hours; only allow her calf to be loose and take what it likes. If a dead calf, then take a very little milk from each teat for the same time twice a day.

"I will not attempt to argue the scientific side of the matter, and content myself that this is good enough for me, for 'the proof of the pudding is in the eating.' If any reader who has had losses concludes to try this plan, please do not half do it! Follow it up, and see that the plan is followed out in every case alike, old or young, fat or lean."

**Western Dairy School.**

The first of a series of monthly conventions for this winter of farmers and dairymen of the Strathroy district was held in the lecture room of the Western Dairy School, in that town, on January 29th. The spacious room was crowded with an appreciative audience of farmers and their wives and daughters, together with many of the people of the town. The speakers were Mr. G. C. Creelman, Supt. of Ontario Farmers' Institutes, who spoke on "The Needs of the Dairy Industry"; Mr. D. Drummond, Myrtle, on "Cultivation of the Soil," and "Feeding and Breeding Dairy Cattle"; Mr. C. R. Cottrel, Milton, on "Feeding and Breeding of Poultry and Preparing for Market"; and Miss Bella Miller, Instructor in Home Dairying at the School, on "Dairying on the Farm."

Mr. Drummond, who has had long and successful experience in breeding and caring for a dairy herd and is qualified to speak with authority on the subject, dealt in a very instructive way upon the approved conformation and qualities of the ideal dairy cow, how to breed, raise and feed her for profit, emphasizing the importance of a good constitution, which implies ample chest room for the full and free action of the heart and lungs for the production and distribution of blood, which plays a prominent part in milk secretion; a capacious stomach for working up food to advantage in milk production, which implies deep and well-sprung ribs. Other desirable features are the clean-cut head, and bright clear eye (denoting nervous force), smooth shoulders and narrow withers, strong, wide loin, long level quarters, a mellow-handling hide, and fine, clean flat bone, together with a large and well-balanced udder and well-placed teats of good size. He advocated liberal feeding at all times with balanced rations, and especially in the case of cows while in milk, and deplored the folly of allowing cows to shrink in their milk in times of drought, as it is impossible in that season to bring the cows again up to their best work. For this contingency he advised the soiling system, or the sowing of mixed grains, the crop to be cut when in the milk stage and fed to the cows in the stable by day during the hot period in summer. The provision of corn ensilage sufficient to carry a part over for summer feeding was also approved.

Mr. Cottrel urged the necessity of co-operation of farmers in the production of a uniformly high class of poultry, so that a profitable export market may be established for our poultry, as has been for our cheese, butter and bacon. He recommended the Plymouth Rocks and Wyandottes especially as utility birds, being fair layers and first-class fleshing fowl, and advised improving the fowls we have by the continued use of pure-bred males of the same breed. For winter egg-production, warm and well-ventilated quarters are essential, together with exercise and a supply of green food, meat, ground bone and grit, mica crystals being preferred to gravel as grit. Fowls should not be filled with a heavy feed in the morning, but kept scratching for grain in straw or chaff to induce exercise, to promote circulation of blood and the formation of muscle and prevent their becoming too fat.

Miss Miller spoke interestingly on the importance of cleanliness in the handling and care of milk in order to secure the best flavor and keeping quality in butter, and deprecated the idea that slipshod methods were good enough for those who made butter only for their own family, as though they were not as good and should not have as good butter as any others. She called attention to the fact that a meal faultless in every other particular and ever so tastefully arranged may be spoiled by a plate of ill-flavored butter. An expensive equipment is not necessary to good buttermaking, and one may have all the latest approved appliances and yet have a poor product. Miss Miller's talk was illustrated by the presentation of samples of milk and butter in various stages of preparation, contrasting good samples with inferior from the stores, and showing the most approved manner of putting up butter in prints, etc., to make the most attractive appearance while standing the severest test for quality. The audience would gladly have listened for an hour to Miss Miller, whose talk was of an intensely interesting character.

Mr. Creelman, who is making a great success of the Farmers' Institute system by the selection of capable and practical men and women as speakers on the various lines in which they have had successful experience, spoke fluently and forcefully of the importance of the educational element in this connection and of the need of vigilance in the production of the best quality of goods in all lines of dairy and meat products in order to capture and keep the best markets.

The Western Dairy School, under the capable, efficient and up-to-date superintendence of Mr. Arch. Smith, is doing excellent work, the attendance of students being larger than in former years, between 50 and 60 being in attendance in January, with additional applications from others who will commence a short course in February. Substantial improvements in the arrangement of the rooms in the school building

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have been made, including the provision of a spacious laboratory, an incubator for the development of ferments, and a powerful microscope. A workshop has also been provided, in which the students have practice in plumbing and opportunity to study the mechanism of an engine by taking it apart and putting it together, etc. The Western Dairy School is doing a good work, and fills an important place in the education of farmers' sons and daughters in practical lines.

#### Care of Cows at Calving.

The discussion of the above subject in this issue by practical breeders will, we are sure, be of interest to a very large number of our readers. The losses sustained every year by dairymen owing to what is known as milk fever and other troubles incident to parturition are in the aggregate very large, and their prevention is of very great importance. Many different theories with regard to the nature and causes of milk fever have been propounded and many different remedies prescribed, but it is doubtful whether any of them are entitled to entire confidence, and the best of them, even when successful in effecting a recovery, are liable to leave effects in some cases which discount the future usefulness of the cow. If ever the maxim that "prevention is better than cure" holds good, it is in this connection. The practice not infrequently adopted, of starving a cow or of putting her on limited rations of dry feed only, is, we are persuaded, a grave mistake, as this course is almost certain to cause constipation of the bowels, which is the greatest danger to the health of the cow and to a safe and successful parturition.

The rule adopted and strongly recommended by some breeders, of administering purgative medicines to overcome this difficulty, while it may be necessary after such a course of feeding, is, to say the least, an unnatural process, and one which must tend to materially weaken the system of the cow, already heavily drawn upon for the support of the unborn calf, and to leave her liable to chills and the retention of the after-birth. Some liberal feeders and successful cattlemen, among whom is Mr. Geo. Rice, one of the most intelligent and successful, believe in physic-ing the cow before calving and after; but other equally successful dairymen, among whom is Mr. Rettle, have little, if any, faith in dosing at that period or any other in this connection, believing that by fairly liberal feeding with succulent food, such as roots and ensilage, with a little bran (thus keeping the bowels relaxed), the cow is in the best and most natural condition to safely perform the functions of parturition to herself and her offspring. If these latter are in the right, it will certainly be a relief to know it, for there is always some risk in drenching a cow with medicine, since if she refuses to swallow it, a portion of the dose may find its way into the windpipe and set up inflammation that may cause death. It may seem a simple thing to drench an animal, but we have known more than one case where a professional veterinarian cut short the life of the patient by this process and charged the owner smartly for killing his cow. Great care is necessary that the medicine be given very slowly, in small quantities at a time, and to be sure that it is being swallowed before giving more. It may not be generally known, but is a fact nevertheless, that in milk fever a cow soon becomes incapable of swallowing, the muscles of the throat becoming paralyzed, and at this stage many a cow has been killed by dosing.

We confess to being favorably impressed by the theory of an English writer, quoted in an article in this issue, that the secret of success in avoiding milk fever is in letting the calf relieve the udder of the dam a little at a time for the first two or three days, and not milking it out clean till after that time. This is nature's plan, and we cannot recall an instance of a cow falling a victim to milk fever while nursing her calf. If such has occurred, it may have been owing to having been milked out after the calf has suckled. It is a fact that the full flow of milk does not come till several days after calving, and the greatly-distended udder sometimes seen before calving, and causing alarm, is often owing, not to the pressure of milk, but to a caking of the udder due to other causes, and for this reason it is seldom, if ever, necessary or wise to milk a cow before calving. Cows in range herds drop their calves on the common, and are never milked except by the calf, and who ever hears of losses from milk fever under those circumstances? Udders sometimes go wrong, it is true, but that is more likely to happen some weeks after calving, when the full flow of milk is on, and the calf gets more than enough, causing sickness and a failure to relieve the mother's udder sufficiently to save it. The cow, under natural conditions, licks her

calf dry, and the liquid she absorbs in this process tends to relax her bowels naturally, but many otherwise dairymen seek to relieve her of this worry by taking the calf out of her sight as soon as born, and imagine they are doing a smart thing and improving on the ways of nature. Then they hasten to draw every drop they can from the udder, with the idea that this is necessary to the safety of the cow, while it may be, and probably is, just the worst thing that could be done. Man, doubtless, has improved on nature in some instances by directing her forces, but there are some things in which it is better to let her have her own sweet way.

The ideal place for a cow to calve is, doubtless, the comfortable box stall, but this is not a real necessity, if the herdsman be present at the critical time. She may calve tied in her stall with less worry than in a strange box and away from her usual company, but she should be allowed to lick her calf and to give it its first nourishment from her udder. And while she must be kept in the stable for a few days after calving and given plenty of water with the chill taken off, it is a mistake to let all the other cows out for water and for cleaning of the stables, while the newly-calved cow stands alone, shivering from the draft from open doors and fretting for company. She should be blanketed, and her companion cow kept in with her to keep her quiet.

#### The Cow at Calving.

Aim to feed the "dry cow" so well that when the time comes to "dry her" she will be in prime condition; in fact, about fat enough for beef. Have her dry about seven or eight weeks, and feed her moderately on a succulent and cooling ration: Clover hay, ensilage and mangels for roughage, and bran or oat chop and oil cake for grain. These are very cooling and laxative in their effects. If the cow stocks up rather much, a dose or two of salts and ginger are useful, but too much physic tends to weaken the cow. Have her in a comfortable and well-bedded box stall a week before calving, and if she is very valuable try to keep watch of her at this time, as a little assistance will often save a deal of time and worry afterward and perhaps save her life. I think the cow will worry less if the calf is taken away immediately, but my usual practice is to let her lick the calf and let the latter get a square meal before I separate them. I only milk before parturition in extreme cases—where the cow is suffering from the excess of milk. The exercise of good care and common sense is the best safeguard against milk fever, garget, retention, etc. I consider salts and carbolic acid the best preventive of these diseases. The Schmidt treatment is the best cure for milk fever, in my estimation. Garget has numerous "sure cures" which are very useful in connection with salts and saltpetre. For retention of membranes and inversion of uterus, have only a qualified man to operate, and use carbolic acid, about 35 drops in some water for a dose, once a day.

Brant Co., Ont.

G. W. CLEMONS.

#### Profit from Jersey Cows.

Herewith I send report of the record in buttermaking of two St. Lambert Jersey cows in the Golden Fawn herd of Cedar Brae farm: No. 1 with her fourth calf gives 43 lbs. of milk per day, sufficiently rich to produce over four quarts of 27 per cent. cream, equal to 19 lbs. of butter in 7 days. No. 2, the first-prize two-year-old heifer at Western Fair last fall, with her second calf, gives 32 lbs. of very rich milk, producing 3½ quarts of cream per day, equal to 16½ lbs. butter in 7 days. This heifer I believe will, by the time she has her fourth calf, come up to her grandam, Nellie of St. Lambert, which gave 70 lbs. of milk per day, making 23½ lbs. butter in 7 days. Those are the kind of cows farmers should aim at having, although they do not make as much beef when old as grade Durham and Holstein cows, many of which do not average for the eleven months more than 5 lbs. of butter per week, if even they do that much.

York Co., Ont.

T. PORTER.

Note.—It will doubtless occur to readers, though it does not seem to have dawned upon our correspondent, that a report of a year's work of the Jersey cows mentioned, or at least of 11 months' work, would appear to be necessary in order to have a fair comparison with the other breeds referred to for that time. We agree with him that it is well to aim to have cows that produce like those mentioned, and although two swallows do not make a summer, nor two cows a herd, the more we have like those whose work is recorded in this letter the better for the dairymen and dairy interests of the country.—Ed. P. A.

#### Cattle Feeding: Tied Up or Loose?

Much has been written and spoken on this question by those interested in feeding cattle, whether for raising them on the farm or for export, and still the question is as far from being satisfactorily answered as ever. There are, no doubt, many like myself, who have made more or less complete experiments along this line, but the sum total of these experiments has not yet been gathered together and compared, so that a fairly reasonable conclusion may be drawn. For my own information, primarily, I conducted an experiment during the winter of 1900 and 1901, the result of which I now offer through your columns for what it may be worth. The lot of cattle handled under the test comprised 187 head of export steers, of which 51 head were fed loose in box stalls 15 feet square, containing 5 each (with water), and were not let out during the time they were fattening. The other lot, consisting of 86 head, were tied up in the usual way, with water in front of them, and, like the other lot, were not let out during feeding period. In all other respects the two lots were treated practically alike, both as to kind and quantity of meal and roughage given them, with the exception that the lot tied up had nearly one quarter of a pound more meal per day than the other.

An examination of the following table will give a fair idea of the result of this test, better, possibly, than would an opinion expressed by myself. However, I will content myself in this connection by saying that no general hard-and-fast rule can be laid down applicable in all cases. In my judgment, cattle of a nervous or excitable disposition will probably do better tied up than if allowed to run loose in box stalls with or without other cattle, while others of a more docile temperament will do as well in box stalls containing not more than 5 head each. But even in the latter case, success will depend very much upon the manner of their feeding, having reference to the nature and quantity of the feed given them, abundance of water as they require it, together with regular and careful attendance. Every farmer will agree that the attendant should know whether the animals under his care are doing well or not by their actions. The conditions required by the experienced feeder on the part of the fattening animals are perfect rest and contentment, which can only be secured by giving them abundant feed to their liking. The fattening steer fed to his full capacity will be quiet and spend most of his time lying down, whether in a box stall or tied up—in the former case with much more ease and comfort. Such, in brief, is the conclusion I have come to after following both methods some 7 or 8 years. Of course, cattle fed in boxes must be dehorned, and could I not get sufficient dehorned steers for my purpose I should at once do away with the boxes and tie up all my cattle. The practice is now rapidly becoming quite general of removing the nubs or horns when the calf is a week or two old, either by the knife or caustic.

It will be noticed that there is an apparent advantage of one-fourth of a cent per day per animal in favor of the steer tied up. This slight advantage is not equal to the saving in labor in favor of the loose ones, and in my case was largely due to the attendant, who was a more experienced feeder, who devoted all his time to his lot; while, in the other case, the attendant had many other duties to perform.

The feed given these lots consisted of ground oats, barley and shorts, in about equal quantities of each; and for roughage, ensilage, cut clover hay and cut oat sheaves—in about equal quantities by bulk—all mixed together a day in advance, and fed in three meals per day, and all they could be induced to take.

The following is the result in detail of my experiment:

COMING IN.			TIED UP.			GOING OUT.		
Date.	No.	Weight.	Date.	No.	Weight.	Date.	No.	Weight.
Oct. 26	48	55,000	Dec. 11	7	7,480	Jan. 19	27	38,560
Nov. 21	1	4,900	Jan. 19	27	38,560	Mar. 14	11	14,955
Dec. 29	5	5,320	Mar. 14	11	14,955	Apr. 10	8	10,180
Jan. 18	2	2,175	May 5	13	17,810	June 17	20	26,415
" 21	11	12,914						
" 30	9	10,335						
Feb. 6	2	2,160						
" 18	2	2,400						
Mar. 7	1	1,150						
Apr. 18	2	2,150						
	86	99,401						
Total gain, 16,000 lbs., for 9,327 days.			86	115,400	9,327			
1.71 lbs. Meal per day per head, 8.52 lbs.								

COMING IN.			LOOSE.			GOING OUT.		
Date.	No.	Weight.	Date.	No.	Weight.	Date.	No.	Weight.
Oct. 29	31	39,105	Jan. 19	13	18,110	Jan. 19	13	18,110
Jan. 14	1	1,075	Mar. 14	7	9,275	Mar. 14	7	9,275
" 21	16	18,781	Apr. 10	15	20,540	Apr. 10	15	20,540
			May 5	8	10,510	May 5	8	10,510
			June 1	1	1,500	June 1	1	1,500
			" 17	7	9,290	" 17	7	9,290
	51	58,961						
Total gain, 10,201 lbs., for 6,105 days.			51	69,225	6,405			
1.60 lbs. Meal per day per head, 8.52 lbs.								

Such, in conclusion, was my experience last winter. I will finish this season about 180 head for export, following both systems as above outlined, and have every reason to be well satisfied





MR. CHARLES THOMAS, LAUDER, MAN.

Whose 1901 farm crops were: Wheat, 1,050 acres, 25,750 bushels, average yield per acre 24½ bushels; oats, 250 acres, 10,000 bushels, average yield 40 bushels per acre.

with feeding them loose, always providing I can get them without horns.  
Huron Co., Ont. D. A. FORRESTER.

Note.—In addition to the saving of labor, we believe it is admitted that animals fed loose will shrink less on shipping. Let us have the experience of others on these questions.—Editor.

GARDEN AND ORCHARD.

Nova Scotia Fruit Growers' Meeting.

The 38th annual meeting of the Nova Scotia Fruit Growers' Association, held at Wolfville on Jan. 20th to 22nd, inclusive, leaves nothing to be regretted, except the fact that Prof. J. W. Robertson was unable to attend it, as had been advertised. The presence of two such distinguished horticulturists as Professors Bailey, of Cornell University, and Waugh, of the Vermont Experiment Station, speaks well for the enterprise and progressiveness of the N. S. Fruit Growers' Association. It was an enthusiastic meeting, filled with interesting discussions on questions of the greatest importance.

THE PRESIDENT'S ADDRESS

President Bigelow, in his annual address, said in part: In submitting this my tenth report to this Association, which has for the past thirty-eight years chronicled the progress of horticulture in Nova Scotia, it is gratifying to be able to report that this Province has this year been blessed with an abundant crop of excellent fruit. Our principal crop, apples, will yield about three hundred thousand barrels for export. The world's crop of apples is this year reported at 35 per cent., and on this continent it is estimated at only twenty-five million barrels, against an average crop of sixty millions. Our plum crop this year yields about 60,000 baskets; pears a fair crop of good quality; peach crop good, quality excellent; strawberries about 300,000 boxes. Owing to early frosts, the cranberry crop was a failure in many sections, and a total crop of only 600 barrels is the result. Prices six dollars per barrel. About 75 acres cranberries under cultivation in King's county. All fruits and berries sold at remunerative prices.

A strange feature of our apple trade is, this year so far our English market has given us the poorest returns. Our Gravensteins have not netted the growers two dollars per barrel in England, while they would have brought four to five dollars per barrel in American markets. The principal reason seems to be that apples arrive in bad condition and show signs of having been cooked in transit. Another singular feature of the trade this year is that apples have been shipped to England via Montreal at less cost and arriving in better condition than those shipped via Halifax.

Fruit trees this year have not generally suffered much from insect pests, and where spraying has been judiciously applied little or no loss has occurred. As the dreaded San Jose scale was destroying many orchards in Ontario and the United States, and it seemed most likely that it existed here, or would be brought here in the large quantities of nursery stock being imported, I deemed it most important that we should have an inspector to thoroughly inspect all young orchard trees and imported stock, and made application for an inspector to the N. S. Government, who cheerfully and promptly responded, agreeing to pay inspector's expenses for one

month. On recommendation of Prof. Craig, we employed Prof. Thro, who, after a careful inspection, reported that he could not find San Jose scale in Nova Scotia. We are under great obligations to Inspector Fisher and Prof. Lochhead, of Ontario, for valuable reports and circulars on this subject, which have been distributed in this Province. As it is reported to be still more prevalent and destructive in Ontario and United States this year, we must be ever on the alert to stamp out this dread destroyer on its first appearance, and this Association should ask the Nova Scotia Government to appoint a permanent general inspector with full power to destroy it.

The fruit exhibit at the Provincial Fair, Halifax, this year was the largest ever shown, consisting of over 3,000 plates and a large quantity of fruits and berries in acids. Twelve counties were represented in county exhibits and about \$800 paid in prizes. The prizes offered each county is doing much to stimulate fruit culture through the Province; but as the date fixed is too early to show our best commercial varieties, this show is of little commercial value for apples.

As the fruit season advanced and no effort was being made by the Canadian Government to make any exhibit at the Pan-American Exposition, I concluded that if we expected to maintain our prestige among the apple-producing countries of America, an exhibition of our superior crop was imperative. I accordingly notified our fruit-growers through the press that I would make a fruit exhibit there if they would contribute the fruit, which was cheerfully responded to by twenty-one fruit-growers, who donated about 15 barrels, to which I added 5 barrels for renewals, and 60 bottles fruit in acids, and they staged one of the best exhibits in Horticultural Hall, and were most favorably commented upon by visitors, the press, and commended by all visiting horticulturists.

The gold medal awarded this Association is the sixth obtained since I have had the honor of presiding, and they have been won at no expense to the Association. I think no other fruit-growers' association can show the record of having won eighteen medals for apples in thirty-eight years. As it is of greatest importance for us to know what varieties of apples we can grow

Nova Scotia—Gravenstein, King, Ribston, Baldwin, Nonpareil.

My impression is that the varieties grown in each State as here given are best adapted to each different State and would not succeed in any other. For instance, Missouri and Kansas grow Ben Davis better flavored than our Baldwin, and can not grow our best varieties to advantage, and our best interests will be served by growing only those varieties in which we have excelled. I selected from the exhibition fruit one barrel of Kings, Ribstons, and Golden Russets, to be presented to the Prince of Wales by our patron, Lieut.-Gov. Jones, in the name of our Association, and have received from St. James' Palace acknowledgment of its acceptance.

Although the new Inspection Act is far from perfect, it is doing much good to prevent careless and fraudulent packing. The inspectors have this year been disposed to assist the growers in complying with the terms of the Act rather than to enforce the penalties, and we hope this missionary work will have the desired effect and that next year the terms of the Act will be complied with.

EPOCHS IN ORCHARD MANAGEMENT.

Prof. L. H. Bailey, of Cornell University, in speaking on "The Apple Tree and Its Management," said there had been three epochs in the recent improvement of orchard methods in New York during the past fifteen years. The first was the introduction of spraying, which was now so generally practiced there that the burden of proof was thrown upon the man who does not spray, and spraying now had little part in their meetings. The second epoch was tillage of orchards, and as a general question that too is settled. Men now ask what is the best method of tillage for a clay soil or a sandy soil, and not "Shall I cultivate?" The third epoch, and the one now under discussion, is cover crops for the orchard, and he believes that in five years they will be discussing special cover crops for special soils. He would use rye as a "starter" in the use of cover crops where soil is not yet in sufficiently good condition to grow the better crops, and would gradually work up to crimson clover, which he considers the best. He believes that it

is quite possible to get the soil over-rich with the use of clover and peas as cover crops, and would, therefore, change occasionally and use buckwheat or rye. He would use a gang plow for plowing-in, and would cover only three or four inches deep. This he would do early, so that cover crop would decay. He thought that not need much commercial fertilizer, but should have good culture and be treated with cover crops. After that, some commercial fertilizer might be necessary. He thought that after the first four years orchards should not need plowing, but the disk and cut-away harrows should suffice. He urged the advisability of setting two-year trees, and gave an instance of two-year and six-year trees set the same time that were of equal size after five years. In his own orchard he is setting Northern Spy trees and top-grafting the varieties he wants with scions from bearing trees of known excellence, believing emphatically in the individuality of trees. Prof. Bailey thinks that the next epoch in New York orcharding will be in the introduction of a more rational system of pruning.

THE FRUIT SPUR.

Prof. F. A. Waugh, of Burlington, Vermont, gave a most instructive and suggestive discussion on the "Fruit Spur" in the various kinds of fruits. He illustrated his talk with the magic lantern. He showed how under present methods the fruit spurs developed, and were gradually

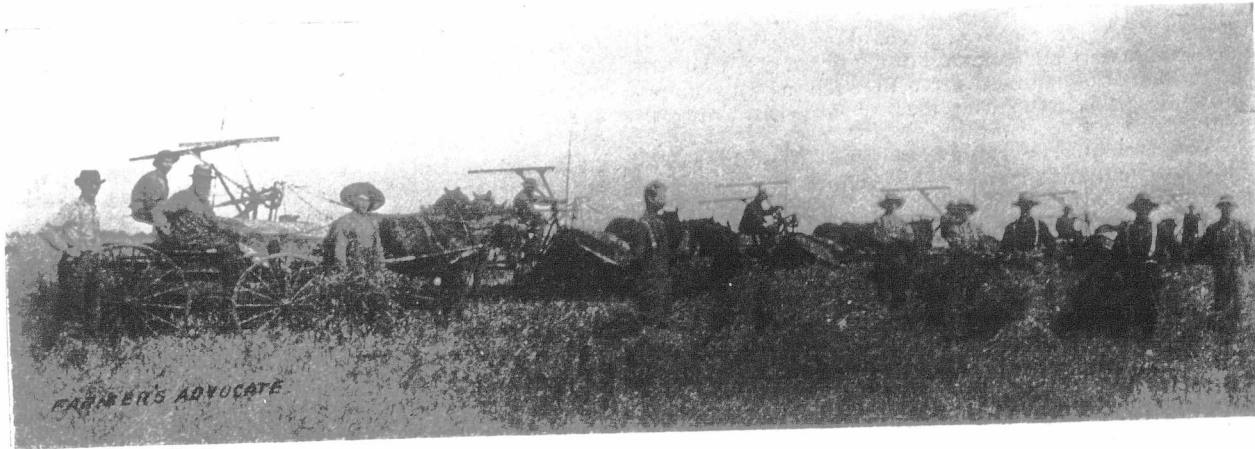


FIVE-HORSE TEAMS PLOWING.

On the farm of Charles Thomas, Lauder, Manitoba.

in Nova Scotia to best advantage commercially, I secured the following list of the four most profitable apples grown in each State:

- Missouri—Ben Davis, Gano, Winesap, Jonathan.
- Kansas—Ben Davis, Huntsman's Favorite, Jonathan, Wolfriver.
- Washington—Baldwin, Spitz, Ben Davis, Greening.
- Nebrasks—Ben Davis, Missouri Pippin, Winesap, Jonathan.
- Oregon—Baldwin, King, Wolfriver, Wealthy.
- New York—Baldwin, King, Greening, Esopus.
- Connecticut—Baldwin, Russet, King, Northern Spy.
- Wisconsin—Duchess, Wealthy, Wolfriver, Greening.
- Illinois—Ben Davis, Grimesgolden, Jonathan, Winesap.
- New Mexico—Missouri Pippin, Ben Davis, Jonathan, Wolfriver.
- Maine—Baldwin, Northern Spy, Greening, King.
- California—Newton Pippin, Baldwin, Winesap, Ben Davis.
- Ontario—Baldwin, Spy, Greening, King.



SIX BINDERS AND FOURTEEN MEN.

Harvesting the 1901 crop of Charles Thomas, Lauder, Manitoba.



killed by shading in the interior of the tree, being replaced by younger ones farther from the trunk. In this way, during the early life of the orchard there is much waste land at a distance from the trees, while when the orchard gets older the waste land is near the tree. He believes that some method should be evolved whereby the fruit spurs may be renewed near the trunk, the top being kept thinned and headed in, so that more trees might be grown to the acre. This would, of course, mean that during almost the entire life of the orchard every square rod of it would be supporting its own share of bearing wood.

FREIGHT CLASSIFICATION.

Mr. Peter Innes, the Vice-President of the Association, presented some resolutions addressed to the Governor-in-Council, asking that the present classification of freight rates on apples be changed. As now classed, apples are carried third class in small lots or fifth class in carload lots; while wheat and its products are carried as eighth and eleventh class in small and carload lots, respectively. Mr. Innes believes that the classification should be changed so as to place apples on a par with wheat, since they are the great staple product of a large part of Canada, just as wheat is the staple product of another part. The resolutions were unanimously passed.

TO FIGHT INSECT PESTS.

Dr. Jas. Fletcher gave an interesting discussion of the insect enemies of the orchard, dealing largely with the San Jose scale, and at the close of his address a resolution was passed asking the Government to appoint an inspector to look after this most serious matter.

Mr. W. A. McKinnon and Mr. Geo. Vroom addressed the convention on the new Dominion Fruit Marks Act, and an object lesson in packing was given by Mr. S. H. Carson, and following the discussion, a committee recommended:

1st.—They would suggest that in section 4, clause 9, the word "packer" should be defined more clearly.

2nd.—That in section 6, below the words "extra good," and the word "quality," the words "or number one" be inserted, and the words "of one variety" be left out to conform with section 4, clause 6.

3rd.—That the grade No. 2 shall be defined as follows: That such fruit shall consist of sound specimens of normal shape and containing not less than 90 per cent. free from scab, worm holes, bruises, and other defects, and properly packed.

Adopted.

Prof. F. T. Shutt gave a most instructive address on cover crops for the orchard and their effect upon the soil. He showed that if planted at the proper time they withdrew soil moisture from the orchard trees at a time when this was desirable, so that the trees might ripen their wood, and when plowed in again in the spring, all plant food that had been taken in by the cover crop was returned to the soil and in a better condition than it was previously. He gave figures from analysis of the soil in the orchard of Mr. J. Elliott Smith, of Wolfville, showing that in four years by the use of crimson clover the nitrogen in the soil had been increased at the rate of 800 lbs. per acre.

Mr. A. McNeil, of Walkerville, Ont., was present at the meetings and gave much practical information, especially as to the San Jose scale and on the subject of spraying.

Another interesting and instructive feature of the meeting was a practical demonstration of apple-packing given by Mr. J. H. Carson, of Meaford, Ont., who has been buying apples largely in Nova Scotia. A packing-table and all appliances were brought to the platform, and Mr. Carson went through every step until the barrel was headed and then took out the head so that the result of the pressing might be seen. An especially interesting feature of this was the removal of all the stems from the apples used for facing the barrel. For this purpose a special pair of shears were used, which were so constructed that they could not injure the fruit.

Mr. A. S. McDonald, of Upper Dyke Village, gave a practical discussion on pruning of fruit trees, starting with the tree at setting time and ending with the bearing tree. He dealt with all such matters as season for pruning, care of wounds, root-pruning, etc., in such a way as to show he had given the matter long and intelligent study.

The treasurer's report showed a balance of \$193.40 on hand, while the School of Horticulture had a balance of \$740.14.

Officers were elected as follows: President, J. W. Bigelow; Vice-President, Peter Innes; Secretary, S. C. Parker; Assistant Secretary, R. W. Starr; Treasurer, G. W. Munroe. Vice-Presidents: For Annapolis—Col. Spurr, Kingston; King's—O. S. Bishop, Auburn; Hants—W. I. Sangster, Falmouth. Executive Board—J. Elliot Smith, R. S. Eaton, Dr. Chipman, A. C. Starr.

The Nova Scotia Government was congratulated upon its vote of \$50,000 for the establishment of a College of Agriculture and Horticulture.

THE FRUIT DISPLAY.

A very interesting feature of the meeting was the fruit exhibit, which Prof. Bailey pronounced the best winter exhibit he had ever seen for excellence and number of varieties. There were over 300 plates in all. The prizes awarded were as follows:

COUNTY EXHIBITS.—King's Co.—1st, A. C. Starr, Starr's Point; 2nd, A. C. Johnson, Greenwich. Yarmouth Co.—1st, F. C. Ryerson, Carleton; 2nd, Yarmouth Agricultural Society; 3rd, Jeremiah Porter, Deerfield. Antigonishe Co.—1st, Geo. Vinton, Lower South River. Inverness Co.—1st, Walter McDonald, Glen Dyer, C. B.

Best 10 commercial varieties—1st, A. C. Starr, who showed King, Baldwin, Golden Russet, Stark, Nonpareil, Ribston, Hubbardston, R. I. Greening, N. Spy, Fallawater; 2nd, A. C. Johnson, who showed Stark, King, Golden Russet, Baldwin, Spitzenburg, Talman Sweet, Banks, Nonpareil, Fallawater, Northern Spy.

Best 6 commercial varieties—1st, A. C. Starr, for Baldwin, Spy, Golden Russet, Stark, Fallawater and Nonpareil; 2nd, Mrs. A. H. Johnson, for Baldwin, Gloria Mundi, Golden Russet, Ribston, Spy, Nonpareil.

Plate of Baldwins—1st, C. S. Fitch, Wolfville; 2nd, A. C. Johnson, Greenwich. Plate of Banks—1st, A. C. Johnson; 2nd, C. S. Fitch. Plate of Gravensteins—1st, C. S. Fitch; 2nd, R. W. Starr, Wolfville. Plate of Blenheim—1st, Andrew Coldwell, Gaspercaux; 2nd, Geo. Thompson, Wolfville. Plate of Ben Davis—1st, Senator Ferguson, P. E. I.; 2nd, T. H. Parker, Berwick. Plate of Fallawaters—1st, J. D. Sherwood, Wolfville; 2nd, A. C. Starr. Plate of Golden Russets—1st, C. S. Fitch; 2nd, R. J. Messenger, Bridgetown. Plate of Cox Oranges—1st, A. C. Starr. Plate of Hubbards—1st, A. C. Starr. Plate of King of Nonpareils—1st, R. W. Starr; 2nd, C. S. Fitch. Plate of Ribstons—1st, C. S. Fitch; 2nd, Geo. Thompson. Plate of R. I. Greenings—1st, A. C. Starr; 2nd, J. D. Sherwood. Plate of Northern Spies—1st, J. D. Sherwood; 2nd, Andrew Coldwell. Plate of Starks—1st, A. C. Starr; 2nd, A. C. Johnson. Plate of Wagners—1st, A. C. Starr.

New and promising table apple—1st to R. J. Messenger, for Hunt's Russet; 2nd to A. C. Starr, for Ohio Nonpareil.

New and promising commercial apple—1st to T. H. Parker, Berwick, for Red Russet; 2nd to A. C. Starr, Starr's Point, for Rome Beauty.

Success with Bush Fruits.

The following are some of my methods in growing bush fruits, with which I have been very successful the past season. The part of my half-acre allotted to small fruit is about 30x100, from which berries were taken amounting to \$10, at market prices. The bushes—gooseberry, currant, blackberry and raspberry—were set out when only slips in the spring of '98, but during the past two seasons have grown good-sized bushes, averaging from seven to twelve quarts each. They were of no particular variety, except some Industry gooseberry and Cherry currant bushes. Each fall I go over them and cut all crooked limbs, dead wood and diseased parts, and in the case of the currants, shorten the new shoots about one-third, so that they will grow stocky, and put a forkful of manure around each one to protect the roots during the coming winter. The raspberries and blackberries I cut down one-fourth to one-third, leaving only four canes to the plant after the dead and spindly stalks are cut out, which and then tied to a stake or fence wire or anything they can gain support from. It seems sad to me, when passing many farm and city gardens, to see the raspberry patch look like a tangled thicket, as if grown for defence, when a little care and knowledge would work wonders in appearance, yield, and pleasure to the grower. Raspberries and blackberries will no more thrive and produce fruit by this careless way than an orchard set three feet apart or having five cows in a place hardly large enough for two. I find that raspberries, even of a common variety, will, when properly treated, yield and ripen fruit for three and five weeks, and there is no berry that demands such a price, which, in this locality, is double that of gooseberries and currants, and usually treble that of strawberries. From ten to eighteen cents per box is the usual rate.

Gooseberries were the most profitable berry up to a few years ago, when they began to be grown more extensively, and owing to the cheapness of plums were not as much in demand as formerly. The price used to be ten and twelve cents a quart, but now they go as low as four and five cents, and very large ones will bring seven, but still even at that low price they are quite profitable, as some four-year-old bushes yield seven to ten quart-boxes. In the spring, as soon as the leaves are unfolded, I take a tin kettle perforated in the bottom and fill it half full of dry, powdered lime or soot. Soon after a rain, or early in the morning when the dew is on, I shake a quantity of the powder over each bush. When the fly comes along, which she does very quickly, to deposit the eggs from which the currant worm is hatched, and sees the bushes sprinkled, she concludes to leave the vicinity. This preventive is much better than waiting till the leaves are full of worms and then dosing them with a lot of Paris green or hellebore, which often is applied too late. After picking the berries, there is nothing to do then till late in the fall. In growing currants, both red and white, I pursue the same course as with gooseberries, except in the matter of pruning. The only remedy for the currant borer seems to be to cut off and burn the affected wood and to keep the stems above the root coated with a mixture

of whitewash and kerosene. The account of bush fruits the past season is as follows:

Fall work—half day banking up	\$ 0 60
Two hours pruning	30
Manure, 1 load	25
Summer work—dusting soot and picking berries	1 25
Cost of producing	\$ 2 40
50 qts. currants, at 6c	\$ 3 00
60 qts. gooseberries, at 7c	4 20
35 qts. raspberries and blackberries, at 12c	4 20
Market price	\$11 40
Cost of producing	2 40
Profit over expenses	\$ 9 00

I don't think that is a poor showing for a plot 20x100, and that a city lot. I would like to see some other amateur's experience in the "Advocate" on this line. E. M. Nova Scotia.

Better Transportation for Fruit.

To the Editor "Farmer's Advocate":

Sir,—Speaking generally, I may say that 1901 was a fairly prosperous year for the farmers and fruit-growers in this valley, and good prices have been realized for all produce, especially apples. The fruit exported to England and elsewhere as a rule carried well, and returns have been unusually good. Most of our farmers are beginning to understand that it pays, if for no other reason, to pack their fruit honestly and well, as John Bull does not mind paying well for a good article, but has no use for the trash which sometimes finds its way into the middle of barrels marked XXX No. 1. Our great bete noire at present is the problem of fruit transportation, especially with our early sorts—Gravensteins, for example. A case in point: A large steamer of the "tramp" species is lying at her dock, say in Halifax, "greedy" for freight and bound for the United Kingdom. Down the railway line come some 20, 30 or 40 carloads of our famous Gravensteins. Very good! Say her agents: "These apples have to go by this boat—we are sure of them, so roll the barrels out here on the wharf in this nice warm September sun, while we look around for something else to complete our cargo. O yes, these green deals will do nicely. We will put these in the bottom of the hold; now roll the apples down on top of them to steam them, and we will cast off and away to St. John (Nfld.) for fish and cod-oil to top out our cargo with, and then off we go for London or Liverpool." Verily, the last state of those magnificent Gravensteins is worse than the first, and is it any wonder that sometimes the returns are disappointing? Where is the solution of this ocean-transit problem? No use to try to reason with S. S. agents; they are a hard-hearted lot, and they must try for full paying cargoes and quick despatch. Fruit-growers, combine; charter your own boats (those fast boats that are used in the Mediterranean fruit trade to carry fruit and fruit alone might fill the bill), ship your own fruit and save the middleman's profit. We hear every day of steel combines, oil combines, and what not, but little or nothing of farmers' combines. It seems, to say the least, a crying shame that a comparatively new and paying industry, as our apple-export business is proving itself to be, should be so hampered and handicapped at its outset by the want of what should be assured—transport facilities. King's Co., N. S. F. W. ABBOTT.

Bug Death—A New Insecticide.

To the Editor "Farmer's Advocate":

Sir,—Having recently received numerous enquiries regarding the composition of "Bug Death"—a newly-introduced insecticide—for destroying the potato beetle, we submitted the material to analysis and obtained the following data:

Moisture	40 per cent.
Insoluble matter, sand, etc.	11 21
Oxide of iron and alumina	5 60
Lime	51
Potash	none
Zinc oxide	82 10
Lead and copper	faint traces
Phosphoric acid	traces
Chlorine	47
Nitrogen	107

The results show that it is practically an impure or commercial zinc oxide—no doubt a by-product. As regards the essential elements of plant food, it is strikingly deficient, the only constituent present of any fertilizing value being nitrogen, of which there is only one-tenth of one per cent. It is, therefore, obvious that any claims made for it as supplying nourishment for crops are without foundation.

FRANK T. SHUTT, Chemist.

Dominion Exp. Farms.

Note.—The constituent in the above preparation which kills the insect is the zinc oxide, a white powder, which a local chemist states is about the same cost as Paris green, but he regarded the latter as preferable.—Editor.



APIARY.

The Treatment of Foul Brood.

(Special correspondence.)

In contributing an article on beekeeping to your very practical journal from far-away England, I realize the fact that although the general principles of beekeeping are the same in both countries, the conditions under which the industry is carried on are widely different here to what they are in Canada.

There is a terrible disease I see your bees are likely to suffer from the same as ours, and that is "foul brood." This disease is the scourge of beekeeping in Great Britain. Let me make a few remarks on the scientific aspect of foul brood, bearing especially on the McEvoy method of treatment, which has been so successfully practiced in Canada in recent years. The apiarist who understands the scientific reason for this method of treatment will, when he has occasion to use it, be twice as successful and employ half the time and labor as the man who merely goes "by the book."

In all advanced cases of foul brood there are an immense number of the spores or seeds of the disease present, and these spores are endowed with such great powers of endurance that it is practically impossible to destroy them by any ordinary method of treatment without seriously injuring the brood and bees as well. Under favorable conditions, these spores hatch into bacilli. The bacilli represent the vegetative stage of the foul-brood organism, and if they cannot at once find a suitable food medium in which to grow and multiply, they must starve and die. The natural food medium of the foul-brood bacilli is the living juice and tissue of the bee larva, but it is an important fact, which cannot be remembered too well, that the juice of a perfectly healthy larva is unfavorable for the multiplication in it of the foul-brood bacilli.

The moral of the above facts, which appear to be well established, is that in our treatment of foul brood we should (1) endeavor to remove and destroy as many spores as possible; (2) that we should get those spores that we cannot destroy to germinate away from a favorable food medium, so that they may starve and die, just like the fledglings of a deserted bird's nest; and (3) that since it is often impracticable to prevent a few spores from passing through the bodies of the larvae, the larvae—and this here implies the whole colony—should be kept as strong and healthy as possible.

One of the best practical applications of these points is to be found in what is called the McEvoy treatment. All the above objects can be achieved without the use of drugs, and personally I believe that drugs are of little value in the practical treatment of the disease. There are, however, occasions when drugs may assist very materially in holding the disease in check, and the drug that we in England have proved to be most useful is naphthol-beta, which is fed to the bees by being mixed with the syrup in the proportion of 1 oz. to 145 lbs. of sugar. It is necessary to dissolve the naphthol-beta first in alcohol (or methylated spirits), and then to mix with the syrup while the latter is very hot.

The third point mentioned is very important. All animals are more liable to be attacked by disease when they are below par than when they are healthy, and the honey-bee is no exception to this rule. When is a colony of bees below par? Most often in the spring, while the weather conditions are more or less unfavorable and the colonies are subsisting on the previous year's honey. This is the time when foul brood works the most havoc in British apiaries; the disease then spreads and develops with the most alarming rapidity. Weak colonies, too—those depleted in numbers—more easily fall a prey to foul brood than strong ones, and in doing so they may become much more easily a center of infection for the whole apiary or district. This is a most serious evil, and in an apiary attacked with foul brood all weak colonies should be immediately united together, and those that are diseased destroyed. Experience in England has taught us that it is often a mistake to deal drastically with mild cases of foul brood when the colonies are strong. This is especially so in high summer, when, with a steady honey-flow and plenty of sunshine, the disease often disappears as quickly as it developed, without any treatment at all. Yet there are times in the spring when the smallest outbreak should be immediately noticed and dealt with, and then it is that, in cases where the brood, being very abundant, is only slightly affected, it seems a pity to destroy it and ruin the colony, and a course of feeding with medicated syrup, if not too costly, seems to be the right line to pursue, for it has the double object of killing a large number of the bacilli and of stimulating and strengthening the colony, although it is open to doubt whether this last object is well attained by the use of such heavily-drugged food.

F. W. L. SLADEN. England.

A Start in Beekeeping.

I believe we are safe in assuming that of all the different things kept on the farm, animate and inanimate, bees are, as a rule, the least understood and the most neglected, so that when I am asked to outline conditions that will make the average farmer successful with bees, I fear I am undertaking a very difficult task; in fact, some noted beekeepers have declared that it is impossible for the farmer to keep bees at a profit, unless carried on as a specialty. However, I have seen exceptions to this, and although somewhat of a specialist myself, I have always maintained that every farmer should keep a few bees (especially if there are none near him), if for no other purpose than for the benefit of his orchards and clover fields. But as this article is not to discuss the economic value of the honey-bee as an adjunct to the most successful raising of fruits, clover, etc., I will say nothing further on that subject at present.

For the benefit of farmers who may be contemplating keeping a few bees, I will try and give a few practical hints in as few words as possible. Naturally, when we think of beekeeping, the first thing that comes to our minds is bees, but I would suggest to the prospective beekeeper to make good use of spare time between now and spring in getting posted a little in bee-culture: i. e., if he has no knowledge on the subject. Subscribe for one or more good journals dealing with the subject and secure some of the excellent works on beekeeping, among which I might mention "Langstroth on the Honey-bee" and Root's "A B C of Bee Culture." I would especially recommend the last-named work, as it is a complete encyclopedia and contains all the information necessary to any beginner, outside of practical experience. Spend some of these long winter evenings in studying the economy of the hive, the life and habits of these wonderful little creatures, and I think you will be amply repaid for your trouble, even if you should never keep a swarm of bees on the place. You will be led to think, as perhaps you never thought before, that there are some other things besides the human

length of frame, as nearly all comb-honey supers and other articles of hive furniture are made to fit that style of hive. I use a frame L. length, only much deeper, commonly called the Quinby. The beginner will need a good smoker, a couple of veils, some hives for increase, say one for each colony, spring count, also surplus cases, etc. If running for extracted honey, an extractor and uncapping knife will be needed. Would not advise any further outlay the first year. I have said nothing as to price of bees, as this will depend a good deal on your locality, prices of bees, like nearly everything else, being subject to supply and demand.

One of the things most dreaded by beginners is the stings. By careful manipulation you need not receive many; i. e., if you wear a veil and gloves, which latter you will soon discard as you get more experience. With the most of people, bee stings are at first quite painful and cause considerable swelling, but as the system becomes inoculated you will mind them but little; of all the different remedies prescribed, "grin and bear it" seems to be the most effectual. In conclusion, would lay particular emphasis on the need of understanding the business. I have often been surprised to hear comparatively smart people wondering why their bees did nothing, or died, when an enquiry would find that if anything the bees knew a little more about their owners than their owners did about the bees. If these same people had known as little about their cattle as they did about the bees, they (the cattle and horses) would certainly have died too. Nothing has made more strides these last fifty years than beekeeping. Remember, we are in the 20th century, so don't speak of skeps, gums, strained honey, king bees, and other phrases of beekeeping of fifty years ago, but be up-to-date in beekeeping as well as in other rural pursuits.

York Co., Ont.

J. L. BYER.

POULTRY.

To Prevent Egg Eating.

The habit of eating their eggs is the result of idleness among the hens. This idleness causes restlessness and morbid habits, and an inclination to grab at every new thing they see for something to do. If the hens are kept continually at work, digging and hunting in the litter for some small seeds, the restless habit is gone. One of the very best ways to cure the habit is to throw five or six of the white porcelain nest eggs among them on the floor, so they may learn they are like the stones, and a useless task to attempt to break them. In addition to this, elevate the nests from the ground so the hens can not see in them when running about; also place the nests in a dark, out-of-the



FARM HOME OF MR. JOHN D. ROSS, ELGIN, MANITOBA.

creation that are "fearfully and wonderfully made."

How many swarms shall you start with? So good an authority as Doolittle says four as the outside number. I think his advice is sound. Personally, I started with one. Acquire more bees if you want them, as you acquire more knowledge of the business. Make them pay for themselves as you go along. If you cannot make half a dozen colonies pay you, it is quite reasonable to suppose that you would not have much success with fifty or a hundred. Again, if you find you are not adapted to the business, with only a few colonies, your loss on the investment will be small. On the other hand, if you have bought fifty or a hundred and fail, the loss would be considerable. What time in the year shall you get the bees? Would say not before the middle of May, as by that time all danger of spring dwindling will be past. If possible, get some practical beekeeper to examine the colonies you purpose purchasing, to post you as to their condition—if free from foul brood, etc. Of course, if you are buying from a practical man whom you can trust, these precautions might not be necessary; but sometimes, I am sorry to say, we are apt to get taken in by trusting too much, as an early experience of the writer would show. The style of hive to use is a knotty question which beekeepers do not agree upon. However, size and style of hive is only a secondary matter at most, but I would advise beginners to get, if possible, standard Langstroth hives, at least as regards

way corner that is least frequented by the hens. It is usually the most restless hens that break the eggs, but when broken all join in eating them. All these habits can be traced to the nervous, restless members of the flock. We can not but feel satisfied that the prime cause of all these faults is the unnatural life the hens must live when kept for eggs during the winter months. If all their wants might be supplied in winter as in summer, then it might be different.

All Sick Fowls Should be Killed.

No one can afford to keep sick fowls unless they are very valuable specimens, and even then the chances of recovery or a return to usefulness, at least, are very slim. When allowed to run about they will spread their disease among the balance of the flock. When placed alone for treatment, the time and money expended for nostrums to cure them are beyond the value of the fowl. Time, money, and anxiety would be better saved by killing the ailing one. Then there is no danger of the trouble spreading into the young stock, nor will there be any danger in the future of eating one of its young whose carcass may be infested by disease.—(Exchange.)

A poultry raiser says that poultry in confinement do not fatten as well or as quickly on grain as on a mash. This is probably true, as the birds require exercise to help assist in grinding the whole grain.



## Popular Premiums.

This is the season when readers, both young and adult, can most readily obtain new subscribers for the "Farmer's Advocate." The growing popularity of the paper with farmers is shown by the splendid increases in our subscription list this winter; also by the growing demands on our space. To meet this and carry out our determination to give our readers the most complete and practical service possible, we are compelled for this issue again to enlarge the size of the paper. Show your copy to some friend who is not a reader, and he will appreciate its worth to the farmer and the home, and subscribe. We believe in encouraging our friends to do missionary work for the "Farmer's Advocate." No other periodical offers such valuable and useful premiums. Our full premium announcement is crowded out, but we call attention to a few of its most attractive features:

**THE FARMER'S POCKETKNIFE.**—The run on this premium was so great as to completely exhaust the consignment received from Sheffield, Eng., where they were specially made for us. So delighted are those who have received the knife that we decided to order another lot, which are now on the way from the manufacturer. It is a superb knife, with nickel handle, and can be secured by sending 2 new subscribers for the "Farmer's Advocate."

**BAGSTER'S TEACHER'S BIBLE.**—A truly magnificent volume, with flexible leather cover and useful S. S. helps; retailed for from \$2.50 to \$3.00. Can be secured for 2 new subscribers. Do not miss such a privilege.

**THE BRACELET AND PADLOCK.**—The beautiful silver filled curb-link bracelet and padlock for young ladies' wear is giving great delight to all who earn it by sending us 2 new subscribers; sterling silver bracelet for 3 new subscribers. Both are gems.

**FOUR FARMERS' PICTURES.**—The agricultural and live-stock public are appreciating as never before our offer of the four masterpieces—"Canada's Pride" (draft horses), "Canada's Glory" (light horses), "Canada's Ideal" (Short-horns), and "Canada's Columbian Victors" (Ayrshires)—for only 2 new subscribers, or any two of the four pictures for 1 new subscriber. Any or all of these engravings, properly framed, make a grand ornament for the home, and are an educator, creating a love for superior animals.

**A COLLIE DOG.**—A choice young pure-bred collie can be secured by sending us 12 new subscribers; or one of the WINNIPEG HEATERS (best drum ever made to save fuel and make the house comfortable in cold weather) for 10 new subscribers.

**GENTS' WATCHES.**—We offer a long list of watches for clubs of from 2 to 25 new names. Here are some of the most popular: Yankee Nickel, for 2 new names; Trump Nickel, 4 new names; Trump Gun Metal, 5 new names; No. 14 Silver, for 8 new names; and 7-Jeweled Elgin, in 3-ounce nickel case, for 10 new names.

**LADIES' WATCHES.**—Gun Metal, Swiss Chatelaine, for 4 new names; Sterling Silver, Swiss Chatelaine, 5 new names; Nickel American O. F., large size, 5 new names; Gun Metal American O. F., large size, 5 new names; and Nickel, small size, for 9 new names.

The above are all handsome watches and good timekeepers.

**BOOK PREMIUMS.**—Complete list of all standard works for farmers. For titles and terms, also for complete list of watches, see page 100, February 1st issue "Farmer's Advocate."

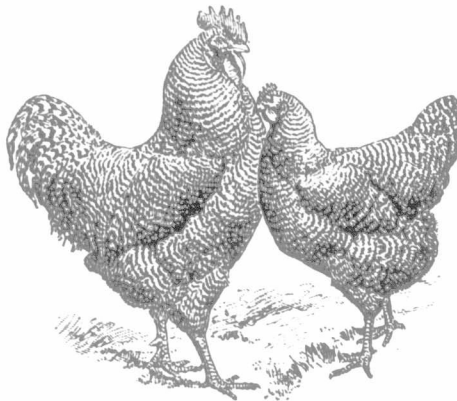
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FARMER'S ADVOCATE,  
London, Ont.

### Poultry: Selection of the Breed.

I do not wish to be understood as speaking slightly of our bird fanciers, for I believe we could not get along without them. They have made a special study of bird production, and have it down to a scientific point, and can produce almost anything they want.

A grave mistake that is continually being made is that a farmer buys a setting of pure-bred eggs or a trio of birds from Mr. X, a fancier of some repute, and straightway advertises pure-bred poultry for sale of such a strain of breeding. He is not able to distinguish between a standard bird and one that is off color,



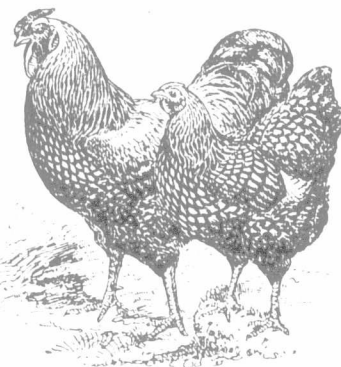
BARRED PLYMOUTH ROCKS.

and when one tries to show him the difference, one is met with the remark, "I bought the original stock or eggs from Mr. X, who had the best birds at all the leading shows." Mr. X, if he knows his business, will cull and cull, and is very careful in his matings, and understands the science of breeding. He will tell you that in his best breeding and mating there will always be birds that are not up to the standard, and must be sold for the table, and if he is an honest man he will not sell such birds for breeding. The fancier has a right to a fair recompense for his trouble, and when he asks what seems a big price for a bird, we must, as farmers, take into consideration the time and money expended in the production of first-class birds. Let us, then, give him a few dollars for his birds, and demand the best. Some fanciers are so short-sighted as to sell all they have, irrespective of quality, and thus damage their reputation, and may give as an excuse, "I told the party that the birds were not up to the standard."

A few days ago I saw two White Plymouth Rock cockerels that had been purchased in Eastern Ontario; my next neighbor has far better birds. I consider them a disgrace to the breeder, and shall not deal with that breeder if I know it. What agreement was made between the parties I do not know, save that the birds are far below the standard.

Now, the great difficulty is to settle on the best kind of hen for winter production of eggs. If eggs only are wanted, we might settle on some of the smaller kinds, but if eggs and meat are the objective point, then we must turn our attention to the larger breeds.

As I said before, I do not think any one breed is perfect, but I believe the Plymouth Rocks and Wyandottes are as near perfection as a general-purpose fowl as any we have. They are my favorites, and have justly earned the position, for I have tried nearly every breed, and I know whereof I speak; yet I have somewhat against them. If the Wyandottes were only a few pounds



SILVER LACED WYANDOTTES.

heavier and as good in other ways, I should consider them the ideal farmer's fowl. If the Plymouth Rocks would only lay more and not sit so often, then I would be much better pleased. I am aware that many persons claim that they have non-sitters in Plymouth Rocks, but I have never got hold of such birds. The Plymouth Rocks generally lay about a dozen eggs and then want to sit. True, they are easily broken up, but when there is a break of several days in the laying. Since we have incubators about perfect, I think it would be a good idea if our fanciers would turn their attention to producing non-sitters and greater egg-producers, with a little more meat on breast, and in the case of the Wyandottes, a heavier bird.

I have Wyandottes that will lay in November

and December, and right through the winter, spring and summer, till they commence to moult, and not offer to sit. Although some want to sit in the spring, I have never had one wanting to sit in the winter. The Wyandottes mature quickly, and will stand cramming better than any other kind.

I have Plymouth Rocks that are wanting to sit already; am just breaking up the third one this winter; they are last spring's birds. The Plymouth Rocks are a fine, large bird, good winter layers and mature early, and will stand considerable cramming.

J. B. POWELL.

### Mongrel or Pure-bred Fowls?

BY JOHN B. PETTIT.

People going into the poultry industry, whether it be upon a large or small scale, as a rule have their ultimate financial success in view when embarking upon the sea of chickendom. They are very few in number who go into it "for their health," but the mighty dollar is what prompts men to take up this work. To ensure this success much thought is given to sites, poultry-house plans, and breeds, and we find that the most success has attended those who have been extremely careful about these matters.

But there is a common error that the majority of farmers make, into which practical poultry-keepers do not fall, and that is the keeping of mongrel fowls. It is astonishing what foolish notions so many people have in their minds concerning the merits of fowls of this description. A good many claim that mongrels are more hardy than thoroughbreds, and, as a consequence, require less attention and care. What an extremely foolish idea to imagine that simply because a hen is a mongrel, the fact of its being so makes it more hardy. We will admit that at times we see pure-bred fowls that do not appear as healthy and hardy as some others that are a cross between a haystack and a sawhorse, but it is the consequence of improper or too close inbreeding, and not simply because they are pure-bred. Again, some claim that they will lay a greater number of eggs with less feed than will pure-breds. It may be that we do not just understand the term mongrel, but if we do, we have as yet failed to hear any satisfactory arguments to prove such statements, and we have never yet seen that class of birds excel as egg-machines.

While there are no reasons why we should continue raising mongrels, there are many reasons why we should discard our old whims and stock and spend our time upon something that may be improved, and in this short article we will attempt to make clear only a few of them.

Our first source of revenue from the flock is the supply of eggs. Some will say, "An egg is an egg." Certainly it is, but we have found out that there are many different sized, shaped and colored eggs, and also that these do not sell as well when all colors, shapes and sizes are mixed as when they are kept separate. In some markets dark-shelled eggs will bring two or three cents per dozen more than will white-shelled ones, while in other markets the direct reverse is the case. It stands in hand, then, to meet the demand of our market, and use the breed that produces the color desired. When we want white-shelled eggs, suppose, for instance, we take the Minorcas or the Leghorns. These will give us the color desired, and the Minorca will give us the largest egg in existence. Many breeds give us dark eggs, but probably Cochins give us the darkest. So when our birds are of one pure breed we can get the color desired and the eggs will nearly all be of uniform size and shape, and, as we all know, such can be, and are, sold at a higher price than eggs of every size, shape and color in one grand mixture.

The very same argument will apply to the sale of the carcass when the hen's work as an egg-producer is over and she is introduced to the hatchet. A pair of birds with nice white skin and yellow shanks will sell for a higher price any time than will a pair of the same size with one having the kind of skin and shanks mentioned and the other with a bluish-black skin full of black pin-feathers, and having black shanks.

Then, when we know we have a pure-bred flock it will not be very long before our neighbors and friends will know the fact also, and when they see that we are making larger profits out of our flock they will want some of the same stock. Then will be our chance to sell a few settings of eggs for hatching purposes. There is always a demand for eggs for this work, and, as a rule, they are sold at a figure much in advance of regular market eggs. And they are often sold at from \$3 to \$5 per dozen. And who ever heard of a man buying mongrel eggs to hatch a few cockerels therefrom to improve his pure-bred flock? Many do not care to go to the trouble of buying eggs of pure-bred fowls and hatching them themselves, but instead buy a cockerel or two to infuse new blood and improve their flock. Then you have a chance to sell a bird at from \$2 to \$10. Sometimes they go as high as \$100 for a single bird. But do we ever hear of a mongrel cockerel being sold at such a high price?

When feeding to produce eggs, if we have a



flock of pure-breds of one breed we can better regulate the feed to the general requirement, and when we have found a food ration that will start two or three laying we can rest assured that we can expect them all to soon begin to pay for their keep. When we have a dozen or more different breeds and as many sizes in a flock we cannot do this, for what food would keep one hen in laying condition would keep others rolling in fat; others again would starve on the bill of fare.

**QUESTIONS AND ANSWERS.**

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

**Veterinary.**

**WARTS ON STEER AND EMBOLISM IN MARE.**

1. A steer, two years old in the spring, is troubled with warts on his neck and shoulders and between his hind legs, and along his belly there is a cluster of them; some as big as a hen's egg, and hanging down. They began to decay on the outside, smell badly, and fall off. I applied some castor oil, but don't see that it has any effect on them. I would like to know if there is any cure for them? 2. I have a mare that is over twenty years old, looks well and eats well, and I can't see anything the matter till I begin to work her, and when she goes a little distance she stands a little while and raises her hind feet, turn about, as if in pain. Sometimes she staggers, and after standing for a little she is all right as far as I can see, but will not go far till she acts the same way. She is all right coming back, with a nice load, down hill.

Nova Scotia.

**SUBSCRIBER.**

Ans.—1. A surgical operation will be the better way to remove the large warts. The smaller ones can be removed by applying butter of antimony once daily with a feather, occasionally picking off the corroded portions which will be on the surface.

2. The symptoms shown by your old mare indicate embolism (a partial plugging) of the iliac arteries. There is little benefit to be derived from treatment, especially in a mare of her age. Treatment consists in giving rest and administering about 2 drs. iodide of potassium three times daily. It might be worth while trying this treatment for a couple of months. J. H. REED, V. S.

**FISTULA.**

Have a horse, five years old, in good condition. Last spring a little pimple or sore came out on top of the neck while plowing on a common walking plow, and his neck was sore almost all summer. He got better towards fall, but there was a little lump left and it is getting sore again. It is on top of the neck where the collar bears. It is on the left side. When it breaks out you can see a little white tube like a goose-quill running up and down, straight, about three or four inches long. It looks to be between the skin and the flesh, or it may be a little in the flesh, not very deep, because you can see a little ridge on the skin about the length of the tube. I work him always with a zinc pad, but it does him no good. What would you advise? J. G.

Essex Co.

Ans.—Your horse has fistula, but evidently it is not deep-seated; still, energetic treatment is demanded. It can be successfully treated by an operation, which consists in cutting down on the tube and carefully dissecting it out. It must all be removed, then neatly stitch up the wound and treat by keeping it clean and applying three times daily a lotion of one part carbolic acid to 60 parts water until it has completely healed. Another method of treatment (which will be successful if the whole length of the tube can be reached with a probe) is to roll about 5 grains of corrosive sublimate in tissue paper and insert it into the tube by forcing in with a probe. You must be sure to get the drug the whole length of the tube. Leave alone for a few days, and in the meantime the drug will have corroded the walls of the sinus and you will be able to catch the corroded portion with your fingers or a forceps at the exposed end and pull it out. This, having removed the diseased tissue, leaves the parts in a condition to heal, and after-treatment consists in injecting a little of the above lotion into the cavity three times daily until healed. J. H. REED, V. S.

**COLT SPRAINED IN STIFLE.**

I have a colt sprained in the stifle and a little swollen. I would like to know what is the best to do for him? C. R.

Huron Co., Ont.

Ans.—Place colt in loose stall and give a long rest. Blister the joint once every month with 1½ drs. powdered cantharides, mixed with 1 oz. vaseline, until the lameness and swelling disappear. J. H. REED, V. S.

**SUPPURATIVE MAMMITS.**

1. Cow cut her teat on barb wire last summer, and could not be milked dry in that teat, whereupon the milk caked in the udder. It became hard, and has broken on several occasions, running a very offensive matter. Have applied home remedies, but to no apparent avail, as that portion of udder remains the same; other parts of udder not affected. What can be done for it? 2. Cow at pasture came home with the right hind part of udder swollen badly, and within a few days spread to other side, but then slowly became reduced. No cause is known, and she continued milking as before. There still remains a small bunch in udder at the teat? W. M. Welland Co., Ont.

Ans.—1. The inflammation set up in the quarter has resulted in the formation of abscesses. These must be freely opened with a knife and flushed out twice daily with warm water, until all pus is removed, and then a little of the following lotion injected into the cavities: Corrosive sublimate 1 part, water 1,000. This treatment must be kept up until the cavity fills with healthy tissue, and any fresh abscesses that form must be treated in the same way. It is possible the quarter will become inactive, as the secreting cells may be destroyed, but if the suppurative process be not checked, the other quarters may become involved by absorption of the gangrenous material, so it is necessary to treat promptly in order to save the other three quarters.

2. This is a case of hardening or induration of a portion of the quarter, the result of inflammation. The lump may be reduced by repeated applications of an ointment made as follows: 1 dr. each of iodine and iodide of potassium, mixed with 2 ozs. vaseline. J. H. REED, V. S.

**MORE FATALITY IN PIGS.**

1. I notice in your Jan. 1st issue an enquiry about fatality in pigs, described as breathing heavily for a few days and then dying. I have lost several pigs in the last few years, two or three each spring and fall, at different ages, from three weeks old up to four months. They have been in good growing condition. Generally would quit eating, stand and breathe heavily, never lie down on either side, but squat down with feet under them, sometimes giving quite a jerk with each breath, as though choking, and generally with a cough. I examined the two last that died, pigs four months old, about 100 pounds, and could see nothing, except in stomach there were 7 or 8 worms from 3 to 7 inches long and some undigested barley hulls a little green in color. These pigs were farrowed in August and were never closed up in pen. Had a run on young clover while it lasted; since then have been fed sugar beets and chopped barley. What was it killed them? Please give a remedy for worms.

2. In what way does it benefit rye to boil it as a feed once a day for working horses, brood sows or young pigs? Can it be fed profitably in this way at present prices of feed? SIMCOE FARMER.

Ans.—1. The symptoms you give are very much the same as those of the pigs referred to in your letter. The disease is evidently not contagious, and must be due to local causes. Symptoms very similar are present in cases of epizootic catarrh in swine, but I am convinced that your losses are due to digestive derangement, due either to the quality of the food given or to overfeeding and too little exercise. You say that your pigs were farrowed in August and died at four months old, which would be in December. The mangolds were good to take the place of green food. If the quarters in which they were kept were damp or cold, the conditions would favor the trouble. I do not think that worms, unless there were many more than you mention, had anything to do with it. I would advise you to purge all your pigs, as has been advised many times in these columns, and then feed daily enough of equal parts sulphur, Epsom salts and powdered charcoal to keep the bowels working freely. See that the surroundings are warm and clean and that the pigs get exercise. From ½ to 1½ ozs. oil of turpentine, given in from 2 to 4 ozs. linseed oil, is a good drench to destroy worms.

2. Boiling rye makes it more easily masticated and digested. I do not consider it good practice to feed any pregnant animal on rye. I think a little of it can be profitably fed at present prices. J. H. REED, V. S.

**EXCESSIVE QUANTITY OF AMNIOTIC FLUID.**

I have a cow seven years old, had a calf last year. About three months before calving, she began to grow exceptionally large, and kept on increasing in size right up to the time of calving, and by that time she was so large she could with difficulty get through the stable door. When she had her calf, about a barrel of water came from her. She never was any way sick, only looked to be uncomfortable at times. Got through her calving all right, but did not look like the same cow. One would think her whole inside was gone. What would you call the trouble? She is due to calve again in April, and I can see she is going to be the same again. The calf she had last spring was the smallest I ever saw at birth, and did not do much good all summer, though running with the cow. E. C.

Perth Co., Ont.

Ans.—In all pregnant animals there is a quantity of fluid surrounding the fetus or fetuses. As pregnancy advances, this fluid, called the amniotic fluid, increases in bulk, and in some cases is formed in excessive quantities. This condition is not a disease that can be controlled; in fact, it cannot be said to be a disease at all. Some females appear to be predisposed to what we might call the formation of an abnormal quantity of this fluid, and in such cases the health of the animal is not interfered with to a greater extent than to make her larger and more clumsy than usual, and the fetus is usually small. Nothing can be done to prevent this condition, and it is probable parturition will take place in a normal manner. J. H. REED, V. S.



A GLIMPSE OF THE FARM OF WM. STEPHENS, VIRDEN, MAN.

**LAME MARE.**

A mare, 11 years old, supposed to be in foal in fall for the first, took lame in shoulder about two months ago, with a slight swelling in leg. Can scarcely back out of stall. Seems worse after taking exercise, which she does daily in yard. Is in splendid heart, and all right other ways. Perth Co. SUBSCRIBER.

Ans.—Keep the mare as quiet as possible in a box stall. Do not allow any exercise. Blister the affected parts once every month with the following: 1½ drs. each powdered cantharides and biniodide of mercury, mixed with 2 ozs vaseline. Clip the hair off the affected parts, and rub the blister well in. Tie so that she cannot bite the part. In 24 hours rub well again, and in 24 hours longer wash well with warm water and soap, and apply some vaseline. Let her head down now, and apply vaseline every day until the scale comes off. Repeat this every month, as long as necessary. Of course, you must be sure of the seat of lameness, else you may be treating the wrong parts. J. H. REED, V. S.

**PRESCRIPTION FOR COLIC.**

Would you kindly publish a good prescription in case a horse should take an attack of colic. How much black antimony could you give to a 100-pound hog? We have heard of it as being good for a hog inclined to be stiff. A. R.

Ans.—The standard prescription for colic in horses is: Tincture of opium, 2 ozs.; fluid extract of belladonna, 4 drs.; sweet spirits of nitre, 2 ozs.; water, 1 pint. Give in one dose and repeat, if necessary, in 1½ hours. This is a fair dose for a horse of about 1,200 lbs. The dose would be larger or smaller according to the size of the animal.

About ½ dram is a fair dose of black antimony for a pig of 100 lbs. J. H. REED, V. S.



**VISCID MILK.**

I am milking four cows, and last August one of them started giving thick milk, and about four weeks ago the other three started giving the same kind of milk. Some days it will be quite bad, other days hardly any. We are feeding clover hay twice a day and cut cornstalks once, and about eight quarts of oats per day. The milk, when it is in the pail after milking, looks as though there had been some oil put in the pail, as it floats on top. Upon examining it, it seems like cream when it is breaking for butter, it is very greasy to feel and rather of a tough nature. I have noticed at times that it was a little stringy. Can you tell whether it is contagious, and what is the cause and can it be cured?

Monroe Co., Mich.

Ans.—This is not a contagious trouble, and the fact that all your cows are affected points to local causes. This kind of milk is usually given by cows that are apparently healthy, and may be due to the condition of the surroundings; damp, poor ventilation or unhealthy vapors may cause it. Want of cleanliness in preserving the milk may also cause it to undergo the alteration. It may also be caused by certain atmospheric conditions. It appears to consist in a mucoid fermentation, and the ferment produced will give rise to the same alteration if a small portion of the milk be added to a larger quantity of that which is healthy. The condition may be due to digestive derangement or the food, especially if any of the food contains decomposing matter. Give each cow a purgative of 1½ lbs. Epsom salts dissolved in a quart of warm water. Feed lightly until purgation commences. Discontinue feeding cornstalks. Feed nothing but perfectly clean food, and give each cow 3 drs. powdered hyposulphite of soda three times daily for about 2 weeks. Attend well to the comfort and cleanliness of the animals.

J. H. REED, V. S.

**BURSAL ENLARGEMENT—LUMP JAW.**

1. I have a mare with soft lump about the size of a hen's egg on right hind leg, a little above fetlock joint. I first noticed it last fall, consulted a vet. and he gave me a blister, which did no good. She is in good condition, but is quite lame.

2. Have a heifer with lump on face just below the eye. Would it be caused from a tooth? It seems like an enlargement of the bone; it is hard. Heifer in good condition. Would the lump-jaw cure advertised be good?

Ontario Co., Ont.

Ans.—1. The lump you mention is a large bursal enlargement, commonly called windgall. When quite large and tense, these sometimes cause persistent lameness, but if, as you state, this lump is quite soft, it is probable the lameness is due to other causes. Treatment consists either in the application of cold water and bandaging or in repeated blistering or firing and blistering. In any case, the mare should have a long rest. Firing should not be done except by a veterinarian.

2. Your heifer has lump jaw, and when the bone is diseased as you describe it is hard to effect a cure. You might try the iodide of potassium treatment, which consists in giving 1 dr. three times daily in food at first and gradually increasing the dose until a condition known as iodism is produced, which is evidenced by loss of appetite, an irritation of the lining membrane of the nose, eyes, etc.; languor, abstinence from water, and sometimes a flow of saliva from the mouth. When these or any of these symptoms are noticed, discontinue the administration of the drug. This treatment will probably arrest the progress of the disease. Have had no opportunity to observe the action of the "lump-jaw remedy."

**SALIVATION IN COLT.**

We have a two-year-old colt that slobbers freely while eating, the saliva sometimes escaping in a stream. It has acted this way for a year. It is fed timothy hay night and morning, and runs in the yard during the day. Its mouth appears all right. It is in fair condition and is growing well. Would you kindly give cause and treatment.

Halton Co., Ont.

Ans.—Salivation is frequently noticed during dentition, and this is probably the cause of it in your colt. If so, it will cease in time, but will probably be noticed in a greater or less degree until four years old, at which age it will have a full mouth of permanent molars. It would be well to have its mouth examined by a veterinarian, as some of the molars may be abnormal in shape and irritating the tongue or cheek; if so, they will need dressing. There may be some other irregularities about the teeth that could be detected and rectified only by a person expert in that line. If the mouth and teeth are all right and the food is of good quality, the cause of the trouble exists in dentition and time alone will remove it. It might be well to change the food. Give clover hay if you have it and a reasonable ration of crushed oats. If you have not got the clover, try good straw and crushed oats for a while.

J. H. REED, V. S.

**SYMPTOMAL ANTHRAX.**

Four calves died out of eleven in twelve days. Die inside of 24 hours. First noticed lame, generally in hind leg; sometimes in front. Refuse to eat or drink. Seem very sick; lie down. The quarter swells up and their vitality goes right down. The whole quarter affected swells up. When pressed, the skin gives a crackling sound, but if lanced no blood comes out; flesh dry and puffy and black. If skinned, the whole quarter is black and mortified. I was feeding dry timothy hay. They might not have got enough salt and water. This is all the reason I can find for it. What caused it? Is there any preventive? Is it contagious?

Norfolk Co., Ont.

Ans.—Your veterinarian is certainly quite correct in diagnosing black quarter. It is unusual for it to occur while animals are fed in the stable, but there are occasional outbreaks under such conditions, especially when the hay fed has grown on swampy or marshy ground. It seldom or never attacks calves under six months old nor animals over four years; in fact, seldom affects animals over two years. The virus of the disease usually gains entrance into the system through a wound, but it is possible for it to act through the mucous membrane of the digestive canal. There is practically no cure for it. Immunity can be rendered by inoculation with anti-blackleg vaccine, which, I believe, can be obtained in Washington. It might be obtained through the Dominion Government. You had better change the food of all your young cattle. Burn the carcasses of all that die. Man is immune, but on account of the danger to other cattle, all carcasses should be burned.

Note.—Blackleg vaccine is advertised in the Manitoba edition of the "Farmer's Advocate" by Parke, Davis & Co., Walkerville, Ont., and Montreal, Que.; and also by the Pasteur Vaccine Co., 56 Fifth Avenue, Chicago, Ill., and W. J. Mitchell & Co., Winnipeg.—Ed. F. A.

**INVERSION OF RECTUM IN SOW.**

A sow was taken to a neighbor's to be served by their boar, the sow being in good condition at the time. Had been served all right, but was left with the boar for a period of three days, after which time we noticed a bearing down of the bowels, or, otherwise, her inside hanging out. She has warm quarters at home and was fed on clover tops, scalded, with shorts, and in the place we took her she was exposed to the wind and cold weather, but fed heavily on pure shorts alone. Would like to be advised whether there is a remedy for the case, or would it be wiser to fatten and make pork of her rather than run the risk of losing her? She doesn't seem to be suffering, and feeds all right.

Wright Co., Que.

Ans.—Your sow has inversion of the rectum, caused either from straining on account of too much service or else constipation. In either case, if taken in time, and good astringents, as alum water or tannic acid, applied, and the intestine returned and secured by a truss, which would have to be removed occasionally to allow her to defecate, a recovery can be effected, but in a chronic case, such as you describe, treatment becomes less satisfactory and usually an operation is necessary, which can be successfully performed only by an expert. You might try treatment as described, and if that fail you had better feed her for the butcher.

**CHRONIC DIARRHEA IN CALF.**

A yearling grade Holstein heifer was scoured badly when running on grass. Thought she would do better on dry feed, but there is no improvement. Appetite not very good; has a warm stone stable; fed the same as other cattle that are keeping well.

Wentworth Co., Ont.

Ans.—Your heifer has chronic diarrhea. This may be due to constitutional digestion weakness or to disease. Tubercular disease of the digestive organs is a fruitful cause of such conditions. You could have her tested with tuberculin to ascertain whether she is tubercular. You can doubtless arrest the diarrhea temporarily by feeding dry food, as hay and a little oat chop, and giving ½ oz. each of powdered catechu and prepared chalk and 1 oz. tincture of opium every four hours until the diarrhea ceases. But in order to effect a permanent cure, the cause must be ascertained and, if possible, removed. If the cause be constitutional weakness, careful feeding and time will probably effect a cure.

J. H. REED, V. S.

**SCRATCHES.**

Please tell me, through your valuable paper, what is a good cure for scratches?

Ans.—We quote from Veterinary Elements (price \$1.50 at this office): "The parts should be thoroughly cleansed with warm water and castile soap, well dried and some clean sweet fat (unsalted) rubbed in; a little iodoform and boracic acid can be mixed with the lard, in the proportion of one to ten. In many cases a physic ball should be administered and the system depleted of waste material, thus cleansing the blood."

J. H. REED, V. S.

**BLACK TEETH IN PIGS.**

I had a litter of eleven pigs thirteen months ago; four of them died from black teeth at three days old. I took eight teeth out of each of the others, which I know saved their lives, but one of them was so far gone he never got over it. Now, I would like to know how many teeth little pigs should have in the sides when born, or if any at all. Since May 15th I have raised thirty-four and took eight teeth out of each, at three to four days old, with the common wire nippers.

Grey Co., Ont.

G. D. S.

Ans.—At birth (or sometimes not for a few days) pigs have twelve teeth on the sides—three in each row above and below. The popular idea of the existence of a disease called "black tooth" in young pigs is entirely erroneous. No such disease exists. In many cases the teeth are of a blackish color, but it is not a diseased condition. In some cases the first tooth in the row or rows is quite sharp and ill-shaped, or pointing in such a direction that there is danger of it irritating the teats of the sow and producing inflammation, which interferes with milk secretion and the general health of the sow and consequently has an effect on the young. In such cases, it is well to break such teeth off with the nippers. The wholesale removal or breaking of the teeth such as you have practiced is certainly irrational and uncalled for. If the so-called "black teeth" are injurious, they should be extracted root and all, as if they cause any trouble other than that mentioned in good and that be derived from breaking off the crown, and that certainly is all that you can do with wire nippers.

J. H. REED, V. S.

**INDIGESTION IN MARE.**

Have a mare, six years old, apparently in good health. She took sick a couple of weeks ago; ate well; would lie stretched out at full length for an hour or two. She acted thus for a day and then recovered. What is the cause, and cure?

Cardwell Co., Ont.

J. H. P.

Ans.—Your mare evidently suffered from indigestion, and in this case nature asserted itself and effected a cure without extraneous aid. I would advise the administration of a purgative of about 8 drs. Barbadoes aloes and 2 drs. ginger, made into a bolus with a little treacle. Starve her for about 10 or 12 hours, then give the bolus and feed nothing but a little bran, and give water with the chill taken off, in small quantities, but often, until purgation ceases. This will remove the tendency to a recurrence of the trouble. Then exercise regularly, and feed in proportion to the amount of work done or exercise given, and it is probable you will have no further trouble. Treatment for an attack consists in giving an anodyne drench composed of 2 ozs. each laudanum and sweet spirits of nitre and ½ oz. fluid extract of Belladonna, mixed with 1 pint of water and given as a drench. The dose may be repeated in two hours if necessary.

J. H. REED, V. S.

**LUMP ON COLT'S KNEE.**

I have a colt, coming two years old, that has a lump on its knee, and it has been there for some time. It feels like a button under the skin, and is movable. It does not appear to be sore nor lame. How can I remove it?

Perth Co., Ont.

A SUBSCRIBER.

Ans.—Your description is very indefinite as regards the exact location of the lump and the length of time it has been present. From description given I infer that it is an incised tumor, and if so, the only method of removing it is by an operation, and the advisability of operating depends largely upon its location. It is always dangerous to cut in the region of a joint, and never should be done except by an expert. As the lump is not large, and apparently not interfering with the colt, I would advise you to leave it alone.

J. H. REED, V. S.

**DOG AFFECTED WITH FLEAS AND INTESTINAL WORMS.**

I have a dog that is troubled with white worms. His droppings smell bad; he also passes worms in it. He is also troubled with fleas. Can I wash him with anything?

Simcoe Co., Ont.

A SUBSCRIBER.

Ans.—Starve the dog for about eighteen hours, then give him in a little sweet milk about two grains of pulverized areca nut for each pound of his weight; that is, if he weighs 20 lbs., give 40 grains, etc. You will have to drench him, as he will not take the medicine voluntarily. To rid him of fleas, wash every few days with creolin, 1 part; water, 100 parts, until they are all destroyed.

J. H. REED, V. S.

**BONE SPAVIN.**

What is the quickest and best cure for a jack spavin on a horse eight years old? He got it while playing in the yard.

York Co., Ont.

C. S.

Ans.—What is commonly called "jack spavin" is a bone spavin. Treatment consists in firing and blistering. In some cases blistering alone will effect a cure, but in most cases, except in colts, it is a waste of time. In an eight-year-old horse, it is better to get a veterinarian to operate at once.

J. H. REED, V. S.



**COLT WITH WEAK PASTERNS.**

I have a colt about six months old. When foaled it was very crooked in the hind legs and set back so far in the pastern joint that the fetlock pads reached the ground and the toes turned up, and it has not improved. I had it shod with high calkins behind, and that seemed to help it while in the stable, but when it goes out to water, its toes turn up the same as ever. What can I do for it, and will it come right as it grows older?  
 Lennox Co., Ont.

Ans.—Keep the colt in a box stall and do not allow it to run out at all. Get it shod with long-heeled shoes—that is, allow the shoes to extend about an inch or an inch and a half further back than the heel of the foot—have the heel calkins about 1/2 inch high (not any higher), and do not have any toe calkin. Blister the back of the limb from the elbow to the foot every four weeks. The details for blistering have been given so often in these columns, it is not necessary to repeat. The cause of the condition existing is a weakness of the back tendons and muscles. The blistering will tend to strengthen and shorten them, and will be the means of assisting nature to effect a cure.  
 J. H. REED, V. S.

**PIGS FEEDING AT WILL.**

Is it good for the digestive organs of a pig to be eating at any or all times, such as is the case where food is constantly kept in self-feeding boxes?  
 Oxford Co., Ont.

Ans.—This manner of feeding is not good for any animal if kept up for a long time. It may answer a very good purpose for a few weeks when pigs are being fed for the butcher, but I do not think it would be a good plan for general use. In order that the best results may be obtained from food, it is necessary that the animal experience a slight degree of hunger at regular intervals, and that he be given no more food at a meal than he will consume. Then the stomach and intestines, after digesting the meal, will be allowed to rest until the next meal, while if food be before the animal at all times he will never be really hungry, and hence not enjoy his food to the fullest extent; neither will the digestive organs be allowed the necessary rest. Still, even where self-feeding boxes are used, it is not necessary (neither do I think it is intended) that food be in them all the time. My idea of the advantages of such boxes is, they allow only a certain amount of food to enter the trough, and as this is eaten more enters, but the pig is forced to eat more slowly and hence will masticate more freely; still, it is neither necessary nor wise to put more food in the box than the pig will eat.  
 J. H. REED, V. S.

**TAIL CARRIED TO ONE SIDE.**

Have a valuable driving colt which, when driving, carries his tail to one side. Want to know whether you would advise an operation in the shape of cutting the muscles, or not?  
 Perth Co., Ont.

Ans.—The colt's tail can be straightened by severing the muscles of the side of the tail to which he carries it. The cutting must be done high up and the muscles must be entirely severed and the tail tied to the opposite side or flogged several times daily until the muscles grow a little and meet. If this precaution be not taken after the operation, the wound will heal quickly without an increase in length of the muscles and the tail will regain its former condition. It requires an expert to perform this operation satisfactorily.  
 J. H. REED, V. S.

**Miscellaneous.**

**TUBERCULOUS TURKEY.**

We have a turkey (gobbler) which for about a week has appeared sick; refuses to eat but very little, and even then does not seem to care for it. Its head is white, and it is getting quite thin. Allows itself to be chased by the other fowl.  
 Renfrew Co., Ont.

Ans.—It is probably tuberculosis, and if that is the case the bird may as well be destroyed, as, if the disease is infectious in the human race, no doubt it will be in the turkey tribe. I might say that I had one of my own go off its feed for a few days—in fact, would eat nothing—about a fortnight ago, and I made a mixture of sulphur, butter and cayenne pepper—a teaspoonful of butter, with the same amount of sulphur and a quarter teaspoonful of pepper—and made it into little pellets and put them down its throat, shut it up for a couple of days, and it is now as well as ever. Its droppings were quite green and unnatural looking, and now it seems all right. You might try this remedy, and put a little iron in the water for drink; a few old rusty nails put in the drinking water makes a good iron tonic. I would also give it some cooked food, such as boiled potatoes (mashed), with a little shorts or bran mixed through them, as it is easier digested than uncooked food.  
 JAMES ANDERSON.

**QUANTITY OF CEMENT AND GRAVEL FOR FLOORS AND WALLS.**

I am about to build a barn and cow house together, the latter to hold 20 cows. It is 32 x 32 feet, with cellar in alley. I want a cement floor. What quantity of cement, gravel and stone is required? As there has been no cement used in this section, I would like to know the best way to make floor and cellar.  
 Pontiac Co., Que.

Ans.—One barrel of cement will make 50 square feet of stable, barn or pigpen floor, or 65 sq. ft. best cellar floor. One barrel of cement will build from 25 to 35 cubic feet of concrete wall, according to quality of gravel and amount of stone to be used. It is not always possible to give a correct estimate for walls, as correspondents do not give full particulars re quality of material they intend using. In such cases we take the average of 30 cubic feet for one barrel of cement. For instance, the walls for barn 40 ft. x 100 ft. x 10 ft., 12 in. thick, would require about 93 barrels cement, 104 yards gravel, or 69 yards gravel and 35 yards stone.  
 ISAAC USHER.

**FOR WALLS.**

Barn: say 40 ft. x 60 ft. x 9 ft. — 1 ft. thick.  
 40 60  
 40 60  
 80 + 120 = 200 x 9 = 1,800 cubic ft. wall.  
 1,800 ÷ 25 = 72 bbls. cement.  
 1,800 ÷ 27 = 67 cubic yds. gravel and stone; that is,  
 54 cubic yds. gravel,  
 13 cubic yds. stone.  
 1,800 ÷ 33 = 54 days' labor, 1 man; that is,  
 6 men 9 days.  
 If no stone were used it would be:  
 1,800 ÷ 20 = 90 bbls. cement.  
 1,800 ÷ 27 = 67 cubic yds. gravel.

**FOR FLOOR.**

40 ft. x 60 ft. averaging 4 inches thick =  
 2,400 sq. ft. ÷ 30 = 80 bbls. cement.  
 1/2 of 2,400 = 1,200 ÷ 27 = 44 cubic yds. gravel.  
 2,400 ÷ 100 = 24 days' labor, 1 man; that is,  
 6 men 4 days.  
 In the walls, we do not take into consideration any deduction for openings.

**ESTATE OF JOHN BATTLE.**

Where the ground is perfectly hard, smooth and solid, satisfactory floors have been laid with only two inches thick of cement concrete, but we prefer from three to four inches for permanence. For walls, one part good Canadian cement to six parts gravel are the usual proportions, and in floors, one to three. Some have been constructed with a bottom layer one cement to six gravel, and a finishing surface of one to three to even one to two. The cement and gravel should be thoroughly mixed dry first and then worked wet, but not made sloppy, just a good stiff mortar, which can be made level and smooth with trowel or shovel. It should be tamped firmly down as being laid. In finishing, do not use too coarse gravel—that is, gravel in which stones or pebbles will show on surface. We refer Mr. McKnight to various articles on this subject in previous issues of the "Farmer's Advocate." The concrete need not be so strong for cellar floor—that is, less cement can be used. Cellar walls should be constructed with same proportions as ordinary stable walls.—Ed.

**SECOND-HAND ENGINE—O. A. C. COURSE—SEED PER ACRE.**

(a) Re query from Messrs. E. & J. Moore, Quebec, we would say that if the vertical engine in question is as good as his letter would lead one to suppose, he is safe to buy it at fifty to seventy-five dollars. The opinion of a capable machinist on the spot, however, would be worth much more than ours at this distance. It is always well to have second-hand engines examined before buying, and if serious defects exist, it is safer to buy a new one.  
 (b) We think it would be wiser, as we understand the circumstances, to leave the engine, hire one for the corn-cutting, and take up the course at the O. A. C., if you must choose between the two.

(c) The proper amount of oats, barley and wheat to sow per acre would depend to some extent on the conditions prevailing in the section, particularly the soil. Presuming that the soil is of average fertility, and neither very heavy nor very light, we would say sow eight or nine pecks of oats and seven to eight pecks of barley and of wheat per acre. You can get any of these grains from those persons using the advertising columns of the "Advocate."

**FORK, SLINGS, OR RACK LIFTER.**

Which device is best for unloading grain or hay in a big barn, slings and hay fork or a rack lifter?  
 Westney, Bros.

Ans.—For hay the horse fork is in most general favor, but in case of short, loose clover through which the fork will pull, slings will be found best, and also for sheaves, which the fork cannot unload. The writer prefers slings that take off the load in four lifts. With slings the grain can be carried back by means of the track above across mows, as is done with hay, thus saving a "hand." To work well, slings require a high barn. With the rack lifter the load must be pitched off, but the grain is likely to be mowed away in better order than from slings. As to which is "best," that depends on the man and the conditions.

**COTTON-SEED MEAL FOR DAIRY COW.**

Kindly let me know, through your columns, the quantity of cotton-seed meal to be fed to a milch cow at this season of the year, and if you know of any better feed for dairy cows?  
 Pictou Co., N. S.

Ans.—As a general rule, cotton-seed meal has proved a satisfactory food for dairy cows when the allowance has not exceeded 5 or 6 lbs. daily for short periods and 3 or 4 lbs. for long periods. In a test at the Pennsylvania Experiment Station, cotton-seed meal produced more milk than linseed meal, but the latter gave better returns in butter. All things considered, neither food showed an advantage over the other. In the writer's experience it was found very satisfactory mixed to the extent of 3 lbs. per day, for butter-making, with other chop. Care should be exercised in its use, as it is less laxative in its nature than linseed meal. It should not be the sole concentrated food given along with the coarse fodders, especially near calving time, but should be mixed with bran or ground oats. Prof. Woll, of Wisconsin, who once collected data concerning the best rations used by dairymen throughout America, gives, among others, the following samples:  
 Canada—45 lbs. roots, 7 lbs. wheat chaff, 15 lbs. silage, 2 1/2 lbs. oats, and 2 1/2 lbs. pea meal.  
 New York State—25 lbs. corn silage, 7 lbs. mixed hay, 4 lbs. corn meal, 5 lbs. bran, 1/2 lb. oil-meal, and 1/2 lb. cotton-seed meal.  
 Wisconsin—40 lbs. silage, 8 lbs. clover hay, 6 lbs. bran, 2 lbs. pea meal.  
 For further information on compounding rations for dairy cows, see page 20, Jan. 1st, 1902, issue "Farmer's Advocate."

J. W. McD.

**BASEMENTS: HEALTHY OR NOT?—WELL NEAR MANURE SHED.**  
 1. Is it unhealthy for pigs and fowls in basement? 2. Would water be impure and injurious to cattle in a well which I am about to dig under a barn, ten feet from basement where manure is kept?  
 Antigonishe, N. S.

Ans.—1. If the basement is underground, it is certainly unhealthy. Basements, however, are generally now all above ground, are but the first storey of the building, and are free from damp, as well as warm. Stone or even concrete walls full height around a pigpen are being abandoned by many as being close and damp, and wooden walls above a foundation are being used instead. Pigs, and hens also, are the better of a yard for exercise and air.  
 2. It depends on the nature of the ground. We know of a well 25 feet from manure shed in which the water is impure in consequence. It is fine sand to a depth of 12 feet. If it had been hard clay, without seams or cracks, we think there would have been no ill effects. It is wise, as noticed in an article on well digging in a former number of the "Advocate," to have the upper 10 or 12 feet of well wall or curbing made water-tight, so as to keep out all surface water. A manure pile under the eave or a raised plank floor through which manure water can run and soak into the soil are both liable to contaminate an adjacent well. This is a strong point in favor of the modern cement floor.

**SUMMER SILAGE IN STAVE SILO—FORAGE CROP.**

1. I am going to build, next summer, a round stave silo. Will ensilage keep over summer in it?  
 2. What would be best to sow on poor ground in the spring to pasture off with cattle in July or August?  
 3. How would a mixture of rape, oats and tares do?  
 4. Would spring rye be any use?  
 5. I am told that in some of the southern counties they sow rape and peas mixed, and turn hogs on to harvest. Is it a profitable plan?  
 I have taken the "Advocate" for six or seven years, and would not like to be without it.  
 Yours truly,  
 R. S. LEE.  
 Grey County, Ont.

Ans.—1. Yes. Only a few inches of the top would spoil if feeding was not kept up steadily, but if an inch or more is fed off every day, the silage will keep well through the summer—as well in a stave silo as in any other.  
 2. If a grain mixture, oats, peas and wheat or rye would probably be as good as any.  
 3. Oats, tares and rape would make an excellent mixture for pasture, as when eaten down, if stock is removed for a few weeks, a good second crop would spring up.  
 4. We have had no experience with spring rye, and would not feel disposed to risk it alone, but in a mixture as above, no doubt it would be all right.  
 5. The mixture of peas and rape for a hog pasture would probably prove satisfactory, as the rape would keep coming on after the peas had been eaten off.

**BLACK HAMBURG FOWLS.**

Could you inform me, through your valuable paper, where I can get some Black Hamburg fowls?  
 Grey Co., Ont.

Ans.—Poultrymen having Black Hamburgs for sale should advertise them in the "Farmer's Advocate."

H. C. DINSMORE.



**LIME FOR LAND.**

Will it pay to sow lime on land? What quantity per acre, on high or low land? On which kind of land, high or low, will it give best results.

W. D.  
Northumberland Co., Ont.

Ans.—Lime is composed of calcium and oxygen, both of which are essential elements of plant food. They are, however, usually present in sufficient quantities in soil for the requirements of plant growth. Lime improves the texture of clay soils by causing a flocculation of the fine clay particles, thus destroying their sticky nature; and it makes sandy soils, containing organic matter, firmer by binding the soil particles together. Lime also acts chemically on the soil, liberating plant food held in an unavailable condition. Heavy clay soils and soils rich in organic matter contain large amounts of unavailable plant food, which lime tends to bring into an available condition. Lime, therefore, gives its best results on such soils, whether they are high or low. As lime is only a liberator of plant food, it should be applied in moderate quantities at intervals of a few years, so as not to render available more fertilizing constituents than can be made use of by the growing crop. On the class of soils mentioned, lime could be profitably applied at the rate of one or two tons per acre at intervals of five or six years.

R. HARCOURT, Chemist.  
Ontario Agricultural College.

**BREACH OF AGREEMENT.**

1. Father and son buy from a neighbor a heifer calf for so much money. The neighbor said the calf was pure-bred and agreed to register it. The father has died and willed the calf to his son. The son has raised the calf, which is now a cow and has a daughter, and both cow and heifer are now with calf to a pure-bred bull. The son finds out now the neighbor has not registered the calf and cannot register it. That puts the son out of four cattle that would register if the cow and heifer raise their calves. Can the son come on his neighbor for damages? If so, how much do you think he should have?

2. Do you know any reliable man in Australia and New Zealand that I could correspond with for certain information about those countries?

Wentworth Co., Ont. D. A.  
Ans.—1. We think that at this late date damages such as suggested are hardly recoverable. It is just possible, however, that some compensation might be adjudged in respect of the breach of agreement to register, but to what amount it is impossible to predict. If action be taken, it ought to be by the executors of the father.

2. Try Editor Australasian, Melbourne, Australia, and Editor Otago Witness, Dunedin, New Zealand.

**GROWING MIXED GRAINS.**

I plowed a field of sod, which I intend sowing with a mixture of oats, barley, grass peas and Goose wheat. How much should I sow to the acre, and what proportion of each?

Middlesex Co., Ont. W. J. SMITH.

Ans.—In growing oats, barley, spring wheat, and peas, singly and in eleven different combinations for grain purposes, in each of six different years, it was found that oats and barley produced the largest yield of grain per acre. In another experiment now in progress, in which nine proportions of oats and barley have been used for two years in succession, it has been found that a combination of one bushel of oats and one and one-half bushels of barley per acre has produced the largest yield of grain. In answer to the above question, I would suggest the following mixture for an average soil: Oats, 3 pecks; barley, 3 pecks; grass peas, 2 pecks, and Wild Goose spring wheat, 2 pecks. When grains are grown in combination, more seed can be used to advantage than when the grains are grown separately.

C. A. ZAVITZ.  
Ontario Agricultural College.

**SUGAR BEET.**

I understand that white carrots are good feed for horses; also, that sugar beets are excellent for milch cows, leaving no bad flavor in butter, and also fattening. I was going to sow about one acre of land in turnips this coming spring, but if sugar beets are a more favorable root, I would make use of that patch to raise the beets instead. Will you please let me know: 1. Is it safe to feed carrots in quantities to working horses? 2. Will pigs and cattle do as well on sugar beets as on turnips? 3. Is it much more difficult to keep beets through the winter than to keep turnips?

A SUBSCRIBER.  
Simcoe Co., Ont.

Ans.—1. In moderation, carrots are an excellent addition to the ration for a horse.

2. Many who have used them prefer sugar beets to turnips for cows or pigs. For fattening cattle or sheep, the latter are most highly esteemed.

3. Like mangels, sugar beets are more susceptible to frost than turnips, but put in clean and kept from frost, we see no reason why they cannot be preserved in first-class condition.

**WINDOWS FOR BASEMENT AND VENTILATION.**

I am building a barn with concrete basement. 1. Which is the best style of window? I do not like the sliding, as it is impossible to move them in the winter, on account of swelling. Do you think a window with 6 panes 12x14 glass would give satisfaction, swinging on a pivot in the center? If I remember right, I read in the "Advocate" some time ago where a man strongly recommended putting windows in the same as in a house, viz., up and down. What is your opinion on that? I am thinking of putting in a window the top of which will open up like a door, while the lower half will be stationary. 2. I would like to put in some system of ventilation which will be cheap as well as satisfactory. Would an 8-in. tile laid on front of the manger and carried below ground some distance outside and then up to the surface give good ventilation?

Lambton Co., Ont. CONSTANT READER.

Ans.—1. To construct a stable window that will move freely up, swing around or slide back into a space provided in the wall, and at the same time be close enough to exclude the cold wind and drafts of winter, is not easy. Moisture will cause the sash and fittings to swell. The house style of window (like that of Jacob W. Manning, described in Feb. 1st issue) is well liked by those who have them, especially for lighting the stable. To have the upper half swing open into passage as suggested will answer if high enough to be clear of heads of men or horses. Why not put the hinges at top and swing up, holding it up with cord and pulley or hook and staple? In that case a half-inch strip between the lower and upper sash, projecting out, would throw storm water off. Some approve of a pocket in the wall, into which the window is slid when necessary for admission of air or for ventilation. Will some of our readers who have thoroughly satisfactory stable windows send us a description of them for the benefit of "Constant Reader" and hundreds of others who are building this year.

2. We have been in stables where the tile-below-feed-alley-system of ventilation worked well, and in others where it did not. It should be open at each end and clear above ground, so as to catch wind from different directions. If carried underground some distance from stable, then a galvanized-iron or other pipe with cowl that will turn freely above ground, catching the wind as in sub-earth ducts for factories, must be provided. Within the stable there must be provision for carrying off upward the heated foul air. Though not regarded by experts as efficient, there are some costly barns that have for ventilation simply tiles through upper part of walls at opposite sides or ends. For a description of various plans of ventilation we would refer "Constant Reader" to Prof. Grisdale's article, March 1st issue of "Farmer's Advocate," 1901; Mr. H. S. Foster's, April 15th, 1901, and Prof. J. B. Reynolds', June 15th, 1901. Efficient ventilation without considerable expense is probably expecting too much.

**WINTER BARLEY TRIALS.**

What has been the experience in growing fall barley in Ontario?

Ans.—We have sown one or more varieties of winter barley at the Ontario Agricultural College at Guelph in each of the past twelve years, and have found that in mild winters the winter barley usually comes through admirably and produces a heavy crop, which gives a large yield of grain per acre. In severe winters, however, it is generally killed out completely. Taking one year with another, we have not yet found a variety of winter barley which we could safely recommend for general cultivation in Ontario.

C. A. ZAVITZ.

Note.—In a recent report received from the Tennessee Experiment Station, winter barley and oats have been found valuable crops in that southern State, keeping the ground covered, thus preventing leaching by winter rains. Large crops are realized, less subject to rusts and insect pests, and the ground can be used to produce a second crop following the early harvesting of the first. The natural conditions in Tennessee are, of course, very different from those of Canada.—Ed.

**TROUBLESOME WILLOW STUMPS.**

We have some willow stumps in wet, low land that shoot out every spring. How can we kill them? We do not wish to drain the land, as the springs there are very valuable and do not cover much ground.

Oxford Co., Ont. C. W.

Ans.—Will some reader suggest a better plan than "grubbing" or pulling them out with a stump machine?

**PLANNING A BARN.**

I am building a barn 110x50, with an L 21x36 for a pigpen. Give me your idea how to lay out the stabling to the best advantage?

York Co., Ont. SUBSCRIBER.

Ans.—By studying the plans given in the Jan. 15th, Feb. 1st, and the present issue of the "Farmer's Advocate," "Subscriber" can lay out his barn to suit his stock and conditions probably better than we could.

**TREATMENT OF SPRUCE HEDGE.**

I planted a white spruce hedge, spring of 1901. Plants were set 15 inches apart; are now two feet high and thrifty. What treatment should they receive in spring of 1902 and thereafter in order to secure a perfect hedge 4 ft. 6 ins. high?

H. D.

Ans.—Cut back the center upright shoots. This will have the effect of inducing growth in the lower limbs. Repeat the process in after years until the lower part of the hedge has become thick and strong. What may be called the shoulder limbs, and straggling ones also, should occasionally be cut back, the design being to bring the hedge into the conical or pyramidal shape, in which shape only will it remain vigorous and green from top to bottom. It may be allowed to grow to the full height desired after the lower part has become close and thick, but not before. Until the full height has been reached it is better to prune with a knife rather than shears, especially with evergreens.

**MILK FOR CALF—FARMERS' HANDBOOK—STOCK SPECULATION.**

1. At what temperature should milk be fed a young calf under two months old? 2. What miscellaneous book, giving measurements, tables, etc., is most suitable for farmers' use? 3. In what way can a person find information about railroad and other stocks, Chicago grain markets, etc., with a view to speculating in them?

Huron Co. W. I. O.  
Ans.—1. About the same temperature as when drawn from the cow, or say from 90 to 95 degrees.

2. Woll's Handbook for Farmers and Dairy-men is a good one; price, \$1.50. Order through this office.

3. The daily newspapers contain quotations of the daily (or hourly) fluctuations of various stocks, and the stock brokers or "bucket shops" afford facilities for gambling thereon, which we advise "W. I. O." to let severely alone, or he will burn his fingers.

**HORSE TRAINING.**

"Horseman."—In reply to your question, we believe Prof. Brush's book on breaking and handling horses is very good when a person wants to handle a perfectly green full-grown horse in a hurry, but for one who is willing to take time to teach the colt in a rational manner, his own common sense and knowledge will prove more satisfactory than the devices of the professional "horse-breakers." Read "Whip's" excellent article on the subject in the "Farmer's Advocate" for January 15th, entitled "The Education of the Horse." We are not aware where Prof. Brush's book is published.

**MAINTAINING A DITCH.**

I built a Russell fence—a line fence. My neighbor changed his water course, where a large amount of water comes down in spring. He dug the ditch about six inches from my stakes, and the water has washed my fence down. The ditch has washed into the line. Which of us will have to maintain ditch, which is through black ground and washes away fast on my side?

Peel Co., Ont. G. R.

Ans.—It is for your neighbor to maintain the ditch; and in doing so he must see to it that your premises are not injured thereby; and he ought, moreover, to make good to you such damage as has already been occasioned.

**TILING A CREEK.**

Have an open ditch running through my farm and I want to put tile in. It starts at the line fence between my farm and A's. A three-inch tile would carry my water and I think a five-inch would carry it all. 1. Can I close it? 2. If so, can I force A, if he wants his water to run, to pay the difference between a three- and five-inch tile? 3. If he does not, might I dam his water back and drain my own?

Middlesex Co., Ont. ENQUIRER.

Ans.—1, 2 and 3. We must assume, from what you say, that the "ditch" in question is a natural water course, and must answer all three questions in the negative.

**TRAINING COLLIE—PIG PEN FOR 100-ACRE FARM.**

1. Would you please give me some advice how to train a collie dog? I have a pup about eight months old; he appears quite sharp and I think if he had the right training he would make a good farm dog.

2. I intend building a pigpen next summer, and would like to see a plan of pen for 100-acre farm.

Ans.—1. See article by Evan McIvor, on "Training a Collie," in this issue.

2. Such a plan as asked for is now in course of preparation, and will appear in an early issue.

**MIXED GRAINS.**

Kindly inform me whether oats, goose wheat and grass peas would be likely to yield well sown together? If so, the proportions of each to sow per acre, and suggest other grains that would likely do well sown together?

York Co., Ont. W. G. S.

Ans.—See answer to W. J. Smith, in this issue.



**TUBERCULOSIS IN HENS.**

What is wrong with our hens? They become mopey and white about head, and although they feed heartily enough, they become very poor and so weak they cannot fly onto roost, and if let will live for months in this condition. Their droppings are dry, with a greenish taint; liver enlarged and rotten; heart with white spots.

Perth Co., Ont. A SUBSCRIBER.  
 Ans.—The symptoms seem to indicate tuberculosis, but it is impossible to diagnose on such an indefinite description. It would be well to send one of the affected birds for examination to Prof. F. C. Harrison, Bacteriologist, O. A. C., Guelph, who would give a full description of disease and prescribe a remedy, or at least the best treatment.

**MUNICIPALITY TAKING GRAVEL.**

A pathmaster opened a gravel pit on concession road allowance. The farmer owning land opposite does not wish to sell land to extend gravel pit. Can he be forced to sell? 2. What is the law regarding gravel pits for roadwork use?

Ans.—1. Yes. 2. Every municipal council may pass by-laws for searching for and taking such gravel, stone or other material within the municipality as may be necessary for keeping in repair any road or highway within the municipality; the right of entry upon lands, as well as the price or damage to be paid to any person for such materials, if not agreed upon by the parties concerned, to be settled by arbitration, under the provisions of the Municipal Act.

**"CREAMERY" OR "DAIRY" BUTTER.**

Is it unlawful for farmers to put "creamery butter" on their butter when using cream separator and taking cream from milk fresh from cow? The cream is ripened, butter made and salted same as at creamery, 6 1/2 miles away, where they only separate twice per week. The "Advocate" is without doubt the best farmer's paper in America.

Oxford Co.  
 Ans.—We believe such an act would come under the Criminal Code relating to false trade description, and would render the person liable to forfeiture of goods, fine or imprisonment, or both.

**HOW TO BRACE A SILO.**

I noticed, in your last issue, someone asking how to make a silo stand without being braced to some building. I think it a good plan to put two posts, 8 x 8 inches, into the ground 4 1/2 or 5 feet, the distance apart that you want the door, letting them reach to the top of silo. This will keep it from blowing over and make it so you can have doors from top to bottom.

Elgin Co., Ont. CAMBY CHARLTON.

**WHITE AUSTRALIAN OATS.**

I got some white Australian side oats from Mr. Wm. Weld about thirty years ago. I have sown the same oats every year since on my farm. They never rusted until last summer. Where can I procure some true to name?

J. E. LEWARS.  
 Ans.—Some reader having a good sample of the above oats suitable for seed should make the fact known through our advertising columns.

**COLLECTING A CLAIM.**

Supposing B owes A some money, and he won't pay the amount, can A collect it from B's boss (the man whom B works for), providing the boss is willing to do so?

Wellington Co., Ont.  
 Ans.—Yes; but B's employer might not be safe in paying over the money without an order from B to do so, or an order of court directing such payment.

**MARKETS.**

Every reader is invited to write something for this department that other farmers ought to know. Do it while you think of it. Put it on a post card if you haven't time to put it in a letter.

**FARM GOSSIP.**

**Road Improvement in Wentworth.**

The County of Wentworth, Ont., has decided to submit a by-law in accordance with the recent act of the Legislature designed to improve the roadways by offering a Government grant to municipalities under certain conditions. A committee of the Wentworth council, after holding a dozen meetings and spending over a thousand dollars in investigating the subject, has made a report recommending that the Government's offer be taken advantage of. On the county's agreeing to expend \$40,000, the Government is committed to contribute \$20,000 additional. The Wentworth council proposes to go beyond that, and will bring the total sum up to \$100,000 for the betterment of the roads of the county. The Act provides that the vote of the ratepayers of the county must be taken before the Government money can be secured, and the Wentworth council have provided for the taking of such a vote. It remains to be seen how the ratepayers will deal with the matter.

**Death of Andrew Chisholm.**

One of the best known and most respected farmers of North Dumfries, Waterloo Co., Ont., Mr. Andrew Chisholm, died on Jan. 30th, aged 46 years and 1 1/2 months. For some years past he had been the efficient secretary of the South Waterloo Farmers' Institute. He was a member of Knox Presbyterian Church, Galt.

**Farmers' Institute Notes.**

BY SUPT. G. C. CREELMAN.

This time last year we were congratulating ourselves on the success of the Farmers' Institute work. This year we are as far ahead of last year as last year was ahead of any previous record. The speakers, in writing regarding their work, say they have never before had such enthusiastic audiences, and secretaries, in sending in their lists of members, are adding names of farmers who had never attended an Institute meeting up to this time.

**NORTH LEEDS AND GRENVILLE.**—Mr. J. B. Arnold, the secretary of this Institute, in reporting the meeting, says: "We had good weather, and 985 people in all were present at the supplementary meetings."

**HALTON.**—This Institute led the entire list in membership last year, and the secretary writes that he expects to do even better in 1902. This Institute can in more ways than one be an object lesson to all other Institutes. Although it is a small county, yet the membership for the first six months last year was 748. This was accomplished by electing to the Board only such directors as were willing to work. Before each meeting opened, the local director had secured a list of members, had the hall engaged and heated, and was there when the speakers and secretary arrived, with an audience ready to start. This is business, and we would be glad to see other Institutes putting themselves on the same business footing.

Mr. T. G. Raynor, who has gone through this county, writes: "The limit of the halls is the limit of the crowds at our meetings. About 600 at Milton last night; discussions are livelier than ever. The question-drawer is very popular, and we introduce it at the commencement of the evening meeting. My companion, Mr. Clark, is meeting interested audiences everywhere on the poultry question. His practical demonstrations of killing, plucking and dressing for the market are very popular."

**PEEL.**—Mr. J. E. Orr, delegate in Division 7 A, says: "We have been in Peel nine days, and the interest has never abated a moment throughout the series. A membership of over 500 had already been secured when I left, and Secretary McCulloch was as enthusiastic as ever. Miss Agnes Smith, of Hamilton, did splendid work in demonstrating simple methods of cooking at the separate meetings for ladies held in the afternoon."

"In the evening, the Women's and Farmers' Institutes joined and held a union meeting. This is working very successfully, and has solved the entertainment problem in connection with the evening sessions."

**WEST NIPISSING.**—This is an Institute we organized only a year ago last summer, and yet the secretary writes, sending in a long list of names, with the remark: "We have had good programmes and enthusiastic meetings. There were 140 at the meeting in North Bay and 35 at Sturgeon Falls, 32 at Verner and 28 at Warren."

**WEST BRUCE.**—In this district we always expect good meetings and the delegates are never disappointed. Mr. John Douglas, the secretary, writes to say that at their Port Elgin meeting the weather was stormy and kept some away. Nevertheless, he reports 200 present in the afternoon and 350 at night. We often wonder what West Bruce people would do with the crowd if the weather was always fine when their meetings are being held.

Mr. G. C. Casper and Mr. F. C. Elford were the delegates, and in reporting the meeting the secretary says: "Never did a deputation receive more attention than this one, and never were speakers more appreciated. They both did splendid work, and much good will result. The interest in Institute work is increasing yearly, and this is very encouraging."

**NORTH NORFOLK.**—In writing of the Courtland meeting held on January 10th, the secretary says: "The hall was not large enough to accommodate our members at the evening meeting, and at Delhi we had 128 in the afternoon and 135 at night." "This," remarks Mr. Culver, "is our weakest Institute point. The discussions at this place were spirited, especially at the conclusion of Mr. Stevenson's address on 'Feeding the Dairy Cow Economically.'"

**WEST DURHAM.**—The secretary, Mr. Hoar, says: "We had good meetings. We had lively discussions on 'Deep vs. Shallow Cultivation,' on the 'Four or Six Years' Rotation of Crops,' and on the 'Curing of Hay.' Mr. Glendinning gave as his experience that clover could be cut and hauled in the same day. He had tried this and found it did not heat or mildew, and that it was the best hay he ever took out of a mow."

This created quite a discussion, and the secretary writes that many members were convinced that they had made a mistake in leaving their clover hay in the field too long. An encouraging feature of these meetings was the large attendance, both afternoon and evening, of young people. The young men particularly seemed to take a great interest in the work of the Institute.

**NORTH PERTH.**—The secretary of this Institute reports at his January meetings an attendance of 500 at Milverton and 550 at Shakespeare. He reports good discussions following Mr. Drummond's address on 'Cultivation of the Soil,' Mr. Cottrell's address on 'Poultry,' and Mr. Elmer Lick's on 'Handling and Marketing of Fruit.' Mr. Pugh reports a material increase in membership over former years. Accompanying the secretary's letter was a list containing 164 names of members for 1902.

**NORTH BRANT.**—This Institute confines its regular meetings to the town of St. George, and while we would like to see them spread out more, we must admit that they always have good meetings in that place. At their meeting this year there were 210 present at the day meeting and 350 at night. Mr. Raynor discussed the 'Value of Foods,' 'Model Methods of Soil Cultivation,' 'Selection and Management of Dairy Cows,' while Mr. J. W. Clark, of Onondaga, took up the subject of 'Poultry Raising and Fattening for the English Market,' and the 'Management of Manure.'

**N. B. Dairy School.**

Mr. Harvey Mitchell, Superintendent of the New Brunswick Dairy School at Sussex, has issued the announcement for the 1902 season. The staff consists of the following: Instructor in buttermaking, L. Cyriaque Daigle; cheesemaking, J. Frank Lilley; separators and boilers, Geo. Ransom; milk testing, Harvey Mitchell; animal husbandry, Robt. Robertson. The factory course begins Feb. 25th, and closes March 26th; home dairy course begins Feb. 25th, closes March 7th. The number of pupils for the course is limited to 60. We trust the classes will be well filled. Tuition is free to all Maritime students, and the courses are very complete. Good board at very reasonable terms can be secured in the immediate neighborhood of the school.

**Notes from Ottawa.**

**THE WEST FLOURISHING.**—Mr. W. V. Gordon, Winnipeg, formerly of Montreal, on being interviewed, said: "The future of Manitoba and N.-W. T. from an agricultural point of view is exceedingly bright. The wealth brought into the country as a result of the magnificent grain crop last year is enormous. As a grain-growing country, I believe Western Canada cannot be beaten by any other country. It is a pity that more is not known in the East of the wonderful resources of the West. I firmly believe before very long there will be enough wheat grown in Canada to supply the demands of the whole Empire. That is a consummation that we should all keep in mind. We had a marvellously good crop this year, but a very much larger area will be under cultivation next season, and if climatic conditions are equal to what we enjoyed last year, there will be an enormous crop in 1902. There is one feature about the development of the West that should be noted, and that is the manner in which the Americans are beginning to swarm across the line and snap up the best farming lands; many thousands have moved in during the past three or four years. Winnipeg is a growing and prosperous city, and gives promise of becoming a great commercial center in the very near future."

**RUSSELL COUNTY AGRICULTURE.**—That the people in the County of Russell, Ont., take considerable enjoyment out of any event held with a view of advancing agriculture was clearly evidenced when fully five hundred people attended the banquet held in the Village of Metcalf at the close of the annual meeting of the Russell Agricultural Society. The business meeting, which was held in the afternoon, was presided over by Mr. W. C. Edwards, M. P., of Rockland, the largest cattle breeder in Eastern Ontario. Mr. Edwards has been president of the Society for the past twenty years, and was again the unanimous choice of the members. The report presented showed the Society to be in a flourishing condition financially, and the new board of directors decided to enlarge and improve the main building, and also to erect a suitable building for the accommodation of the live stock. Mr. Edwards, in addressing the meeting in the afternoon, congratulated the members on the advancement they had made in agriculture, and advised the directors to increase the prize list, which, if done, said Mr. Edwards, would have a tendency to make the fair more popular. The crowning event of the day was the banquet in the evening, which was attended by the most representative gathering that has perhaps ever convened in the county for a considerable length of time. The hall was lavishly decorated with bunting, evergreens and flags, which were artistically entwined. Conspicuous among the worded mottoes on the walls were noticed "Welcome to Our Guests," "Speed the Plow," and "Our Motto is to Advance in Agriculture." The object of the Society in holding the banquet was to celebrate the winning of the silken banner by the county for making the best exhibit of live stock in the Ottawa Valley and district in a judging competition at the recent fall exhibitions, presented by the Ottawa Valley Journal. A popular and pleasing innovation was seen in the presence of ladies, and many of the speakers referred to them as being of great assistance to the Society in the work they were doing.

**NOTES.**

Dr. Fletcher and Prof. Shutt attended the annual meeting of the Fruit-growers' Association at Wolfville, N. S., and Prof. Grisdale, the Farmers' and Dairymen's Association at Fredericton, N. B. Mr. A. G. Gilbert, who is addressing Farmers' Institute meetings in New Brunswick this month, writes that the meetings are being largely attended, and, everything taken into consideration, are very successful.

A number of live-stock meetings in Winnipeg (commencing on the 21st of Feb.) will be attended by Prof. Grisdale, Mr. McCoun, Dr. Fletcher and Mr. Shutt, of the Central Experimental Farm, Ottawa.

Dr. A. E. James, who has been Government Veterinary Surgeon for the Department of Agriculture for the past two years, was granted a commission as veterinary lieutenant on the third contingent. He sailed with Major Merritt for South Africa on the Manhattan.

**The Dominion Grange.**

The 27th annual meeting of the Dominion Grange was held in Toronto, January 29 and 30. Mr. Jabel Robinson, M. P. the Master presiding. He reported 76 Granges working, commended the Ontario Agr. College, condemned the growth of trusts and combines, advocated a fairer system of taxation, believed that manufacturers now required but little further assistance from the Government, but contended that we should buy from those who buy from us, unless our people would be injured thereby. Railroads, he said, should be assumed by the Government and controlled by an independent commission.

Mr. George Fisher spoke on the subject of spraying. He had an apparatus with him to demonstrate his remarks, which dealt largely with the fraudulent adulteration of Paris green. The fraud practiced by the sellers and some manufacturers had shaken the confidence of farmers in the effectiveness of spraying. This was to be regretted, as the farmers were just commencing to learn the proper method of spraying, and, of course, with unadulterated materials would obtain good results. But, like nearly everything, as the demand for Paris green increased, in consequence of a general use for this purpose, the quality dropped.

After a discussion on the subject, the Grange decided unanimously to urge upon the Government the importance of giving the farmers protection against adulterated spraying materials.

It was decided to have a committee wait upon the Government to compel railway companies to keep their lines equipped with properly-constructed cattle guards. Those present expressed an antipathy against going to law to recover the damages caused by the killing of their cattle on railway tracks. Experience proved that it was usually necessary to mortgage their farms to fight the cases out to the end.

Encouraging reports were received from the agricultural and educational committees.

The election of officers results as follows: Master, Jabel Robinson, Middlemarch; Overseer, John McDougal, Milton; Secretary, Wm. F. W. Fisher, Burlington; Treasurer, James Fallis, Newbridge; Lecturer, Jos. Todd, Gifford; Chaplain, W. J. Goodfellow, Craigvale; Steward, J. A. Carswell, Newbridge; Assistant Steward, W. A. E. Perry, Freeman; Gatekeeper, T. C. Osborne, Whitby; Ceres, Mrs. J. Robinson, Middlemarch; Pomona, Mrs. W. Gray, Lonsboro; Flora, Mrs. E. Brown, Whitby; L. A. S., Mrs. Warnica, Painswick; Auditors, J. M. Syme, Dalston, and Jas. Allen, Churchill; Ex. Com., Peter McDuffee, Omagh, and F. W. Fisher, Burlington.

The next meeting will be held in Toronto. A vigorous Grange extension campaign is to be instituted.

**New Stock Yards Opened.**

The new Union Stock Yards at Toronto Junction received their first consignment last week. The shipment, which included about 400 sheep and 100 lambs, arrived from Galt, en route to Montreal and the British markets.



Lincoln Co., Ont.

The year 1901 was not a very prosperous one for the farmers of the Niagara Peninsula. The spring seeding was exceptionally late, on account of heavy rainfall during May, consequently the out crop harvested very light, both in yield and in weight per bushel, and the straw was not as good as usual on account of rust.

Very little corn was planted last spring, and owing to planting very late did not yield very many bushels to the acre. Quite an amount of fodder corn and millet was sown, which did fairly well.

The old adage, "A cold, wet May will fill the barns with wheat and hay," came true as regards the hay crop, and possibly would have been equally true regarding wheat, had it not been for the Hessian fly, which played such havoc in this section.

A large acreage of peas was sown. The grass pea is the only kind we can raise to advantage here, as the pea-bug destroys the common round pea. The grass pea is a splendid yielder, and will do better on hard land than the common variety. They are bug-proof and excellent for chopping purposes. If cut green, they make excellent feed, but if allowed to thoroughly ripen, the straw seems to be of no use for feeding. The weather was very dry for fall seeding. However, wheat looked fairly well later in the season, but rye looked exceptionally poor.

The root crop was not very heavy. Mangels did fairly well, but turnips were not a heavy yield in some places.

Fall plowing was very backward, and as the weather continued so very dry, a great many farmers did not get through with their plowing, consequently a considerable amount will have to be done in the spring, which will likely be a disadvantage here.

More bacon hogs are being raised in this section than there have been heretofore, and good prices have been realized during the past summer, which has enhanced the encouragement of the farmers along this line.

I. E. N. Lincoln Co., Ont.

Waste Land.

Ontario is a grand Province, and in many localities we find the lands put into first-class order for miles together, but occasionally we find patches, either great or small, on good farms that are not a real credit to the owner or tenant. Of course, circumstances alter cases. We say it takes time to do this and that. It would take considerable time to root up and drain fifty acres of a willow patch, or even ten acres, but quite frequently we see men plowing around a briar bush, a small stump, or a stone, and continue to do so year after year. Of course, it takes no time to gee and haw around these obstacles. Perhaps thirty minutes with an axe, spade and crowbar would settle the whole difficulty for all time and allow the land to bring forth a crop that would be valuable. On the other hand, we waste time and steps going around the objects, and horses destroy, for considerable distance around, the crop which has been tilled. Then, in the case of sale, the land will not bring nearly so high a price. Let us try to cut our furrows clear from fence to fence. When once done, we will never regret it. The little waste places look very bad, especially when seen near the front of a farm. Moreover, the farms with gay fronts are not always models at the rear. I might give an idea or two that may be helpful to the reader if interested in any way. In the case of a few acres of rough land to be cleared, I would say: Prepare three pieces of 4x4 inch scantling about 16 or 18 feet long, saw one of these into four pieces 4 ft. long, bolt these to the longer ones in the form of a ladder. Plow your land next spring as early as possible, cutting the knolls only, following with the disc hitch to one end of the big ladder with a crotch chain which fastens to both front corners, drawing it lengthwise. This implement does good work behind the disc. Repeat a few times and your land is in better shape. Let the ground lie for three weeks or so, then repeat the dose, and you will be pleased with the result, and so will your neighbors. Clean up the homestead before buying more land. Paying taxes on bog-holes, briars, little rocks, etc., upon the surface is a poor way to get rich. FARMER LITTLE.

A Short Institute Trip in New Brunswick.

Leaving Amherst, N. S., by the noon train, we were told by the conductor that we were too late to make connections by rail, and would have to cross the river by ferry and drive some eight or ten miles instead of a pleasant forty miles or so by rail. I felt like saying something pointed to the railway clerk who had misinformed me, but there was no help for it now, so, leaving the train at Dorchester, we hunted up the ferryman, and now the fun began.

The tide was at low-water mark, and a mud flat a quarter of a mile wide lay between the wharf and the river. What was to be done? No long boots, and the mud from six to nine inches deep, and almost as sticky as prairie mud, but buff color instead of black. There was the boat, about eighteen feet long, high and dry in the mud. It was not customary to cross except at high water, but as that would make us too late for our meeting, a good deal of coaxing and a little extra pay induced the ferryman to take us over at low water. But how were we to get that boat to the water? Old Grey came to our assistance, and the faithful old horse was hitched to the painter, or tow line, and away we went. This was my first experience at boat-riding in the mud. On we plodded until the steep bank of the channel of the river was reached; then Old Grey was allowed to return home alone, the sail was run up, we all pushed with oars, and soon we were on the water. A good stiff breeze tipped (listed, the sailors say) the little skiff well over, and away we went for a three-mile sail, passing a lighthouse, quarries and dwelling houses, and as we rounded the cape, came in sight of a small fleet of all sorts of sea crafts loading plaster from the Albert Gypsum Quarries.

The ferryman landed us amid rocks and mud, perhaps ten rods from the wharf, and by jumping from one rock to another, we managed to get once more on terra firma.

A pleasant drive alongside, or almost under, the Shepody mountains, which we could see so plainly from our own front door thirty miles distant, brought us to our first meeting at Hopewell Hill.

The little hall was well filled with as interesting and interested a company of farmers as one need wish to talk to. "A good meeting," everyone said, then a pleasant hour or so with new-made friends, a good night's rest, a look over some splendid farms, containing more than a hundred acres of this fertile marsh or dyked lands, which is below the level of the sea at high water and protected by dykes; a run through some good large, well-planned barns, containing many nice feeding steers and lots of splendid hay from the marshes, and turnips and mangels in quite large quantities; then on to the next place of meeting, and after a few days we return to our own farm, exceedingly pleased with Albert County, and strongly impressed with its great resources of field, forest and mine. C. H. BLACK.

Cumberland Co., N. S.

The Government Sale at Ottawa.

Ottawa, Feb. 13th.—The auction sale of stock held here yesterday under Government auspices, met a rather chilling experience, the attendance being small and the prices for those sold, with few exceptions, discouragingly low. The weather was cold and roads heavy with snow. A large proportion of the animals offered were withdrawn, the bids being in many cases less than their value as butchers' stuff. Mr. Geo. Jackson, of Port Perry, Ont., was the official auctioneer. Hon. Mr. Fisher opened the sale with a short address.

Of the 65 Shorthorns entered and catalogued for this sale, 45 were sold at prices ranging from \$36 to \$160, 20 being withdrawn or failing to face the auctioneer from some cause, a number being withdrawn on account of the bids not being satisfactory to the owners. The dairy breeds fared much worse, the prices made being very low, and in one or two breeds the most of them being withdrawn, at ridiculously low offers. The pigs also made very low prices, a large proportion being withdrawn.

Tamworth boars brought from \$9 to \$10; sows, \$13.50 to \$16. Berkshire boars, \$8 to \$14; sows, \$13.50 to \$16. One Yorkshire boar sold for \$23; the other three entered were withdrawn. One sow sold for \$7; balance withdrawn.

Following are the sales of cattle, with prices and address of buyers:

Table listing various cattle breeds and their prices, including Shorthorns, Jerseys, and Ayrshires. Columns include breed name, price, and buyer information.

Table listing various breeds and their prices, including Jerseys, Guernsey Bulls, and other cattle types. Columns include breed name, price, and buyer information.

Grey Co., Ont.

We are having excellent winter weather—mostly fair, and enough snow for all kinds of work. Our January thaw was a brief one, much to the regret of some people, as water is very scarce in several localities. Feed is moderately plentiful, and, as a result, stock are in good condition. A large number of farmers have gone into raising pure-bred stock—principally Shorthorn cattle. Buyers have been plentiful. Several lots of five or six in number have been shipped out to different points in Canada and the United States at good prices. Grey Co. is fast becoming famous for having stock second to none in Ontario. A considerable number of farmers are feeding cattle for the Easter and export markets, and high prices are expected, while others, owing to the high price of coarse grains, are feeding with the intention of finishing on the grass in June or July. The hog industry has not been neglected, strict attention being paid to raising a hog that will enable the packer to satisfy the demands of the British market and be profitable to the producer as well. The Yorkshire and Tamworth seems to predominate. High prices have been realized for a year or more, in some parts of the country the farmers selling direct to the packing house.

Horses are in good demand, buyers numerous, offering good prices for good animals of all classes, and not a few farmers are looking for work horses. Good colts two years and older sell for \$100 upwards. The lumber business is scarcely as brisk as a year or two ago. Mill yards are not so well stocked as in former years, which will have its effect in some districts. The managers of butter factories are on the alert, canvassing for patrons for the coming summer, and

will endeavor to operate on a larger scale in the future.

Prices for all kinds of farm products are good. Times are prosperous, which is being demonstrated in a large degree by the preparations for erecting new buildings. Silos are becoming very popular. Those who have them speak highly of their usefulness, while others are making preparations for erecting silos. Still the question of filling is a conundrum which confronts many, as it is hard to secure a power to drive the cutting box at the particular time when it is needed. It is also difficult to secure help, but, doubtless, through time these obstacles will be overcome.

The real-estate market is active; farm property has advanced from 30 to 40 per cent. during the last eighteen months. The man inquiring for a farm to rent or work on shares is frequently met. Farm hands are now being employed for the coming summer. Wages seem to have slightly decreased, and men seem to be plentiful.

\$9,100 for an Aberdeen-Angus Bull

and \$6,300 for a cow of the same breed was the record made at a combination auction sale of selections from six herds held at Chicago, Feb. 4 and 5. The bull is Imp. Prince Ito, a Highland champion, imported and sold by M. A. Judy, Williamsport, Ind., and bought by B. R. Pierce & Son, Creston, Ill. The cow is Blackcap Judy, bred and sold by Mr. Judy, and bought by C. H. Gardner, Blandinsville, Ill. These are the record auction prices for a bull and a female of any breed in the last 20 years.

Toronto Markets.

The receipts of live stock at the Toronto Cattle Market, on account of the severe snowstorms, have not been so large for the past two weeks as for the two weeks mentioned in our last report. The total two weeks from Feb. 4th to Feb. 11th, inclusive, were receipts from Feb. 4th to Feb. 11th, inclusive, were 364 carloads, composed of 6,427 cattle, 3,917 hogs, 2,359 sheep and lambs, with about 150 calves.

The quality of fat cattle has shown some improvement, although not as good as the season demands. On account of the high prices for feeding grains, farmers seem to have fed sparingly, as there are too many unfinished cattle coming forward, both in the shipping and butcher classes.

Trade has been brisk, with prices firmer in all the different classes of fat cattle, sheep and calves. Prices for hogs are lower, while feeders, stockers and milch cows have remained steady, but firm.

Export Cattle.—Extra choice lots of exporters sold at \$5.25 to \$5.60; light unfinished rough exporters at \$4.25 to \$4.50; green exporters at \$4.75 to \$4.95; and the better class of butchers' cattle, weighing from 1,100 to 1,200 lbs. each, at \$4.60 to \$5 per cwt.

Export Bulls.—Choice heavy bulls sold at \$4 to \$4.30; light export bulls at \$3.65 to \$3.90 per cwt.

Export Cows.—Export cows, weighing from 1,100 to 1,300 lbs. each, sold at \$3.75 to \$4.40 per cwt.

Butchers' Cattle.—Choice picked lots, 1,000 to 1,050 lbs. each, sold at \$4.40 to \$4.65 per cwt.; loads of good butchers' sold at \$4.25 to \$4.40 per cwt.; loads of common to medium butchers' at \$3.25 to \$3.40; inferior butchers' (canners) at \$2.75 to \$3 per cwt.

Heavy Feeders.—Heavy short-keep feeders, 1,100 to 1,200 lbs. each, are scarce, and are worth all the way from \$4.25 to \$4.50; light feeders, 900 to 1,050 lbs. each, are worth from \$3.50 to \$4 per cwt.

Milch Cows.—The demand for good to choice milch cows and springers has been and is brisk, at \$40 to \$55 each, while common medium have sold at \$25 to \$35 each.

Calves.—Choice veal calves are scarce and are worth from \$5.50 to \$5.75 and even \$6 per cwt.

Lambs.—Prices firmer, at \$3.75 to \$5.25 per cwt., the latter price being paid for choice grain-fed for export purposes.

Sheep.—Prices firmer, at \$3.50 to \$3.75 per cwt. for ewes, and \$2.50 to \$3 per cwt. for bucks.

Hogs.—Prices easy, at \$6 per cwt. for selects, while lights and fats sell at \$5.75 per cwt.

Table showing market prices for various commodities like extreme com, parative weeks, same date last year, and various types of cattle and hogs.

PRODUCE MARKET.

Wheat.—Prices remain about steady, as follows: White at 70c. to 78c., red at 68c. to 77c., goose at 67c., spring at 70c. to 72c. per bushel.

Barley.—Deliveries of 700 bushels sold at 55c. to 63c.

Oats.—Seven hundred bushels sold at 47c. per bushel.

Hay.—Timothy sold at \$12 to \$14 per ton, and clover \$8 to \$10 per ton.

Straw.—Loads of sheaf sold at \$9 to \$10 per ton, while loose is worth about \$6 per ton.

Dressed Hogs.—Prices easy, at \$8 to \$8.25 per cwt.

Potatoes.—Prices steady, at 70c. per bag by the load from farmers' wagons; car lots are easy, at 65c. per bag.

Poultry.—Prices firmer, as follows: Chickens 50c. to \$1.50 per pair, or 12c. per lb.; ducks and geese, none offering; turkeys 12c. to 14c. per lb.

Butter.—Prices firm, at 18c. to 21c. per lb. from farmers' baskets.

Eggs.—Strictly new-laid are worth 30c. per dozen.

Hides and Wool.—No. 1 green, 7c. per lb.; No. 2 green, 6c. per lb.; No. 1 green, steers, 8c. per lb.; No. 2 green, steers, 7c. per lb.; hides, cured, 8c. per lb.; calfskins, No. 1 sell at 9c. per lb.; No. 2 calfskins, 7c. per lb.; sheepskins, 70c. to 80c. Wool, fleece, 13c. per lb.; wool, unwashed, 7c. per lb.

Montreal Markets.

Montreal, Feb. 10.—There were about 400 head of butchers' cattle, 6 calves and 50 sheep and lambs offered. The butchers came out in large numbers, and trade was brisk, while the prices continue high. Six prime steers were sold at 5 1/2c. per lb., and several others not so good at from 4 1/2c. to 5c. per lb.; pretty good cattle sold at from 3 1/2c. to near 4 1/2c., and common stock at 2 1/2c. to 3 1/2c. per lb. The calves were all sheep young veals, and sold at from \$3 to \$5 each. Sheep sold at from 3 1/2c. to 3 3/4c. per lb.; lambs at from 4 1/2c. to 4 3/4c. per lb. Fat hogs sold at from 6 1/2c. to 6 3/4c. per lb. for good straight lots, weighed off the cars.

British Cattle Markets.

London, Feb. 10.—United States cattle, 7 1/2d.; sheep, 6d. Canadian cattle, 6d. to 6 1/2d.

Liverpool, Feb. 10.—Canadian cattle, 6 1/2d.; sheep, 5 1/2d. Cattle firm; sheep bad.





Our lives are songs; God writes the words,
And we set them to music at pleasure;
And the strain may be glad, or sweet, or sad,
As we choose to fashion the measure.

How Royalty Spends Sunday.

When King Edward and Queen Alexandra were the Prince and Princess of Wales, the following interesting account of how they were in the habit of spending Sunday appeared in The Quiver. The writer says:

Sunday with their Royal Highnesses the Prince and Princess of Wales is passed in much the same quiet way as with Her Majesty the Queen, inasmuch as religious ceremonies are faithfully observed, and the household and servants are spared all unnecessary duties. The guests wend their way, as the hour of eleven approaches, towards the little Church of St. Mary Magdalene in the park. There is a private foot-way direct from the house to the church gate; by this, the royal family and guests often proceed, driving round by the road only in case of unpropitious weather. Sunday afternoon is quietly spent in the house or park. Dinner is served at half-past seven. Occasionally, however, dinner is a little later, as the Prince and Princess may be attending evening service in one of the village churches near. The small station some two miles away, where the royal family have their own waiting rooms, is closed on Sunday, as no train whatever is run on that day. By this means, the church is kept clear of an attendance prompted by curiosity, and also the men employed have the entire day's rest secured to them. In fact, no unnecessary work in any shape or way is performed on Sunday in any one part of the Prince's domains.

Sunday at Marlborough House differs slightly from Sunday at Sandringham, but the day is spent in comparative quietude. In the morning their Royal Highnesses attend divine service held in what is known as the German (Lutheran) Chapel. After luncheon, the Princess and her daughters may possibly attend one of the West End churches to hear some popular preacher, or to be present at a children's service. It is not only at Sandringham and Marlborough House that Sabbath observances are rigidly adhered to by the Prince and Princess of Wales, but also in any of the Continental places where they may be staying. There is an old saying, that when you go to Rome do as the Romans do, but our Prince honors this rule in the breach, for, although he has ever been a constant visitor to Paris, yet he has never seen the French Derby, for the simple reason that it is run on a Sunday. In a matter where hundreds and thousands of Christians have followed the fashion of the gay capital they are visiting, and indulged their love of horses and of pleasure, the Prince has set a good example and absented himself. In every way, the Prince and Princess have always faithfully observed the Sabbath, and we, as a Christian people, may congratulate ourselves that our future king and queen will steadfastly uphold the sanctity of the day of God and the doctrines of the Christian Church.

A recent quotation from the St. James' Gazette, of London, England, saying that the King had refused to travel from Scotland to London on Sunday, and has "stunned society by putting all social functions and entertainments on Sunday under the royal ban," would seem to indicate that His Majesty's accession to the throne of the "mightiest empire that has been" has not led to the relaxing of his scruples as to how Sunday should be spent.

If there is any truth in the rumors that are rife about Sunday yachting excursions, mounted paper-chases, and the like, starting from Rideau Hall, it would seem that His Majesty's example has not much weight with society leaders generally at the Dominion capital, where only a few months ago the domestics formed themselves into a mutual protective association in order to get deliverance, among other things, from seven-days-in-the-week bondage through having to dance attendance at Sunday dinners, suppers, etc., as well as on all the other days of the week. Society is fond of following the lead of royalty in many things. Why not also in the observance of the Lord's Day?

A man going by train selected a comfortable first-class compartment, put his bag and stick in one of the corners, and went to buy some papers. When he got back he found his things had been removed and that a lady occupied the corner he had chosen. He requested her to move, but she would not; he asked her again and she refused, so he stormed and raged, and so did she, but he insisted on having his corner. At last the lady said: "Sir, do you know who I am? I am one of the director's wives." "Madam," he replied, "I should not mind if you were the director's only wife!"

The Orphan.

Probably the original of this picture, with color, light and shade to relieve it, may have even greater artistic merit than some of those which the "Advocate" has from time to time presented to its readers, but apart from its merit as a work of art, who could honestly admire it as a picture? One is thankful to know that it must be wholly imaginative, for had the artist really seen that poor forlorn little object bleating its hopeless tale of woe by its dead mother's side, he must have snatched it up in his arms and driven those murderous-looking crows away. The writer, who has often seen a somewhat similar scene upon the veldt of South Africa, when the very air was darkened by the cloud of vultures watching the dying throes of a wounded wilderbeest or larger animal, still, while powerless to help it, is well aware that the picture is true to nature, but to look at it within even an hour of bedtime would be, in the case of one of an emotional temperament, a veritable invitation to bad dreams, with a downright "shouting nightmare" as its climax. But perhaps this is the highest possible tribute which could be paid to the genius of the artist. We pay it gladly, but we do not think we desire to add his "Orphan" to our list of favorites. H. A. B.

To Renovate Feathers.

Feathers that have become dead and heavy from age or any other reason may be renovated



THE ORPHAN.

and made light and fluffy by the following process: Choose a bright, clear day, when there is a good breeze stirring for the work. If there are three pounds of feathers to renovate, make a bag out of thin muslin that will hold five pounds; stitch all around with the exception of one-half across one end; now rip a seam in one end of the pillow which contains the feathers to be renovated, of the same size as the one left in the bag; then sew the edge of the bag to the edge of the pillow, and then shake all the feathers from the pillow into the bag. Sew up both the openings. Shave a third of a bar of some good white soap into a bowl, add a tablespoonful of powdered borax and enough boiling water to dissolve the whole, and then pour the mixture into a boiler of soft cold water. Place the boiler on the stove and put the bag of feathers in and boil for five or six minutes; with a clothes-stick turn and lift the bag up and down constantly while it is in the boiler. Take it out and rinse in two waters. Use cold water and plenty of it. Do not rub or wring it, but drain and squeeze out all the water possible and hang in a shady place to dry. While drying shake the bag frequently.

Launder the pillow-tick right side out; then rip open the seam, turn it wrong side out and pick off the little balls of down and feathers. Put the feathers back into the pillow in the same way that they were taken out. If handled in this way there will be no down and feathers flying around while the work is being done.

If feathers have the least smell of decomposing skin or flesh, it indicates that they ought to be steamed and probably dried.—Mary B. Keech.

Second Prize Essay in "Christmas Cover" Competition.

"Ich Dien" is a fitting title for the design on the 1901 Christmas number of the "Farmer's Advocate," since service best describes the life-work of its various elements. A midnight scene furnishes the background, while old Father Time in the foreground represents the passing of another year in the records of the ages. Our lesson here is plain, for the flight of time should spur all workers to vigorous action. The picture suggests four epoch-making events, which, arranged chronologically, are: The birth of Christ, instituting the Christian era; the inauguration of the "Farmer's Advocate," heralding a new era for the agriculturists; the founding of the Canadian Dominion, now taking a vanguard position among the nations; the accession of King Edward VII., marking a new epoch in the worldwide British Empire. The artist's conception is sublime, for no loftier thought could occur to any mind than to illustrate the significance of the greatest motto ever given to man. "I serve" knows no peer as a motive-power to true and noble living. It has been the pole-star of man's greatest achievements. It sparkles in the monarch's diadem; it renders the peasant's task royal and divine.

The design is especially appropriate for a Christmas number, for to best express such a lofty motto, the artist must think of the one personage whose life best embodied the principle of service. Christmas suggests that Divine personality. Jesus of Nazareth both enunciated the

dignity of service and perfectly exemplified it in His life. He spent His life for man, and in His command, "Follow Me," He indicates the way to the highest glory possible to the human race. Having selected the ideal, the artist could but select the nation which has followed it most perfectly. That nation is Great Britain, whose destiny is now guarded by Edward VII., King by the grace of God.

The maple leaf represents the brightest jewel in the British crown. By the deeds of her sons, Canada shows her loyalty to the motherland. She serves Britain, as the latter follows the ideal.

The fourth element in the design is the "Farmer's Advocate," the most efficient servant of the major part of Canada's population. The entire globe is explored that its columns may contain the best material for aiding the farm and home. Its influence, after more than thirty-five years of steady progress, is still advancing. A loyal patriotism permeates it. It works for Canada, Britain, and the Right. The picture contains material for hours of deep thought. It is a clarion call to all to work. Farmers, work for the journal which serves you so honorably and well. Work for the welfare of your young country. Be loyal to the British crown. Follow Christ. M. W. SHEPHERD.

A poor old laborer lay dying and his wife waited on him with homely care. "John, dear," she said, "do you think you could eat a bit? Is there anything you fancy?" A light came in his eyes. "I seem to smell a ham cooking somewhere," he said. "I think I could eat a little bit of ham." "Oh! no, John," said his wife, "you can't have that; that's for the funeral."



## On Some Practical Topics.

(NO. 11.)

## A LIVE QUESTION.

A live question may generally be known by the storm of opposition it has to encounter. Like the sturdy pine tree upon the bare hillside, the harder the wind blows, the wilder the tempest rages around it, so much the deeper does it strike its roots downward, and so much the firmer hold does it have upon mother earth. It lives and deserves to live, for it has gained strength through conflict. Nearly all of the epoch-making movements of the world have, in their turn, been cried down as mere fads. Those from whose clever brains they have been evolved have even gone down to their graves not only with their labors unrecognized, but they themselves considered as having been mere visionaries. Yet their work has lived. The seed they sowed has, though slowly, germinated at last, and in its full fruition has proved a blessing to the world. Progressive movements have as many foes in the ranks of the merely indifferent as amongst the active oppositionists. The former simply refuse to consider them at all. "The world," they say, "does very well as it is; why should we bother our heads about changing its conditions? Let well alone." If these do not help, neither do they very seriously hinder, whereas the oppositionists really help, just where they try to hinder, and therefore have a value quite beyond their merits or intention, for it takes two battle-axes to keep the shuttlecock from falling to the ground. Then, there are what Octave Thanet calls the "after-witted men, who are always a little behind the occasion." They come in very usefully when once they have grasped their subject. Their brains may have been "slow in solution," but when at last they have become awakened to the merits of a question, they can be depended upon to fight for it against all odds.

Was it not the notorious claimant of the historical Tichborne trial who originated the oft-quoted remark that "Some has brains and no money, and some has money and no brains"? What cannot be achieved by those who not only have brains, but also money, and who, in a spirit of philanthropy and enlightened patriotism, devote both brains and money to the good of their country?

The golden key placed in the hands of the educationists of Canada by such noble men as Lord Strathcona and Sir W. C. Macdonald should unlock a large storehouse of treasures for the children not only of to-day but of generations yet to come.

The very existence of our public-school system, which, if it has some faults, has also many virtues to commend it, proves how thoroughly alive have been, and are, the legislators of the Dominion to the necessity for affording educational advantages to the children of the land, whose training has rightly been called a national concern. Their danger has been one of overdoing rather than of underdoing, the outcome of a failure to recognize the true definition of education; i. e., that school should be the happy training ground for life of the whole human being, morally, mentally and bodily, not merely for a part of the individual child or for a section of the community. The brain-clever pupil has hitherto been educated at the expense of the finger-clever pupil, and the Canadian educationists of to-day are only beginning to give expression to what they have long dimly felt as an injustice to both. In other lands, schools have long been established, and have amply justified their existence, along the lines of co-operation between head and hands, including technical instruction, manual training, domestic science, teaching and practice of agriculture in allotted grounds, school dairies and school gardens. Hitherto there has almost been what one of our most earnest women workers for the introduction of domestic science once called "a complete divorce between intellectual culture and domestic duties," a divorce which has tended to educate the girl away from her home instead of making her realize that there is no greater scope for the trained mind than in the faithful and competent discharge of her daily tasks within the walls of woman's realm—her own home; and caused the boy to believe that intellectual culture would be thrown away upon him if he should have to spend his days upon the old homestead. In other words, the children of both sexes alike have been dealt with as houses provided with windows on one side only, instead of their builder having planned for the "admission of light from every quarter of the intellectual compass." But better counsels are about to prevail. The live question of which we treat is no new one. It has gone through all the stages of passive indifference and of the active opposition born of wilful ignorance, whilst the hearts of those who have so faithfully fought for a fair hearing to be given to it, can thank God and take courage. Meanwhile, there is every indication that the swing of the educational pendulum is going to bring about a happy medium in school methods, and the live question of "What shall we do with it?" will receive its wise and practical answer from those at whose disposal has been placed the munificent gift from Sir William Macdonald.

H. A. B.

## The History of Little Jack Horner.

BY E. YATES, FARMER.

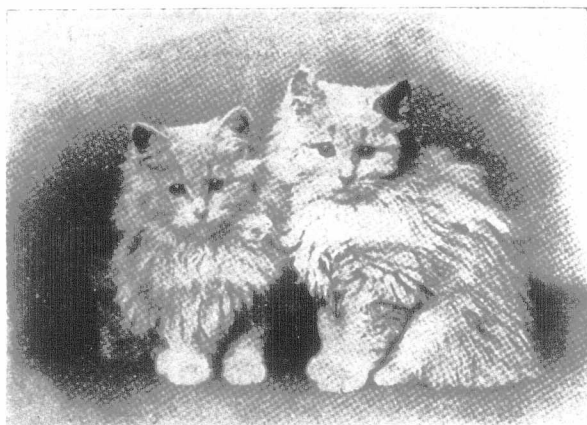
"Little Jack Horner sat in a corner,  
Eating some Christmas pie;  
He put in his thumb and pulled out a plum,  
Saying, 'What a good boy am I.'"

This is a nursery rhyme so often repeated that every child has it by heart, and here is the origin of the story:

When Henry VIII. suppressed the monasteries and drove out the old monks from their nest, the title deeds of Mella Abbey, including the sumptuous grange, built by Abbot Bellwood, were demanded by the commissioners. The Abbot of Glastonbury determined that he would send them to London, and, as the documents were very valuable and the roads infested with thieves, it was difficult to get them to the metropolis in safety. To accomplish this end, however, he devised the following plan. He ordered a pie to be made, as fine as ever seen on a refectory table; inside he put the documents, as rich a filling as pie ever had. He entrusted this to a lad named Jack Horner to carry up to London and deliver safely into the hands for whom it was intended. The journey was long, the day was cold, the boy was hungry, the pie looked tempting, and the chance of detection was small, so the boy broke off a piece of pie. To his surprise, he beheld the parchment; pulling it forth innocently enough, he wondered how it got there. Tying up the pastry, he journeyed on, and when he arrived in town the parcel was delivered; but the title deeds were missing—Jack had them in his pocket—the juiciest plums that had ever been made into a pie. Great was the rage of the commissioners, heavy the vengeance they dealt out to the monks. Jack kept his secret, and when peaceable times were restored he claimed the estates and received them.

## THE CHILDREN'S CORNER.

## Two to Make It.



Friends so true these kittens are—  
Little Fluff and Floss—  
Don't they love to roll a ball,  
Play at pitch and toss!  
Fluff is rather cranky, too,  
If you put her out;  
Like some children that we know,  
She can sulk and pout.  
But dear little Flossie knows  
What the Spaniards say,  
"Two it takes to make a fight,  
One the strife can stay."  
Copy Floss, and you will find  
That the words are true.  
If you're friendly, bright and kind,  
None can fight with you.  
If your friend is angry, then,  
Never storm and fret,  
For two wrongs don't make a right—  
Never did it yet.  
When you're angry, stop and think,  
Be careful what you say;  
"Two it takes to make a fight,  
One the strife can stay."

COUSIN DOROTHY.

## Our Competitions.

Did you ever try to write poetry, children? A small niece of mine, who is just eleven, sent me an original poem the other day—called "Naughty Sam"—and I thought it would be a good idea to have a poetical competition for once. Prizes will be given for the best original poetry on "Canadian Country Life." All who are under fifteen may compete. Write your name, age, and address on the back of your poem, and address to "COUSIN DOROTHY, BOX 92, NEWCASTLE, ONT." The competition closes on the first of April. Don't be afraid to try. I don't expect any of you to rival Tennyson or Longfellow, but you can surely describe country life in some sort of rhyme. If there are enough competitors, they will, as usual, be divided into classes.

Here is the little poem I mentioned:

## Naughty Sam.

I'll tell you now of naughty Sam—  
He wouldn't wear his best new tam.  
He said it seemed so like a girl  
Giving the pretty tam a whirl.  
"You must wear it, Samuel," his mother said,  
"It looks so nice on your curly head."  
But Sam was spoilt; as spoilt could be,  
As you and I will plainly see.  
And spoilt little Sam soon got his way;  
He wore his little red cap that day.  
At last he thought he'd play a trick,  
And he gave his curls a little flick.

"I'll tease my sister till she's mad,  
I hope she won't tattle-tale to Dad."  
He went to his sister and said to her:  
"I see on your dress a little burr.  
Because you are so grand and gay  
You'd better flick it off to-day.  
Or p'raps you'd better call a maid  
If you are yourself afraid."  
"Oh!" she said, "you silly boy,  
You're always trying to annoy.  
You'd better go and feed your bird  
Till you can find a better word."  
So Sam went off to feed his bird,  
But did not find a kinder word  
For his younger sister Jane.  
At last he felt a dreadful pain,  
For you see this greedy child  
Had eaten food not very mild;  
And so you see it served him right.  
This very dreadful food to bite.  
Alas! for him the doctor came  
And questioned him and gave him shame;  
His conduct he then had to tell  
Why that he was now not so well.  
He wished the doctor would go away  
And far away from him would stay.

MARJORIE.

Now, I hope you won't give in without trying, even though you may never have attempted to write verses. When people think they can't do a thing, and yet keep at it, they often succeed, much to their own surprise. Did you ever hear of the two frogs who went on an exploring expedition and fell into a jug of cream? The sides of the jug were steep and slippery, so, after a few attempts to jump out, one of them said:

"It's no use, we can't get out, we might just as well die at once."

"You may die if you like," said the other, "but I shall keep at it as long as I can."

Then the dismal frog cheered up, and they both began to jump and splash about energetically. What do you think happened? Something they never expected, as they knew nothing about churning. The cream suddenly turned into butter, and our heroes climbed on top and made a high jump for liberty.

They succeeded by "keeping at it," and there is no reason why anyone should fail in his ambition. Only keep on trying, no matter how hard it seems to win. If you don't get exactly what you are aiming at, you will surely get something better. As one little girl found—

"It's a funny thing that lessons,  
Said a kindergarten small,  
Are easy when I study them,—  
Don't bother me at all.  
But if, instead of work, I play,  
They're dreadful hard to get.  
I get mixed up in every way  
And cry my 'kerchief wet.'"

COUSIN DOROTHY.

## Do You Know It?

Here is an amusing game: Paste or pin several newspapers together. Cut a number of holes in them about eighteen inches apart, and each a little larger than the human eye.

Now fasten this big paper round three sides of a clothes-horse. Some of the party go inside and look through the holes in the paper, placing their faces close to it. The rest remain outside and try to decide the owner of each of the various eyes beaming upon them.

Strange to say, however familiar all the players may be, they will find this a very difficult task.

Try it and see. The game is well worth the very slight preparation required.

## Cheerfulness at the Table.

An old lady, who looked as though she might have belonged to the "Sunshine Society" all her life, was asked by a friend for the secret of her never-failing cheerfulness. Her answer contains a suggestive lesson for parents. "I think," said the clever old lady, "it is because we were taught in our family to be cheerful at the table. My father was a lawyer with a large criminal practice. His mind was harassed with difficult problems all the day long, yet he always came to the table with a smile and a pleasant greeting for everyone, and exerted himself to make the table-hour delightful. All his powers to charm were freely given to entertain his family. Three times a day we felt this genial influence, and the effect was marvellous. If a child came to the table with cross looks, he or she was quietly sent away to find a good boy or girl, for only such were allowed to come within that loving circle. We were taught that all petty grievances and jealousies must be forgotten when mealtime came, and the habit of being cheerful three times a day, under all circumstances, had its effect on even the most sullen temper. Grateful if I am for all the training received in my childhood home, I look back upon the table influence as among the best of my life."

Much is said and written these days about "table manners." Children (in well-bred families) are drilled in a knowledge of "good form," as to the use of the fork and napkin; proper methods of eating the various courses are descanted upon; but training in the most important grace or habit a child should have, that of cheerfulness at the table, is too often neglected.

The Orientals had no family ties of affection until they began to eat at a common table. Let the gathering at mealtime be made the most happy hour of the day, and the influence on the children may be beyond estimation.—(Canadian Churchman.)



**Mollie's Irish Notes Continued.**

Among the many delightful visits which I have paid since I left Canada, there is none that I feel more inclined to mark with a red letter than my visit to Newtownbutler, County Fermanagh. My friend, Mrs. J., had spent some years in London, Ontario, before her marriage, therefore it was a great pleasure to me to see her in her own nice home, with her two bright-faced, clever little children, and to be able to congratulate her in person on her matrimonial happiness.

We had many mutual friends over the water to chat about, and I was entrusted with kindly greetings, which shall be delivered all in good time. I was not allowed to waste a moment, but was shown many points of interest during my stay in County Fermanagh. Amongst these were the beautiful park and gardens of Col. Sanderson, the Irish member of Parliament; at Lord Erne's, another show-place in the north of Ireland, I saw the ruins of the old, as well as the new, castle, most beautifully situated amidst romantic surroundings overlooking Loch Erne. I think I never noticed before such a wealth and variety of creepers anywhere as those which covered the walls of Loch Erne Castle. I spent a day at the Belleck china works, and watched with interest the processes which produced each kind, from the heaviest class of pottery to the finest grade of exquisite egg-shell china. There was first the crushing up of the hard flint stone, then its conversion into a soft mortar. This, on being stirred up, looked like cream, which, after being poured into moulds, passed into drying and firing ovens.

When we drink our cup of tea or place our plates upon the hospitable board, I wonder if we realize through how many hands and through what complicated processes each has passed to prepare it for service?

My friends arranged that I should visit their farms, inspect their stock, and be impressed with the fact that there were no horses in the world to be compared with those of old Ireland. I had often heard of the warm Irish heart, of the clever Irish tongue so quick at retort, of the Irishman's apparently transparent candor and yet of his sudden assumption of a density which could conceal an opinion or a purpose; I had heard, and now had confirmation, of his patient endurance of privations, of his uncomplaining efforts at earning a bare subsistence or of arriving at starvation point without hope utterly dying within him. I saw more than one family circle composed of father and mother, six to ten children, a pig or a goat in the living room, and the chickens roosting in the rafters overhead, all subsisting upon a miserable pittance of eight shillings a week. In spite of ragged garments and bare feet, in spite of a diet of potatoes and buttermilk, the youngsters managed to enjoy their rollicking fun, whilst their parents were never so ignorant, never so poor, as to be other than tender and kind to their little ones. Of course, in Ireland, as elsewhere, industry brings its reward, and unthrift and laziness their natural punishment, but it would take a wiser head than Mollie's to read the riddle which seems compounded of the absentee landlord and the Irishman's love for the old sod, which makes so many still cling to it instead of following the wiser example of those who have adopted Canada as a home, and who have helped, by their thrift, talent and industry, to make "its desert blossom as a rose." To observant eyes the Irish people have many special claims to our admiration. They give years (some I met had given from twelve to thirty years) of faithful service to the families with whom they lived, and to whose members they offered a willing respect, which betokened kindly reciprocation. "Did I see any beggars?" Well, I cannot deny that I did, but for every dole I gave, often but a copper coin, I earned so many benedictions and received such comically doubtful compliments that I was most amply repaid. When you read this, you in Canada will probably be gathering round the stove after a long sleigh drive in an atmosphere hovering over zero point, so you will not care to hear just now of my delightful week at the Irish seaport of Bundoran, County Donegal, with its rocky shore, its bathing machines or houses on wheels, and of the lovely daily swim in its health-giving waves. That was in August, and even in Bundoran one would hardly want a dip in the sea in January. Amongst the things I did not do was to kiss the Blarney-stone. The wonder is that anyone survives the attempt. If you have ever seen a picture of the process you will not be surprised that I did not try it. I have always had a prejudice against standing with my head upon nothing (there's a bull for you), even at the risk of missing "to grow eloquent," which is the reward of the adventurous spirit, man or woman, who kisses the Blarney-stone.

Do you think I did not hear mention of Ire-

land's patron saint? Was I not nearly caught in one or two inaccuracies when I was trying to show that we knew all about him in Canada? For my consolation I was given the accompanying lines, which will at least show that I was not the only one who had got mixed over the question of "St. Patrick's day in the morning."

**ST. PATRICK.**

On the eighth day of March it was, some people say, Saint Patrick at midnight he first saw the day. While others declare 'twas the ninth day he was born; And 'twas all a mistake between midnight and morn; For mistakes will occur in the hurry and shock, And some blamed the baby, and some blamed the clock, But with all their cross-questions, sure, no one could know If the child was too fast, or the clock was too slow.

The first faction-fight in Old Ireland, they say, Was all on account of St. Patrick's birthday. Some fought for the eighth, for the ninth more would die, And who would not see right, sure, they'd blacken their eye.

At last both the factions so positive grew That each kept a birthday and Pat then had two; Till Father Mulcahey, who showed them their sins, Said, "Sure, no one could have two birthdays but twins."

He said, "Boys, don't be fighting for eight or for nine,

Don't be always dividing, but sometimes combine; Combine eight and nine—seventeen is the mark, Let that be his birthday," "Amen," said the clerk. If he was not a twin, sure our history will show He was worth at least any two Saints that I know. So they all got blind drunk, which completed their bliss, And kept up the practice from that day to this.

I am afraid you dear temperate Canadians will think I should have suppressed the last two lines, but I offer you the poem, whilst I do not recommend the practice. Adieu.

MOLLIE.

**Ingle Nook Chats.**

My dear Guests,—

"Oh the snow, the beautiful snow,  
Filling the sky and the earth below;  
Over the archways, over the street,  
Over the heads of the people we meet."

If our new friend 1902 be as generous with other good gifts as he has proven himself in dealing out "the beautiful," we shall be fortunate indeed. Letters in response to the last contest are pouring in from all parts of the Dominion, and I cannot help wondering if any of my guests are as nearly snowed in as we are. One little friend comes all the way from "Merrie England," where Sir Winter is not quite the absolute monarch we know. What a picture would greet her, could she but look out from the window where I sit! A broad expanse of immaculate white, broken only by trees and the neighbors' buildings, with here and there an occasional glimpse of a high fence, for everything of smaller dimensions is snugly hidden under mother earth's great blanket. "Ever on the dreary height down comes the snow" might be our refrain, for it still continues to fall.

What a sermon it is on united effort and the power of little things! Any one of those tiny flakes, if allowed to fall upon our hand, would vanish instantly, so feeble it is; and yet this wonderful white cover enveloping everything is the result of these apparently helpless atoms falling upon one another.

I was in the city during the last great storm, and could not help contrasting its effects there and in the country. Here the fair sky-blossoms seem to fall caressingly and lovingly, as if striving to cover all that might have been unlovely, and when once more the sky is clear, a vision of beauty greets us everywhere. There the pure crystals fell with touch as gentle, it is true, but only to be trampled and sullied by the hurrying, anxious, eager crowd, each bent upon his own quest; never a pause in that swift tide of life long enough for the purifying influence of the snowflakes to become perceptible. And even thus, I thought, is it with human life in the great cities of the world. All is haste and bustle and worry, with rarely a moment for calm reflection, for that "closing of our eyes and looking steadily into ourselves," which we are told is, apart from its spiritual advantages, "a wonderfully soothing process." "It is solitude—and solitude is the mother-country of the strong. To shut

one's eyes and turn the thoughts inward is like sleep; and, like sleep, gives strength and peace." Here, in nature's own domain, untrammelled by the restrictions of society, and while next season's resources are calmly resting 'neath the snow, we may prove to the full the truth of these words, and true we shall certainly find them. There! I am drifting, even as the snow that now lies piled in forms of dreamlike beauty; but the merry jingle of bells awakens me to the fact that a laughing group of typical Canadian boys and girls are clamoring for admittance at the door of the Ingle Nook. I am pleased to note an occasional guest from among "children of a larger growth," a courtesy from my older readers which I very highly appreciate.

**OUR COMPETITIONS.**

Nothing seems to draw out such a merry crowd as a good puzzle. Already one hundred and nine papers have been received for Contest XVII., and the time limit is nearly up. This is as it should be, and as I love to have it.

"Leo Carleton," and others—There are no rules to follow, to gain admittance to the Nook, except to write with pen and ink and on one side only of paper (this refers to contests only). Yes, "Leo," all have the privilege of writing letters to the Hostess, whether they try any contest or not; letters to the Nook are always welcome, so come again. Thank you "Brownie"; same to you, little girl. I thank all my guests who have expressed so many kind wishes for the Hostess and her work.

**CONTEST XVII.**

Will be quite distinct from anything we have yet had, viz., a drawing competition. Three prizes will be given for the best drawings sent in on or before March 20th. The drawing may be of an animal, a building and surroundings, a flower or tree, or a bit of landscape. It must be drawn on thick paper, and must be the unaided work of the sender (a statement to this effect must accompany work). The sender must state to which class he belongs. Classes will be divided as follows: I., all over eighteen years of age; II., fifteen years and up to eighteen; III., all under fifteen years of age; and one prize will be given in each class. Name and address must be attached to drawing, but a pen-name may be used for publication when desired.

Young and old have an equal chance, and I hope to discover much artistic talent among my guests.



A SCENE IN A TYPICAL IRISH VILLAGE.

**Recipes.**

**JUGGED HARE OR RABBIT.**

Cut the rabbit up into joints, dredge with flour and fry in boiling butter. Then put into a stewpan, with one teaspoonful of thyme, two onions, six cloves, three whole allspice, half teaspoonful pepper and salt to taste, cover with water; let it simmer gently till tender, which will be about 1½ hours, or longer, should the rabbit be old. Add quarter pint of port wine and two tablespoonfuls red currant jelly about ten minutes before taking from the fire. This should be properly cooked in a jar closely covered, inside a stewpan of boiling water, taking four hours to cook.

**SHREWSBURY CAKES.**

One quarter pound each of butter and sugar, six ounces flour, one teaspoonful grated lemon peel, one egg; mix and roll as thin as possible. Cut out with cutter, and bake.

**SPOTTED DICK.**

Chop half pound suet, and rub into one pound flour, mixed with one teaspoonful of baking powder and a pinch of salt. Make into a stiff paste with milk, roll out one-half inch thick, and spread quarter pound currants or raisins over it. Roll it up and wet the edges, then tie up in a wet pudding cloth floured on the side on which the dough is laid. Leave room for pudding to swell, then tie tight, plunge into boiling water, and boil 1½ hours. This paste will also do for any fruit or "roly-poly" puddings.

**CURATE'S PUDDING.**

Cook and wash one pound potatoes, add two ounces butter and the grated rind of a lemon, quarter cup of sugar; then add two well-beaten eggs and the juice of the lemon. Stir all well together, place in buttered baking dish, and bake 30 minutes. When done turn out and serve hot.



Send all work within time given above to the address below. Wishing you all a pretty valentine.

THE HOSTESS.

Ingle Nook Chats, Pakenham, Ont.

## THE QUIET HOUR.

### God Knows and God Cares.

"I know not what will befall me!  
God hangs a mist o'er my eyes;  
And o'er each step on my onward path  
He makes new scenes to arise;  
And every joy He sends me  
Comes with sweet and glad surprise.

"I see not a step before me,  
As I tread the days of the year,  
But the past is still in God's keeping,  
The future His mercy shall clear;  
And what looks dark in the distance  
May brighten as I draw near.

"For perhaps the dreaded future  
Is less bitter than I think;  
The Lord may sweeten the water  
Before I stoop to drink;  
Or if Marah must be Marah,  
He will stand beside the brink.

"It may be He is keeping  
For the coming of my feet,  
Some gift of such rare blessedness,  
Some joy so strangely sweet,  
That my lips can only tremble  
With the thanks I cannot speak."

I have just been reading a story of the Franco-German war, and those vivid pictures of sorrow and anxiety for absent husbands, brothers and sons, made me think of the sadness even now caused by the fighting in South Africa. How many are looking anxiously for news of their boys, hoping for good tidings, yet fearing the worst! They are so far away, and we powerless to help them. There are others who bear heavy burdens of anxiety, pain or sorrow, feeling as though it were impossible to obey the command, "Rejoice in the Lord Alway."

Are you anxious about a dear friend, uncertain of his fate? Remember that God knows, if you do not, and He cares far more than you do. If you are powerless to help, He is not. Did you ever read the wonderful story of our Lord's life, with the special purpose of noticing His sympathy? Sometimes, as in the case of the widow who was mourning for an only son, it is directly stated that He had compassion on her. Sometimes His sympathy is shown in act or word, which reveals the quick insight and loving thought of our Elder Brother.

I have not time to speak of many cases, but will mention a few where His love was strong to help, although not manifested miraculously, but only by a look, a word or a touch. In the midst of the terrible excitement of the mock trial, He was ready with the look which was strong enough to win back the erring disciple to repentance and courage. There was a living power in the hand laid so tenderly on the loathsome leper from whom all men shrank; a power to reach the shrinking soul, apart from the miraculous power which healed the body. There was loving sympathy in the way He invited Himself to visit Zaccheus, the hated publican, who was accustomed only to contempt and scorn. Think of the thrilling power of that one word "Mary," which turned despair into ecstasy in a moment. Think of the thoughtful tenderness of that special message to St. Peter, who must have felt that he had very little right to be considered a disciple.

What He was then He is now, "the same yesterday, to-day, and forever." He loves each one of us with an everlasting love, and surely we can trust Him to order everything for the best. As Miss Fowler says: "At one time, like everybody else, I thought that I knew better than God, and I tried my utmost to teach Him what was the right thing for me and the Church, and I confess that I was grieved, not to say reproachful, when He did not follow my advice. But now I just sit still, and let Him take all the responsibility."

"O restful, blissful ignorance!  
'Tis blessed not to know;  
It keeps me quiet in those arms  
Which will not let me go;  
And hushes my tired soul to rest  
On the heart that loves me so.

"So I go on not knowing;  
I would not if I might;  
I would rather walk in the dark with God  
Than go alone in the light;  
I would rather walk with Him by faith  
Than walk alone by sight.

"My heart shrinks back from the trials  
Which the future may disclose,  
Yet I never had a sorrow  
But what the dear Lord chose;  
So I press the coming tears back,  
With the whispered words, 'He knows.'"

H. A. B. has drawn my attention to the parable of farm life in the last part of Isa. xxviii. If you read it you will find that the greatest care is taken in preparing the ground and sowing the different kinds of seed in the place best suited to each. Then, when the grain is to be threshed, it is not all treated alike. Some kinds are beaten out carefully with a flail, while others are broken

with the heavy threshing wheels, or bruised with hoofs. "Bread corn is bruised," and if the Captain of our salvation was made "perfect through sufferings," we can hardly expect to be gathered as good wheat into God's great granary without being first purged from the husks and chaff which cling so closely to us. The Divine Husbandman never makes mistakes either in our environment or our training. God knows and God cares—cares so much for our real good that He does not hesitate to cut very deeply sometimes. Certainly He loves too much to give us any unnecessary pain, so we may rest satisfied in those strong yet tender Hands, feeling sure that anything that comes from Him must be for our real and lasting good.

"'Tis the Master who holds the chisel;  
He knows just where  
Its edge should be driven sharpest,  
To fashion there  
The semblance that He is carving;  
Nor will he let  
One delicate stroke too many,  
Or few be set  
On forehead or cheek, where only  
He sees how all  
Is tending -- and where the hardest  
The blow should fall  
Which crumbles away whatever  
Superfluous line  
Would hinder His hand from making  
The work divine.

"With tools of Thy choosing, Master,  
We pray Thee, then,  
Strike just as Thou wilt: as often,  
And where, and when  
The vehement stroke is needed,  
I will not mind,  
If only Thy chipping chisel  
Shall leave behind  
Such marks of Thy wondrous working  
And loving skill.  
Clean carven on aspect, stature,  
And face, as will,  
When discipline's ends are over,  
Have all sufficed  
To mould me into the likeness  
And form of Christ."

Think what it means to be a member of Christ's mystical body, the Church, of which He is the living Head. As every pain in every member of a body is flashed like lightning along the nerves to the brain, so—as Robertson beautifully says—"there is not a single throb, in a single human bosom, that does not thrill at once with more than electric speed up to the mighty heart of God.

We are not required to be stoics, hardening ourselves until pain is hardly felt. God surely intends us to feel, for insensibility to pain is a very dangerous symptom, either in soul or body, and He will very likely cut deeper still if we try to harden ourselves. Let us trust Him utterly and unreservedly, for He knows what is really for the best—and certainly we don't. Let us seek to win the great gift of patience.

"While I lay prone, Pain stood at my right hand,  
And with hot fingers seared her furrows wide  
Through nerve and muscle; till to longer stand  
Her cruel torture seemed too hard! I cried,  
'Enough!' But sounded in my ear  
A tender voice, 'A little longer, dear!'

"While, the sweet speaker beckoned toward the night,  
And broad-frowed Courage took his place by Pain,  
And so we faced, until the morning light,  
Courage and Pain and I; nor e'er again  
I cry, 'Enough!' but meekly turn to hear  
Great Patience speak, 'A little longer, dear!'"

HOPE.

### Some Winter Ways with Beef.

#### BEEF STEW.

Cut two pounds of the cheaper pieces from the bones, and then into inch pieces, roll in flour and fry brown in a saucepan, with a little fat and a sliced onion. Put the bones into cold water and heat slowly to boiling, add the meat and  $\frac{1}{2}$  teacupful of canned tomatoes. Simmer an hour, then add a carrot cut in squares. Cook until the meat is tender, adding a few potatoes, also cut in squares. Serve with a garnishing of toast cut in pieces around the meat dish.

#### MOCK SAUSAGE.

Chop very fine a pound of cold beef, add to it four tablespoons of mashed potatoes, a beaten egg, season highly with salt, pepper and sage; mix well. Shape into small flat cakes with the hands, and fry in a little fat like pork sausage.

#### ROAST BEEF WITH YORKSHIRE PUDDING.

Take the roast beef from the pan, skim off all the fat dripping into a pan in which the pudding is to be baked, make a batter with two eggs beaten separately (very light), salt, one cup of milk, one cup of flour. Unless the eggs are very light, add a little baking powder. Bake in the beef dripping for ten minutes in a hot oven.

#### BEEF STOCK.

Get a knuckle of beef, cut the meat all off the bones into small pieces. Break the bones, put them into a kettle with the meat, allow one quart of water for every pound of meat. When it begins to boil, skim as long as any scum rises. Set the kettle on the back of stove, so that the meat will cook slowly for five hours; then add salt to season, and skim out meat and bones. Strain the rest, and set away to cool; then chop off the fat and you will have a firm jelly ready for soups.

#### BEEF LOAF.

Chop fine four pounds beef without any fat, add to it three dozen soda biscuits rolled fine, four eggs, one cup milk, one tablespoon ground mace, salt and pepper to taste, one tablespoon melted butter; mix well, and put in a tin, packing it well; baste with butter and water, and bake two hours. This will slice well when cold, and can be eaten either cold or hot.

#### Old Foggy Farm Women.

Not long ago I called on a town woman, who remarked: "Why don't you write up for the 'Farmer's Advocate' these old foggy farm women who spend their time patching quilts and sewing rags? Why do they not buy their cloth and have a prettier quilt, with the covers all of one kind, without cutting up to sew together again?" I nearly smiled out loud, for I quite agreed with her on the method of quilt-making, but I did not quite agree on the "old foggy farm women." It is a well-known fact that the village and town women are just as "old foggy." Indeed, at our local fairs it is just as often the village woman who shows the many-patched quilt. Last fall I saw one made of two colors of cashmere, new, and of good quality. Instead of the cover being of one color and the lining of the other, it had all been cut into tiny strips and sewn up again log-cabin pattern, and I had the extreme bad taste to see no artistic beauty in it, but (I would like to emphasize that "but") it was not the old foggy farm woman, it was a Town Woman who exhibited it.

I once, in a Farmers' Institute address, used words somewhat as follows:

"Any young woman who buys new cloth to cut up in little pieces to sew together again is a fit subject for the lunatic asylum." Perhaps I was rash, though it does look to me like a crazy piece of work, but I forgot that one might be insane in this one line but be perfectly sane on every other subject, and so might be left at large for many useful years.

Then, the gorgeous hooked mat and the rag carpet are extravagant luxuries if one has a sensible regard for mind and body; and they, too, almost as frequently grace the floors of the village woman as of the farm home. Do they pay for the time and strength wasted in making and shaking them? Of course, those who hook mats do not consider the time wasted, as the work is done in supposed leisure moments. This is where the mischief comes in. Our leisure moments should not be spent in extra and unnecessary work, be it patching quilts, sewing rags or embroidering center-pieces. We should consider we have minds to improve and to keep from deteriorating. We might just as well be built without brains if we put them to no better use than to plan sewing rags.

Our pioneer ancestors had not the wealth of reading matter, nor had they the educational advantages we have, but they had time for social intercourse and for a life "near to nature's heart."

We neglect to entertain, because we are too busy patching quilts and doing lots of other useless things. My town friends say: "Why cannot the farmers trace up and be somebody? Give little social evenings, and not live so much to themselves?" Of course, select little parties are very pleasant, and I being (or, not being) "an old foggy farm woman," give and attend them about a dozen times during the year, not counting the evenings when boys and girls drop in for music or a quiet game. Do the "old foggy" town women entertain oftener?

I decidedly disapprove of the every night away from home which is so prevalent both in town and country; some classes going to parties, others to revival and prayer meetings, where, perhaps, only the emotional part of one's nature is aroused. We should also remember we have bodies to improve and to keep healthful. We are placed in this world to enjoy its beauties and its pleasures and to be as nearly perfect as possible. To do this we must make our recreation partake largely of physical exercise, for if we have not healthy bodies we must expect to be less perfect in spirit and mind. If we would drop the rag recreation and go out skating, walking, tobogganing, or take other lively physical exercise, in company with congenial people, new brightness would come to the eyes, yellow complexions would turn white, bleached cheeks would become rosy, minds would become fresher and more able to grasp grander ideas and to think better thoughts. In conclusion, while I admit there are "old foggy farm women," I refuse to believe that we are all "old foggy," or that we are more so than are our sisters in towns and villages. Old foggyism means being behind the times, old-fashioned in our ideas and methods. Let us show the world that we are up-to-date farm women, if not in our dress, at least in our thinking capacity, and in our methods of spending our working and recreation hours.

M. E. GRAHAM.

Ailsa Craig, Ont.



### Dispersion Auction Sale

OF PLEASANT VIEW HERD OF REGISTERED DAIRY SHORTHORNS AND TAMWORTH AND YORKSHIRE HOGS, On Wednesday, March 5, 1902.

PROPERTY OF E. B. KOLB, BERLIN, ONT. 17 head of dual-purpose Shorthorn cattle—14 females and 3 bulls—bred on dairy lines, but good beef producers as well. Hogs—10 Tamworths and 4 Yorkshires, registered and eligible to registry. Sale to commence at 1 o'clock p. m. Catalogues sent on application to JOSEPH MICKERS, E. B. KOLB, Auctioneer, Box 213, Berlin, Ont.

### Clydesdale Stallions FOR SALE.

One seven-year-old. One three-year-old. Three two-year-olds. Also a few mares and fillies of good size and good quality. I. Devitt & Sons, Freeman P. O., Ont. Burlington Junction Station 1/2 mile from farm.

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Of our Illustrated Catalogues are now going to customers, giving PRICES and how to plant TREES Shrubs and Roses. Just what you want before placing your order. Shall we send you one? We also offer Seed Potatoes and Eggs for Hatching, at the CENTRAL NURSERIES. A. G. HULL & SON, ST. CATHARINES, ONTARIO.

### SPRAYERS From FACTORY TO FARM

Compressed air and self-operating 4-gal. Steel Tank, Brass Air Pump with Brass Valve, nothing to eat out, rot or decay; brass nozzle for solid stream or fine spray; rubber hose and shoulder strap; all ready for use; \$2.50. Send for descriptive circular. Address: COLUMBIA NOVELTY COMPANY, ROCHESTER, N. Y.

### 12 SHORTHORN BULLS.

ALL UNDER TWO YEARS OLD. PRICE, FROM \$100 UPWARDS.

At the Toronto Industrial, 1900, the herd was awarded first for aged cows, three-year-old cows, two-year-old heifers, sweepstakes for female any age, first for herd (bull and four females), and first for breeder's herd.

Yonge Street trolley cars, from Union Station, Toronto, pass the farm several times a day.

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From pure-bred White Rocks, Tyerman's and Barker's strain. \$1.00 per setting of thirteen. ROBERT L. CRERAN, Shakespeare, Ont.

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Six 10 cent ones for 25 cents. A sample love story to ladies for 1-cent stamp for postage. Red Star News Company, London, Canada.

### DISPERSION SALE OF SHORTHORNS.

The subscriber will sell at auction, at his farm at Britannia, Ont., 4 miles from Streetsville Junction, C. P. R.; 6 from Brampton, G. T. R. and C. P. R.; 7 from Port Credit, G. T. R., on THURSDAY, MARCH 20,

his entire herd of 35 head of high-class registered Shorthorns—28 females and 7 bulls, including the stock bull, Imp. Scotland's Fame—29083—, by Scottish Archer, dam Kibblean Beauty 3rd. 18 breeding cows, besides heifers in calf or with calf at foot. A grand lot of young bulls fit for service. Catalogues sent on application. F. A. GARDNER, BRITANNIA, ONT. John Smith, M. P. P., Auctioneer, Brampton, Ont.

Daubeney seed oats and grass peas are advertised in this issue by James Bowman, Guelph, Ont., also Pearl of Savoy potatoes and Polled-Angus bulls. Those wanting very early oats and bug-proof peas, or one of the best varieties of potatoes, and those looking for good Aberdeen-Angus bulls, should look up the advertisement.

Referring to the review in our Feb. 1st issue, page 103, of the Maple Grove herd of Shorthorns, owned by Mr. W. B. Campbell, Campbellcroft, Ont., we are requested to state that the imported cow, Victoria, in the herd was imported by Mr. W. D. Flatt, Hamilton, and that the herd bull, Imported Orange Duke 28872, was imported by Messrs. H. Cargill & Son, Cargill, Ont., and was the sire of Orange Chief (imp.), sold at Mr. Flatt's sale at Chicago on August 7th, 1900, for \$1,500.

### GOSSIP.

#### Holstein-Friesian Breeders.

The nineteenth annual meeting of the Holstein-Friesian Association of Canada was held at the Palmer House, Toronto, Feb. 4th. Some of those present were: Messrs G. A. Gilroy, Glen Buell, Jas. Rettie, Norwich; S. R. Beck, South Cayuga; R. S. Stevenson, Ancaster; A. C. Hallman, New Dundee; M. Richardson, J. W. Richardson, Caledonia; G. W. Clemons, St. George; Wm. Suhring, Sebringville; J. H. Patten, Paris; W. G. Ellis, Toronto; Alfred Rice, Currie's; Geo. Rice, Currie's; Reesor, Locust Hill; Adams, Carleton West; H. Welsh, Weston; Rife, Hespeler; Macklin, Streetsville; Clarkson, Summerville; Wm. McClure, Norval; W. A. Clemons, Ottawa; W. H. Simmons, New Durham.

The annual report showed the Association to be in a very flourishing condition.

ANNUAL REPORT FOR 1901-02. Registrations of animals under one year (members) 460 Registrations of animals under one year (non-members) 119 Registrations of animals over one year (members) 88 Registrations of animals over one year (non-members) 11 Registrations of imported animals 10 Re-registrations of Canadian-bred animals 2 Duplicate certificates of registry 4

Total 694 Total last year 677 Transfers for members 211 Transfers for non-members 70 Transfers (after 90 days from date of sale) 60 Total 341 Last year 279

Total bulls now registered 2,251 Total cows now registered 3,517 Total bulls now transferred 871 Total cows now transferred 1,343

Twenty-two new members have joined the Association during the year.

FINANCIAL STATEMENT. Receipts. Balance from last audit \$ 816 14 Registry and transfer fees 873 70 Membership fees 105 00 Annual dues 109 00 Sale of Herdbooks (Vol. I.) 5 25 Interest 9 55 Total \$1,918 64

Disbursements. Salary, Secretary-Treasurer \$ 300 00 Special prizes 145 00 Expenses, Executive Comm. 76 73 Dominion Cattle Breeders' Association 60 50 Printing minutes, certificates, etc 44 75 Postage stamps 32 00 Stationery 5 75 Sundries 1 75 Balance on hand 1,252 16 Total \$1,918 64

Copies of Herdbook on hand: Vol. I., 70; Vol. II., 2; Vol. III., 57; Vol. IV., 60. Total, 189.

The officers were elected as follows: A. Gifford, Meaford, president; Jas. Rettie, Norwich, 1st vice-president; H. Bollert, Cassel, 2nd vice-president; R. S. Stevenson, Ancaster, 3rd vice-president; A. C. Hallman, New Dundee, 4th vice-president. The directors appointed for two years were Geo. Rice, Currie's, and G. A. Gilroy, Glen Buell. Messrs. Patten and Suhring were re-elected auditors, and G. W. Clemons, St. George, secretary-treasurer.

A grant of \$100 was made to the Provincial Winter Fair; \$100 for Toronto Industrial; \$25 for Maritime Winter Fair; \$25 for St. John or Halifax; \$25 for Brandon; and \$25 for New Westminster, B. C.

A grant of \$5.00 was made for each cow that is accepted in the Record of Merit. An additional prize of \$5.00 was made for the cow standing highest in each class, there being four classes, as follows: Two-year form; three-year form; four-year form, and full-age form.

Messrs. Wm. G. Ellis and Edward Adams, Carleton West, were appointed delegates to Toronto Fair; Messrs. Clemons and Bollert to London; Messrs. Gilroy and Joseph Fletcher to Ottawa; Mr. Stanley A. Logan to Halifax and St. John; Mr. Jas. Glennie to Winnipeg.

Messrs. Stevenson and Bollert were recommended as judges for Toronto Fair; Suhring and Beck for London; Hallman and Bollert for Ottawa; Bollert and Rettie for Winnipeg and Brandon.

A long discussion took place on the motion that the fee on animals imported from the United States be raised, and it was decided to charge a registration fee of \$5.00 on females and \$10.00 on males on all such imported animals.

Deep regret was expressed at the death of Mr. E. D. Tillson, a member of the Association, and a resolution was passed that a letter of condolence be forwarded to the family.

The meeting was closed by an interesting address on "How to improve our breed of cattle by breeding and feeding," by Mr. Geo. Rice.

## PERTINENT FACTS.

The De Laval Machines were awarded the only Gold Medal for Cream Separators at the Pan-American, 1901.

The De Laval machines were awarded the Grand Prize (Highest Award) at Paris, 1900.

The official skimming record of the De Laval machine at the Pan-American, during its allotted run, was .0161.

The official skimming record of the only machine trying to compete, during its allotted run, was .0543.

The De Laval is used by all prominent and successful creamerymen and dairymen in every country on the globe.

The above statements can be substantiated in every instance.

The De Laval Separator Co. 77 YORK STREET, TORONTO.

## Good Calves Are Raised Where

# BIBBY'S "CREAM EQUIVALENT" IS USED.

FOR supplementing the supply of whole milk or for enriching separated or skimmed milk, or if necessary for raising the calves without any milk whatever after a few weeks old. It is by far the most popular calf food on the market.

Price: 50-lb. bag, \$2.00; 100-lb. bag, \$3.50; freight prepaid to nearest railroad station.

To be obtained from local dealers, or direct from

J. BIBBY & SONS, 10 Bay Street. TORONTO.

### GOSSIP.

The handsome new catalogue of the Prairie State Incubator Co., just received, is a large volume, pages 84 by 114, printed in two colors throughout, with several handsome colored inserts and more than fifty full-page groups showing scenes on poultry farms, besides numerous smaller illustrations. A full description is given of the Prairie State Incubators and Brooders, and a complete report of their show record. Another attractive thing about the catalogue is that while it is said to have cost probably \$15,000 to print the first edition, a copy will be sent free to any one interested in poultry. Write to Prairie State Incubator Co., Homer City, Pa., and mention this paper.



## CONSUMPTION Prevented and Cured.

Four marvelous free remedies for all sufferers reading this paper. New cure for Tuberculosis, Consumption, Weak Lungs, Catarrh, and a rundown system.

### FREE.

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

These symptoms are proof that you have in your body the seeds of the most dangerous malady that has ever devastated the earth—consumption.

Consumption, the bane of those who have been brought up in the old-fashioned beliefs that this disease was hereditary, that it was fatal, that none could recover who were once firmly clasped in its relentless grip.

But now known to be curable, made so by the discoveries of that man whose name has been given to this new system of treatment.

Now known to be preventable and curable by following and practising his teachings.

The new system of treatment will cure you of consumption and of all diseases which can be traced back to weak lungs as a foundation.

It is not a drug system, but a system of germ destruction and body building.

Not guesswork, but science. Not a step backward, but a stride out of the old ruts. The Slocum System consists of Four Preparations which act simultaneously and supplement each other's curative action.

You are invited to test what this system will do for you, if you are sick, by writing for a

#### FREE TRIAL TREATMENT

and the Four Free Preparations will be forwarded you at once, with complete directions for use.

The Slocum System is a positive cure for Consumption, that most insidious disease, and for all Lung Troubles and Disorders, complicated by Loss of Flesh, Coughs, Catarrh, Asthma, Bronchitis and Heart Troubles.

Simply write to the T. A. Slocum Chemical Company, Limited, 179 King Street West, Toronto, giving post office and express address, and the free medicine (the Slocum Cure) will be promptly sent.

Persons in Canada seeing Slocum's free offer in American papers will please send for samples to Toronto. Mention this paper.

#### HIGH-CLASS SCOTCH SHORTHORNS

of the following families, for sale at moderate prices: Village Girls, Broadhooks, Beaufort Roses, Missies, Clares, Marr Floras, Nonpareils, Minas and other choice families. Write for catalogue. Shropshire rams and ewes for sale as usual.

ROBERT MILLER, Stouffville, Ont.

**WANTED.** FOUR good farm hands for dairy farm; wages \$240 to \$300 a year and board. Permanent employment. Apply to G. T. CORFIELD, Corfield, B. C.

**SHIP YOUR FURS TO**  
**McMillan Fur & Wool Co.**  
 MINNEAPOLIS, MINN.  
 WRITE FOR CIRCULARS

#### 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 blister. 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. FREDRICK 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 STREET, EAST, TORONTO, ONT.

**SAVE ONE HALF YOUR FUEL.**  
 THE WINNIPEG HEATER Will do this. I placed a Winnipeg Heater in my dining-room, which is 20 x 24 ft. It was connected with the kitchen stove, the waste heat from which heated my large dining-room perfectly, and kept it up to any temperature desired. We are exceedingly well pleased with the heater. Consider it a great economizer of fuel. J. SPENCE, M. D., 646 Dufferin St., Toronto, Ont.

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



## A Flower Garden Free

We want 50,000 new customers to use our seeds. Send your name with Ten Cents, and state where you saw this advertisement, we will mail our Handsome Catalogue for 1902, and include, Free of Charge, our Special 50 cent Flower Seed Collection—Asters, Giant Comet; Morning Glory, new Japanese; Sweet Peas, large flowering; Poppy, new double; Verbena, Mammoth, enclosed in a Coupon Envelope.

### Envelope Worth 25 Cents.

The empty envelope, when returned, will be accepted as 25 Cents cash payment on any order amounting to one dollar or upwards, for Seeds selected from our catalogue. Your opportunity for a pretty garden without cost.

The Steele, Briggs Seed Co., Limited, Toronto, Ont.  
 "Canada's Greatest Seed House"

#### GOSSIP.

##### Robt. Miller's Sale of Shorthorns.

The heavy snowstorms and high winds of the first days of February militated somewhat against the success of Mr. Robert Miller's sale of Shorthorns at Stouffville, Ont., on the 5th inst. The snowdrifts, which in many places made roads almost impassable and seriously delayed trains, doubtless prevented many who had planned to be present. The day was bitterly cold, making it almost impossible to follow the sale closely throughout, yet a good crowd of representative breeders and farmers, among whom were five or six Manitoba breeders, and as many from the States, found their way to the sale and took most of the animals at very satisfactory prices. No special preparation of the cattle for sale had been made, and while all were in good breeding condition, and hence in the best possible condition for buyers, the most of them would have sold much higher had they each carried two hundred pounds more of beef. No sensational prices were made, and none were expected, but the average of \$306 on those sold was considered a very fair result under all the circumstances. The highest price for a female, and the highest price for the day, was \$650 for the roan five-year-old cow, Imp. Broadhooks 20th, which fell to the bid of Mr. E. C. Attrill, Goderich, Ont. The highest-priced bull was Imp. Prince of the Forest, an exceedingly good roan coming two years old in March, and sired by the Duthie-bred bull, Squire Nonpareil, bought by J. & D. Chinnick, Chatham, Ont., at \$635. Mr. R. W. Barclay, of Iowa, as auctioneer, ably conducted the sale, and won golden opinions by his tact, courtesy, and cleverness. We give below a list of the animals sold, with their age and the prices and address of purchasers:

#### COWS AND HEIFERS.

Golden Rose 2nd (imp.), 3 years; Geo. Harding & Son, Waukesha Wis.	\$525
Golden Rose 4th (imp.), 1 year; W. D. Flatt, Hamilton	400
Butterfly Queen (imp.), 2 years; John Miller & Sons, Brougham	550
Duchess of Gloster, 2 years; E. C. Attrill, Goderich	250
Daisy Duchess of Gloster, 3 years; Arthur Johnston, Greenwood	225
Village Rose, 2 years; E. C. Attrill	210
Village Bird, 5 years; W. D. Flatt	375
Lady Sirius, 8 years, and calf; Geo. Harding & Son	225
Lady Clara 6th, 1 year; Arthur Johnston	400
Lady Lavender 1 year; Geo. Harding & Son	400
Village Maiden, 1 year; Wm. Fishbeck & Son, Howell, Mich.	150
Missie White Stockings, 4 years; W. D. Flatt	325
Missie of Neidpath 10th, 10 years; W. D. Flatt	400
Lady Dorothy 42nd, (imp.), 5 years; Geo. Harding & Son	525
Nonpareil of Riverview, 8 years; J. G. Barron, Carberry, Man.	125
Flower Girl 12th (imp.), 1 year; W. D. Flatt	475
Bracelet, 1 year; Wm. Fishbeck & Son	260
Claret Princess 10th, 1 year; J. A. McElhinney, Uxbridge	220
Princess Claret 10th, 3 years, and calf; W. D. Flatt	450
Claret Princess 6th, 6 years; Jno. McFarland, Woodstock	175
Flora 92nd, 3 years; Hudson Usher, Queenston	385
Broadhooks 20th (imp.), 5 years; E. C. Attrill	650
Pennan Broadhooks (imp.), 1 year; Jno. Miller & Sons	350
Ness, 2 years; Geo. Harding & Son	320
Claret Princess 11th, 2 years; R. Miller, Pickering	180
Roan Buttercup 8th, 2 years; John Lee, Highgate	130
Lovely Gem 3rd, 2 years, and bull calf; W. D. Flatt	500
Mina Millicent, 2 years; Geo. Harding & Son	150
Claret Princess 14th, 8 months; J. Leask, Toronto	117
Ladysmith, 2 years, and calf; T. E. Robson	215
Burnbrae Nettie, 10 months; T. E. Robson	135
Daisy of Lashby, 3 years; Geo. Harding & Son	250
Jewell, 3 years; John Miller & Sons	250
Red Lady, 2 years; John Miller, Pickering	150

## MAPLEWOOD HACKNEYS.

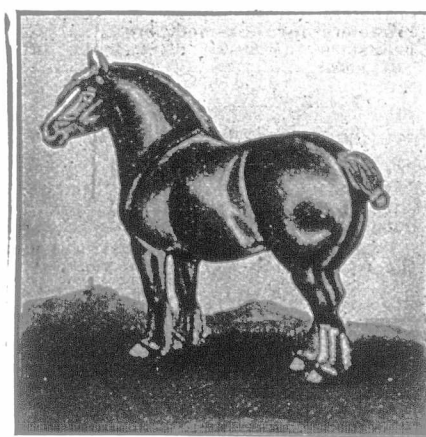
PROPERTY OF FREDERICK C. STEVENS, ATTICA, N. Y.

Have won more challenge cups, more championships, more first prizes, and more value in prizes during the past seven years than all the other Hackneys of America combined.

#### THIS IS THE PLACE TO BUY FOUNDATION STOCK.

Stallions of all ages, mares in foal, young mares and fillies. The best three carriage horse sires in America at the head of this stud: Langton Performer, Clifton 2nd, and Pandango.

SEND FOR CATALOGUE TO E. T. GAY, MANAGER, ATTICA, N. Y.



LATELY IMPORTED A FRESH LOT OF

### Glydesdale Stallions,

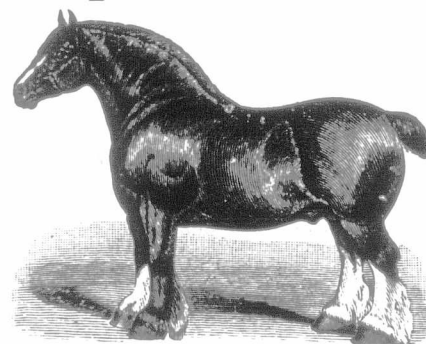
Comprising sons and grandsons of many of the most noted Scotch showyard winners and sires, all in the pink of condition without surplus flesh, and personally selected to meet the best Canadian markets, having, without exception, the best of bone, hair, feet, and action, coupled with true Clyde character.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

Prices consistent with quality.

ROBERT GRAHAM, Ringwood P. O., Ont.

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

## Imported Stallions for Sale.



FOURTH consignment, per steamship from Glasgow, due to arrive end of February, 1902.

#### DALGETY BROS., DUNDEE, SCOTLAND,

the largest importers and exporters of horses in Canada, have on hand just now a choice selection of above, including several prizewinners. Our fourth consignment this season. Largest and best lot from Glasgow show. They combine size, quality and action, and all good colors; age, from two years upwards; and will be for sale at

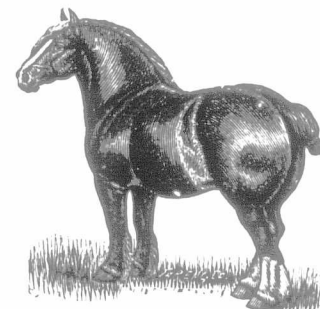
BLACK HORSE HOTEL, FRONT STREET, TORONTO, ONT., on Wednesday, March 5th, for one week; after that at our own stables, London, Ont. Any one in need of a good stallion should not miss seeing our stock before buying. Prices right. Apply: -om

JAMES DALGETY, 229 HYMAN STREET, LONDON, ONTARIO.

#### JOHN BRIGHT, MYRTLE, ONTARIO,

BREEDER OF Clydesdale Horses

AND SHORTHORN CATTLE.....



#### SHORTHORNS.

For Sale: 16 head of bulls and bull calves; also a large and choice lot of cows and heifers of all ages.

#### CLYDESDALES.

11 registered mares, 6 of which are in foal to such notables as Royal Cairnton, Prince Patrick and Lord Lyndock; also 2 young stallions.

Myrtle P. O. and R. R. Stn., G. T. R. and C. P. R.



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

## Barclay's Patent Attachment

FOR THE CURE OF BALKING AND KICKING HORSES.

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

THE BARCLAY MFG. CO., Brougham, Ont.

#### BULLS.

Prince of the Forest (imp.), 1 year 10 months; J. & D. Chinnick, Chatham	635
Roan McKay, 10 months; Chas. Calder, Brooklyn, Ont.	240
Golden Crown, 5 years; John Bright, Myrtle, Ont.	150
Village Clerk, 9 months; Geo. Harding & Son	140

The Aberdeen-Angus heifer, "Black Cap Judy," was sold at auction at Dexter Park Amphitheater, Union Stock Yards, Chicago, Feb. 4th, to C. H. Gardner, of Blandinsville, Ill., for \$6,300. This makes the female record price of all breeds since 1873, a Missie Shorthorn cow selling for \$6,000 in Chicago on December 5th last. The previous high record on Angus was \$2,800.



WANTED A Practical Shepherd. W. H. GIBSON. POINT CLAIRE P. O., P. C. Huntlywood Farm. Ont.

SHORTHORNS. THORNHILL HERD. ESTABLISHED 27 YEARS. Imp. Prime Minister and Sailor Champion now at head of herd, which are all bred on straight Scotch lines, and are of the up-to-date kind. Present offering: some choice young bulls.

Subscription Agents Wanted FOR THE Farmer's Advocate

IN ONTARIO, QUEBEC, MARITIME PROVINCES, AND MANITOBA. Good opportunity for pushing men. Apply— FARMER'S ADVOCATE LONDON, ONT.

GOSSIP. IMPORTANT SALE OF HOLSTEINS IN SIGHT.

Dairymen throughout the Dominion and the United States will be interested in the announcement in our advertising columns of the dispersion sale by auction, without reserve, on March 6th, of the entire herd of 26 head of high-class Holstein-Friesian cattle belonging to Mr. William McClure, Norval, Ont., at his farm, two miles from Norval Station, G. T. R.; five miles from Brampton, G. T. R. and C. P. R., and 20 miles west of Toronto. It is rarely that so good an opportunity offers to secure at one's own price selections from so notable and useful a herd. The herd was established some 12 or 15 years ago, the foundation stock having been carefully selected from leading Canadian and American herds, and high-class bulls of the best breeding and character have been continuously used in building up and improving the cattle in dairy form and performance at the pail till there are few herds on the continent to-day more uniform in type or of higher average capacity in dairy performance. Those who watched the work of the cows in the Pan-American Model Dairy test last year could not be favorably impressed with the excellent record of the Holsteins from start to finish, standing steadily at the top of the list in milk yield, in milk solids, and in net profit in the production of milk solids, and evidencing clearly their ability to hold out well for a lengthened term of lactation.

Mr. McClure's great cow, "Beauty of Norval," included in this sale, a model dairy cow in type, conformation and performance, made in the six-months test at the Pan-American the highest milk record of the 50 selected cows of ten different breeds in "The Model Dairy," and stood second in butter production, having yielded in the six months, under adverse conditions, 8,140 lbs. of milk and 323 lbs. of butter. She is now in the prime of life, being only seven years old. She was sired by Siepkje's Mink Mercedes Baron 31, and is out of Aagie Lady of Luraine 378, and is now in calf to the grand yearling bull, Sir Pietertje Posch, now at the head of this herd and in the sale, a son of the noted young cow, Alta Posch, who holds the world's record for a two-year-old and a three-year-old cow, having given in an official 7-days test, at 2 years 11 months and 28 days old, 21 days after calving, 586 lbs. of milk, an average of over 83 lbs. per day, containing 21.661 lbs. fat, or equal to 27 lbs. 1 oz. butter in a week, 80 per cent. fat. This young bull was sired by Worthenall 3rd's Sir Pietertje 1243, and the dam of Alta Posch is the great cow, Altje Posch 4th 65, who holds the highest record in a public test, having given in two days, at the Provincial Dairy Show in 1900, 114 lbs. milk in 48 hours, testing 4.28 per cent. butter-fat.

There are included in this sale the dam of Beauty of Norval, three of her sisters, a two-year-old daughter, and a capital one-year-old son, sired by Baron Witzde, and most of the herd are bred deeply in the same prepotent blood lines, while many of the females are in calf to this rarely, richly-bred bull, Sir Pietertje Posch. Space will not admit of individual mention of all the good things in the herd, but suffice it to say there is nothing inferior in it, and scarcely one that does not rank well above mediocrity. The sale will be entirely without reserve, as Mr. McClure has leased his farms and is retiring from farming. The prospects for the dairy business will warrant dairymen in seizing this opportunity to secure some of the best dairy stock available.

The Battle Estate, in writing regarding change of advertisement, say that from the number of orders already placed with them by the farmers from all over the Province of Ontario for their well-known "Thorold Cement," the outlook for new farm buildings for the year 1902 is a good one. Many farmers have taken a sales agency for the "Thorold Cement," and are employing their spare hours in canvassing among their neighbors and talking up cement and better buildings on the farm.

H. C. Graham, Ailsa Craig, Ont., advertises two young Shorthorn bulls, bred from good milking families, of the same strains as the young cow shown by them at the Provincial Dairy Show, Guelph, in Dec. last, and which did excellent work in that trial.

J. & W. Russell, Richmond Hill, Ont., advertise 12 young Shorthorn bulls, all under two years old, bred from their noted gold medal and sweepstakes herd at the World's Fair and the Toronto Exhibition. See the advertisement and write them for particulars.

Dalgety Bros., Dundee, Scotland, have consigned to their Mr. James Dalgety, London, Ont., the fourth shipment of high-class Clydesdale stallions direct from the Glasgow Spring Show. This is described as the largest and best shipment the firm has made. The horses will be on view at the Black Horse Hotel, Toronto, March 5th, for a week, and after that at London, as per advertisement in this issue.

Cicely, the champion Shorthorn cow at the Toronto Industrial and Pan-American Exhibitions last year in the herd of W. D. Flatt, Hamilton, and sold at his Chicago sale in November to J. G. Robbins & Sons, Horace, Ind., has produced a healthy roan heifer calf, sired by Imp. Consul, second-prize winner at the Highland Society Show in 1900, and sold by Mr. Flatt last year to go to the Argentine Republic.

At a dispersion sale on Jan. 15th, of the herd of Holstein cattle belonging to M. L. Jones, Villa Nova, Norfolk Co., Ont., good prices were obtained, considering that the sale was only locally advertised, several of the cows and heifers bringing from \$100 to \$150 each, and one, Daisy B. DeKol 3rd 2308, brought \$200, falling to the bid of Matt Richardson & Son, Caledonia, Ont., who secured five of the best in the sale.

Mr. H. D. Smith, Compton, Que., in ordering change of advertisement, writes: "I am glad to be able to report the Ingleside Herefords all doing well this winter. The calf crop is most promising—so far nearly 30 head, all by Mark Hanna, and more to come. The demand for bulls keeps up well, and at present I have only two left for sale over 12 months old. I have a nice lot of heifers all ages. Your paper continues to keep me busy answering enquiries for stock."

Mr. William Linton, Aurora, Ont., places an advertisement in this issue of imported Shorthorn bulls and heifers from his old-established Sheriff Hutton herd, descended direct from the famous herd of his late father, whose bulls made a great record as winners of the championship honors at the Royal Show of England, and from which the late Mr. Cypriank on more than one occasion selected sires for the evolution of his noted herd. Mr. Linton's farm is readily reached from Toronto, being on the line of the Metropolitan Electric Railway, and only 24 miles north of Toronto, on Yonge street. Write him for particulars, or call on him.

B. H. Bull & Son, Brampton, Ont., write: "Mr. A. E. Aiken, of Woodlawn Farm, Hagersville, Ont., has purchased one of our Jersey bulls advertised by us, and the following letter received from Mr. Aiken explains itself: 'The young bull, Royal Prince, arrived in splendid condition. He is feeding well, and is quite at home. I am perfectly satisfied with him, and believe he will make a grand sire.' Four young bulls bred by us are heading herds in British Columbia. Two sons of Brampton's Monarch are heading the leading herds in Manitoba. We have also sent one to Quebec, two to Nova Scotia, three to Newfoundland, and several to the United States, besides the numerous herds in Ontario that are well headed by bulls from the Brampton herd. This growing trade is strong evidence that when one reviews the records of this herd at the leading Canadian fairs."

I. Devitt & Son, Freeman, Ont., write: Our offering of Clydesdales includes our stock horse, Grandeur 2nd 2246. He is not only one of the largest Clydesdales in Canada, but is also a horse of fine quality, and has proved himself a getter of the right sort of draft horses, and is just the horse to get the big geldings that are now in such demand. Nickel Steel is a fine rich bay, thick colt, with strong, flat, clean bone, heavy muscled, and, as his name indicates, a strong constitution. He is a grand horse for breeding up, where the other horse might be too large. The two-year-olds are a good smooth lot of strong-boned colts, and will make big horses of the right kind. The mares are in nice breeding condition, of the low, thick-set type, with good feet and plenty of bone and good action. Here are a few qualities that are noticeable throughout the stud: Good sound feet; strong, clean, flat bone; strong, muscular development; deep chested; short, strong backs; broad loins; closely ribbed, and good barrels, with good temper.

PLANT TREES.—Don't wait till the last minute before ordering trees for spring planting. It will pay you to make your selection early. See advertisement of the Winona Nursery Co., Winona, Ont., and write them at once for catalogue and prices.

Dominion Shorthorn Breeders' Annual Meeting.

The 16th annual meeting of the Dominion Shorthorn Breeders' Association was held in Toronto on Feb. 4th. The President, Mr. Robt. Miller, presided, and in his opening address congratulated the members on the prosperous state of the industry. The heavy snow-storms of the previous few days had rendered travelling difficult, and the attendance was consequently not as large as last year, but some 200 members were present, including several from Manitoba, among whom were Messrs. Andrew Graham, Pomeroy; Jas. Bray, Longburn, and J. G. Barron, Carberry; and Alberta was represented by Mr. John A. Turner, Calgary. The Secretary's report showed that the registrations are steadily increasing, the increase in Vol. 17, issued last year, being 2,582 in excess of the record of the previous volume. More registered cattle had been sold and shipped from Eastern Canada in the last year than in any previous year, the greater number going to the U. S., but a great many to the Northwest and British Columbia.

The financial statement showed that the receipts during the year were \$12,131 and the expenditure \$12,880. The credit balance on December 31st last was \$7,471. One thousand two hundred and fifty-five yearly subscriptions were received, and 8,874 registration fees for pedigrees and 3,019 transfer fees were paid, both being largely in excess of the previous year.

The report of a committee composed of President Miller, Richard Gibson, W. D. Flatt and Arthur Johnston was adopted unanimously, as follows, after a brief discussion: We, the members of the Dominion Shorthorn Breeders' Association, at our annual meeting, resolve that the tubercular test is unreliable, unnecessary, and in many cases injurious, and that we urge the discontinuance of the compulsory use of the toxine by the Dominion Government Department of Agriculture. It was resolved that we also fail to see the object now of requiring a 90-days quarantine on imported cattle, as there is no contagious disease in Great Britain requiring its enforcement to such length of time.

Upon motion of Capt. T. E. Robson, M. P. P., seconded by Mr. H. Smith, it was resolved that the matter of changing the Canadian standard of accepting pedigrees recorded up as high as Volume 30 in the English Herdbook take effect when the American Association adopt the same rule. The Association also passed a resolution asking the directors of the World's Show at St. Louis to appoint Mr. W. E. Skinner as Live Stock Director of the Exhibition.

A motion favoring the condensing of pedigrees and the use of smaller type in Vol. 18 of the Herdbook, and that the list of transfers be omitted, was carried, as was also a motion granting \$100 from the funds of the Association towards the salary of a man to take charge of shipments of registered stock to the West. On motion, it was resolved that new members be given the volume of Herdbook containing the pedigrees of the young animals recorded by them, and that submembers be given the volumes in succession as published.

Officers elected for 1902: President, Robert Miller, Stouffville, Ont.; 1st Vice-President, William Linton, Aurora, Ont.; 2nd Vice-President, W. G. Pettit, Freeman, Ont.; Vice-Presidents from Provinces: A. W. Smith, Maple Lodge, Ont.; P. G. Boyver, Georgetown, P. E. I.; W. H. Ladner, Ladner's Landing, B. I.; James A. Cochrane, Hillhurst, Que.; George A. Fawcett, Sackville, N. B.; Jno. A. Turner, Calgary, Alta.; C. A. Archibald, Truro, N. S.; W. A. Heubach, Touchwood Hills, Assa.; J. E. Smith, Brandon, Man.; Directors: James M. Gardhouse, Highfield; T. E. Robson, M. P. P., Ilderton; Edward Jeffs, Bondhead; H. Smith, Hay; Thomas Russell, Exeter; W. G. Cargill, Cargill; S. Dymont, Barrie; John Isaac, Markham; Geo. Raikes, Barrie; C. M. Simmons, Ivan; W. J. Higgins, Clinton; Walkerton; W. Salem; James Tolton, John Davidson, D. Flatt, Hamilton; and Finance Committee: Robert Miller, W. D. Flatt, I. Smith, Arthur Johnston, W. G. Pettit. Delegates: To Dominion Cattle Breeders' Association—John Isaac, Markham and T. E. Robson, M. P. P., Ilderton; Industrial Exhibition, Toronto, Hon. John Dryden and Robert Miller; Western Fair, Henry Smith, Hay, and C. M. Simmons, Ivan; Central Fair, Ottawa, R. R. Saugster, Lancaster, and D. McLaren, Dunmore; Provincial Exhibition, Nova Scotia, C. W. Holmes, Amherst, and F. C. Dickie, Fort William; Provincial Exhibition, New Brunswick, Senator Jesiah Wood and George A. Fawcett, Sackville; Provincial Exhibition, Prince Edward Island, C. C. Gardner, Charlottetown, and F. G. Boyver, Georgetown; Winnipeg Industrial Exhibition, Hon. Thos. Greenway, Crystal City, Man., and W. S. Lister, Middlechurch. Secretary and Editor, Henry Wade, Parliament Buildings, Toronto.

A BEAUTY.—A G. Hull, of St. Catharines, Ont., the old reliable nurseryman, has this season issued the handsomest catalogue he ever sent out, and the contents are as good and helpful as the cover is bright. Drop him a post card at once for a copy. See his advertisement also.

Canadian Ayrshire Breeders' Annual Meeting.

W. F. Stephen, Trout River, Que., the President, presided at the annual meeting of Ayrshire Breeders' Association in Toronto on February 5th. He considered the Ayrshire the best commercial cow, eminently fitted for the dairy. Canadian Ayrshires kept up their reputation at the Pan-American, where they won 75 per cent. of the prize money offered for this breed. He advised an early selection of animals for St. Louis.

According to the Secretary-Treasurer's report, 1,476 animals were recorded in 1901, a trifling decrease when compared with the registrations of the year before, but the membership increased from 190 to 226; \$85.50 was paid to the Dominion Cattle Breeders' Association to make the members of the Ayrshire Association members of it. This was given for prizes at the Provincial Winter Fair for Ayrshires. The meeting approved of having three judges at the Toronto Industrial, two to act in each section and one as referee, alternately, and also recommended Mr. Skinner for the post of Director-General of Live Stock at the St. Louis Exposition. A good exhibit will be sent there, if the Dominion and Provincial Governments give as good transportation facilities as were given to the Pan-American. The Dominion Government was asked to accept the nomination of the judges from the Association for the St. Louis Show. It was decided to discontinue the use of ear tags. The Secretary was instructed to confer with the Live Stock Commissioner and Secretary of the Cattle Breeders' Association as to the payment of \$250 promised to the Ayrshire Association.

The list of officers for 1902 is as follows: President, F. W. Hodson; Vice-President, Senator Owens, Montreal. Vice-Presidents: For Ontario, N. Dymont, Clappison's Corners; Quebec, R. Ness, Howick; Manitoba, Geo. Steele, Glenboro; Assiniboia, C. W. Peterson, Regina; British Columbia, A. Wells, Chilliwack; Prince Edward Island, Hon. T. Rogers, Charlottetown; Nova Scotia, F. Black, Amherst; New Brunswick, M. H. Parlee, Sussex. Directors for Western District: W. W. Ballantyne, Stratford; Wm. Stewart, Menie; A. Hume, Menie; A. Kains, Byron; J. C. Smith, Hintonburg; J. G. Clark, Ottawa; F. W. Hodson, Gt. Falls. Executive Committee for Eastern Division: R. Hunter, Senator Owens, Napoleon LaChapelle. For Western Division: Wm. Stewart, W. W. Ballantyne, J. C. Smith. Revising Committee: F. W. Hodson, Senator Owens, J. C. Smith, R. Ness, H. Wade. Secretary-Treasurer, H. Wade. Delegates: Toronto Industrial, W. W. Ballantyne and Wm. Stewart; London, A. Kains (Byron) and Geo. Hill (Delaware); Ottawa, F. W. Hodson and Jas. Yuill (Carleton Place); Sherbrooke, T. D. McCallum (Danville), R. Ness (Howick), Napoleon LaChapelle, and A. Drummond; Cattle Breeders' Association, W. W. Ballantyne and H. Wade. Mr. David Benning, Williamstown, was unanimously made a life member.

Expert judges for fairs were selected as follows: Toronto Industrial—Prof. J. H. Grisdale, Ottawa; A. Kains, Byron; W. W. Ballantyne, Stratford. London—Geo. McCormack, Rockton; Thos. Bradshaw, Ottawa. Ottawa—A. Kains; T. D. McCallum, Danville, Que. Sherbrooke—Jas. Boden, Danville, Que. Bellevue; A. Drummond, Kingston—J. H. Douglas, Warkworth. Quebec—Horace Lamarche, St. Esprit, Que.; Jno. Morin, Belle Riviere, Que.

SHORTHORNS AT AUCTION.

Mr. F. A. Gardner, Britannia, Ont., announces in our advertising columns the dispersion sale of his entire herd of 35 head of Shorthorn cattle, from his farm near Streetsville Junction, O. P. R., on Thursday, March 20th. The herd is composed of useful cattle of good sound Scotch and Scotch-topped families, many of the cows being excellent milkers. The imported bull, Scotland's Fame 26063, a grandson of the noted Scottish Archer, and of the favorite Kiblean Beauty family, heads the herd, where he has been in service for three seasons, and has left his impress on the young stock, which are uniformly of the low-set, thick-fleshed sort. The cows, of which 18 are of breeding age, as well as a number of heifers, are in calf or have calves at foot. There are 7 young bulls of serviceable age, besides the imported bull in the sale. More extended reference to the offering will be given in our next issue. In the meantime, parties interested should send for the catalogue, which will be mailed to applicants as soon as ready.

DAIRY SHORTHORNS AT AUCTION.

A public dispersion sale of a herd of dairy-bred Shorthorn cattle is advertised elsewhere in this issue to take place at Berlin, Ont., on the Grand Trunk Railway, on March 5th. The herd is owned by Mr. E. B. Kolb, of that place, who has for some time been conducting a successful milk and cream supply business in the town. The herd is founded on good families of standard dual-purpose Shorthorn cattle known to have deep-milking propensities, some of the cows giving up to 50 lbs. a day, and yet such as feed rapidly when not milking. These are the farmer's general-purpose cattle. Most of the cows are young or in the prime of life, and several have calves at foot, and there are three young bulls, also a number of registered Yorkshires and Danworth hogs, included in the sale. See the advertisement and send for the catalogue.



Important Dispersion Sale

OF HIGH-CLASS HERD OF

HOLSTEIN - FRIESIAN CATTLE.

THE SUBSCRIBER WILL SELL AT PUBLIC AUCTION, AT HIS FARM, TWO MILES FROM NORVAL STATION, G. T. R., AND FIVE MILES FROM BRAMPTON, G. T. R. AND C. P. R., ON

THURSDAY, MARCH 6TH, 1902,

His entire herd of 26 registered Holstein cattle—22 females and 4 bulls. Included in this herd is the great cow, Beauty of Norval, which made the highest record for milk production and second highest for butter in the Pan-American Model Dairy test. The dam of this cow, three sisters and a son are also in the sale. The yearling bull, Sir Pietertje Posch, son of Alta Posch, who holds the record for a three-year-old cow, having given in a seven-days official test 586 lbs. milk, containing 21.681 lbs. fat, equal to 27 lbs. 1 oz. butter, heads the herd, and will be sold. A span of general-purpose mares by Imp. Clydesdale sires, and in foal, will be sold, as well as other work horses, and all implements and chattels of the farm. The sale of these will commence at 10 o'clock, the cattle sale at 1 p. m. Teams will meet the 9.30 west and 11.20 east trains at Norval station. The whole will be sold without reserve, as the owner has leased his farms. Terms.—For cattle: 8 months' credit, on approved joint notes. —om

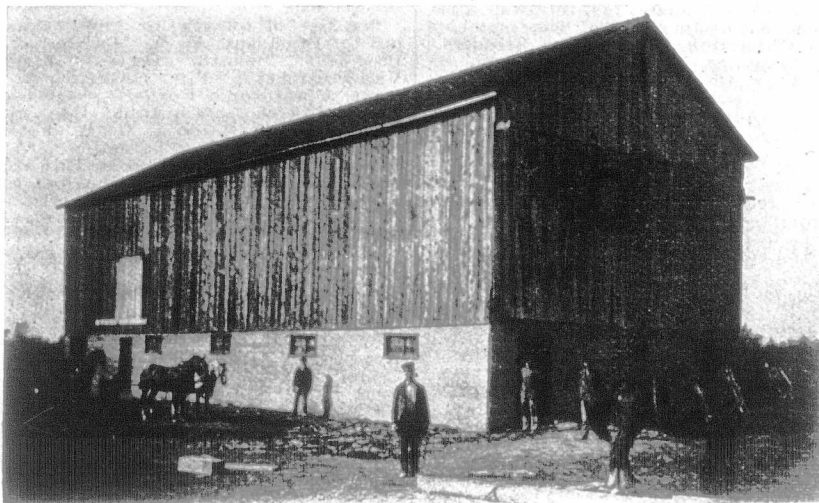
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JOHN SMITH, M. P. P., } AUCTIONEERS. WM. MCCLURE, }  
BRAMPTON, } NORVAL, ONT.  
J. K. MCEWEN, WESTON, }

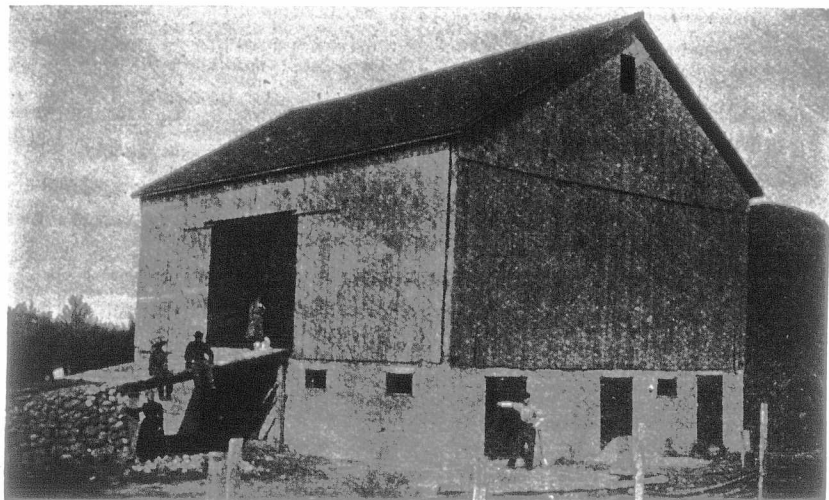
Two Fine Basement Barn Walls at Camlachie, Lambton Co.

BUILT WITH

BATTLE'S THOROLD CEMENT



BARN OF MR. JOHN McCONNELL, CAMLACHIE, LAMBTON CO., ONT.



BARN OF MR. JOHN MORROW, CAMLACHIE, LAMBTON CO., ONT.

Special price and terms for winter shipments. Sales agents wanted where we have none now. Write us for free pamphlet and any information desired.

ESTATE OF JOHN BATTLE, THOROLD, ONTARIO.  
MANUFACTURERS OF THOROLD CEMENT.

A BARGAIN! A LARGE CONSIGNMENT OF  
**Basic Slag**

FROM SCOTLAND, TO BE SOLD AT HALF PRICE.  
\$17.00 per ton, Toronto.

The best fertilizer for grasses, clover, roots, corn, etc. Used more in Great Britain than any other manure. Write for pamphlets.

GEORGE KEITH, Seed Merchant, TORONTO.

Send for Seed Catalogue and for samples of pure clover and timothy seed.

GOSSIP.

There were reported to have been entered 25 hogs, 101 cattle, and 1,500 poultry for the Ottawa stock sale on Feb. 12th.

D. Milne & Son, Ethel, Ont., write: "Our sales of Shorthorns for last month were: A pair of heifer calves, 12 and 13 months old, to Mr. W. B. Watt, Salem, Ont.; a young bull to James McQueen, Arthur, Ont.; a six-months-old Rosebud heifer and a six-year-old cow to Robt. Miller, Stouffville, Ont.; a three-year-old Golden Drop cow and an eight-months-old calf to W. D. Platt, Hamilton, Ont. We have quite a lot of young heifers and cows of the most fashionable Scotch families. Also some young bulls: good color, etc.; lots of size and style.

N. M. Blain, St. George, Ont., writes: "In glancing over your stock notes of last issue, I notice that Colwill Bros. have had a dream—no doubt due to Xmas turkey and warm fire. Their Gossip and advertisement states that the young stuff offered are all from the sweepstake's herd at Toronto last fall. My winnings at Toronto last fall were: 1st on yearling boar and boar under six months, 2nd for aged boar and boar under a year, 1st on aged sow and yearling sow and sow under six months, 3rd for sow under one year, 1st for herd and for sow and four pigs, silver medal for sow any age. We expect to have them out again this year (like Barnum's circus) 'bigger and better than ever.'

Mr. O. Sorby, Woodlands Horse Stock Farm, Guelph, Ont., writes: "I have just sold the two-year-old Hackney stallion, 'Guelph Performer,' to the Messrs. Hastings Bros., of Crosshill, Ont. He was shown for the first time last fall, and won first prize at Toronto, London, and Ottawa. At Ottawa he competed against horses from the celebrated American stud of Dr. Seward Webb. His dam, 'Miss Baker,' has won six silver medals at Toronto; also numerous other prizes at London, Ottawa, and New York. The sire, 'Square Shot,' is well known here, and his pedigree is a sure guarantee that he will produce high-steppers, which are so keenly sought for at the present time.

James Leask, Greenbank, Ont., writes: "Our Shorthorns are wintering well. We have lots of good turnips and clover hay, which make them grow good and sappy. Monevuffel Banner 38736, the first-prize bull call at Toronto, London, and Ottawa, is growing and filling out fine. The chances are you will hear from him again. We have a bull calf, sired by Knight Errant and from the same cow (Mayflower 7th), which we are looking forward to doing something in the showing at the fairs next fall. We have another first-class bull, a full brother to Banner Fortune, which brought \$900 at Mr. Platt's sale, sired by Royal Banner 27652, dam Pickle Fortune (imp.) 31179, which we are also using. He is a dark roan, low, thick-set, with the best of quality, even fleshed and straight as a line. Knight Errant's calves are coming good; are big sappy fellows with grand coats of hair.

A. B. Armstrong, Codrington, Ont., in ordering a change of advertisement, reports an extra good season's trade in both Yorkshire swine, poultry and collie dogs, and is already looking orders for eggs for hatching from superior stock. Our imported W. Wyandottes and Barred Plymouth Rocks are splendid specimens of their respective breeds. Mr. Armstrong adds: "Our Yorkshires were selected in the first place for length, smoothness, and easy-feeding qualities, and have not disappointed us. Our stock boar, Summer Hill Model, has proved to be one of the best investments we ever made. He stamps his likeness on all his progeny, and gives them the right bacon type. The collies we are offering are a hand-some lot, the dam's breeding being first-class, and, better still, she is a splendid worker. The puppies are sired by Imported 'Roughlan Sandy.' The incubator we are offering for sale is a 150-egg Safety, and is in first-class condition; as good as new, and does good work in hatching.

REMARKABLE TEST FOR BROOD MARE.

Blue Earth, Minnesota.

To Farmers and Breeders: Blue Earth, Minnesota. I think it my duty to let others know the good I received by using "International Stock Food." I had a nice mare and wanted a colt from her, but it seemed I could not get one, as she aborted for 3 successive years, at 7 months. Just at the start of the 4th year of breeding her I received an "International Stock Book" and found in it a guarantee that "International Stock Food" would prevent abortion. I bought some of it and fed as directed, and my mare raised the nicest colt I have ever seen. I used it right along and it kept mare and colt in very fine condition. "International Stock Food" is a great preparation for all breeding animals. Very truly yours, Edward Katzung, Sr.

(Copy) Our \$1,000 Cash Offer.

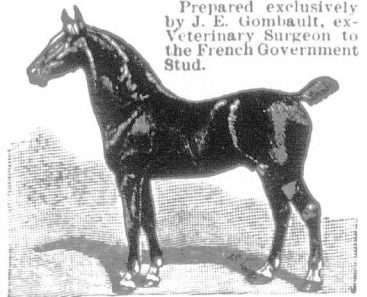
We hereby agree and bind ourselves to pay anyone \$1,000 in cash to prove that our testimonials are not genuine, unsolicited statements received through mail from parties who have thoroughly tested "INTERNATIONAL STOCK FOOD." The originals are on file in our office, subject to your examination. Capital paid in, \$1,000,000. INTERNATIONAL STOCK FOOD CO., 530 Minneapolis, Minn.

Horse Owners

Look to your interests and use the safest, speediest and most positive cure for ailments of your horses, for which an external remedy can be used, viz.

GOUBAULT'S CAUSTIC BALSAM

Prepared exclusively by J. E. Goubault, ex-Veterinary Surgeon to the French Government Stud.



SUPERSEDES ALL CAUTERY OR FIRING.

Impossible to produce any scurf or bluish. The safest best Blisters ever used. Takes the place of all treatments for mild or severe action. Removes all Bunches or Blemishes from Horses or Cattle. Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address THE LAWRENCE-WILLIAMS COMPANY, Toronto, Can.

GOSSIP.

A GREAT HORSE SALE.

At the late Fasig-Tipton sale of trotting horses in New York City, 585 head sold for \$220,265, an average of \$377. The topper was Oakland Baron (2.094) by Baron Wilkes, dam Lady Mackay by Silver Threads, to Jacob Ruppert, New York, for \$15,700. Oakland Baron cost the Penn Valley Farm \$10,000. The next highest horse was Advertiser (2.154) by Electioneer, dam Lulu Wilkes by George Wilkes, \$5,300. One old scrubby mare sold for \$35.

DIRECTUM (2.054).

The Standard-bred trotter, Directum (2.054), portrayed in our Horse Department of this issue, is a game race-horse and a sire of extreme speed, several of his colts showing a gait of 2.10. Several of them sold as yearlings for \$2,000 each, one three-year-old mare, Emma Winters (2.14), bringing \$8,000 at a public auction. The family of Directum has been furnishing world champions for over one-third of a century. Commencing with the great Dexter (2.174), Jay Eye See (2.10), Phal-as (2.134), Nancy Hanks (2.04), Direct (2.054), etc., and then Directum, "the noblest Roman of them all." He held the world's stallion trotting record from 1893 to 1900, and was finally overtaken by a horse of his own blood, but who had two years more of careful training, being six years old before he reached the mark set by Directum as a four-year-old. He was raced very hard and often as a four-year-old, and won 13 world's records at that age. He was purchased at \$12,100 by the International Stock Food Company, of Minneapolis, Minn., as head of their farm stud. They also own the trotting stallion, Buttonwood (2.17), sired by Nutwood, dam by Mambrino Boy, and the trotting stallion International King, sired by St. Vincent (2.134), dam by Chimes, and the trotting stallion, International Prince, sired by Island Wilkes (2.134), dam by Florida by Hambletonian 10. Any reader of the "Farmer's Advocate" writing the International Stock Food Co., stating how many horses he owns or handles, will receive a history of Directum and a lithograph in six colors.

SHROPSHIRE SPECIAL PRIZES.

Richard Gibson, Delaware, Ont., writes: In case you may not have received a report of the specials offered by the Shropshire Sheep Breeders' Association, I send you a list. At Chicago International Live Stock Exposition \$600 is offered, viz.: Same classifications as last year, but five prizes of \$10, \$8, \$6, \$5, \$3 are offered to each of the eight classes, while the championships for best ram and best ewe are reduced to \$10 each.

Fat Sheep Division.—The classes of wethers and wether lambs each have five prizes, viz.: \$15, \$10, \$7, \$5, \$3; pens of lambs have \$18, \$15, \$10, \$7, \$5, and champion \$20. Grades and Crosses.—Three classes of wethers and wether lambs are assigned \$16, \$12, \$8, \$5, \$3; while the championship remains the same as last year, viz., \$20.

Indianapolis.—Same as last year, the Shropshire Association paying one third as much as the Indiana directorate offered.

Minnesota State Fair.—Same as last year, viz., \$50.

Toronto Industrial.—Flocks over a year and under, as last year. Four cash prizes are offered of \$12, \$8, \$6, \$4. Champion ram \$20; champion ewe \$20.

Provincial Winter Fair.—\$100. Classification same as last year. To win in breeding classes it is not necessary to be American bred. Imported wethers cannot compete.



**Corn Planting**  
must be well and carefully done, as the future crop depends upon it. For all purposes, in any soil, on all kinds of ground nothing equals the



**SPANGLER CORN PLANTER.**  
It saves time, labor, money and insures the crop. You know when it is working; you can see the corn on its way to the ground. Made with or without fertilizer attachment. New device for sowing peas, beans, clover, corn, etc. We also make the famous Spangler Lawn-Down Grain and Fertilizer Drill. Write for catalog and circular. SPANGLER MANUFACTURING CO., 518 Queen St., York, Pa.

**BRITISH COLUMBIA FARMS**  
If you are thinking of going out to the Pacific Coast, try British Columbia. A delightful climate; no extremes of temperature; fertile land; ample rainfall; heavy crops, rapid growth, and splendid market for everything you raise, at good prices. The celebrated valley of the Lower Fraser River is the garden of the Province. Write for farm pamphlet telling you all about it, and containing a descriptive list of farms for sale.

**WANTED**  
EXPERIENCED FARM FOREMAN IN MANITOBA.

First-class man, able to take charge of 400 acres grain and 100 cattle—30 milch cows. Sh p cream to creamery. Wife must board men House and stables modern. Will sign agreement for 3 years. Apply, stating wages, experience and references. -o

C. C. CASTLE, Drawer 1306, Winnipeg, Man.

SECOND ANNUAL ONTARIO

**PROVINCIAL AUCTION SALE**

OF PURE-BRED CATTLE AND SWINE will be conducted under the auspices of

The Dominion Cattle, Sheep and Swine Breeders' Associations

at GUELPH, ONT., FEB. 26th, 1902.

Selected stock. Nothing but good representatives of each breed will be allowed to enter and be put up for sale. Orders to buy may be placed with the Secretary, and will be honorably discharged.

Reduced Passenger Rates. Special Rates to Buyers.

A grand opportunity for anyone wishing to procure registered stock. For copy of rules, catalogue and full particulars apply to

A. W. SMITH, President, A. P. WESTERVELT, Secretary, Maple Lodge, Ont. Parliament Bldgs. Toronto, Ont.

Clydesdales for Sale. Imported and Canadian-bred stallions for sale. Fillies from one to three years old. Terms reasonable. -o

JAMES PATON, Swinton Park, Ontario.

**FOR SALE: CLYDESDALE STALLION.**

ONE PURE-BRED A first-prize winner at Toronto as a three-year-old. For full particulars address: -om

W. J. CHURCH, ARTHUR, ONTARIO.

**FOR SALE: A Pure-bred Clydesdale Stallion**

Bred from imported stock; five years old; brown in color.

GEORGE MARTIN, CROMARTY P. O.

**FOR SALE: CLYDESDALES AND SHORTHORNS.**

Stallions from sucking foals up. Brood mares and fillies of superior quality and breeding. A few grand young Shorthorn heifers, bred in the purple. Special mention, the great four-year old stallion "Prince Lyon."

THOS. GOOD, Richmond P. O., Ont. R. R. Station, Stittsville, C.P.R.

**CLYDESDALE AND HACKNEY STALLIONS AND MARES**

FOR SALE: THE CLYDESDALE STALLION

CHARMING LAD 2923

Rising 3; large size and very smooth; has won 6 prizes and a gold medal at Ottawa Exhibition. LORD STANLEY 2537, rising 2, also a prizewinner. CLOTH OF GOLD 2959, 5 years old; first-prize winner at Toronto and first and sweepstakes at London. Also brood mares and a number of very fine foals of both sexes. TWO HACKNEY stallions; also two mares rising 4 and 5 years old; large, hand-some, high-steppers, well broken to drive. Size, action and quality combined in all. Inspection invited. -om

O. SORBY, GUELPH, ONTARIO.

**4 Imp. Clydesdale Stallions 4**

Clyamphion, Vol. 21, 2 years old, bay; Bucephalus, Vol. 21, 2 years old, black; Voyageur, Vol. 24, 2 years old, brown; Lord Garley, Vol. 23, 4 years old, brown. Representing the blood of Golden Sovereign, Sir Christopher, Montravel Matchless, and Royal Garth.

GEO. G. STEWART, P. O. and Station, Howick, Quebec.

IT PAYS TO ADVERTISE IN THE FARMER'S ADVOCATE.

**OAKLAWN FARM**  
THE GREATEST IMPORTING and BREEDING ESTABLISHMENT IN THE WORLD.



**PERCHERONS, FRENCH COACHERS.**  
On hand upward of 500 HEAD.

Our late importations included the Principal Prize Winners at the Great Shows of France. At the recent INTERNATIONAL LIVE-STOCK EXPOSITION at Chicago, the Oaklawn Percherons won every Championship, First Prize, and Gold Medal and every Second Prize in classes. Notwithstanding the superior quality of our horses and the amply fair and certain terms of our breeding guaranty, backed by our well-known responsibility, it is a fact that our prices are lower than can be obtained elsewhere in America. Catalogue sent on application.

**DUNHAM, FLETCHER & COLEMAN, WAYNE, DU PAGE CO., ILLINOIS.**

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

Clydesdale Horses & Shorthorn Cattle

**Wm. Brash, Ashburn, Ont.,** BREEDER OF

CLYDESDALE HORSES and SHORTHORN CATTLE.

**CLYDESDALES**

Shires and Hackneys. -om

OUR new importation of Clyde, Shire and Hackney stallions, comprising winners at leading shows in England and Scotland, arrived at our stables January 22nd. We have now over 20 imported stallions, all of which we are offering at living prices, including the champion Shire stallion, Belshazzar.

**Bawden & McDonell, Exeter, Ont.**

**Smith & Richardson**

COLUMBUS, ONT., IMPORTERS OF CLYDESDALE STALLIONS.

Our latest importation of 4 stallions is the best we ever made, weighing from 2,000 to 2,200 lbs., and of the well-known Darnley and Prince of Wales breeding. We have a number of pure-bred mares; also some young Canadian-bred stallions and fillies. Write for prices. -om

Railway Stations: Oshawa, G. T. R.; Myrtle, C. P. R. Long-distance telephone at Columbus.

**IMP. CLYDESDALES AND AYRSHIRES.**

The three imp. stallions, Copyright, Baron Frederick and Baron Laing, and the Canadian-bred stallion, Laurentain. Ayrshires all ages; and poultry, utility breeds. Eggs for sale. -om

**ROBT. NESS & SONS, Howick, Que., P.O. & Sta.**

**4 Imp. Clydesdale Stallions**

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

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

**Shires, Shorthorns, and Leicester.**

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

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

**Clydesdales**

Two stallions for sale, rising two and three years old. Correspondence solicited. -om

Josiah Hallman & Sons, Washington, Ont.

**The Sunnyside Herefords.**

Imp. Sunny Slope Tom 1st at head. The blood of Lord Wilton, Garfield, Grove 3rd, Beau Real and Diplomat represented. Special offering: 3 bulls, 8 to 11 mos; 6 young cows and heifers. Inspection and correspondence solicited. 2 choice registered Berkshire boars, price \$10.00 each. -om

O'NEIL BROS., Southgate, Ont. Lucan station, G. T. R. Elderton station, L. H. & B.

**High-class Herefords**

We have for sale the following choice young stock, which have been bred from imported and American sires. Intending buyers will do well to inspect the following: 18 young bulls, 2 aged bulls, 20 young heifers. Correspondence invited. -om

A. S. HUNTER, DURHAM, ONT.

**HEREFORDS.**

Seven bulls, from 12 months to 2 years old, by Clarion and Clarion 2nd, and out of dams from imp. stock. Also a few choice heifers. Write for particulars. -om

R. J. MACKIE, Oshawa P. O. and Station.

**INGLESIDE HEREFORDS.**

A few choice heifers and young bulls by Mark Hanna, sweepstakes bull at Pan-American.

Shropshire Sheep and Tamworth Swine.

H. D. SMITH, Compton, Quebec, -om

**HIGH PARK STOCK FARM.**

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

**FOR SALE ABERDEEN-ANGUS BULL**

A CHOICE ABERDEEN-ANGUS BULL Nine months old. Sire Fairy Prince No. 307, dam Kyma 2nd O. E. F. No. 123. For particulars apply or come and see. JNO. J. BELL, G. T. R. station, Elmvale, Ont. Waverley P. O. -om

**ABERDEEN-ANGUS BULLS.**

Daubeneys oats. The best very early variety grown at O. A. C. Most suitable for growing with barley. 60c. per bush; 10 bush. or over, 55c. Grass peas. \$1.00 per bush; entirely bug-proof. Orders booked now for Pearl of Savoy seed potatoes: \$1.00 per bag; 2-bush. bags, 20c. each; f.o.b. Guelph, C. P. R. or G.T.R. -om

JAMES BOWMAN, GUELPH, ONT.

**6-POLLED ANGUS BULLS-6**

Six young bulls, from 6 to 16 months old; prize-winners among them. All for sale. -om

Alex. McKinnon, Hillsburg P. O. and Station.

**FOR SALE: TWO EXTRA GOOD SHORTHORN BULLS**

Twenty months old; red; also younger ones, as well as a number of heifers or young cows in calf or calf at foot. -om

YORKSHIRE SWINE—BOARS AND SOWS. -om

RICH. GIBSON, DELAWARE, ONT.

**Riverside Holsteins**

Five bulls, 9 to 11 months old, for sale. Victor De Kol, Pieterje and Johanna Rue 4th's Lad head the herd. -o

MATT. RICHARDSON & SON, HALDIMAND CO. CALEDONIA, ONT.

**STOCKMEN**

THE SALE OF

**Hersee's Reliable Stock Food**

The past two weeks was the largest in its history, the sales being one-third more than any two previous weeks. We like this, showing us that it is doing the work you want it to do. It is made to be of some use, and we ask every stockman to give it a trial, and get some of the profits others are getting. Ask your dealer about it. Stock book free. -o

E. HERSEE, MANUFACTURER, WOODSTOCK, ONT.

**Mercer's Shorthorns for Sale**

BULLS and heifers from such families as Matchless, Clarets, Missies, Stamfords, Fashions, Buttercups, Isabellas, Princesses, Beatrices, and other choice families. Herd headed by Village Squire = 24955 = (he by Abbotstford), assisted by a son of old Royal Sailor (imp.). Cows and heifers in calf. Four nice young bulls. Our herd stands at the head of the show-ring in this northern country. Over 40 head now in the herd. Intending visitors drop a card and they will be met at the C. P. R. station, Markdale, one mile from farm. Write for prices. No business, no harm. Our motto: "The best is none too good." -om

THOS. MERCER, MARKDALE, ONT.

**COCKERELS FOR SALE.**

Barred Rock, W. Wyandotte, Buff and Black Orpington, and Houdan; also Pekin ducks. Prices, \$1.00 to \$2.00. Eggs, \$1.25 per setting. -om

C. W. BEAVEN, PRESCOTT, ONT.

**FOR SALE:** Nine Shorthorn bulls, from 8 to 15 months old. Also pure-bred Clydesdale stallion, bred from imported stock, rising 2 yrs.; brown in color. -om

McDONALD BROS., WOODSTOCK, ONT.

**JOHN DRYDEN, BROOKLIN, ONTARIO.**

BREEDER OF CRUICKSHANK SHORTHORNS and CHOICE SHROPSHIRE SHEEP.

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

**A QUICK, SHARP CUT**

DEHORNING KEYSTONE KNIFE

Does with the least effort. Quick, sharp cut. Cuts from four sides at once. Cannot crush bruise or tear. Most humane method of dehorning known. Look highest award World's Fair. Write for free circulars before buying. -om

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**GREEN GROVE HERD OF SHORTHORNS.**

This herd is headed by the famous show bull, Spicy Robin = 28259 = (bred by J. & W. B. Watt), grandson of Imp. Royal Sailor, and of the noted English family, and contains such noted tribes as Nonpareils, Grimson Fuchsiass, Mysies, Butterfly, and Languiques. Short-horns of both sexes. Also a choice litter of Yorkshires, about 4 mos. old, for sale. Address: -om

George D. Fletcher, Binkham P. O., Ont. Erin Shipping Station, C.P.R.

**SHORTHORNS, SHROPSHIRE, COTSWOLDS.**

We are now offering a number of heifers and heifer calves; a few bull calves; a number of cows; all bred in the purple and as good as the best. Also Shropshire and Cotswold sheep. -om

JOSEPH BELL ESTATE, Bradford P. O. & Sta

**FOR SALE:**

SHORTHORNS: 7 young bulls, from 8 to 10 mos. old, sired by Let's Lad, and out of deep-milking cows. H. E. HIND, Hagersville P. O., and Station, G. T. R. and M. O. R. -om

**BELLEVUE SHORTHORNS.**

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

**EDWIN BATTYE, GORE BAY P. O. AND PORT.**

MANITOULIN ISLAND, -om

**10 SHORTHORN BULLS**

From 6 to 18 months old. Nearly all from imp. dams, and sired by the imp. Golden Drop bull, Royal Prince. Catalogue upon application. -om

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

**J. & W. B. WATT, SALEM, ONTARIO**

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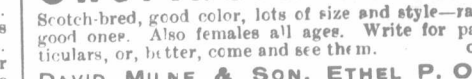
Shorthorn Cattle, Clydesdale Horses, Leicester and Oxford Sheep, and Berkshire Pigs.

Our herd contains such families as Matchless, English Ladies, Mildreds, Village Buds, Misses, Stamfords, Clarets, and Marthas. Royal Wonder = 54082 =, junior champion of 1901, now heads the herd. A choice lot of young bulls and a few females for sale. We offer our whole flock of Leicesters for sale—thirty-five ewes and ewe lambs and fifteen rams.

Farms 2 miles from Flora Stn., G.T.R., and C. P. R., 12 miles north of Guelph.

1833 **Wm. Linton,** 1902

AURORA, ONT.,



Has for sale three imported Shorthorn bulls and a few heifers, various ages; also a few home-bred bulls fit for service. This is one of the herds that the late Amos Cruickshank used to resort to for stock bulls. Aurora is 24 miles north of Toronto, by Metropolitan R. R. Can leave Toronto any time during the day, and be back in Toronto in two hours and a half. -om

**Shorthorn Bulls.**

Scotch-bred, good color, lots of size and style—rare good ones. Also females all ages. Write for particulars, or, better, come and see them. -om

DAVID MILNE & SON, ETHEL P. O., Huron Co., Ont.

Ethel Station, G. T. R., half mile from farm.

**MILKING SHORTHORNS.**

2 young bulls of good milking strains and A1 quality for sale. Come and see them. Stn. 34 miles from farm. H. C. GRAHAM, AILSA CRAIG, ONT.



## Shorthorns

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

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Stouffville Station, G. T. R.

### Maple Lodge Stock Farm.

ESTABLISHED 1854.

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

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

### SHORTHORNS.

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

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

### SHORTHORNS (IMPORTED).

Five choice young bulls, from 6 to 10 months old, by Imp. Capt. Mayly, out of Indian Chief dams.

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

### ROSEVALE SHORTHORNS

Are of the up-to-date sort. We have for sale a number of young bulls and heifers of all ages. Marengo Heydon Duke (imp.) heads the herd.

W. J. SHEAN & CO  
Owen Sound, Ont.

### J. R. McCallum, Iona Station, Ont.

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

### SHORTHORNS AND LINCOLNS.

A. D. MCGUGAN, RODNEY, ONT.

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

## Dairy Feed.

The percentage of digestible protein is the first consideration in dairy feeding. 100 lbs. prime cotton-seed meal contains as much protein as 600 lbs. corn meal. Cotton-seed and gluten meals increase dairy farmers' profits. Cotton-seed meal, gluten meal, hay, straw and feed grain for sale by

H. L. BREEN, 41-45 Cottingham St., Toronto.

### 10 SHORTHORNS FOR SALE

Sired by Scottish Chief and (imp.) Chief of Stars, and from prizewinning dams. Also cows, heifers, and Berkshire pigs.

ALEX. LOVE, - EAGLE P. O.  
Bismarck Station on M. C. R.

### High-Class Shorthorns

and YORKSHIRE PIGS.

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

JAS. McARTHUR, - Goble's, Ontario.

### SPRINGBANK FARM.

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

JAS. TOLTON, WALKERTON, ONT.

### SHORTHORNS FOR SALE:

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

JAS. GIBB, Brookside, Ont.

### Bonnie Burn Stock Farm.

40 rods north of Stouffville Station, Ont., offers Shorthorn bulls and heifers with calf, Shropshire ewes with lamb, and Berkshire pigs. All at farmers' prices. Inspection invited.

D. H. RUSSELL, Stouffville, Ontario.

### "ORCHARD HILL" SHORTHORNS.

Herd comprises representatives of best Scotch-bred families, with Lord Lavender at head. Young animals of both sexes for sale.

ARTHUR JOHNSTON, Vandeleur, Ont.

### LAKE VIEW STOCK FARM.

SCOTCH SHORTHORNS, both sexes, all ages. As good as the best.

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

### Shorthorns, Yorkshires and Berkshires

For immediate sale, 2 bulls 10 months old, 1 bull 18 months old; bred right and built right. Also pigs of both breeds, both sexes and different ages.

C. & J. CARRUTHERS, Cobourg P.O. & Stn.

### GOSSIP.

H. Bollert, Cassel, Ont., reports: "The Maple Grove Holsteins are doing finely this winter. A few calves (all females; sired by Prince Pauline De Kol) have been dropped, and, if anything, they are even better than last year's, which is saying a great deal, as they were the best I ever owned. I have three bulls of them left, which are now fit for service. I really would not know where to go to find their equal; they would head the best herd with credit to themselves and the breed. Sales have begun very satisfactorily. During January the cow, Holland Beauty, and the two-year-old Emma Abbekerk, were sold to Mr. Gordon H. Manhard, of Fairfield East, who is starting a choice herd. Mr. Manhard was here personally to make the selection. While here he also selected the three-year-old Belle De Kol for Dr. O. Tillie, of Westport. Belle De Kol is one of the finest specimens of the breed, and is a producer. As a two-year-old her official test is 58 lbs. in a day, 376 lbs. 2 ozs. in 7 days, and 14 1/2 lbs. butter in 7 days. This is not her full capacity, as this test was made under adverse circumstances. Since sold to Mr. Tillie she dropped a beautiful heifer calf."

Mr. Geo. D. Fitcher, Binkham, Ont., when ordering a change of advertisement, writes: "The Green Grove herd of Shorthorns was never in a more prosperous condition nor contained a choicer lot of young stock than at present. The heifers by Spicy Robin 28259, some of which are already bred, add greatly to the value of the breeding herd. Mysie 46th, of massive, fleshy, low-down type, has been a good show cow and is a valuable breeder. She is the dam of Miss Mysie, which sold at S. C. James' sale, Iowa, in Oct. last, for \$1,075. Lilian Butterfly, a large roan cow of good type that has been of great value in the herd as a breeder, has a four-months-old roan bull calf, got by Spicy Robin, which bids fair to make a grand show bull, and is almost the image of his sire. Verbena Languish, a long, smooth cow, has a choice red heifer calf, one month old, got by Spicy Robin, which is full sister to the fifteen-months heifer sold by me at the Provincial sale at Guelph last year for the highest price of any female at the sale. Crimson Fuchsia 12th, a choice young cow of the Crimson Flower family, is without a Canadian-bred sire in her pedigree, and has a sweet, blocky, roan bull calf one month old, sired by a good imported bull. Nonpareil 53rd is another grandly-bred young cow, having a straight Nonpareil pedigree, without a Canadian-bred sire. She has a choice four-months roan calf of good type. A number of the other cows have calves at foot, all of which are promising lookers and the remainder are almost due to calve. I have a few choice young bulls on offer, one eighteen months old, which has been used some in the herd, the others are under one year and sired by Spicy Robin. Also a few good females for sale. I have also a choice litter of Yorkshire pigs about four months old, dam Princess Beauty 5222; sired by Eric Boy 2629, a grand prizewinning boar bred by Jos. Featherston, Streetsville."

### REDMOND BROS.' SHORTHORNS.

Thornhill Stock Farm lies in the County of Durham, about 1 1/2 miles from Millbrook, which is the P. O. and G. T. R. station of the owners, Messrs. Redmond Bros. This farm for the last 27 years have been breeding Shorthorn cattle. The herd was founded on Duchess blood. Later acquisitions were of the well-known Marigold strain, a family noted for their extremely thick, beefy carcasses. The present herd of 25 head are all of this family, and sired by the following Scotch-bred bulls: Challenge 2933, bred by the Messrs. Watt, sired by Barnston Hero, and out of one of Mr. Watt's famous Matchless cows. Charley Mitchell 111273, by the Kinler Nonpareil bull, Imp. General Booth 54353; dam Ury 12th, by Imp. Statesman. Imp. Prime Minister 129938 is at present at the head of the herd, winner of first prize at Toronto, Hamilton and London, as well as gold medalist. His lieutenant in service at present is that grand thick, fleshy, beautifully-moulded bull, Sailor Champion 27235, also bred by Watts. He is sired by Imp. Royal Sailor 18959, dam Violet's Bud 23611, by Imp. Variare. He is a rich roan, four years old, and is a typical, up-to-date, short-legged animal, and is beef from the ground up. Another important bull used extensively on this herd was Imp. Royal Member 64741, sired by Royal James 54972; dam Nonpareil 22nd. He was a straight Campbell-bred Nonpareil. The following pedigree of one of the cows will show the breeding of the herd: Marigold 17502, by Challenge (above described); dam Rosabella 2nd 4507, by Baron 326, g. d. Rosabella 4506 by Oxford Chief 900. Another exceedingly fine cow is Matchless, Vol. 17, by Imp. Prime Minister; dam Marigold 3rd 20431, by Charlie Mitchell. In this herd are about a dozen breeding cows that for genuine quality of the low-down, beefy sort, that show enormous breadth and depth, are hard indeed to duplicate. There are a few heifers, one year old, by Sailor or Champion, that are extra good ones. There are also five young bulls by the same sire that are a very even, well-proportioned lot, and among them will surely be prizewinners. Two of them are entered to be sold at the Guelph sale that are extra choice.



## The Frost 10 Wire and 6 Stay Fence

is the strongest and heaviest wire fence made—good openings for good agents; write us at once for terms. Ask for catalog.

THE FROST WIRE FENCE CO., - - WELAND, ONT.

## TROUT CREEK HERD

# Shorthorns

Won first prize for herd and the championship for best bull and best female, any age, at Toronto Industrial and Pan-American Exhibitions, 1901. We keep constantly in our herd a choice lot of imported and Canadian-bred cattle of both sexes. Personal inspection invited. Parties desiring to see the herd will be met on arrival of trains if notice is given. Visitors always welcome. Address:

JAMES SMITH,  
Manager,  
MILLGROVE, ONT.

W. D. FLATT,  
378 HESS ST., SOUTH,  
Hamilton, Ontario.

## LESS LABOR AND MORE MONEY ON THE FARM.

BUY A LOW-DOWN, THICK-FLESHED

## Hillhurst Shorthorn Bull,

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

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

The Best Is Always Cheapest, Especially When the Cheapest Is Best.

YOUR FENCE WILL BE STRONGER, LAST LONGER AND COST LESS IF BUILT WITH A

## LONDON FENCE MACHINE.

Anyone can weave 50 to 75 rods per day. The money saved on 50 rods will pay for a machine. A post card will bring you our prices and new catalogue with scores of pointers on building fence.

THE LONDON FENCE MACHINE COMPANY, LTD.,  
LONDON, ONTARIO.

## Shorthorns and Leicesters.

Herd Established 1855.

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

JAMES DOUGLAS,  
CALEDONIA, ONT.

## SEED OATS

NEW IMPROVED WHITE LIGOWO OATS.

The Improved Ligowo Oat is a large, white, plump variety, with a branching head and stiff straw; a vigorous grower; very prolific and early and free from smut. Price, 75 cents per bushel. Bags, 20 cents each.

GEO. MILLER, MARKHAM, ONTARIO.

## MAKE THE GROCER'S PROFITS.

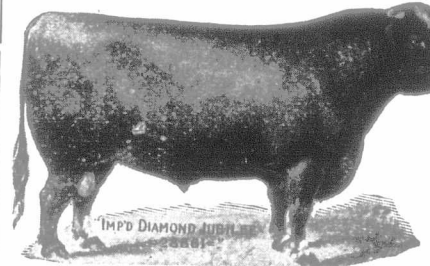
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The average family spends \$280 a year for groceries; we can save you \$40 of this. At the end of each year put this \$40 in the bank at the regular bank interest of 6; and when you are twenty years older you will have a nest egg of \$1411.13 to your credit.

Do not lose any more of your hard-earned money, but write at once for price lists and we will astonish you. Bank references.

CRIGHTON & CO.,  
Wholesale Grocers, 102 Church Street,  
Toronto, Ontario.

IT PAYS TO ADVERTISE IN  
THE FARMER'S ADVOCATE.



T. DOUGLAS & SONS, STRATHROY, ONT.

BREEDERS OF

## Scotch Shorthorns.

100 HEAD TO SELECT FROM.

Herd headed by Imp. Diamond Jubilee = 28861 = and Double Gold = 37852 =. February offering: 14 grand young bulls and cows and heifers of all ages. Farm 1 mile north of town.

LOUIS ELLARD, Loretto P.O., Beeton Stn.

## Shorthorns for Sale.

6 heifers (all in calf), from Imp. British Statesman; also two young bulls, 18 months old. Write for prices.

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

## Shorthorns, Berkshires, Leicesters

Am offering at present the grand stock boar, Crown Prince; also some young ones.

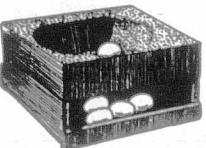
ISRAEL GROFF, ALMA, ONTARIO.

PLEASE MENTION FARMER'S ADVOCATE.



**"VIGILANT" NEST**

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



**CARRIAGES**

AT FIRST COST.



NO. 10. PIANO BODY, PRICE \$52.50.

By our system of selling carriages direct to the customer, you can purchase a buggy, phaeton or other high-grade carriage, or harness, one-third less than from a local dealer. Why not?

**Deal Direct With the Maker**

and save two profits? We give the broadest guarantee with each purchase. You can return the vehicle, and we will pay freight both ways, if you are not thoroughly satisfied. Our complete illustrated catalogue, showing many styles of vehicles and harness, with detail description of each, mailed free.

ADDRESS:

**INTERNATIONAL CARRIAGE CO.,**  
BRIGHTON, ONT.

**FIRE Safety**

is best secured by using "Safe Lock" Shingles

on all your buildings. Prevents many fires and makes other easier controlled. The Safe Lock Metal Shingles are lightning proof too and keep out the snow and rain.

Small Shingle showing construction mailed free.

The Metal Shingle & Siding Co., Limited  
PRESTON, ONT.



**To Rid Stock of Lice AND ALL SKIN DISEASES.**

Also to Keep Poultry Healthy

**WEST'S FLUID**

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

**The West Chemical Co'y,**  
ONT. TORONTO, ONT.

**MAPLE GROVE SHORTHORNS.**

I am now offering 5 bulls from 10 months to 2 years old; imp. and home-bred; of the low, fleshy sort. Write for prices. **W. B. CAMPBELL, L.,** o  
Campbellcroft P.O. Garden Hill Station.

**SHORTHORNS FOR SALE.**

Three dark red bulls, 12 mos. old, got by Diamond Jubilee (Imp.). One rich roan, 10 months old, got by Favorite 24690. For prices write—

**E. & C. PARKINSON,**  
Thornbury P. O. and station: G. T. R.

**HAWTHORN HERD**

of deep-milking Shorthorns for sale. Six young bulls of first-class quality and breeding and from A1 dairy cows. **WM. GRAINGER & SON,**  
Londesboro, Ont.

**SHORTHORNS (imported)**

One bull, 2 years old, and 1 imported cow, and 7 home-bred heifers.  
**THOS. RUSSELL, EXETER, ONT.**

**GOSSIP.**

Alex. Hume & Co.: "Our herd is doing nicely. Several of our choice Ayrshire cows are springing, dropping their calves early in February. The two imported bulls, 'Prince of Barcheskie' and Caspian of St. Anne's, have been used on the herd, so that we anticipate a crop of fine calves. Thanks to the advertisement in your valuable paper, we have sold nearly all our bulls, but have one from an extra heavy-milking dam that will be fit for service in spring. Sold all our Yorkshire boars, shipping the last one Monday. Have some sows just at the farrow, and a few sows ready to mate. Feed is plentiful with us, and we hope to make a record with our dairy herd this incoming season."

J. T. Gibson, Denfield, Ont., writes: "My Shorthorns and Lincolns are wintering nicely. The Prime Minister calves are good ones—what J. M. Gardhouse said they would be when I bought the old bull from him. If I am not too busy with the Lincolns I will show next fall that they are the kind to feed, and I think the old bull is looking and feeling better than when I got him. My show Lincolns are coming along nicely. I imported two of the best ewe lambs from England last fall. They won second at the Royal and first at the Lincolnshire Show, beating the Royal winners. I think I have some lambs of my own raising that will make better shearlings—not so large, nor have they as much wool, but they have better ends, even, better backs. I like size, but size without quality I have no use for."

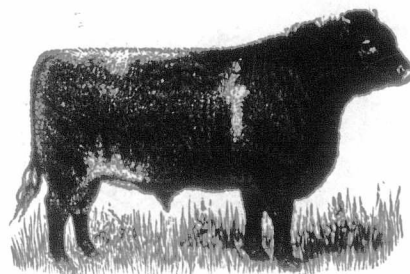
Maple Cliff Dairy and Stock Farm is situated in the outskirts of Hintonburg, about one mile from Ottawa City, and is the property of R. Reid & Co., whose specialties are Ayrshire cattle, Tamworth, Berkshire and Yorkshire hogs. The herd of Ayrshires number 58 head of imported and home-bred animals that for quality and royal breeding are hard to duplicate. The present stock bull is Imp. Duke of York 2301, who is the sire of the youngsters of the herd. The two and three year olds are sired by Gold King, who is out of that great show cow, Nellie Osborn, who won the sweepstakes at the World's Fair, Chicago. There are six young bulls for sale that are extra good ones, and are in the pink of condition; in fact, the whole herd shows that Mr. J. Campbell Smith, the superintendent, is no novice in feeding and care of cattle. The Tamworths number some 50 head, a number of which are imported. The stock boar is Whiteacre Bruce (imp.) 2544, an exceptionally deep, lengthy animal, and withal very smooth. His lieutenant in service is Amber King, an extra fine type of bacon hog, bred by Nichol. This herd captured practically all the prizes at Ottawa last fall, while at Buffalo they came out second best. There are a number of both sexes for sale of this breed. In Berkshires, there are about 80 head. This herd was founded on Green stock. The stock boar is King High-clore 2nd 6334. He is a pure type of the up-to-date bacon hog, showing great length and depth, and has proven his worth as a sire. One of the dams, Spanish Queen 6353, won 2nd place at Ottawa last fall, and the splendid sow, Model Lady 5176, won 1st place at Ottawa two years in succession. In the breed there are a few young sows ready to breed for sale. The Yorkshires are principally of Brethour & Saunders breeding, the quality of which is too well known to need any comment. Sales are reported as extra good.

**A. HUME & CO.'S AYRSHIRES AND YORKSHIRES.**

A. Hume & Co., of Menie, Ont., whose farm lies in the County of Northumberland, about six miles from Campbellford and three miles from Hoard's Station, are somewhat extensively engaged in dairying, and to supply the requisite amount of milk with the largest percentage of butter-fat, have gotten together a large and up-to-date herd of Ayrshire cattle. At the present time there are only a few of the cows in milk, but a number of them are soon due. The stock bull now at the head of the herd is (imported in dam) Caspian of St. Anne's. He is a grand animal, both individually and in breeding, and will, without doubt, improve this already excellent herd. His lieutenant in service last summer was White Cockade, who was sold last fall at the Western Fair, London, to go to British Columbia. The many cows and heifers in the herd are exceedingly uniform in color, type and quality, and of the now fashionable color. They are a grand lot. Among the cows is Imp. Eva of Barcheskie, a noted prizewinner; Snowflake, Nellie's Gem, Bonnie Doon, Eva's White Pearl, Lady Mitchell, Little Love, Irene of Menie, all Toronto prizewinners, and a number of others equally as good. Among the younger ones are several two and one year olds, daughters of that great stock bull, White Chief of St. Anne's. Prominent among them is the yearling heifer, Eva of Menie, out of Imp. Eva of Barcheskie, and by Caspian of St. Anne's. The younger ones are nearly all sired by the present stock bull, and are a very even, well-formed lot. Mr. Hume is also breeding Yorkshire hogs, which for ideal type and quality are not surpassed anywhere. At present there are on hand for sale a few lengthy, well-developed young sows, supposed to be in pig. Mr. Hume reports the past season the most successful he ever experienced, both in quality of milk production and in sales made, stating that the demand for both Ayrshires and Yorkshires was very heavy.

**Spring Grove Stock Farm.**

Shorthorn Cattle AND Lincoln Sheep.



HERD prize and sweep-stake at Toronto Industrial Exhibition, 1897 and 1898. Herd headed by the Marr Missie bull, Imp. Wanderer's Last, last of the

get of the great sire Wanderer, of the Cruick shank Brawith Bud tribe. High-class Shorthorns of all ages for sale. Also prizewinning Lincolns. Apply om

**T. E. Robson,**  
ILDERTON, ONT.

**Scotch Shorthorns**

BREEDING FEMALES ALL IMPORTED.

Imp. Golden Drop Victor our present stock bull. Eleven young bulls and some young cows for sale at reasonable prices.

**H. CARGILL & SON,**

Cargill Station, G. T. R. CATALOGUE FREE. om Cargill, Ontario.

**ARTHUR JOHNSTON, GREENWOOD, ONTARIO.**

BREEDER OF POST OFFICE AND TELEGRAPH OFFICE. IMPORTER OF

**SHORTHORNS ONLY.**

FOR SALE: 9 imported bulls and bull calves. 11 home-bred bulls and bull calves, from imported cows and by imported bulls. 17 home-bred bull calves. A large and excellent lot of young cows and heifers of various ages.

RAILWAY STATIONS: PICKERING, G. T. R., 22 MILES EAST OF TORONTO. CLAREMONT, C. P. R., 28 MILES EAST OF TORONTO.

**DR. HESS' STOCK FOOD**

IS A GUARANTEED MILK PRODUCER.

W. T. S. Bear, manager of the Oregon Dairy Farm, Franklin, Pa., has the following to say:

DR. HESS & CLARK, ASHLAND, O.:  
Dear Sirs,—Ten days ago we began feeding Dr. Hess' Stock Food to a dairy herd of 35 cows, part grade Jerseys and part Red Polls. All were suffering from indigestion, owing to heavy feeding of grain through the entire summer; all were falling away in milk; some were so bad as to bloat, and refused to eat for several days. Tried all manner of feeds and combinations, but only partially succeeded in checking the decrease in milk. Two days after we began feeding Dr. Hess' Stock Food they began to mend and increase in milk, until they are now gaining an average of two pounds of milk per head per day, without any increase of feed or change of feed or any other conditions. I think the improvement wonderful, especially when we consider that it was done while the temperature was between 10 and 20 degrees above zero, and the first cold snap at that, which is always the worst.  
Yours truly, W. T. S. BEAR, Manager Oregon Dairy Farm.

Feed Dr. Hess' Stock Food to your cows; if it don't pay, your money will be refunded. 7-lb. sack, 65c.; 12-lb. sack, \$1.00.

SOLD BY DEALERS GENERALLY, OR ADDRESS:

**THE GREIG MANUF'G COMPANY, CANADIAN AGENTS, MONTREAL, QUE.**

FREE.—Dr. Hess' scientific veterinary work, giving the symptoms and latest treatment on stock diseases, will be mailed you for the asking. Address:

**DR. HESS & CLARK, ASHLAND, OHIO.**

**NOTICE:**

I desire to thank the farmers and others for their ever-increasing patronage. We are changing the process of manufacture and improving the quality of Queenston cement from year to year, and beg to assure my patrons that the improvements I am making this winter will still add to the wonderfully good reputation of Queenston cement. I will do all in my power to assist the farmers in getting up first-class buildings that are cheap and labor-saving, with first-class sanitation by a proper system of ventilation held under my own patent. Until the 15th day of March, 1902, Queenston cement will be sold at a reduced price. On and after Feby. 1st I will add a draughtsman to my office staff, and to all patrons of Queenston cement pencil sketches of the most approved farm structures will be furnished free of charge. For particulars write me at this office, or see my agents.

**Isaac Usher, Queenston, Ontario.**





**An order by 'phone**

"Hello! Is this Mr. Wise, the McCormick agent?"

"Yes, who is this?"

"This is Bright of the Brookdale Farm. — Say, have you any more new, right-hand McCormick binders like the one Wilson bought?"

"Yes; just unloading our third car today."

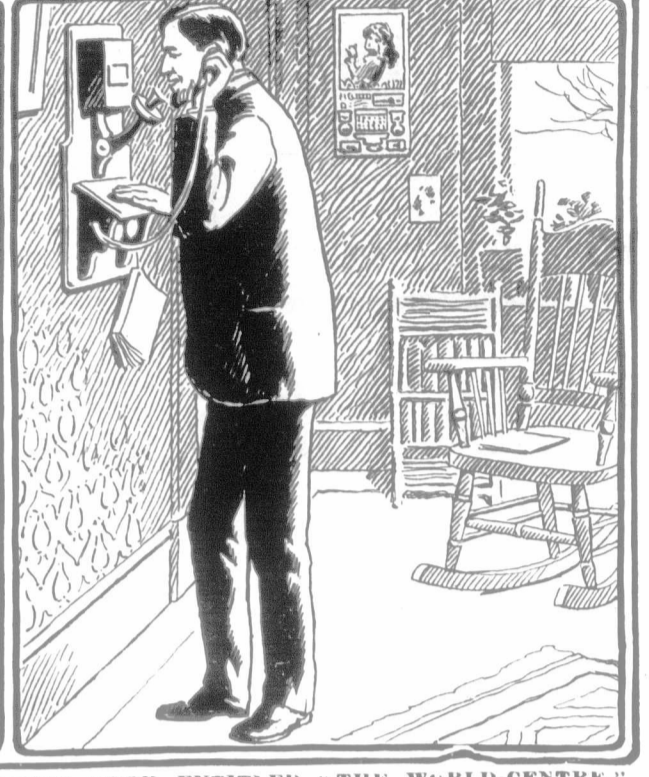
"Have these binders got the folding divider, new needle, hardened knotted parts, reversible trip hook and new pitman shield?"

"Yes, sir; all of 'em."

"Well, set aside two binders for me. Guess I'd better have 500 pounds of McCormick twine, too; Manila brand. — And, say, Wise, send me one of McCormick's World-Centre books."

"All right, Mr. Bright. The binders will be ready for you any day, and I'll mail the book. Thank you; good-bye."

"Good-bye."



IF YOU ARE INTERESTED IN HARVESTING MACHINES, WRITE FOR BEAUTIFULLY-ILLUSTRATED BOOK ENTITLED "THE WORLD-CENTRE."  
Address: P. W. Stanhope, General Agent, McCormick Harvesting Machine Co., Toronto Ont.

**Charles Rankin**

WYBRIDGE, ONT.,  
IMPORTER AND BREEDER OF  
**SHORTHORNS, OXFORD DOWNS AND BERKSHIRE PIGS.**  
Young stock always on hand. — om



**Shorthorns and Berkshires**

Four young bulls, 6 to 12 months old. Pigs, 2 to 6 months old. Pairs supplied not akin. — om  
**MAC CAMPBELL, NORTHWOOD, ONT.**

**W. G. PETTIT & SON,**

FREEMAN P. O., ONT.,  
IMPORTERS AND BREEDERS OF

**Scotch Shorthorns and Shropshire Sheep,**

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

Burlington Jct. Stn. Tele. & Phone, G. T. R.

**SHORTHORN BULLS.**

RARE GOOD BULLS. SCOTCH-BRED BULLS.

Write for bull catalogue free.

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

**SCOTCH SHORTHORNS.**

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

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

**SHORTHORNS.**

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

**For Sale:** Shorthorns — Young bulls, heifers and calves. Berkshires — Young boars and sows. Leicester — Aged, shearlings and lambs, both sexes. Southdown — Rams and ewes, all ages. Write or come to **E. JEFFS & SONS, Bond Head.** — om

**Centre Wellington Scotch Shorthorns**

Young bulls, heifers and young cows for sale. Farm adjoining town on G. T. R. and C. P. R. Correspondence solicited. — om

**H. B. Webster,**  
Box 66. — om **FERGUS, ONT.**

**SHORTHORNS FOR SALE.**

Two bulls ten months old, two heifers one year old, one three years old in calf. Write for prices. — om  
**JAS. RIDDEL, BEETON P. O. and STN.**

**R. Mitchell & Son, Nelson, Ontario. Scotch Shorthorns.**

Twenty-five (imp.) bulls and heifers of following families: Jilt, Roan Lady, Augusta, Roebud, Mayflower, Rosemary, Beauty, Victoria, Orange Blossom and Princess Royal. Also home bred heifers in calf to imp. bulls and choice bull calves. — om  
**Burlington Jct. Station and Tele. Office.**

**Shorthorn Cattle, Lincoln Sheep**

Imp. Prime Minister at head of herd. Imp. Clippers, Miss Ramsdens, and other Scotch families. Lincolns won more than half the money and first for flock at the Pan-American; International, Chicago, 1901 and 1902. — om

**J. T. GIBSON, — om DENFIELD, ONT.**

**QUEENSTON HEIGHTS SHORTHORNS**

SCOTCH AND SCOTCH TOPPED

In service: Derby (imp.) = 32057; Lord Montalls, by Collynie Archer (imp.) = 28899. — om  
A few young cows with calf at foot or in calf to imported bull. Also two bulls, 10 months. Moderate prices.

**HUDSON USHER,**

QUEENSTON, ONT. — om  
FARM 3 MILES NORTH NIAGARA FALLS

**Shorthorns, Cotswolds & Berkshires**

**FOR SALE:** Nine young bulls from 6 to 18 months old, sired by Prince George — 28973, a Scotch-bred bull of the Miss Ramsden family, and from good milking dams. Cows, heifers and heifer calves. A choice lot of ewe lambs. Young pigs of the bacon type from 2 to 6 months old. — om  
**F. BONNYCASTLE & SON, CAMPELLFORD, ONTARIO.**

**SHORTHORN BULL FOR SALE.**

One bull — red, a little white — 10 months old; got by Fernando 33355, dam Rose 32858. Come quick. — om  
**A. M. MORROW, TEVIOTDALE P. O., FALMERSTON STATION.**

**For Sale:** Very heavy, massive cows of Bates and Cruickshank breed. Two-year-old heifers in calf. Stock bull, Imperial 2nd, No. 28883. Bull calf, 11 months (Caneopper By 2nd — 39878), dam Flora — 32574; also dark red heifer calves. John McFarlane, Dutton, Ont. — om

**SHORTHORNS FOR SALE.**

3 young bulls, from 12 to 17 months old — 2 red, 1 roan; registered in Dominion Herdbook. — om  
**PETER DOW, FERGUS P. O. AND STN.**

**WM. SMITH, COLUMBUS, ONT.,** will offer at

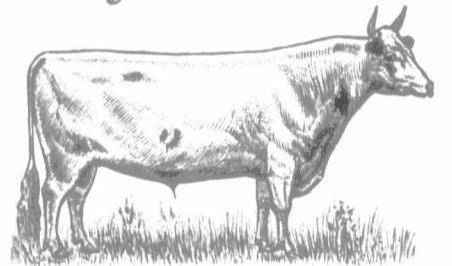
February 26th, one Mina bull, Wylie — 37290, 11 months old, and 4 two Mina heifers 2 years old, Wedding Gift 11th — 11896 and Wedding Gift 15th — 11897. Heifers served by imported Meadow Leaf — 36067. — om

**Scotch-bred Shorthorns** AT OAK GROVE ARE famous for size and quality. Eight bulls from 10 to 15 months old; reds and roans. Several heifers at prices that will save you money. Also Collie pups. **L. K. WEBER,** Hawkesville P. O., Ont. Co. Waterloo, St. Jacob's Station, G. T. R. — om

**PLEASE MENTION FARMER'S ADVOCATE.**

**Rapids Farm Ayrshires.**

**REINFORCED BY RECENT IMPORTATIONS** of 2 bulls and 20 cows, selected from noted Scotch herds, and including the male and female champions at leading Scottish shows last year. Imported Douglasdale of Dam of Aber, Representative of this herd won the first herd prize at the exhibitions at — om



Young Bulls and Heifers for Sale, bred from High-class Imported Stock.

Toronto, London and Ottawa in 1900, and at the Pan-American in 1901.

Come and see or write for prices.

**Robert Hunter, Manager**

for W. Watson Ogilvie, Lachine Rapids, Quebec.

**Hillside Shorthorns and Shropshires.**

Bulls, from 8 to 18 months old; heifers, various ages, of true type and fashionable breeding; also 25 ram lambs and 15 ewe lambs, from imp. sire. Will quote prices right for quick sales. — om

**L. Burnett, Greenbank P. O., Ont.; Uxbridge Stn., G. T. R.**

**4 HOLSTEIN BULLS & 4 FOR SALE:**

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

**Brookbank Holsteins**

16 to 25 lbs. of butter in 7 days' official test are the records of this herd of Holstein cows. Heifers of equivalent records. Bulls for sale whose sires and dams are in the Advanced Registry, with large official butter records. — om

**GEO. RICE, Currie's Crossing, Ontario. OXFORD COUNTY.**

**HOLSTEINS.**

Maple Grove offerings are of the richest breeding, combined with greatest individual merit. Young stock of both sexes. For particulars address: — om

**H. BOLLERT, Cassel, Ontario.**

**SUCCESS WITH HOLSTEINS**

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

**HENRY STEVENS & SONS, LACONA, OSWEGO CO., N. Y. — om**

**Maple Glen Stock Farm.**

EXHIBITION OFFERING: Two bull calves under 1 year. Also a Sylva and an Abbekirk bull calf, with spring and fall heifer calves of Sylva breeding, bred from winners and ones that will make winners. Prices according to quality. — om

**C. J. GILROY & SON, Brookville, on C.P.R. and G.T.R. Glen Buell, Ont.**

**Spring Brook Holsteins, Tamworths, B. Rocks**

One bull, 11 mos. old; 2 calves, 6 weeks old; 4 yearling heifers in calf; 2 cows; also heifer calves, all DeKols. Two Tamworth boars ready for service. Sows and young pigs ready to ship. — om

**A. C. Hallman, New Dundee, Ontario.**

**IMPORTED JERSEY BULL**

FOR SALE:

The prizewinning sire, imported

**DISTINCTION'S GOLDEN**

Is docile and sound. His get have won the family prizes for three years at Toronto Exhibition. — om

APPLY

**ROBERT DAVIES,**

THORNCLIFFE STOCK FARM, TODMORDEN, or 31 Toronto St., Toronto.

**Ridgedale Farm Holstein-Friesians for Sale.**

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

**SUNNYLEA FARM.**

Jerseys — 6 yearling bulls; females for sale; any age. Tamworths — 30 boars and sows, different ages. Shropshire sheep — rams and ewes of good breeding. Prices reasonable. — om

**H. E. WILLIAMS, Knowlton, P. Q.**

**Exmoor Jerseys for sale:** 1 year-old bull, by Ace of Ace of St. Lambert. One bull calf by Srdar of St. Lambert. Also a registered cow 4 years old. — om

**A. Norman Smith, Meaford P. O. and Stn.**

**F. L. GREEN,**

BREEDER OF

Jersey Cattle and Yorkshire Pigs.

Choice stock of each sex for sale. — om

PICKERING STATION, G. T. R. **GREENWOOD P. O., CLARKMONT STATION, C. P. R.**

**FOR SALE: A SPLENDID LOT OF**

**Jersey Cattle.**

41 HEAD TO CHOOSE FROM.

Close descendants of my most noted prizewinners, and closely related to many animals I have sold that have won easily in the Northwest and all over Canada. My shipments last summer ranged from Manitoba to State of Delaware, U. S. — om

**MRS. E. M. JONES,**

BOX 324, BROCKVILLE, ONT., CAN.



CHOICE JERSEYS.

Offering 1 cow 5 years old, due to calve Feb. 6, very choice; bull calf 11 months old, registered, and cheap. WM. N. HASKETT, Avon Manor, Markdale, Ont.

We have now on hand young females sired by Nero of Glen Rouge 50241, and cows and heifers bred to him. E. B. HINMAN & SON, GRAFTON, ONT.

BRAMPTON JERSEY HERD

Offers: 3 St. Lambert bulls from 6 to 14 months old, out of high-testing cows; 1 yearling and 5 bull calves, sired by Brampton's Monarch (imp.). Four young bulls sired by him won 1st, 2nd and 3rd prizes under one year, and 1st prize under six months, also 1st, 2nd and 3rd at London and Ottawa, in 1901. The best is none too good. These young bulls have never been beaten. Get one to head your herd. B. H. BULL & SON, BRAMPTON, ONT. G. T. R. and C. P. R. Stations.

Jerseys for Sale: From high-testing stock—registered A. J. C. C. Cow 3 years old, due to calve May 11th, \$60. Bull 9 months old, \$40. Heifer 5 months old, \$25. Or to clear out lot now, will take \$115. R. DODDS, P. O. Box 606, Guelph, Ont.

FOR SALE:

Three young St. Lambert bulls; best breeding, color and dairy form. T. PORTER, MOUNT DENNIS, ONT.

Jerseys and Cotswolds. For sale, three-year-old stock bull, Count of Pine Ridge 53862, a grandson of Adelaide of St. Lambert, that gave 82 1/2 lbs. milk in a day, and 2,005 1/2 lbs. in a month. Also two of his sons—one year old, and a few daughters; and a useful lot of Cotswold rams and ewes. For particulars and price write: WILLIAM WILLIS, Newmarket, Ontario.

RIDGELING CASTRATION.

Dr. J. WILSON, V. S., WINGHAM, ONT., Specialist in the castration of ridgeling horses and colts. Terms and testimonials on application.

LAWNRIDGE STOCK FARM.

JERSEYS FOR SALE: Yearling bull, 5 bull calves, also some very fine registered cows, heifers and heifer calves—fresh calved and springers. One hundred head to select from. Cows a specialty. J. L. CLARK, Norval station: G. T. R. Norval P. O.

AYRSHIRES AND YORKSHIRES.

We always have on hand choice individuals, male or female, of above breeds. Write us. ALEX. HUME & CO., Menie, Ontario

DAVID A. McFARLANE,

Breeder of high-class AYRSHIRES. Young stock for sale from imported and home-bred foundation. Prices reasonable.

FOR SALE:

Three grandly-bred Ayrshire bull calves, 12 to 15 mos. old. Also young calves, by Napoleon of Auchenbrain (imp.), whose dam has a record of 72 lbs. of milk per day. A few choice young Berkshire and Yorkshire sows could be served before shipping. Collie pups, from Perfection Queen. Address: T. D. McCALLUM, Nether Lea, Danville, Que.

Maple Cliff Dairy and Stock Farm.

AYRSHIRE CATTLE, IMPROVED BERKSHIRE AND TAMWORTH PIGS. FOR SALE: 5 bull calves, a few heifers; young pigs, pairs not akin; 2 boars, 4 months old; young pigs. Farm adjoins Central Experimental Farm, Ottawa. R. REID & CO., Hintonburg, Ont.

AYRSHIRES.

Five bulls ranging from 11 to 23 mos., from such noted cows as Jean Armour, Lady Ottawa, Sprightly and Primrose (imp.), and from the best sires procurable. Also heifers and cows all ages, and poultry. WM. STEWART & SON, MENIE, ONT.

High-class AYRSHIRES,

including cows, heifers and young bulls out of our prize and sweepstakes cows. Foundation selected with due regard to quality and productiveness. Come or write. WM. WYLIE, HOWICK, QUEBEC.

HOMECROFT,

a farm for dairying and pure-bred stock AYRSHIRES, IMPROVED CHESTER WHITES, BARRED PLYMOUTH ROCKS. SOME FINE YOUNG BULLS. J. F. PARSONS & SONS, Barnston, Quebec.

SPRINGHILL FARM.

Importers and breeders of choice, deep-milking

Ayrshires

Males and females for sale. ROBERT HUNTER & SONS, Maxville, Ont.

5 AYRSHIRE

bull calves for sale, from 6 to 12 months old. Sired by Klondyke of St. Ann's 8897. Their dams are heavy milkers, with good udders and teats. Inspection invited. W. F. STEPHEN, Trout River, Quebec (Carr's Crossing, G. T. Ry.)

Reward of Merit.

A New Catarrh Cure Secures National Popularity in Less than One Year.

Throughout a great nation of eighty million it is a desperate struggle to secure even a recognition for a new article, to say nothing of achieving popular favor, and yet within one year Stuart's Catarrh Tablets, the new catarrh cure, has met with such success that to-day it can be found in every drug store throughout the United States and Canada.



To be sure, a large amount of advertising was necessary in the first instance to bring the remedy to the attention of the public, but everyone familiar with the subject knows that advertising alone never made any article permanently successful. It must have, in addition, absolute, undeniable merit, and this the new catarrh cure certainly possesses in a marked degree.

Physicians, who formerly depended upon inhalers, sprays and local washes, or ointments, now use Stuart's Catarrh Tablets, because, as one of the most prominent stated, these tablets contain in pleasant, convenient form, all the really efficient catarrh remedies, such as red gum, blood-root and similar antiseptics.

They contain no cocaine nor opiate, and are given to little children with entire safety and benefit. Dr. J. J. Reitter, of Covington, Ky., says: "I suffered from catarrh in my head and throat every fall, with stoppage of the nose and irritation in the throat, affecting my voice and often extending to the stomach, causing catarrh of the stomach. I bought a fifty-cent package of Stuart's Catarrh Tablets at my druggist's, carried them in my pocket and used them faithfully, and the way in which they cleared my head and throat was certainly remarkable. I had no catarrh last winter and spring, and consider myself entirely free from any catarrhal trouble."

Mrs. Jerome Ellison, of Wheeling, W. Va., writes: "I suffered from catarrh nearly my whole life, and last winter my two children also suffered from catarrhal colds and sore throat so much they were out of school a large portion of the winter. My brother, who was cured of catarrhal deafness by using Stuart's Catarrh Tablets, urged me to try them so much that I did so, and am truly thankful for what they have done for myself and my children. I always keep a box of the tablets in the house, and at the first appearance of a cold or sore throat we nip it in the bud, and catarrh is no longer a household affliction with us."

Full-sized packages of Stuart's Catarrh Tablets are sold for fifty cents at all druggists. Send for book on cause and cure of catarrh, mailed free. Address: F. A. Stuart Co., Marshall, Mich.—Advt. om

Tredinnock Ayrshires.

Imported bulls at head of herd: Glencair 3rd, Napoleon of Auchenbrain, and Lord Dudley. Forty imported females, selected from leading Scotch herds, and their produce from above-named bulls. Size combined with quality and style, well-formed udders, good-sized teats, and capacity for large milk production. Bull calves for sale; also a few young cows and heifers. For prices and particulars address JAMES BODEN, Mgr., St. Anne de Bellevue, Quebec. Farm close to St. Anne Station, G.T.R. & C.P.R., 20 miles west of Montreal. om

Ayrshire Bulls

from 1 1/2 years to 6 months, from special milking stock, sired by the sweepstakes bull, Cock of the North—9997—, also females all ages. Shropshire sheep, Berkshire pigs, either sex, and B.P. Rocks. For particulars write J. YUILL & SONS, Carleton Place, Ontario.

AYRSHIRES.

I offer four choice August (1901) bull calves, two yearling heifers due to calve next August to imported bull, and a pair of March and April heifer calves. All bred from imported stock of choice milking strains. W. W. BALLANTYNE, Stratford, Ontario. "Neidpath Farm" adjoins city, main line G.T.R.

PLEASE MENTION FARMER'S ADVOCATE

GOSSIP.

The opening sale of Shire horses for the year in England was held at Tring Park on Jan. 15, when a large selection from Lord Rothschild's stud was disposed of. The average for forty head was £217 14s. 10d., which was considerably higher than that realized at the last sale at Tring, and has only twice been exceeded in the annals of the breed. The sixteen brood mares made the great average of £294 6s. 6d., the highest price being 750 gs., given by Mr. R. W. Hudson, for the champion mare, Alston Rose. Another noted prize mare, The Nun, went to the Duke of Westminster at 410 gs., and the same price was paid by Mr. Kearns for Windley Blossom. Other high prices were 440 gs. for Saxon Girl (Mr. P. L. Mills), 300 gs. for Dorothy Drew (J. Blundell Maple, M. P.), 410 gs. for Royal Rose (Mr. Victor Cavendish, M. P.), 410 gs. for Victoria's Queen (Sir J. Blundell Maple, M. P.), 410 gs. for Fortress (Mr. Hamar Toogood), 410 gs. for Birdsall Stately (Mr. A. Henderson, M. P.), and 350 gs. for Sunset (the Marquis of Winchester).

Mr. D. A. McFarlane, of Kelso P. O., whose farm lies in the Province of Quebec, about three miles from Carr's Crossing Station, and about eight miles from Huntingdon Station, on the G. T. R. line between Montreal and Massena Springs, is the happy owner of a herd of 25 head of imported and home-bred Ayrshire cattle that are models of their breed. Mr. McFarlane is a gentleman well versed in the breeding and family history of Ayrshire cattle, and takes particular pride in keeping his splendid herd in the pink of condition, and for a number of years back has persistently and judiciously followed the weeding-out process, till to-day his herd is thoroughly up-to-date, both from the breeder's standpoint and from milk production and dairy conformation. His present stock bull is Glenora Dairy Prince, sired by Imp. Comrade of Garlaft, dam Imp. Georgina 2nd. At Huntingdon and Sherbrooke Exhibitions last fall, representatives of this herd carried off the lion's share of the awards, which speaks volumes for the quality of the stock. The young things in the herd are a very even, well-ordered lot, and already show a conformation that produces record-breakers. Mr. McFarlane reports a very successful year, his sales being many and prices satisfactory. There are at present for sale two bull calves and a few heifers.

F. Martindale & Son, breeders of Shorthorn cattle, York, Ont., write: "The Advocate" is the right paper to advertise in, as we have disposed of all our Shorthorn bulls except one through its advertising columns. The following is a list of sales we have recently made: To John Miller & Son, Brougham, the red 11-months-old Nonpareil Pride. To W. C. Hambly, Rockford, one bull 16 months old. To C. W. Glasgow, Fingal, one bull 23 months old. To Hugh Bertram, Vimont, a fine roan bull 9 months old. To C. E. Barr, Vimont, a roan bull 7 months old that promises to make a good one. To F. A. Pratten, Naticoke, one bull two years old; and to Yule Bros., Caledonia, Ont., one bull twelve months old.

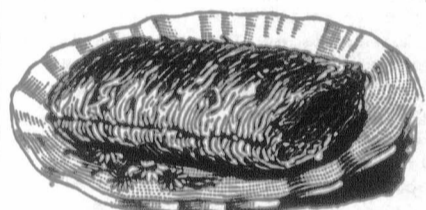
Mr. Geo. G. Stewart, whose farm lies in the outskirts of the Village of Howick, Quebec, which is Mr. Stewart's P. O. and station, has for the last 14 years been engaged in importing high-class Clydesdale stallions and mares, and to Mr. Stewart's enterprise in this connection great credit is due, as the very marked improvement in the quality of the farm and draft horses in the Province of Quebec during the last few years can to a large measure be traced directly to Mr. Stewart's importations. His last importation, which arrived last fall, but was too late to compete at the fall exhibitions, comprise four stallions, three 2-year-olds, and one 4-year-old. The 2-year-old stallion, Clymphion, Vol. 24, is sired by Golden Sovereign 10198; dam Heather Jess 4248, by Topman 886. He is a beautiful bay, with three white feet, a large, well-built, evenly-proportioned colt, standing on perfect feet and legs, and is a great actor. He is the making of a grand animal, will weigh, when developed, considerably over a ton. Another of the 2-year-olds is the colt, Bucephalus, Vol. 24, sired by Sir Christopher 10286; dam Jean 10th of Balmanno 13766, by Prince of Carruchan 8151. He is a black colt, full of quality from the ground up, a grand animal all over; a big slashing fellow that will make a prizewinner sure. The other 2-year-old is Voyager, Vol. 24, sired by Montrave Matchless 9959; dam Black Bess, Vol. 24, by St. Stephen 9231. He is a dark brown, of perfect mould and finish; a big, lofty, clean-stepping colt that is hard to equal. The 4-year-old is Lord Gartly, Vol. 23, sired by Royal Gartly 9844; dam Fanny of Blairnessnock 6155, by Lord Lennox 2967. He is a rich brown, smooth to a turn, grand mat, well-weighted, good actor; a big, well-balanced animal. There is also the imported mare, Twilight, an ebony black, full of quality, with nice smooth action. These animals are of the kind required in this country, and were selected on account of their superior breeding and extra individuality. They are all smooth and square actors; no wing-footed actors among them. They stand on perfect feet and legs, and give promise of making horses weighing over a ton each. This, coupled with their rich breeding and perfect Clydesdale conformation, makes them very desirable animals to breed from. They are all for sale.

American Field and Hog Fence. The best product of American skill in woven steel wire fence making. In rolls, ready to stretch and staple. The Fence of Economy. If your dealer hasn't it, write to American Steel & Wire Co., Chicago, New York, San Francisco, Denver.

WINDMILLS



Have you cheap power? Do you know that a CANADIAN AIRMOTOR will yield greater returns for your money than any other farm implement. Has a cast-iron constitution, and is a terror to work. We have other things that save money. Write us. ONT. WIND ENGINE & PUMP CO. LIMITED. TORONTO, ONT.



Shredded Wheat Biscuit. Endorsed and Prescribed by Physicians.

"I have used the Shredded Wheat Biscuit in Hospital practice and find the results highly satisfactory. They are especially beneficial in cases of indigestion complicated with constipation."

ALBERT A. TAFT, M. D. Carney Hospital, Boston, Mass.

SHREDDED WHEAT BISCUIT. For sale by all Grocers.

LITTLE'S PATENT FLUID NON-POISONOUS SHEEP DIP AND CATTLE WASH

THE ORIGINAL Non-Poisonous Fluid Dip. Still the favorite dip, as proved by the testimony of our Minister of Agriculture and other large breeders.

For sheep. Kills ticks, maggots; cures scab; heals old sores, wounds, etc., and greatly increases and improves growth of wool.

Cattle, horses, pigs, etc. Cleanses the skin from all insects, and makes the coat beautifully soft and glossy.

Prevents the attack of Warble Fly.

Heals saddle galls, sore shoulders, ulcers, etc. Keeps animals free from infection.

No danger, safe, cheap, and effective

Beware of imitations.

Sold in large tins at 75 cents. Sufficient in each to make from 25 to 40 gallons of wash, according to strength required. Special terms to breeders, ranchmen, and others requiring large quantities.

SOLD BY ALL DRUGGISTS. SEND FOR PAMPHLET. Robert Wightman, Druggist, Owen Sound. Sole agent for the Dominion.



**BOOK REVIEW.**

Any book reviewed in this department may be ordered through this office, at the price stated.

**PHYSICS OF AGRICULTURE.**—A work which should be consulted by farmers has recently come to the editorial table. It is a text-book of the Physics of Agriculture. This up-to-date work is written by F. H. King, late Professor of Agricultural Physics in the Wisconsin Agricultural College and Experiment Station, and now head of the Department of Agricultural Physics at Washington, D. C. As the author aptly puts it, "the great need of agricultural practices at the present time is a keener appreciation and a more thorough comprehension of the principles which underlie them. . . . the laws and principles which control his practice each farmer must know before he can secure his results with the greatest certainty and at the least cost." This work is easily understandable by the farmer, and has been used in the short course in agriculture at Madison. We briefly call attention to some of the chapters in the book which are of special interest to farmers. The maintenance of country roads; farm motors, gasoline and steam engines and windmills; farm machinery and the construction of silos; under-draining, etc., are all subjects of vital and daily interest to the farmer. Professor King has succeeded in making his book both interesting and practical. The problems of soil moisture as related to cultivation are well handled. The explanations regarding the principles of the draft of horses are clear and easily understood. It is hardly necessary to say more of the book, except to strongly advise its addition to every farmer's library. At the present time we are unaware of any work on the same subject in the English language which at all covers the ground and is as useful to the agricultural student as is this book. The price, \$1.75, places it within the reach of all. It is well illustrated, and is published by the author at Madison, Wis. It can be supplied from this office at the price mentioned above.

**NOTICES.**

**THE WINDMILL ON SHIPBOARD.**—A circular from the Ontario Wind Engine and Pump Company, Toronto, shows an engraving of a 16-foot Canadian Airmotor furnished for the South Pole expedition steamer, "Discovery," which left England some time ago for the Antarctic Ocean. By driving an electric dynamo it furnishes light for the whole ship, thus saving fuel and labor, and cheering the ship's company during the long south polar night.

**THE FARM TELEPHONE.**—The farm telephone enables the farmer to transact business, give orders, get market quotations on his products, keep thoroughly informed, etc., without going to town. In the busy season he is enabled to save valuable time. This is aptly illustrated on another page of this issue, where the farmer is shown ordering up-to-date new McCormick binders and twine from the dealer.

**REMOVED BOG SPAVIN.**

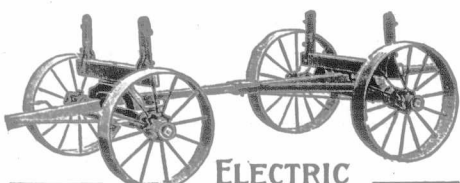
The Lawrence-Williams Co., Cleveland O. In the fall of 1896 we had a valuable brood mare which became very lame with bog spavin, and during the winter we commenced using "Caustic Balsam" on it, putting it on once a week, and spending at least a half hour in rubbing each time. To-day her leg is as smooth as before, and we now consider Caustic Balsam the one indispensable medicine for the stable.

H. A. MIXER & CO.

**GOSSIP.**

Mr. John McFarlane, Dutton, Ont., whose advertisement of Shorthorn cattle and Oxford Down sheep has been running in our columns, writes us in ordering a change of advertisement, that he has sold his flock of Oxfords, 51 in number, to Henry Arkell, of Arkell, Ont. Mr. McFarlane is now offering for sale Shorthorn cows, heifers in calf, a bull calf 11 months old, and heifer calves of Bates and Cruickshank strains.

O'Neil Bros., Southgate, Ont., breeders of Hereford cattle, in ordering change, write: "We have to report the sale of two very fine young bulls recently, both by Imp. Sunny Slope Tom 1st SC085. One, Rex of Sunny Side, went to Mr. W. Bennett, Chatham, Ont.; the other to a herd at Wingham, Ont. Our herds are doing well, and the baby Herefords are occasionally putting in an appearance. The two Berkshire boars we offer are an exceptionally fine pair, are sure and good stock getters, and their breeding is of the best, coming from the Ontario Agricultural College, Guelph, and being of the proper bacon type.



**ELECTRIC Handy Farm Wagons**  
make the work easier for both the man and team. The tires being wide they do not sink into the ground; the labor of loading is reduced many times, because of the short life. They are equipped with our famous Electric Steel Wheels, either straight or stagger spokes. Wheels any height from 24 to 60 inches. White hickory axles, steel hounds. Guaranteed to carry 4000 lbs. Why not get started right by putting in one of these wagons. We make our steel wheels to fit any wagon. Write for the catalog. It is free.  
ELECTRIC WHEEL CO., BOX 253, QUINCY, ILL.

**"Here's Your Calf. Got Your Tag On."**  
No need to silt the ear of your animals to mark them. Mark all your stock with the Aluminum "Stay There" Ear Marker. Contains your name, address, and consecutive numbers on each tag. No rusting or wearing off, inexpensive, and perfectly easy and simple to attach. We send free sample and prices upon application.  
WILCOX & HARVEY MFG. CO., 184 Lake St., Chicago, Ill.

**WE OFFER THIS MONTH FOLLOWING CHOICE BULL CALVES:**

**Ayrshires:** OUT OF Sired by  
Nora of Fin (Imp.). Wee Earl (Imp.).  
Gem of Castle Hill (Imp.). Matchless 7560.  
Nellie of Barcheskie (Imp.). Matchless.  
Lady Bute (Imp.). Napoleon of Auchen-  
brain (Imp.).

**Guernseys:** OUT OF Sired by  
Roseland III (Imp.). Masher (Imp.).  
Princess May (Imp.). Masher (Imp.).

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

**AYRSHIRE CATTLE AND POULTRY.**

**FOR SALE:** Royal Star of Ste. Annes, 1st-prize bull at Toronto and London, also heifer calves, heifers and cows from dams with milk records from 40 to 64 lbs. per day. Price from \$35 to \$80 each. Banded Plymouth Rocks, Black Minorcas, Cornish Indian Games, \$1.50 each. Four pair Toulouse geese, \$4.00 per pair. For particulars write  
**WILLIAM THORN,**  
Norfolk Co., Lynedoch, Ontario.  
Front Run Stock Farm. -om

**STEWART'S SHEEP SHEARING MACHINE**  
Highest and Only Award at Pan-American Exposition.  
1902 Model, price including grinder, only \$18.50  
Will be fitted with the wonderful Stewart Shear same as supplied with the \$65.00 Power Machine. No owner of 10 Sheep or more can afford to shear by hand even though the work be done for nothing. Don't butcher your sheep. Shear with this machine, and get ONE POUND WOOL EXTRA PER HEAD.  
Will more than cover the whole cost of shearing. Send today for valuable book on shearing. It is free and will save you money.  
**CHICAGO FLEXIBLE SHAFT CO.,**  
150 La Salle Ave., Chicago, Ill.

**EUROPEAN ADVERTISEMENTS.**

**English Shorthorns.**

Booth and Bates Shorthorns, topped with Cruickshank bulls. Young cows, bulls and heifers always on hand for sale. Eligible for the American herdbook. Royal and Highland prizewinners included for the last two years. Close on £400 won in prizes last year and this. -om  
**WM. BELL,**  
Ratcheugh Farm, Alnwick, Northumberland, Eng.

**Ayrshire** HERD of 150 cows and heifers, bred from deep milkers, with large teats, of a commercial stamp. Established over half a century. **J. & A. Wilson,** Boghall Farm, Houston, Kenfrewshire, Scotland. -om

**PEDIGREE AYRSHIRES.** Cows and heifers, all bred from prizewinning stock at the leading shows. -om  
**Robert Wilson, Mansurac, Bridge of Weir, Kenfrewshire, Scotland.**

**FAMOUS ALL OVER THE WORLD ALFRED MANSELL & CO.,** LIVESTOCK AGENTS AND EXPORTERS, SHREWSBURY.

BRITISH STOCK selected and shipped to all parts of the world. Write for prices to **ALFRED MANSELL & CO.,** Shrewsbury, England, or to our American representative, Robert Miller, Stouffville, Ont., Canada.

**J. E. CASSWELL'S LINCOLNS.** Laughton, Folkingham, Lincolnshire, England. Breeder of Lincoln Long-wooled sheep. Flock No. 46. At the Palermo Show, 1900, 25 rams bred by J. E. Casswell averaged 454 each; 14 of the best averaged 483 each, this being the highest sale of the season in the Argentine. Lam and ewe hoggs and shearlings for sale; also Shire horses, Shorthorns, and fowls. Telegrams: "Casswell, Folkingham, Eng." Station: Billingham, G. N. R. -o

**Dominion Swine Breeders' Annual Meeting.**

The annual meeting of the Dominion Swine Breeders' Association was held at the Palmer House, Toronto, January 24th, the President, Mr. Wm. Jones, in the chair. The Secretary-Treasurer's report showed the affairs of the Association to be in a prosperous condition. The financial statement showed receipts, \$5,641.14; expenditures, \$3,525.42, and a balance on hand of \$2,115.72. The chief effort during the present year will be in reference to the export trade. A committee was appointed to prepare a model prize list for the leading as well as the local fairs in so far as practicable. The meeting reported favorably on giving a grant to exhibitions in Western Canada.

The following officers for the current year were elected: President, G. B. Hood, Guelph; Vice-President, Thos. Teasdale, Concord; Secretary-Treasurer, A. P. Westervelt. Directors for the different sections: Berkshires, Geo. Green, Fairview; Yorkshires, J. E. Brethour, Burford; Chester Whites, R. H. Harding, Thorndale; Poland-Chinas, W. M. Smith, Fairfield Plains; Duroc-Jerseys, L. B. Tape, Ridgetown; Tamworths, J. C. Smith, Hintonburg; and for Essex, Jos. Featherston, Streetsville; Ontario Agricultural College, G. E. Day, Guelph. General Director, Wm. Jones, Mount Elgin; Auditor, J. M. Duff, Guelph. Representatives to Fair Boards: Toronto Industrial, D. C. Platt, Millgrove, and R. P. Snell, Snelgrove; Ottawa, A. P. Westervelt and J. C. Smith; London, George Green, Fairview, and D. DeCourcy, Bornholm; Peterborough, Robt. Vance, Ida; Guelph, G. B. Hood and James Anderson; Brantford, J. E. Brethour; Belleville and Kingston, J. M. Hurley, M. P.; Provincial Winter Fair, Prof. G. E. Day, G. B. Hood and Wm. Jones.

**EXPERT JUDGES.**

The following are the expert judges recommended for the various breeds: Berkshires—Wm. Wilson, Snelgrove; J. C. Smith, Hintonburg; X. Plant, Northcote; Samuel Dolson, Allos; Hugh G. Clark, Norval; P. W. Boynton, Dollar; A. W. Smith, Maple Lodge; Wm. Jones, Mt. Elgin; W. G. Caven, East Toronto; Jas. McEwan, Kertch; John Boyes, Jr., Churchill; Henry Jones, Zenda; H. J. Davis, Woodstock; J. C. Snell, London; Thos. Teasdale, Concord; Geo. Green, Fairview; Robert Vance, Ida; T. A. Cox, Brantford; Jas. Quire, Delaware; Jos. Featherston, Streetsville; R. P. Snell, Snelgrove; C. R. Decker, Cherterfield; Chas. Youngs, Brookdale; D. DeCourcy, Bornholm; R. H. Harding, Thorndale; Jos. Barnett, Rockland; E. F. Martin, Canning; H. E. Jeffs, Bond Head; Wm. Linton, Aurora; E. Brien, Ridgetown; G. B. Hood, Guelph; J. E. Brethour, Burford; Alex. Hart, Hampstead; W. A. Shields, Milton. Yorkshires and Tamworths—David Barr, Jr., Renfrew; A. Boyd, Kars; E. A. Kipp, Chilliwack, B. C.; Jas. Bray, Longburn, Man.; Lou Rogers, Weston; Geo. D. Betzner, Copetown; R. J. Kerr, Mimosa; W. R. Bowman, Mount Forest; Wm. Jones, Mt. Elgin; R. J. Garbutt, Belleville; E. Dool, Hartington; R. H. Harding, Thorndale; N. M. Blain, St. George; A. Dunn, Ingersoll; J. H. Simonton, Chatham; G. North, Marden; A. Elliott, Galt; L. F. Master, Haysville; A. C. Hallman, New Dundee; D. G. Hamner, Burford; John G. Nichol, Hubrey; J. E. Brethour, Burford; W. Elliott, Hamilton; A. Laurie, Wolvorton; Wm. Davies, Toronto; Richard Gibson, Delaware; Henry Dedels, Kossuth; G. B. Hood, Guelph; Jos. Featherston, Streetsville; H. E. Sharp, Ida; A. F. McGill, Hillsburg; J. G. Mair, Howick, Que.; J. M. Hurley, Belleville; Geo. Gier, Grand Valley; Jas. Stephen, Trout River, Que.; R. McCulloch, Harriston; Jos. Fletcher, Oxford Mills; Robert Nichol, Brussels; J. F. Foreman, Collingwood; J. Y. Ormsby, Woodstock; Jas. Leach, Toronto; Wm. Howe, North Bruce; Chas. Yapp, Brantford; G. E. Day, Guelph; F. R. Shore, White Oak; H. J. Davis, Woodstock; D. C. Platt, Millgrove; Wm. McDonald, Ridgetown; W. Elliott, Galt; R. G. Martin, Marysville; J. E. Cousins, Harriston; Geo. Green, Fairview; J. W. Callbeck, Augustine Cove, P. E. I.; J. G. Clark, Ottawa; J. C. Smith, Hintonburg; D. Drummond, Myrtle, Suffolks and Essex—Wm. Jones, Mt. Elgin; Geo. Green, Fairview; Thos. Teasdale, Concord; Jas. McGarvin, Chatham; R. H. Harding, Thorndale; Jas. Main, Milton; D. DeCourcy, Bornholm; G. B. Hood, Guelph; R. P. Snell, Snelgrove. Duroc-Jerseys—D. C. Platt, Millgrove; Daniel DeCourcy, Bornholm; Major Hood, Guelph; Norman M. Blain, St. George; Geo. Green, Fairview; Wm. Jones, Mt. Elgin; Thos. Teasdale, Concord; J. E. Brethour, Burford; R. H. Harding, Thorndale; W. M. Smith, Fairfield Plains; Jos. Featherston, Streetsville; W. N. Tape, Bentpath; Geo. Bennett, Charing Cross; H. George, Crampton. Poland-Chinas—Thos. Teasdale, Concord; Jos. Featherston, Streetsville; Jas. Main, Milton; Geo. Green, Fairview; W. M. Smith, Fairfield Plains; Wm. Jones, Mt. Elgin; Henry Jones, Zenda; Oliver Drury, Fargo; C. W. Yapp, Brantford; R. Willis, Glen Meyer; R. H. Harding, Thorndale; Lawrence Tape, Ridgetown. Chester Whites—E. D. George, Putnam; R. E. Birdsall, Birdsall; Albert

**WALTON HERD OF PEDIGREE PIGS.**

The property of Sir Gilbert Greenall, Bart., Walton Hall, Warrington, England. This herd is unrivalled for its true type, large size and strong constitutional vigor. It is the premier herd in England at the present day. Its show-yard career is unique, the champion prize for the best Large White pig at the R. A. S. E. having been won by pigs bred in the herd in 1896, '97, '99 and 1901, besides leading prizes too numerous to mention at all the principal agricultural shows in England. A choice selection of boars and sows for sale. Inspection invited. All purchases carefully shipped. For particulars, apply to the Manager, M.R. J. HALLAS, Higher Walton, Warrington, England. Railway stations:—Warrington (Bank Quay) per L. & N. W. Ry.; (Central) per Midland, G. N. or G. C. Rys. Telegrams, "HALLAS Higher-Walton."

**W. W. CHAPMAN,** Secretary of the National Sheep Breeders' Association, Secretary of the Kent or Romney Marsh Sheep Breeders' Association, and late Secretary of the Southdown Sheep Society. Pedigree Live Stock Agent, Exporter and Shipper. All kinds of registered stock personally selected and exported on commission; quotations given, and all enquiries answered. Address: FITZALAN HOUSE, ARUNDEL ST., STRAND, LONDON W. W. Cables—Sheepcote, London. -om

**FARMERS! KEMP'S INSTANTANEOUS Sheep Dip**

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

**W. W. Stephen,** MEAFORD, ONTARIO.

**FAIRFIELD LINCOLNS**

Imported ewes and lambs. Can supply show flocks. -om  
**J. H. PATRICK, ILBERTON, ONT., CAN.**

**LIVE STOCK AUCTIONEER.**

The undersigned is prepared to conduct pure-bred auction sales. 20 years' experience. References: John I. Hobson and Alfred Stone, Guelph; Jas. Hunter, Alma, and Mossom Boyd, Bobcaygeon. THOS. INGRAM, care Mercury Office, GUELPH, ONT. -o

**SOUTHDOWNS AND COLLIES.**

Imported and home-bred prizewinning aged sheep. After the Fan-American a number of particularly good ram and ewe lambs. Collie puppies by imported Holyrood Leek and champion Alton Monty, out of noted prizewinning dams. -o

**ROBT. MC EWEN, BYRON, ONT.**

ALLOWAY LODGE STOCK FARM. Rail'y Stn., LONDON.

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

**IMPORTED COTSWOLDS**

We are now offering some choice shearlings of both sexes; also this season's crop of lambs, sired by Imp. Swanwick.

**BROOKS & LANGMAID, COURTICE P. O.** SIX MILES FROM OSHAWA STATION, G. T. R. -om

**COTSWOLD HILL STOCK FARM** Offers imp. and home-bred Cotswolds of both sexes and all ages, from the champion flock of Canada for the last six years. -om  
**JOHN PARK & SONS,** Burgessville P.O., and Str.

**JOSEPH FERGUSON, UXBRIDGE, ONT.,** BREEDER OF Pure-bred Cotswolds—choice quality om UXBRIDGE P. O. AND STATION. -o

**CHAS. GROAT, BROOKLIN, ONT.,** OFFERS FOR SALE Cotswold Ewes and Ewe Lambs of good quality and breeding. Also a registered stallion, 1 year old, and one filly foal. Good ones. Write for particulars. -om

IN WRITING PLEASE MENTION FARMER'S ADVOCATE.

(Continued on next page.)



**SUMMERHILL OXFORDS.**

Present offering: A choice lot of ram lambs and ewe lambs. Also 50 extra nice yearling ewes. PETER ARKELL & SONS, Teeswater P.O. and Station.

**OXFORD DOWNS**

Largest breeder of Oxford Downs in Canada. Have still some fine ewes of different ages for sale. Dred to imported rams. Also 50 superior ewe lambs, and 100 ram lambs. All registered. Prices reasonable. Barred Rock eggs for setting, \$1 per dozen.

HENRY ARKELL, ARKELL, ONT.

**BROAD LEA OXFORDS.**

Can sell a few choice ewes of different ages, bred to our imported rams, May King 1st and Earl of Fairfield 2nd; also 75 good ewe and ram lambs, and an imported two-shear ram. Come and see our flock, or write us for prices, etc.

HENRY ARKELL & SON, TEESWATER, ONT. MILDMAY, G. T. R.; TEESWATER, C. P. R.

**Linden Oxfords and Shorthorns**

Flock composed of selections from the best English flocks and their progeny. None but the best imp. rams used. Stock for sale.

R. J. HINE, Dutton, Ont.

**FAIRVIEW**

Has still a few good rams for sale. Also a limited lot of ewes, bred to choice rams.

Barred Plymouth Rock cockerels now for sale, at \$1 for good utility birds, and \$2 each for extra good ones.

JOHN CAMPBELL, Woodville, Ont.

**HOLWELL MANOR FARM**

SHORTHORNS, SHROPSHIRE, YORKSHIRES, SCOTCH COLLIES.

D. G. GANTON, ELMSVALE, ONT.

**HIGH-CLASS SHROPSHIRE.**

A flock of 75, of good type. Two-shear rams, shearing rams, ram lambs, ewe lambs, fine lusty fellows. Flock headed by a fine imported ram. Write for prices. Abram Rudell, Hespeler P.O., Ont.

C. P. R. and G. T. R.

**W. S. CARPENTER,**

"MODEL FARM," SIMCOE, ONT., IMPORTER AND BREEDER OF

Shropshire Sheep.

Ram and ewe lambs for sale. Well covered. Station One-half Mile from Farm, Wabash and G. T. R.

**50 REG. SHROPS. 50 FOR SALE!**

Shearing and two-shear rams; also stock ram, bred by John Miller & Sons, and this season's crop of lambs ready for the fall trade. Foundation stock bred by Mansell, England. Prices moderate. A card will bring them.

ROWAT BROS., Phipps station, G. T. R., 5 Hillsdale, Ont. miles east, Simcoe County.

**LARGE ENGLISH FOR SALE.**

YOUNG boars and sows carrying the blood of Baron Lee 4th, Bright Star (imp.), Enterprise and Highclere, on Bow Park, Teasdale and Snell females, with Allandale Boy 5375 and Royal Lad 3rd 4307 heading the herd.

S. DYMENT, BARRIE, ONT.

**SMITH EVANS, GOUROCK, ONT.**

Breeder and importer of registered Oxford Down Sheep. Selections from some of the best flocks in England. Stock for sale at reasonable prices. Inspection invited.

**WILLOW LODGE BERKSHIRES FOR SALE**

Two boars, 7 months old; several litters, 6 weeks to 3 months. Also a number of young sows ready to breed, sired by Longfellow 10th of H. B. No. 8633, and Gallant Prince No. 7691. Pairs supplied not akin.

WM. WILSON, SNELGROVE, ONTARIO.

FOR SALE: Berkshires (both sexes), Shorthorn stock bull, cows, heifers and young bulls. Prices reasonable. Write or come and see us.

A. J. C. SHAW & SONS, Thamesville, Ont.

**Snelgrove Berkshires.**

Our herd is unrivalled for its large size and bacon type. All bred from imported stock. We are offering now sows large enough to be bred, sows in pig, boars fit for service, and young pigs from 2 to 4 months old. Can supply pairs not akin. Write us.

SNELL & LYONS, SNELGROVE, ONT.

**Dominion Swine Breeders' Annual Meeting**

Baracky, Bloomington; Wm. Jones, Mt. Elgin; J. C. Snell, London; Geo. Green, Fairview; D. DeCoursey, Rornholm; R. H. Harding, Thorndale; G. B. Hood, Guelph; Gideon Snyder, Jarvis; Jos. Featherston, Streetsville; H. George, Crampton; G. Bennett, Charing Cross; W. N. Tape, Bentpath; J. E. Brethour, Burford; J. C. Nichol, Hubrey; G. E. Day, Guelph; W. E. Wright, Glanworth, Provincial Winter Fair, G. B. Hood, Guelph.

The following expert judges of sheep of the various breeds were chosen at the annual meeting held in Toronto, January 24th: Cotswolds—John Rawlings, Ravenswood; William Thompson, Uxbridge; Val. Ficht, Oriel; Jas. Hume, Arkell; W. G. Laidlaw, Wilton Grove; R. P. Snell, Snelgrove; S. J. Lyons, Norval; Jas. Russell, Richmond Hill; J. C. Snell, London; F. Bonnycastle, Campbellford; John Park, Burgessville; J. Hardy Shore, Glanworth; A. J. Watson, Castlederg; Prof. G. E. Day, Guelph; John V. Snell, Snelgrove. Judges nominated: Toronto—Robert Miller, Stouffville; Jas. Hume, Arkell, London—Val. Ficht, Oriel; John V. Snell, Snelgrove. Ottawa—V. Ficht, Oriel; W. Thompson, Uxbridge. Chicago—Prof. Curtiss, Ames, Ia.; Prof. Day, Guelph; R. P. Snell, Snelgrove. Leicester—R. F. Arbuth, Belleville; Jas. Fennell, Bradford; H. B. Jeffs, Bond Head; A. E. Archer, Warwick; Geo. Whitelaw, Guelph; John Wells, Galt; Hardy Shore, Glanworth; Abraham Easton, Appleby; E. Wood, Appleby; Wm. Parkinson, Eramosa; E. Parkinson, Eramosa; John Orr, Galt; W. B. Watt, Salem; Wm. McIntosh, Burgoyne; Thos. Curroly, Fairlarton; R. Eastwood, Mimico; John Kelly, Shakespear; And. Thompson, Fergus; J. K. Campbell, Palmerston; J. C. Snell, London; G. B. Armstrong, Teeswater; John T. Gibson, Denfield; C. E. Wood, Freeman; Jos. Gaunt, St. Helen's; J. M. Gardhouse, Highfield; And. Whitelaw, Guelph; Wm. White-law, Guelph; R. C. Martin, Marysville; A. W. Smith, Maple Lodge; Alex. Waldie, Acton; Walter Nichol, Plattsville; H. G. Arnold, Maidstone; Prof. J. A. Craig, Des Moines, Ia., U. S.; John Marshall, Cass City, Mich., U. S.; J. W. Murphy, Cass City, Mich., U. S.; Prof. C. F. Curtiss, Ames, Ia., U. S.; D. C. Graham, Cameron, Ill., U. S.; G. Penhale, Exeter; Jas. Smith, Clinton; John Wright, Chesley; Prof. G. E. Day, Guelph; M. Kennedy, Northwood; D. Lilloco, Ayr. Judges nominated: Toronto—Jas. Fennell, Bradford; Jas. Douglas (reserve), London; H. B. Jeffs, Bond Head; John Orr, Galt. Ottawa—John Orr, Galt. Brantford—W. Whitelaw, Guelph.

Dorsets—John Kelly, Shakespear; Robert Miller, Stouffville; J. M. Gardhouse, Highfield; John Campbell, Fairview; J. G. Hamner, Mount Vernon; Prof. Curtiss, Ames, Ia.; Thos. W. Hector, Erindale; G. P. Everett, Mt. Vernon; John A. McGillivray, Uxbridge; H. N. Gibson, Delaware; E. O. Denton, Somerset, N. M.; G. McKerrrow, Sussex, Wis.; John Hunter, Wyoming; Herbert Hamner, Burford; Arthur Danks, Allamuchy, N. J.; John Jackson, Abingdon; Fred. Silversides, Uxbridge; R. H. Harding, Thorndale. Judges nominated: Toronto—Thos. W. Hector; G. P. Everett (reserve); London—J. G. Hamner, Mt. Vernon; John Kelly, Shakespear.

Southdowns—John Jackson, Abingdon; Wm. Martin, Binkok; W. H. Beattie, Wilton Grove; W. H. Gibson, Beconsfield, Que.; R. H. Gibson, Delaware; T. C. Douglas, Galt; A. Simenton, Blackheath; H. B. Jeffs, Bond Head; John Miller, Markham; Henry Arkell, Teeswater; Wm. Telfer, Paris; J. G. Hamner, Mount Vernon; Jas. Smith, Mt. Vernon; Jas. Scott, Aberfoyle; Geo. McKerrrow, Sussex, Wis.; Prof. J. A. Craig, Des Moines, Ia.; J. C. Duncan, Lewiston, N. Y.

Shropshires and Oxfords—List not yet received from Breeders. Hampshires and Suffolks—R. Gibson, Delaware; H. Arkell, Arkell; Prof. J. A. Craig, Des Moines, Ia., U. S.; Ira Hiller, Thornton, Mich.; W. H. Beattie, Wilton Grove; J. Bowman, Guelph; Prof. Kennedy, Columbus, Ohio, U. S.; W. R. Bowman, Mount Forest; John Kelly, Shakespear. Judge at Toronto—N. Gibson, Delaware.

Lincolns—J. T. Gibson, Denfield; J. H. Patrick, Ilderton; Capt. T. E. Robson, Ilderton; Graham Walker, Ilderton; Wm. Oliver, Avonbank; E. Parkinson, Eramosa; J. H. Neil, Parkinson; Wm. Mitchell, Glencoe; A. W. Lucan; Wm. Mitchell, J. M. Gardhouse, Highfield; Jas. Snell, Clinton; P. Hardy Shore, White Oak; Geo. Weeks, Glanworth.

Merinos—Rock Bailey, Union; Andrew Terrell, Wooler; G. P. Everett, Mount Vernon; W. H. Beattie, Wilton Grove; W. M. Smith, Scotland; R. Shaw, Glanford Station; J. G. Hamner, Mount Vernon; Geo. McKerrrow, Sussex, Wis., U. S.

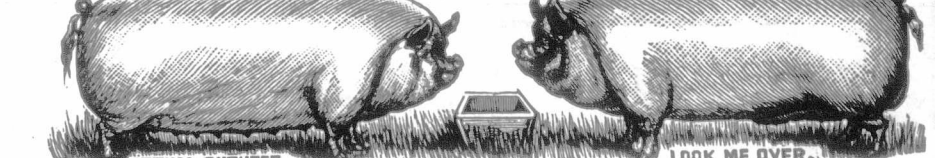
Shropshires and Oxfords—List not yet received from Breeders.

**NOTICE.**

CHICAGO REAPERS FOR RUSSIA.—A New York despatch states that five within the next five or six weeks five ship loads of farm machinery, representing about 35,000 tons, will be shipped from New York and Philadelphia to the Black Sea for Southern Russia. The McCormick Co., of Chicago, will send, by steamer Othello, some 9,000 tons of harvesters, said to be the largest shipment by 2,000 tons ever sent out of the States to a foreign port. Large consignments also go from the Deering Harvester Co., of Chicago.

**SUMMERHILL HERD OF Large English Yorkshires.**

HEADQUARTERS FOR THE IDEAL BACON HOG.



Our winnings at the large shows, for 1901, are as follows: At Toronto every possible first prize and five seconds, two silver medals, and first for pen of pure-bred bacon hogs, also sweepstakes on bacon hogs over all breeds; at London every possible first but two; while at the Pan-American, where our herd was divided, half going to Toronto, we won six out of ten possible firsts, also sweepstakes on boar any age. At the Pan-American (Buffalo), Toronto and London there were thirty-six first premiums and medals given: all the medals and every first prize but six won by the Summer Hill Yorkshires. When in need of the best write D. C. FLATT & SON, MILLGROVE, ONT. Telephone: Millgrove, Ont.

**Maplewood Herd**

7 IMPROV'D LARGE YORKSHIRES 7 PRIZEWINNERS AT Pan-American Exposition, Buffalo.



21 HEAD PRIZEWINNERS 21 AND PRIZEWINNING BLOOD. IMPORTED AND CANADIAN-BRED. EASY FEEDERS. BEACON TYPE. STOCK FOR SALE. WRITE US WHAT YOU ARE WANTING.

IRA JOHNSON, BALMORAL, ONTARIO. Nelles' Corners Station and Telegraph.

**Large English Berkshires.**

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

**LARGE WHITE YORKSHIRES.**

Am offering this month a superior lot of Yorkshire sows bred to Riddington Es sign (imported). Three pigs up to three months of age, furnished in pairs not akin. A fine lot to select from. Write: H. J. DAVIS, WOODSTOCK, ONT. Importer and breeder of Shorthorns and Yorkshires.

**Large English Yorkshires**

Sows safe in pig, boars and sows ready to breed, boars and sows three to four months old. All lengthy, smooth, deep-sided type. Barred Rock cockerels, Miller strain. Write: JAS. A. RUSSELL, Precious Corners P. O. Cobourg Station, G. T. R., Ontario.

**PINE GROVE FARM HERD OF Large Yorkshire and Essex Swine.**

The oldest established herd in America. We bred Hasket 3rd -1937-, sire of Oak Lodge Conqueror -2475-, and also sire of Look Me Over, the sire of Summerhill Victor, the champion boar at the Pan-American and the late Chicago Exposition, and sold there for \$700. Personal inspection and correspondence solicited. Nine imported and twenty home-bred sows breeding. JOSEPH FEATHERSTON & SON, STREETSVILLE P. O., ONT. Streetsville stn., C.P.R. Clarkson stn., G.T.R.

**BOARS FOR SALE.**

We have a few choice Yorkshire boars to sell at \$15 each. Sows and young pigs always on hand. Herd headed by the second prize boar at Toronto, 1901. We still have a few extra fine Shropshire and Suffolk Down ewes at \$25 per pair. We also have a number of Aberdeen-Angus bulls and heifers to part with.

W. R. BOWMAN, Mt. Forest, Ont.

**Improved Yorkshires FOR SALE.**

of the most popular families. All ages and both sexes now ready for immediate shipment. Write for what you want. Prices reasonable—consistent with quality. E. DOOL, Hartington, Ont.

**YORKSHIRES AND POULTRY.**

Pigs all ages and both sexes; quality right. Eggs for hatching. Barred Plymouth Rocks, White Wyandottes, White and Brown Leghorns, and Buff Orpingtons. Incubator for sale. Also choice pedigreed collie pups.

A. B. ARMSTRONG, CODRINGTON, ONTARIO.

**FOR SALE: Yorkshires and Holsteins**

Best type and quality. Young stock constantly on hand. Prices right. R. HONEY, Brickley P. O., instead of Warkworth.

**YORKSHIRES**

Headed by Oak Lodge Prince 5071. Litters 15 weeks, either sex; 2 sows to farrow. WM. TEASDALE, Dollar, Ont. Northern branch G.T.R., 15 miles from Toronto. om

IN WRITING PLEASE MENTION FARMER'S ADVOCATE.

**Imported Poland-China Hogs.**

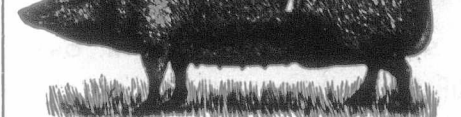
We are offering choice, of both sexes, any age (pairs not akin), from imported stock, and of the true type. Easy feeders, rapid growers. ROBT. L. SMYTH & SONS, Fargo P. O. and Station, M. C. R.

**A few good Chester Boars fit for service.**

Also some Dorset ewes and ewe lambs. Prices reduced for 30 days. R. H. HARDING, Thorndale, Ont.

**OHIO IMPROVED Chester White Swine.**

OLDEST ESTABLISHED REGISTERED HERD IN CANADA. Choice young stock, 6 weeks to 6 months old. Pairs and trios not akin. Registered pedigrees. Express charges prepaid. Safe delivery guaranteed. E. D. George, Putnam, Ont.



One hundred Tamworth and Improved Chester White Spring Pigs of a true bacon type, our herd having won the best prizes offered at the leading exhibitions throughout Ontario and Quebec for the past ten years. Stock for exhibition purposes a specialty. We pay express charges between stations, and guarantee safe arrival of all stock shipped. Pairs furnished not akin. Write for prices.

H. GEORGE & SONS, Crampton P.O., Ont.

**NEWCASTLE HERD OF TAMWORTHS**

We are now offering several choice boars and sows, 3 and 4 mos. old, and half a dozen choice 2-mos. olds, all from Toronto Industrial sweepstakes herd. Write us for prices before buying elsewhere. COLWILL BROS., NEWCASTLE, ONT.

**Tamworths and Berkshires**

A choice litter of young Berkshires, farrowed Jan. 10th, at \$6.00 each, registered (when 6 weeks old); order now. Also collie pups, \$3.00 each.

D. J. GIBSON, BOX 38, BOWMANVILLE, ONT. HAZEL DELL STOCK FARM.

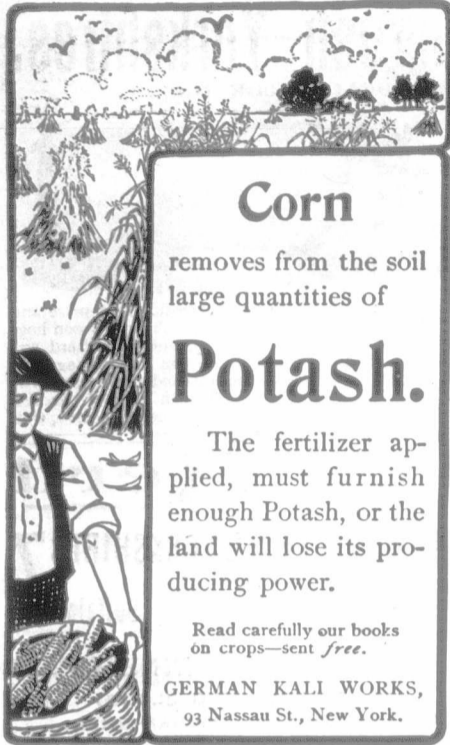
**Goldspring Herd Tamworths.**

Offer choice Oct. and Nov. boars and sows Also my stock boar, Advance. This is the spot for the best. Write for prices. They are moderate, quality considered. NORMAN M. BLAIN, ST. GEORGE, ONT. BRANT CO.

**SEVERAL YOUNG TAMWORTH SOWS AND BOARS**

nearly ready to ship. Also a few ready for service, of both sexes. P. R. Hoover & Sons, Green River, Ont.





**Corn**  
removes from the soil  
large quantities of  
**Potash.**  
The fertilizer applied, must furnish enough Potash, or the land will lose its producing power.

Read carefully our books on crops—sent free.

GERMAN KALI WORKS,  
93 Nassau St., New York.



Latest and best devices for wire-fence building, including  
**GEM and McCLOSKEY**  
weaving machines, also Coiled Spring and other fence wire at lowest prices. Write on  
McGregor, Sanwell & Co.,  
Box 23, Windsor, Ont.

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

**BOYS FOR FARM HELP.**  
The Managers of Dr. Barnardo's Homes invite applications from farmers, or others, for the boys who are arriving periodically from England to be placed in this country. The young immigrants are mostly between 11 and 13 years of age; all will have passed through a period of training in Dr. Barnardo's English Institutions, and will have been carefully selected with a view to their moral and physical suitability for Canadian life. Full particulars as to the terms and conditions upon which the boys are placed may be obtained upon application to Mr. Alfred B. Owen, Agent Dr. Barnardo's Homes, 214 Farley Ave., Toronto.

**TURKEYS! TURKEYS!**  
Grand Mammoth Bronze Turkeys, heavyweights. Nothing but the best toms used.

**E. S. BENNETT, GLANWORTH, ONT.**  
**FOR SALE:** A few pairs of choice TOULOUSE GEESSE. Order at once, as we have only a few pairs left. A few B. P. R. COCKERELS. **W. W. EVERITT, Chatham, Ontario.** Box 552. om

**BARRED ROCKS.**  
A number of choice cockerels: large, strong-boned, robust, healthy birds, bred from my famous National strain, noted for large eggs and persistent layers. For prices write

**W. C. SHEARER, BRIGHT, - ONTARIO.**

**Mammoth Bronze Turkeys**  
Sired by 42-lb. tom. Cayuga ducks, Chester White swine (both sexes) from two to six months old; bacon type. Write for prices.

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

**R. G. ROSE, GLANWORTH, ONT.** offers for sale a choice lot of M. B. turkeys from his 40-pound imported yearling tom. Also Black Minorcas, W. Wyandottes, Barred, Buff and White Rocks. Pairs and trios mated not akin.

**BARRED ROCKS AND PEKIN DUCKS.**  
Best quality. Write for prices. **H. GEE & SONS, Fisherville, Ontario, HALDIMAND CO.**

**FOR SALE:**  
Golden, Buff and White Wyandottes, S. S. Hamburgs, White Leghorns, Houdans, Golden Polands, at \$1 each. Also Embden geese at \$2 each. **R. J. LAURIE, - - - Wolverton, Ont.**  
**ADVERTISE IN THE FARMER'S ADVOCATE.**

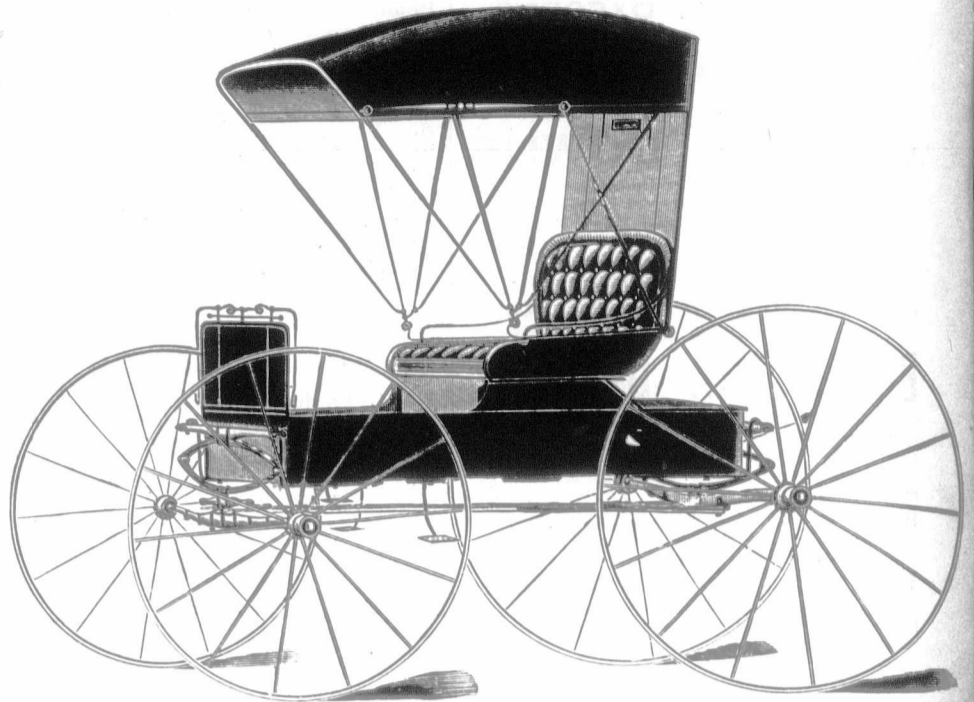
**GOSSIP.**  
Messrs. H. Cargill & Son, Cargill, Ont., last month made a sale to R. O. Miller, Norwood, Iowa, of 11 Scotch-bred Shorthorns and 11 Oxford Down sheep, 10 ewes and one ram lamb. The Shorthorns included 9 females and the 2 bulls, Clan Stewart and McKay 7th, both by Clan McKay.

On Jan. 4th, says the London Live Stock Journal, Mr. W. Bawden, of the firm of Messrs. Bawden & McDonell, Exeter, Canada, sailed from Liverpool in the Turcoman with a very valuable consignment of Shire, Clydesdale and Hackney stallions from such well-known breeders as Sir J. Blundell Maple, M. P.; Mr. J. Chambers, Hordenby, Northampton; Mr. Thos. Smith, Blacon Point, Chester; and Mr. C. Edward E. Cooke, Hinxton Grange, Cambridge.

Isleigh Grange Stock Farm, property of Mr. J. N. Greenshields, lies in the Province of Quebec, about three miles from Danville Station, which is on the G. T. R. line between Richmond and Quebec, and is about 90 miles east of Montreal. This farm is well known on account of the large herds of imported Ayrshire and Guernsey cattle owned there, as well as the splendid flock of imported Mansell and Thomas bred Shropshire sheep. The Ayrshire herd comprises 50 head of typical animals, the major part of which are imported, built on the true dairy lines and of the fashionable color, and with milk records of 600 lbs. and upwards annually. Nothing but the best procurable imported bulls, or those bred from imported stock, have been used on the herd. There are at present 10 young bulls ranging in age from 6 to 12 months, bred from imported stock, that are beauties. The Guernseys number about 30 head, and are almost all imported and from imported stock on both sides, and are an ideal lot, showing perfect dairy conformation, with large, even udders. There are also 10 young bulls for sale in this herd from six to twelve months old that are hard to duplicate. In both these herds there is nothing reserved, either among the imported or home-bred ones. In both herds there are a number of heifers that are as sweet as can be found anywhere, and under the capable and efficient management of Mr. Wm. Reid, the animals are in the pink of condition. In the Shropshire flock there are about 50 head of imported animals. They are a large, even, perfectly-covered lot. There are about 20 ram and 10 ewe lambs for sale, bred from imported stock on both sides that are good ones indeed. The Isleigh Grange advertisement shows what they are offering for sale now.

**ROBERT NESS & SONS' CLYDESDALES AND AYRSHIRES.**

Woodside and Burnside Stock Farms are the property of Messrs. Robt. Ness & Sons, of Howick, Quebec. These splendid farms, which comprise 500 acres of choicest farm lands, are the home of 90 imported and home-bred Ayrshire cattle and 19 imported and home-bred Clydesdale stallions and mares, and a large variety of pure-bred poultry. In Clydesdales, there is the imported stallion, Baron Frederick 10681, got by that well-known prizewinner and sire of winners, Baron's Pride 9122; dam Fanny Moody 1061, by Darnley 222. He is a bay, coming four years old, a big, well-balanced horse, showing great flat bone, standing on the best of feet, and is a grand mover. Another stallion is Imp. Copyright 10724, also sired by Baron's Pride; dam Trilby 12583, by Messenger 1487. He is a beautiful brown, rising four years old, as nearly perfect as a horse can be, extremely sweet in temper, make-up, and superb action, and will credit to a Hackney. Another one is the horse, Baron Lang, Vol. 23, also imported. He is sired by Sir Everard 5353, who is the sire of Baron's Pride; dam Brownfield Lass 10516, by Garrison 2800. He is also rising four, is a bay, showing abundance of hair and bone, and is of perfect mould; a very smooth horse, and is also a grand mover. These three horses, besides combining the best blood of Scotland, are individually perfect types of the easy-feeding, smooth-gaited Clydesdales. There is also a Canadian-bred stallion that for type and quality does not need to take a second place with any of them. He is the two-year-old Laurentian 2954, sired by Lawrence Again (Imp.) 2047; dam Imp. Roseleaf 2165, by Macbeith 3317. He is a bay, of fine symmetry, and superb action, and will make a top notcher. In mares, there are, all told, 15 registered, from one to seven years old, five of whom are in foal to Copyright. They are a rare good lot. Among the fillies are some that will surely be heard from in the show-ring. Anything in the horse line on these farms are for sale. As might be expected from so large a herd of Ayrshires, there are some crackers, as a glance at some of their last fall's winnings will show. At Toronto they won 3rd on aged herd, 1st on young herd, and 1st and 4th on breeder's herd. At Buffalo they won 2nd on herd, 4th on aged cows, 1st and 2nd on two-year-old heifers, 1st and 5th on yearling heifers, 2nd on heifer calves, and sweepstakes for best female in the class, 1st and 2nd on bull calves, and 5th on yearling bull. The stock bull is Duke of Clarence of Bardonia, imported sweepstaker of Canada in 1899 and 1900. The young stuff on the farms are all sired by him, and are a grand lot. The Messrs. Ness report sales as exceptionally good. Still there are others left that are for sale, of both sexes. In poultry, the breeds kept are B. and W. Rocks, S. C. Dorkings, W. Wyandottes, W. Leghorns, Pekin ducks, Chinese and Toulouse geese. Eggs from these different varieties are now for sale.



THE ABOVE IS ONE OF THE STYLES OF BUGGIES MADE BY

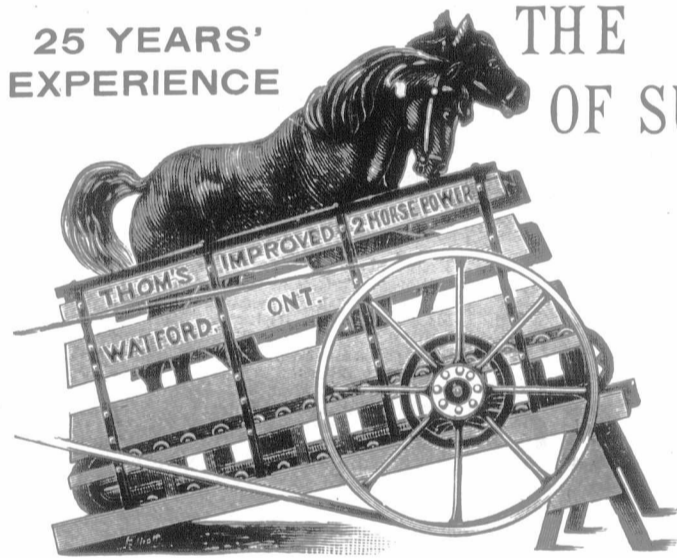
**John Campbell & Son,**  
LONDON, ONTARIO.

Catalogue and prices on application.

**Tread Powers.**

25 YEARS' EXPERIENCE

THE SECRET OF SUCCESS



Is in knowing how to build a tread power to run easy when say three heavy horses are on the platform so as to generate the largest amount of power possible. Knowing this, together with our up-to-date *Governors*, makes the Watford tread power the most desirable. With us Feed Cutters and Grain Powers are a special study. Originators and patentees of up-to-date improvements.

**Thom's Implement Works,**  
WATFORD, CANADA.



'Tis the WORK that TELLS. True of RAPID-EASY Grinders as of other things.

We use the Rapid-Easy Grinder No. 2 with an eight horse sweep power, grinding 50 bushels of mixed grain (oats, barley, and wheat and oats), and doing a splendid job. I am delighted with the way it works. **JOHN TERRY, Chickney, Assa.**

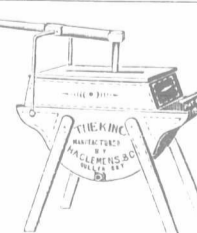
With your Rapid-Easy Grinder, got from you a short time ago, we grind all sorts of grain, and in regular work the last time we gr and (with 12-horse-power portable engine and grinder running from 1,800 to 2,000 revolutions per minute) we did 140 bushels of mixed peas and oats in three and one-half hours.

The Rapid-Easy Grinder is the handle-t and best grinder I have ever seen, and it is the best running. For a number of years my neighbors have got grinding done on stones in Emsdale, but since I have been using the Rapid-Easy Grinder I do the work for them, and they say they never before had such good work done.

**STEWART MOORE, Kearney.**

Buy your machine now, and prepare to do your grinding. Further particulars on application.

**J. FLEURY'S SONS, AURORA, ONT.**  
Medals: World's Fair, Chicago, 1893; Paris, 1900.



Our customers say that the King Washer is the best. Before buying a washer, get prices of King Washer. We have agents in nearly every city, town and village in Canada handling our goods. If your dealer does not handle them, write direct to us for particulars. **H. A. CLEMENS & CO., GUELPH, ONT.**

**NOTICE.**

**USE PAINT—** Killing two birds with one stone is true of the farmer who protects his buildings and implements with Zanzibar paints. He is saved the expense of getting new implements and erecting new buildings, and adds a hundredfold to the prosperous appearance of his possessions. The results are far-reaching. The Zanzibar Paint Co., Ltd., Toronto, Ont., make a specialty of high-grade paints for this purpose at a price within the reach of all.



**INCUBATORS AND BROODERS.**

Guaranteed to give satisfaction. Built to last a lifetime. Absolutely self-regulating, self-ventilating, and perfectly reliable in every way.

For circular giving prices, etc., write the manufacturer: **J. E. MEYER,** Shipping station: Guelph. **Kossuth, Ont.**

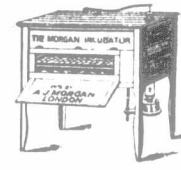
**BUILT FOR BUSINESS!**  
THAT'S THE IDEA.



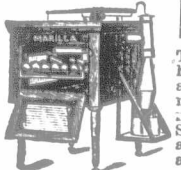
**The Cyphers Incubators**

are positively warranted to last **TEN YEARS**, without repairs, and are guaranteed to **OUT-HATCH**, during three trials, any other make of incubator on the market — bar none. **THIS, OR YOUR MONEY BACK.** Used exclusively at Experimental Farms, Guelph and N. W. T., and Ottawa; Dominion Government Poultry Stations, Whitby, Truro (N. S.), and Quebec; also six American Experimental Stations, Daniels, the universal provider in Poultry Supply business, has the sole agency for the Cyphers Incubators and Brooders for Canada. Our list of Poultry Supplies are too numerous to mention here, but just drop us a line and state what you require. We handle nothing but the best. Satisfaction every time, or money refunded. o Mention "Advocate."

**C. J. DANIELS,**  
196 to 200 River St., **TORONTO, ONT.**



**GRAMMING MACHINES,**  
FATTENING COOPS,  
Incubators and Brooders  
POULTRY SUPPLIES.  
**A. J. MORGAN, MFR.,**  
LONDON. om  
Catalogue free.



**MARILLA.**  
That's the name which means highest excellence in Incubators and Brooders—the most perfect regulation of temperature and moisture. Hot air or hot water. Send for catalogue and guarantee. Your money back if you are not satisfied.

**MARILLA INCUBATOR CO.,**  
Box 102, Rose Hill, N. Y.  
Machines may be seen at the store of our agent,  
**C. J. DANIELS,** 196 River St., Toronto, Canada.

IT'S THE MAN WITH

**Canadian Incubators**

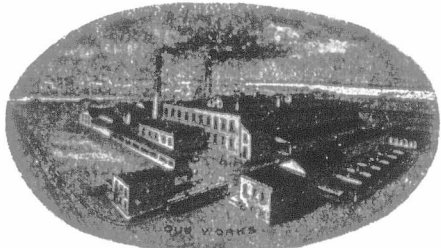
THAT DOES THE WORK.  
**CANADIAN INCUBATOR & BROODER CO.,**  
GET CATALOGUE — om — **TORONTO, CAN.**

**Fruit Growers!**

DO NOT FORGET THAT  
**FREEMAN'S**

**FERTILIZERS**

ARE RELIABLE.



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**Trees! Trees! Trees!**

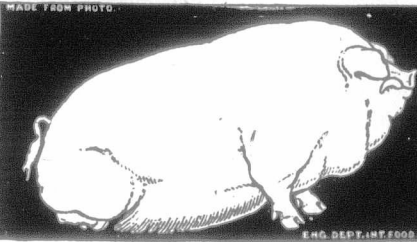
We have a full line of Fruit and Ornamental Trees for spring, 1902, at lowest possible prices.

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The Poland-China hog called "Old Tom" was raised in Minnesota and was exhibited at Minnesota State Fair in 1897. He made a Big Gain by eating "INTERNATIONAL STOCK FOOD." "INTERNATIONAL STOCK FOOD" causes Hogs, Cattle, Horses and Sheep to grow very rapidly and makes them Big, Fat and Healthy. Is used and strongly endorsed by over 600,000 Farmers. It is sold on a Spot Cash Guarantee to Refund Your Money in any case of failure by over 30,000 Dealers. It will make you extra money in Growing, Fattening or Milking. Owing to its blood purifying and stimulating tonic effects it Cures or Prevents Disease. It is a safe vegetable medicinal preparation to be fed in small sized feeds in connection with the regular grain. It fattens Stock in 80 to 60 Days less time, because it aids Digestion and Assimilation. In this way it saves a large amount of Grain. The use of "INTERNATIONAL STOCK FOOD" only costs 2¢ a FEEDS FOR ONE CENT. Ask your dealer for it and refuse any of the many substitutes or imitations. It always pays to feed the best. "INTERNATIONAL STOCK FOOD" is endorsed by over 100 leading Farm Papers.

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MAILED TO EVERY READER OF THIS PAPER.

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DEALERS SELL THESE ON A "SPOT CASH" GUARANTEE

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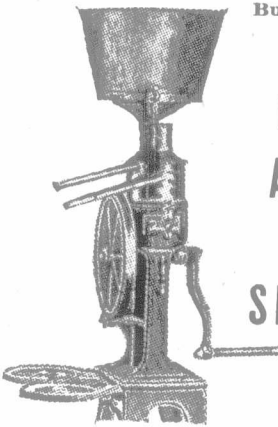
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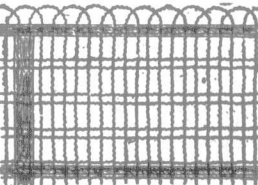
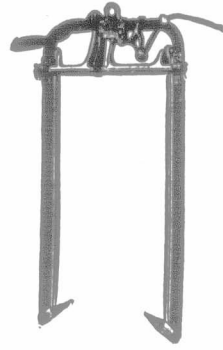


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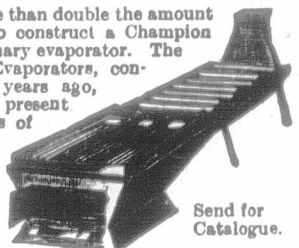
Are now made in Canada, saving duty and freight for our customers. Made of boiler steel. No flues to rust or leak. Will cook 25 bushels roots or grain in two hours. Fine for heating stock water-tanks, dairy rooms, pigpens. Can be used outside or attached to a chimney same as a stove. Used and endorsed by the following Canadian breeders and many others: Brethour & Saunders, Burford; W. D. Platt, Hamilton; D. C. Platt & Son, Millgrove; H. J. Davis, Woodstock; Ontario Agricultural College, Guelph; also James Boden, Graham Bros., Newton & Gosh, J. A. McDonald, J. P. Connley, Prices, \$10 to \$45. Took first premium at Toronto and London fairs. Catalogue and prices mailed free. Address:

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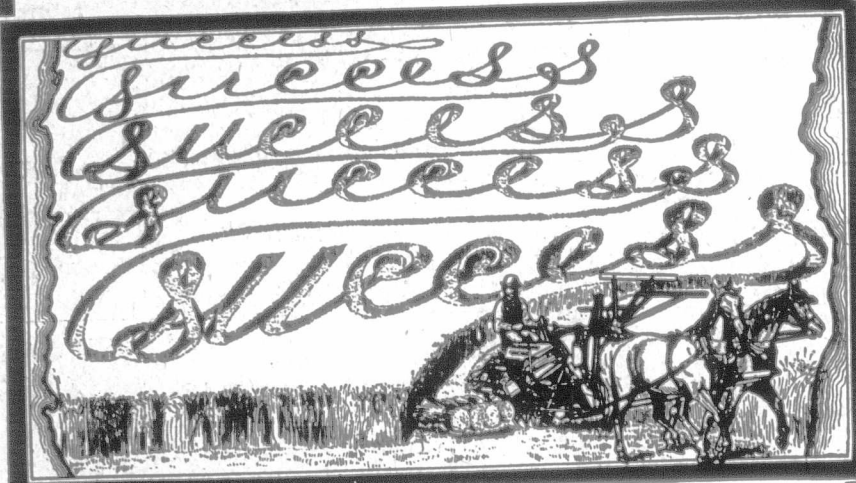
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The simplicity of the design.  
All wheels and bearings protected, being perfectly safe in the hands of a child.  
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Few parts to wash—only two pieces inside the bowl.  
The National is made by the Raymond Mfg. Co. of Guelph, whose success with the celebrated Raymond Sewing Machine is sufficient guarantee of the high finish and workmanship.  
In 1901 five machines a day were manufactured. For 1902 the capacity is increased to 25 machines per day, showing the satisfaction given by the National in the past two years.  
The 1902 National contains all the strong points found in other separators, and is placed on the market with the guarantee of being the best and most up-to-date machine in every particular offered to the Western farmers to-day.  
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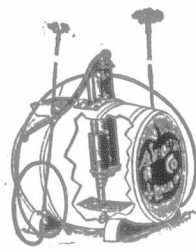
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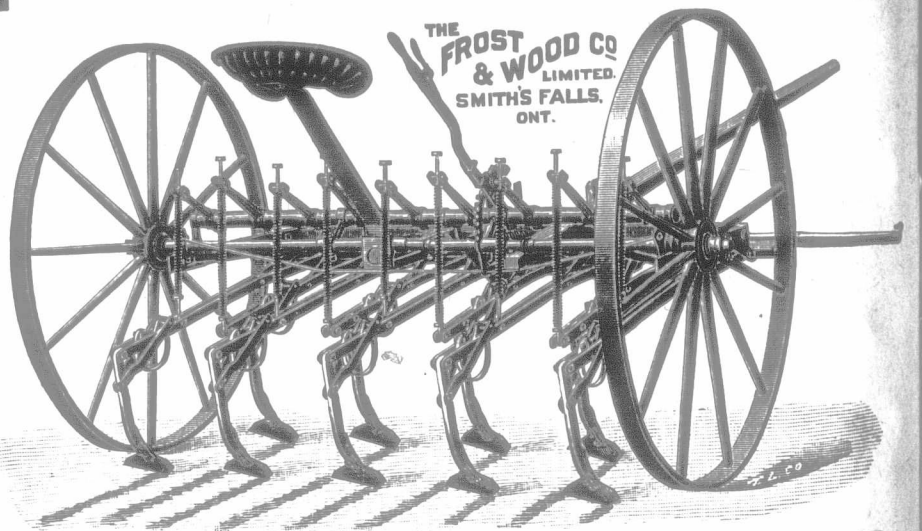
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Is a weed and thistle killer. The teeth are independent and can be set to any required depth.



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