

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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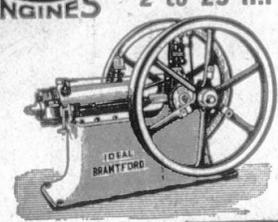
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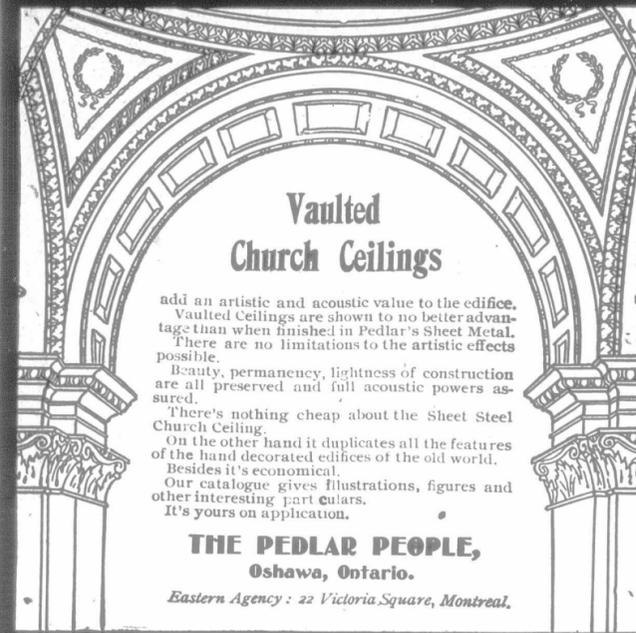
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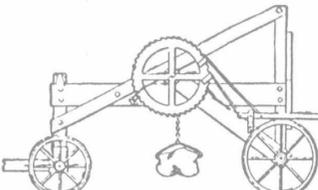
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VOL. XXXVI.

LONDON, ONT., AND WINNIPEG, MAN., SEPTEMBER 2, 1901.

No. 533

An Open Letter.

To the Hon. Sydney Fisher,
Dominion Minister of Agriculture:

Sir,—No man having at heart the well-being of live-stock husbandry, upon which the permanent success of Canadian agriculture depends, can view without grave apprehension the continuance of what has been styled the Tuberculin-test Crusade. The magnitude of the interest involved, the injury already inflicted, and the menace which overshadows the future of cattle-breeding operations in consequence of the application of this so-called test under and by virtue of your authority, justify me in addressing you publicly through the periodical specially concerned for the interests jeopardized.

Permit me at the outset to pay a just tribute to the vigor which has marked your administration of the Portfolio of Agriculture, and to the beneficent results accruing from such measures as the removal of a vexatious ninety-day quarantine preventing the disposal to American feeders who desired them of our surplus feeding cattle and giving our stock-feeders freedom of access to an advantageous raw material required in their operations, and also to the strict attention given to the marketing of our agricultural products abroad. Dealing with an enlightened and progressive people, it has been found wise and statesmanlike to remove hindrances and facilitate advancement. In its application the tuberculin test has, unfortunately, had exactly the opposite effect. While with one hand you have removed burdens, you have on the other permitted progress to be arrested by hindering the importation and spread of the breeding animals imperatively required if our live-stock trade is ever to make the improvement and progress of which it obviously stands in need.

It would seem needless to adduce or reiterate testimony showing the unreliability and futility of tuberculin testing. The experiments of the Royal Agricultural Society of England, showing 17-64 per cent. of error, discredited the test as not sufficiently trustworthy to accomplish the purposes desired, and there it has certainly lost ground. The Dublin experiment showed a similar rate of error, condemning the innocent and letting off the guilty. I have before me particulars of the testing of a notable dairy herd on the ground of public weal through the knowledge to be gained. Some that failed to react were slaughtered and were found to have tubercles in their systems, while a number that did react were found to be perfectly sound. Animals passing the test in England have been condemned on reaching the Argentine or Canada. Is it not a fact that under test cattle have been condemned by your officers in quarantine, and on being officially tested again were pronounced free from tuberculosis? Is it not also true that late last year an importation for Canada all passed the official test in Britain, but, importuned by Canadian officials, the distinguished owner, thinking to do his country some service, allowed them to be re-tested. About one-third of them were condemned. In a few months, under re-test, did not all these animals pass without a reaction? A bunch of beautiful heifers, evidently in the pink of

health, purchased in England for Canada, were tested and condemned; in two months they were tested by another officer, and all passed. Twelve animals were tested for an importer by a British veterinarian, and nine reacted. In five weeks those rejected at first all passed, and those that passed the first test were condemned. Another breeder had a lot tested and several gave a reaction, but in six months' time all the condemned ones passed, and one that first passed, reacted at the second test. It would appear from experience gained this year that strong, fleshy animals are more liable to show a rise in temperature after an injection of tuberculin than leaner ones, of apparently less constitution, and for this there is presumably reasonable ground, as the tendency to react is in a measure dependent on cellular activity (promoted by nutrition and blood supply), and also by the amount of the dose. Consequently, this season some of the best and most robust animals selected in British herds for export to Canada were left behind.

Furthermore, there can be little doubt that the animal is liable to many changes in physical condition, causing variations in temperature which may easily be confounded with the condemning rise or feverish reaction occasioned by this subtle poison—tuberculin—in the system. Careful trials in several herds have shown that animals on regular feed and evidently in perfect health, but without any tuberculin injections, gave a rise in temperature, arising from some natural cause or change, sufficient to condemn under the test.

Surely, sir, you must be aware of these facts, which I cannot conceive have been concealed from you, and you must see that the test is utterly unworthy of confidence, and that its value as a preventive against the importation or weeding out of any diseased animals, or the propagation of sound stock, is actually nil.

Canada and the States enjoy a discreditable pre-eminence in this business. Britain, which has produced more and better pure-bred stock than any other countries put together, has, fortunately, not been led astray with this inoculation fad. The solid good sense of the Britisher has saved him from being overridden by a veterinary caucus. To the credit of the English veterinarian, he has shown no marked disposition to approve the test or make its use compulsory, nor have any of them attempted to hold the Government in leading-strings. And I am glad to say that not a few of the more thoughtful men of the profession in North America have not been carried away in the delusive and costly pursuit of an ignis fatuus which has landed breeders, people and governments in a quagmire, and accomplished no good whatever.

It has been frequently charged that the tuberculin test is responsible for many cases of abortion in pregnant animals, in consequence of the influence which the lymph has upon the tissues. I observe by an official report of the Canadian Quarantine Department, that breeders were warned, in studying the test, to see that only "reliable tuberculin" be used; and Prof. Nocard, of France, has issued a warning against the use of tuberculin as a diagnostic of tuberculosis in man, owing to the danger that it may start the mischief afresh in a portion of the lung that was healing. In view of these possible dangers, would it not have been a proper and prudent course to have set afoot scientific inquiry into these serious questions before embarking on an unknown

course, which, as we now know, has resulted in confusion, uncertainty, and loss?

Again, this policy is anti-Canadian. Leading American breeders desire access to the herds of Canadians, and prefer to trust their own experience and knowledge of good healthy animals, rather than trust the vagaries of inoculation with an unknown fluid. But they are prevented from doing so, and trade is destroyed. Within their own borders the test is not allowed to embarrass them. Hence the Canadian Veterinary Department is simply made a tool of. Since Canada was the first to impose the test, leading to its adoption by the United States, you, sir, should be the first to remove it.

The result of the investigations by Dr. Robert Koch, admittedly the highest living authority on the subject in the world to-day—the man who invented tuberculin, though he was not responsible for the test system—is that human and bovine tuberculosis are distinct diseases, and not intercommunicable, and that the precautions against infected cattle may at once and for all be abandoned. No one could reasonably believe that the people dying annually from consumption in Canada contracted it from our cattle, which are healthy. An animal wasting and dying of tuberculosis is the rarest of occurrences, and the same is true of British herds. But for the unfounded fear of disease to man, the tuberculin crusade had no real strength, and was not needed for the cattle themselves. But your Chief Veterinary Officer appears to be laboring under the hallucination that the breeders of this country, who have demonstrated their superior capacity and skill in every arena on the continent, are either dishonest or lacking in sufficient knowledge to conduct their own business. They cross the Atlantic, select, at a cost of thousands of dollars, the best bred, most robust constitutioned and good conditioned animals to be found for the improvement of our stock, but our Official Tuberculin Censor puts about one-third of them on the black list, raises doubts as to their soundness, and casts a stain on the reputation of the herds. Need we wonder if the British stockman receives coldly your application to raise the embargo against the admission of Canadian feeding cattle?

In conclusion, wherein has it been shown that either humanity or the animals themselves have benefited by the system instituted by and to which your Chief Veterinary Officer has clung with such deathlike but misguided tenacity? Had it been some lawyer or physician whom the exigencies of politics had made Minister of Agriculture, I would have been less surprised at the course of events, but from an enlightened farmer, and a stockman to boot, as I am assured you are, better things were expected. I have never heard or read of a breeder who does not welcome any reasonable proposition whereby the health and condition of stock may be improved, but I am amazed at their long forbearance with the test system and the injury it is doing them, and also under the broken promise of assured relief in February last. Other considerations aside, the political instincts of a statesman would naturally suggest the propriety of not arraying the breeders and the leading farmers of the country in a strong spirit of antagonism, but rather to take these men into your confidence, as they are the persons who are directly concerned and whose operations I venture to hope may still be accorded that measure of security to which they are entitled at your hands.

STOCKMAN.

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12. NO ANONYMOUS communications or enquiries will receive attention.
13. LETTERS intended for publication should be written on one side of the paper only.
14. WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch printed matter. Criticisms of Articles, Suggestions How to Improve the ADVOCATE, Descriptions of New Grains, Roots or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation, are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.
15. ALL COMMUNICATIONS in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.

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

EDITORIAL.

Secure the Best.

Parties desiring to secure improved stock of any of the standard breeds should carefully read the advertisements now appearing in the columns of the FARMER'S ADVOCATE, where they will find a large offering in many varieties, and we feel sure that by correspondence with the breeders, or visiting them at their homes, it will be found that good stock can be bought at reasonable prices. There may be exceptional instances of what may seem to be exorbitant prices asked, but, as a rule, these will be found to be cases where large expense has been incurred in importation or purchase of the parent stock, and there is always this about it, that one does not have to buy if the price asked is higher than he considers he will be justified in paying. By seeking further, he may find what will suit him as well for less money. The field is large and the good things are not all owned by any one breeder. It is, however, good policy to buy the best one can afford, especially in the case of a sire, as his influence for good, if he is well come, will extend through the herd or flock for years and may be visible for decades of years. And the influence of an inferior sire is just as likely to be for ill and for as lengthened a period. The lowest priced is not always the cheapest, but often decidedly dear.

Has no Equal.

Letters like the following are reaching us every week, and are a fair indication of how the paper is appreciated everywhere:

SIRS,—I would not be without the FARMER'S ADVOCATE for five dollars per year. There is no farm paper as good.
ARCH. MANSON,
Lanark Co., Ont., Aug. 15th, 1901.

Our Royal Visitors.

We take pleasure in presenting herewith portraits, from a recent photograph, of Their Royal Highnesses the Duke and Duchess of Cornwall and York, whose arrival in Canada this month ranks in some respects as the most notable event of the year. Their visit is part of a tour of British dominions, and we are certain that nowhere else in the Empire will they have received a more cordial welcome. It is now some forty-one years since the King, Edward VII., then the Prince of Wales, paid his personal respects to Canada (autumn of 1860), and if he received a hearty reception in those early,

er. Prince Arthur visited Canada in 1869, and the Princess Louise was here during the term her husband, the Marquis of Lorne, was Governor-General.

Programme for the Royal Tour.

Major F. S. Maude, Secretary to the Governor-General, under date of August 6th, 1901, The Citadel, Quebec, has issued the following instructions as to the presentation of addresses to Their Royal Highnesses the Duke and Duchess of Cornwall and York while in Canada:

1. Addresses should be presented at the following "centers": Quebec; Montreal (*Montreal addresses only*); Ottawa; Winnipeg; Regina; Vancouver;



LATEST PORTRAITS OF THE DUKE AND DUCHESS OF CORNWALL AND YORK.

modest days, we may predict a truly royal greeting to his son in days of expanding imperialism and deepening love for the motherland. George Frederick Ernest Albert, Duke of York and Cornwall (second son of the King, Albert Victor, Duke of Clarence, having died Jan. 14th, 1892), was born June 3rd, 1865, and was married on July 6th, 1893, to Princess Victoria Mary (May) of Teck, who have issue a son Edward (in direct succession to the throne), born June 23rd, 1894; Albert, born Dec. 14th, 1895; Victoria Alexandra Alice Mary, born April 25th, 1897, and Henry, born March 31st, 1900. The Duke is an enthusiastic farmer and stock-breed-

Victoria; Toronto; London (*London addresses only*); Hamilton (*Hamilton addresses only*); Kingston; St. John; Halifax.

2. Addresses from cities or towns not mentioned in paragraph 1 should be presented at the "center" nearest to such city or town.

3. Drafts of addresses for presentation to His Royal Highness should reach the Governor-General's Secretary, The Citadel, Quebec, by the 1st September next. It should be stated at which "center" it is proposed to present them.

4. The deputation intending to present an address should be limited to five individuals. The names of the proposed deputation should in every case accompany the draft of the address mentioned in paragraph 3.

Advertising and Selling Stock.

Next in importance to having good pure-bred stock, kept in good condition, especially those one wishes to dispose of, is by judicious advertising to let it be known that one has such for sale. There are two principal methods of advertising pure-bred stock. One is to show representative specimens of one's herd or flock at the fairs, taking chances of winning a share of the prizes, thus securing attention and more or less publicity, according to the character of the exhibition at which one competes. If it is a show of provincial importance, the stock may be seen by visitors

that the visiting public judge of the comparative popularity and usefulness of the several breeds largely by the number and character of the exhibits in each, and for this reason loyalty to the breed of his choice and his interest in the dissemination of that breed should be an incitement to every breeder to fit and exhibit something good enough to be creditable to himself and the breed. While, therefore, we hold that breeders should, in their own and the country's interest, sustain the fairs by exhibiting, we just as strongly contend that the show-yard is not the best place to sell breeding stock in the best breed-

the class of men most likely to want what he has to sell. Many of the importers and breeders who have been among the most successful in making sales of their stock, and a reputation for themselves, do not exhibit, some of them, indeed, never having done so, and yet have found no lack of buyers. Their business has grown into large dimensions, mainly through correspondence resulting from judicious advertising, but also to a considerable extent through personal visits at their homes by men who have noticed their advertisements.

One of the advantages of advertising is that it is cumulative; that is, it is not for the present only, but a man's name and address as a breeder of a certain class of stock having been for a time before the public as such, it becomes fixed in the mind of the reader, and when that class is wanted the name recurs unconsciously to the memory, and besides, the more one is talked of in that connection the wider his reputation grows, like the ripple in a lake caused by the casting in of a pebble. People are apt to get the impression that advertising rates in first-class papers are high, and to doubt whether the returns will justify the cost, but they forget that advertising by exhibition is much more expensive and the field much more circumscribed. Does it never occur to these people that the papers having the highest standard of rates have the largest circulation, and are read by the largest number of farmers and patronized by the most enterprising breeders and business men, who have studied the various methods of advertising, and learned from experience the most advantageous. These men have realized that not infrequently by attracting one good customer, and often in one sale, they have been more than repaid the whole cost of their advertisement for a year, and this has also in many cases been the experience of smaller breeders, who often have quite as good stock for sale as some who make more pretentious claims. It is due to the increasing advocacy of the advanced agricultural press that the farming community generally has come to appreciate the outstanding value of improved live stock.

A continuous yearly advertisement, in the opinion of the writer, as the result of experience and observation, is the most profitable and satisfactory, since it stands to reason that parties desiring to purchase stock will look up the list of advertisers of the breed they are interested in, and the occasional advertiser not being found in the list receives no enquiry in that case, while his neighbor, who is advertising steadily, may secure valued customers by this means.

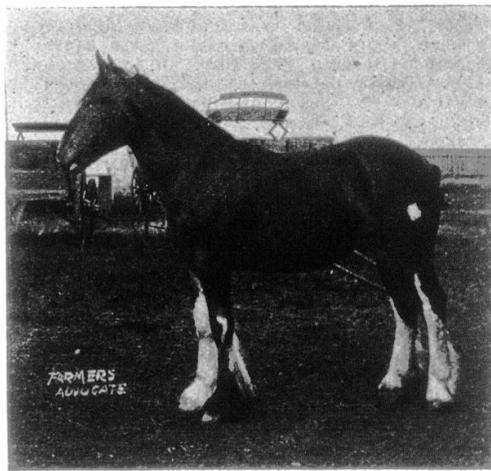
Much of the benefit of advertising may be lost through indifference in the wording of the announcement, or by failure to order changes necessary to make it attractive and seasonable and keep it up to date. Carelessness and lack of promptness, too, in answering correspondence is often accountable for failure to reap the best returns from advertising. When an enquiry is received it should be carefully read, and the points on which information is asked noted in order that they may be all covered as explicitly in the answer as can reasonably be expected, the description and breeding being fairly and clearly stated. As the enquirer in many instances has little idea of the location of the advertiser, it is well to make this clear in the advertisement as nearly as possible, and also upon one's letter-heads or envelopes. Every breeder who expects to do business with the public should also have an atlas or map of the country in his house, if it be only a railway map, as by this and the mileage statement on the time tables, he can form an approximate idea of the distance his correspondent is from him, and can, by enquiring of the railway agent, give him an idea of what the freight or express charges will be, which may be the means of securing a sale, and if a price can be quoted, including the expense of transportation, so that the buyer may know just what the animal will cost him at his own station, business may be much facilitated. To a Canadian breeder a copy of the Canadian Almanac, which contains, besides much other useful information, a list of all the post offices in the Dominion, and the nearest railway station, will be found to be very convenient and helpful. Care and attention to shipping stock comfortably and in good condition, in order that the animals make a good impression on arrival at their destination, is also important, as



LORD BANFF, ASCOTT MAYFLOWER, LADY WATERLOO B. 2nd, EMPRESS 12th, AND CICELY AS A CALF.
IMPORTED SHORTHORNS IN THE HERD OF W. D. FLATT, HAMILTON, ONT.



LORD ROBERTS.
Second-prize yearling Clydesdale stallion at Winnipeg Industrial. By Imp. Heirworth 5086, out of Gipsy Queen.
OWNED BY D. FRASER & SONS, EMERSON.



LITTLE BOOBS.
First-prize yearling Clydesdale stallion, Winnipeg Industrial.
BRED AND OWNED BY J. E. SMITH, BRANDON.

from a comparatively large territory, and if prizes are won, the list being published by the more enterprising papers, a more or less wide circulation may be given to the standing of the stock competing. The successful exhibitor may win sufficient in prize money to pay the expense of preparing his stock and placing it on exhibition, and if very successful may win more than that. The unsuccessful gain some knowledge from experience and observation, and, profiting by this, may make a better record later on. In the interest of the breed, and that means the interest of the breeder, it is desirable that a strong representation be brought out to the fairs, for there is no doubt

ing condition. Stock in that condition taken to the fairs compares badly with highly-fitted animals, and is not likely to be estimated at its true value by intending purchasers. For this reason we find a very much smaller number of animals taken to the fairs for sale than formerly, though, as a rule, more carefully selected and fitted, breeders more and more availing themselves of the advertising columns of the agricultural and stock journals to inform farmers and breeders of what they have for sale. And this is the medium which at all seasons of the year, over a vast territory extending as widely as the circulation of the paper, brings a man's stock to the notice of just

first impressions count for a good deal. In the case of cattle, the furnishing of good halters, and plenty of feed and bedding for the trip, and in the case of sheep or pigs shipped in crates, washing and trimming previous to shipping, and neatness, with lightness and strength in the crates, and the use of an address card or tag having the printed address of the breeder on it, are all details which indicate business methods and go to make a favorable impression, which will be found to pay many times their cost. The first essential, however, in establishing and maintaining a successful business by whatever method or medium it is advertised, is to produce high-class stock, to feed liberally in order to develop it creditably, and to ship only stock of such character as will themselves be a good advertisement for the breeder and be likely to prove satisfactory to the buyer.

The Canadian Minister of Agriculture Abroad.

Hon. Sydney Fisher, Minister of Agriculture, recently returned to Ottawa from a two-months visit in Great Britain. He had several objects in view: 1st, to buy thoroughbred cattle for the Dominion Experimental Farms; 2nd, to discuss the restrictions placed by the Old Country on the importation of cattle from Canada for their markets; 3rd, to discuss the purchase of horses in Canada for army purposes (War Office); 4th, to discuss some matters connected with patents and trade-marks with the Board of Trade authorities in England; 5th, to visit the Glasgow Exhibition and inspect the Canadian exhibits there which were prepared under his direction; 6th, to meet with and address various bodies connected with the Canadian trade in food products; 7th, to induce the heads of great shipping firms to improve the accommodations on their vessels for the carriage of Canadian food products; and, 8th, generally to investigate in what way Canadian trade with England in agricultural products can be improved and increased.

He visited many herds of cattle and sheep to find the animals wanted for the Farms, and found stock in England high in price and most of the breeders indisposed to sell their best. It took some time, therefore, to secure the animals desired, and which are coming out in charge of Mr. Grisdale, the Agriculturist of the Central Experimental Farm: some 20 head of cattle and a number of sheep and pigs.

We understand that Mr. Fisher was able to induce the ship-owners to start the improvements desired in the matter of accommodation for shippers, though disinclined to do so when first approached. He also obtained much useful information regarding the improvement of Canadian exports.

Mr. Fisher laid before the Imperial War Office a scheme for the purchase of army horses in Canada, with which they were favorably impressed, and a committee is now investigating the matter. In the meantime, however, the problem has been satisfactorily solved by Col. Dent and Capt. Maudslay, of the Remount Department, who are now thoroughly aware of those districts in Canada where suitable horses can be secured, chiefly through the private enterprise of our local horse dealers. Thousands of Canadian horses have been going forward to Africa this season, and our farmers have been getting remunerative prices—much better than were realized for such animals during recent years.

At the Glasgow Exhibition he found great interest taken in the Canadian exhibits, and most flattering things have been said of them by the press and the visitors. It is a thoroughly good economic representation of the products of our soil and industries. The exhibitors there have done an excellent business, and are well satisfied with the returns for the trouble they have taken. The Glasgow Exhibition is not as large as the Paris or Chicago ones, but the quality of the exhibits and the organization of the Exhibition are excellent. It has been a great financial success.

This season in England has been extremely dry. The hay crop is a very short one. The pastures when he left were burned up and the milk production shrinking. He found everywhere enquiry about Canadian hay. Those who have used it in England acknowledge it to be the best they can get. The hay crop in Canada this season being such a good one, there should be a good demand for the quality of hay which is expected by the English market. It must be free of weeds, amongst which is counted couch grass, and have about 20 per cent. to 25 per cent. of clover. To overcome the cost of carriage, it is necessary that the hay should be more tightly pressed than the old-fashioned press could do. In consequence of the sale of hay to the War Office for South Africa, a number of improved presses have been established in the country, which will be extremely useful in future hay trade with England.

As was foreshadowed in the Farmer's Advo-

cate" when he left on his mission, Hon. Mr. Fisher, like some of his predecessors, did not succeed in securing the removal of the embargo against Canadian cattle, which requires them to be slaughtered within ten days of landing, so that stockers or feeders are barred out and only cattle finished for the block are sent. From the standpoint of the Canadian farmer, many consider it to be by far the better policy for him to finish the cattle here. This restriction is statutory, and Mr. Fisher was told that an amendment could not be got through Parliament. The ostensible reason is to keep out a disease which does not exist and never has among the healthy cattle of Canada, but the real reason is that the majority of British stockmen, and the Irish farmers especially, are opposed to the competition of Canadian "store" cattle, which in times past were so popular there as feeders. A Scottish correspondent of the "Farmer's Advocate" lately threw out a hint that it would be desirable, from the British point of view, to admit dressed meat only (which sells at a lower price), and thus exclude our fattened cattle, which now go forward to the great lairages of Liverpool, London, and Glasgow. If John Bull is wise he will take a hint from the "Farmer's Advocate" and never attempt any game of that sort, and Mr. Fisher will do well to see that the present privilege is retained and the facilities improved. Nowhere in the world is the dressed-beef business carried on so perfectly and on so vast a scale as in Chicago and other Western States cities. Still, they ship thousands of their very best cattle alive to England every year. If there were as much or more money in shipping them as dressed meat, would they send them on the hoof? Uncle Sam is not in the habit of doing that sort of thing. As yet we have practically no export trade in dressed beef. Let us not drop a real substance for an uncertain shadow.

STOCK.

Practical Lessons from the Tuberculosis Discussion.

(From the English Live Stock Journal.)

The echoes of Dr. Koch's remarkable address at the Congress on Tuberculosis are still heard in many lands, and will doubtless continue to be so for a long time. At the closing sitting of the Congress, it was resolved, on the motion of Sir Herbert Maxwell, seconded by Earl Spencer, "That in view of the doubts thrown on the identity of human and bovine tuberculosis, it is expedient that the Government be approached and requested to institute an immediate inquiry into this question, which is of vital importance to the public health, and of great consequence to the agricultural industry."

These statements, no doubt, fairly represent the position, but it may be well to ask whether, during the period of experiment and investigation now before us, something cannot be done to modify the suspicion that has been growing up for some years regarding cattle as a cause of tuberculosis in man. The result of this suspicion has been most detrimental to stock owners in many ways. To specify one instance of this, it is well known to have had an adverse influence on the export trade, as the Governments of Colonial and foreign countries have insisted upon the tuberculin test being applied to all pedigree cattle purchased with the object of improving the stock of these distant countries. No one disputes for a moment the perfect right of the Governments to insist upon any reasonable precaution being taken to prevent the importation of disease. Many thousands of pounds have been spent in this country in order to clear our herds of all infectious maladies which could possibly be conveyed. It is the aim of breeders here to have only healthy stock, and the restrictions to which they have patiently submitted with this object amply prove their earnest wish to comply with the highest practical requirements as to the freedom of their stock from disease. But when the scare about the transmission of tuberculosis from animals to man extended all over the world a few years ago, something was demanded with which it was certainly difficult to comply, and many breeders, convinced of the health of their herds, declined to have their animals subjected to the tuberculin test, and preferred to let the export trade alone, while the diverse and uncertain results of the test have resulted in loss and inconvenience to those who have submitted to it. The cattle breeders, both in the United States and Canada, have revolted against this test in the case of carefully-selected pedigree stock, and if it rested with them its application would be withdrawn at once. It will be interesting to see if the Governments of these countries still consider it necessary to guard against a danger which Dr. Koch considers to be non-existent, because that is really the chief excuse for insisting upon the application of the test. Exporters are quite capable of selecting animals that are healthy, and that will certainly not be the cause

of disease among cattle. The test is not needed for that purpose.

It has been stated that Dr. Koch, in his declaration as to the non-transmissibility of tuberculosis from man to animals and from animals to man, has really attacked his own science, but this is not strictly correct. His discovery of the tubercle bacillus, upon which all the modern methods of dealing with tuberculosis in human beings have been built up, was followed, some years afterwards, by his invention of tuberculin as a cure for consumption in man. As is well known, this cure was prematurely disclosed, and disappointment followed the high hopes with which its discovery was hailed. It was not Dr. Koch who first applied it as a diagnostic among animals, but Professor Gutman, of Dorpat, Russia. Dr. Koch apparently considers it a useful agent for diagnosing the disease in animals for laboratory purposes, as he used it in his recent experiments to prove that the disease is not inter-communicable. The great edifice of suspicion against cattle that has been built up, to some extent by the results of the tuberculin test as a diagnostic for animals, is not, however, part of Dr. Koch's science. The object of his address was to recall attention to the real practical use of his discovery of the tubercle bacillus, which can, in his opinion, best be combated by preventing infection from human beings who are afflicted with the disease. The tendency has been to concentrate attention upon the possibility of the transmission of the malady from animals to man, and the reactions of the tuberculin test have tended to magnify the prevalence of the disease in cattle. Dr. Koch puts heredity and transmission from cattle in the same category, and does not consider it necessary to take any measures against either as a cause of the disease in man, and, of course, he did not make that declaration without a certain amount of proof, his experiments which preceded it, and of which he suggested a repetition elsewhere, being indeed such that Lord Lister admitted that he had established part of his case, viz., the incommunicability of human tuberculosis to animals. The other branch of the case is in dispute, and will probably remain so for many years, but Dr. Koch's pronouncement against it must have some considerable influence, as there is an absence of direct evidence to justify the suspicions that have grown up.

Few would object to adequate measures being adopted to safeguard the soundness and purity of the meat and milk supply, quite apart from the question of the transmissibility of this particular disease. A good deal has yet to be done to secure efficient inspection, and to avoid the unnecessary destruction of wholesome food, as also to apportion the losses from seizures and to introduce the principle of compensation for meat destroyed in the public interest; but the agitation for better inspection will make progress, and capricious condemnations will become more rare. No doubt the influence of Dr. Koch's statement will be increasingly felt in a more reasonable administration of the laws for regulating the purity of food. Some vexatious provisions demanded by local authorities will now have less chance of being conceded than ever, and a few of those already granted may with advantage be revised. On the whole, however, the public are not likely to consent to the withdrawal of safeguards in this direction.

As regards the disease in cattle, there was a good deal of alarmist talk at the Congress, and no doubt there would have been more if it had not been for Dr. Koch's intervention. Certainly it would be a great relief to cattle owners to know that their stock cannot transmit this scourge to the human race, and it seems strange that during all the years of controversy the veterinary profession do not seem to have systematically experimented on the lines carried out by Dr. Koch, as they might have done, though Professor Bang, of Copenhagen, mentioned that he had proved that there was very little danger in inoculating cattle from man. We are sure that the veterinary profession would welcome as much as the owners of live stock the establishment of the theory of the non-transmissibility of this disease from animals to man. This would relieve them from the task of dealing with subjects which do not directly touch upon the branch of study in which they are universally acknowledged to be distinguished experts.

If tuberculosis in cattle were to be treated as a disease of animals, much more rapid progress would be made with its extermination than has been the case during the period of alarm which has followed the introduction of the tuberculin test. The slaughter of cows that took place when pleuro-pneumonia was being stamped out revealed the fact that tuberculosis prevailed to a considerable extent among animals in town cow-sheds, while, according to these post-mortem examinations, it was not largely prevalent in the ordinary cattle stock of the country. It would not cost a great amount of public money to destroy any visibly affected animals in these sheds, compensating the owners for their loss. Professor McFadyen states that two per cent. of the milk cows have tuberculous udders. Could not these be dealt with on some practical scheme

of slaughter with an element of compensation to encourage intimations of the disease, and to prevent loss to the owners?

The herds of the country, especially those composed of valuable pedigree animals that are carefully bred and reared, are, we believe, very healthy. They are out in the open air half the year; their sheds are frequently disinfected and cleared of all the cobwebs which shelter disease germs, while unthrifty animals are not retained for breeding purposes. It is a great hardship that such cattle should be placed under a cloud of suspicion. The tuberculin test does not always disclose the really bad cases of tuberculosis, so that they could be weeded out if they exist, but it often gives reactions where the disease exists in the shape of a minute speck, that on slaughter can only be discovered by the microscope. The working out of this matter has led to anomalous results, and has hindered practical measures for eliminating the disease. If the tuberculin test were to be used in the laboratory as an aid to scientific experiment, and the Government veterinary staff were authorized to remove the comparatively small percentage of animals that are visibly tuberculous, compensating the owners for any loss they may sustain, we should soon be able to claim a clean bill of health under this head, as we have been in the case of other cattle diseases which have succumbed to practical treatment in this country, but that have baffled the executives on the Continent, where the tuberculin test has been exploited with so much vigor.

Live Stock Rearing from a Banker's Standpoint.

At a large gathering of farmers and friends at the residence and grounds of Mr. Jas. I. Davidson, near Ashburn, on July 30th, interest-

al reputation, which hundreds of others might attain. He said there was not a bank in the country unwilling to help a good farmer to increase his stock, and if more attention were paid to this branch of husbandry there would be less difficulty in inducing young men to remain upon the farm.

Successful Hog Feeding.

On the 18th day of Feb., 1901, we had a litter of eleven pigs born, out of which eight lived and grew to an average weight of 206 lbs. at 5 months and 6 days old.

The breed was Yorkshire and Cheshire cross, which are large, lengthy hogs, with strong constitutions and great capacity. At the age of about four weeks we had a place fixed so the pigs could eat out of a small trough which the dam could not get at, and by six weeks old they went right on and scarcely missed their mother.

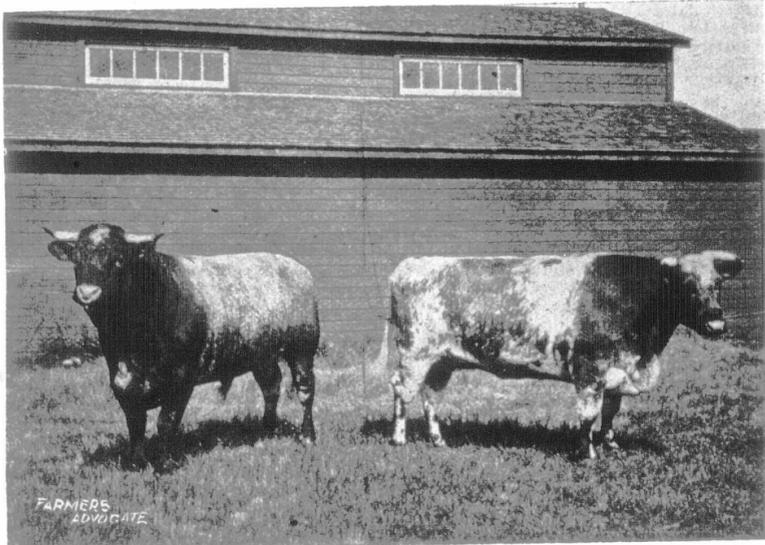
We fed skimmed milk and shorts until about the first of May, or till the pigs were about two months and a half old, and from that on wheat chop (ground fine) and whey. They were fed six feeds every day. Quantity—what they would eat up clean. We watched that they ate up everything clean. If some was left we slacked the feed, and then increased it as the hogs grew. We put their shorts or chop in their troughs dry, and put their drink on it every feed. During the cold weather, when they could not go out, we gave them dirt from the root-house and ashes and such like to keep them healthy.

The secret of success in feeding and raising hogs is to watch, be with them often, keep the rooms clean, give them dry beds, and see that they are always comfortable.

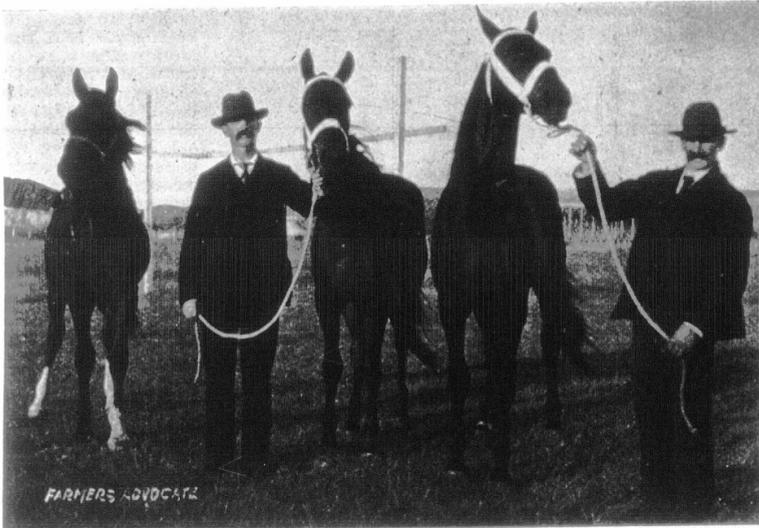
Dairy Cattle at Winnipeg Industrial Exhibition.

The dairy breeds were fairly represented in numbers, the exhibits being very creditable for a Province where dairying is, comparatively speaking, in its infancy. Notwithstanding the fact that there were some good animals brought out in fine condition, the larger number were a disgrace to any showing. People will not pay to see at an agricultural fair what they can see on any roadside, and several breeders are "penny wise and pound foolish" in not fitting the cattle of their favorite breed so as to make a favorable impression on those around the ring. True, feed has been scarce and high in price during the past year, but that is no excuse for an animal coming into the ring with her udder, flanks and hips covered with stable dirt. A little grooming and extra care will make a wonderful difference in a few weeks.

HOLSTEINS were out in full force, every section being well filled. Jas. Glennie & Son, Longburn, Man., had the largest number of entries. His cattle were well fitted, and carried off the lion's share of prizes. In the aged bull class there were three entries: John Oughton, Middlechurch, had the winner in Royal Duke 796, a massive bull of good dairy type, but off in his hind quarters. He is a son of the sweepstakes cow, Daisy Teake's Queen. The Munro Creamery Co. won second on Queen's Pride, another son of Daisy Teake's Queen, the third prize going to Sir P. J. DeKol, owned by A. B. Potter, Montgomery, Assa. In yearlings, with three entries out, Glennie won on his last year's importation from Gardiner's Wisconsin herd, Chief Mercedes DeKol; Potter second on Sir Becky DeKol. Glennie won on calves. The sweepstakes went to Royal Duke. There were six entries in the aged cow class, and Mr. Glennie came to the front again with Daisy Teake's Queen, an eleven-year-old cow that has always taken first in her class. She is an excellent type of a dairy cow, with a very fine udder,



TOPSMAN'S DUKE AND IMP. JENNY LIND 4th.
Sweepstakes bull, D. S. H. B. Ass'n special, over all ages, and sweepstakes female at Winnipeg Fair.
FORMER BRED AND BOTH OWNED BY J. G. BARRON, CARBERRY.



BOB KIRK AND PROGENY.
A trio of Standard-bred prizewinners at the Calgary (Northwest Territories) Fair.
OWNED BY W. R. STEWART, M'LEOD, ALBERTA.

ing addresses were delivered by Mr. Gould, M. P., Uxbridge, and Mr. G. M. Gibbs, Manager of the Port Perry Branch of the Canadian Bank of Commerce. Mr. Gibbs pointed out that the price paid for grain in Ontario is far short of what the care, labor, anxiety, and value of the land warrants. After a passing reference to the increasing interest taken in the displays of live stock at our leading exhibitions, and the success of the Ontario Provincial Winter Stock Show without any circus performance attachment, Mr. Gibbs proceeded to say to the young and progressive farmer that just in proportion as he intelligently pursues live-stock husbandry will his operations prove successful. "Just so long," said he, as "you cater to your live-stock interests, just so long will your fields teem with good crops and your pockets bulge with money. Statistics show that barley fed is worth from 80 to 90 cents per bushel, as against 40 to 45 cents marketed; oats a cent a pound or 34 cents per bushel, as against 20 to 30 cents on the market. Again, look at the loss if your products are held, as many farmers hold them, for better prices. Wheat shrinks 6 per cent. in six months; corn 20 per cent. from time of husking in four months, root crops from 20 to 33 per cent. if held over winter. Add to this, insurance, anxiety, loss of bank interest, or discount if you are a borrower, and it will not take much of a mathematician to figure out how much more profitable it will be to feed your products." Referring to the tremendous crop of wheat in Manitoba this season, he said that was the place to grow wheat. He referred with pride to the stock interests of central Ontario, and to such names as Davidson, who in pure-bred stock, and Leask, in grades, had earned an internation-

Now, as for letting them out, they were out every day (when the weather got warm enough), in the forenoon, in a small yard (just so as to get to the ground), and shut in the rest of the day until about four months and a half old. After that they were shut in close all the time. We enclose certificate of the buyer of these hogs, as to their weight, etc.

Scotland, Ont., July 25, 1901.
I have much pleasure in certifying to the extra quality of eight hogs bought to-day from L. Kelly & Son, of Kelvin. At five months and six days old the average weight was 206 lbs. The breed was Yorkshire and Cheshire.

O. J. Benedict.
Mr. Benedict is a buyer for Mr. Harris, of Bow Park. He buys only first-class hogs, and pays first-class prices. We received \$7.25 per 100 lbs.
LEMUEL KELLY & SON.
Norfolk Co., Ont.

The judging rings at the leading exhibitions furnish a good opportunity for young farmers to study the different breeds of stock, and to see the most approved type in each breed as placed by the judges, who, as a rule, are nominated by the Breeders' Associations, and are supposed to be competent experts and up to date in their ideas. There is, also, much to be learned from conversation with stock-breeders around the ring, many of whom are as capable judges as those officiating, and whose criticism of the work, though not always disinterested, may be helpful in arriving at proper conclusions. To one willing to learn and looking for light on the question of stock-judging, we know of no better school.

backed up by a strong constitution and a capacious breadbasket. The second and third also went to the same owner. In three-year-olds, Glennie first, Potter second, and Oughton third. The section for two-year-olds brought out a grand heifer of Potter's that won "hands down," and if nothing happens will cause a shaking up in the older classes in a few years. Glennie got second and third. Potter also won in yearlings, Glennie on calves. Glennie won the herd prize, female sweepstakes, and all the group prizes.

JERSEYS.—There was a small number of Jerseys, but what they lacked in numbers was made up in quality. W. V. Edwards, Souris, was the chief exhibitor, and had it all his own way in most of the sections, taking first and second in aged cow class, and sweepstakes, also sweepstakes with his grand young bull, Artisan of Brampton, bred by B. H. Bull & Son, Brampton, Ont. Mr. J. P. McKibbin, Cartwright, showed a cow in the aged class that, had she been in milk, would likely have made it interesting for the others. A very fine heifer calf, bred by Mrs. Jones, Brockville, and owned by A. H. Hincks, won easily in her section, and gives promise of being something extra.

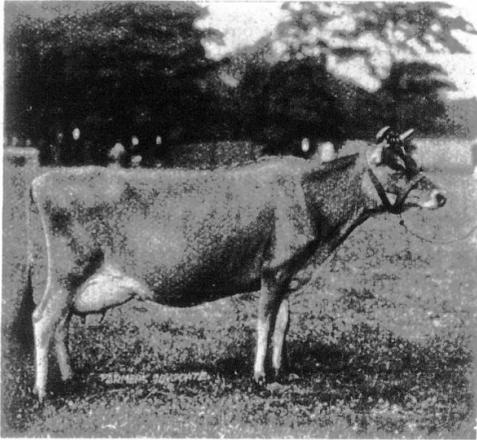
AYRSHIRES.—This class was well filled from the herds of Hon. Thos. Greenway, Crystal City; Wm. Smith, Scotland, Ont., and Alex. Wood, Souris. Mr. Greenway had forward Surprise of Burnside in the aged bull class, and won the coveted red ticket. This bull is a son of Nellie Osborne, of World's Fair fame, and displays dairy conformation in his powerful make-up, a son of his being second, and owned by Mr. Wood. The other bull classes were not well filled, the bulk of the prizes going to the Crystal City herd. The aged cow section brought out the two types of Ayrshires—the old and the new—all three prizes going to very fine cows of the Greenway herd. Mr. Smith came to the top in the

three-year old class with a grand heifer that could easily have stood more fitting. She has a well-balanced udder, with teats of the right length and neatly placed. Mr. Greenway had a very sweet two-year-old that made a close run for sweepstakes. All the herd prizes and sweepstakes went to the Prairie Home Farm Ayrshires.

The exhibit of grade dairy cattle was poor, except in the aged cow class. The Munro Creamery Co. won all the prizes in this class with three magnificent cows. The dairy breeds were judged by Mr. R. Reid, Berlin, Ont.

Points About Pork Production.

Growing pigs need plenty of exercise.
Feed to make muscle instead of fat.



JOLLY BROWN.

First-prize Jersey cow, Royal Show, Cardiff, 1901.
PROPERTY OF LADY DE ROTHSCHILD, TRING.

Preventing diseases is better than curing them. A breeding boar should not be kept fat. With growing pigs more grass or clover means better health and growth.

Individual merit is as essential as pedigree in a breeding boar.

It is the pig that is kept growing without being glutted or cloyed that pays best.

The pigs to be castrated should be attended to as soon as they are old enough to handle.

Sows that are expected to farrow an autumn litter of pigs should not be allowed to get poor.

Economy of pork production is to maintain good health with early maturity.

An important item in making cheap pork is to get the pigs to market as soon as possible.

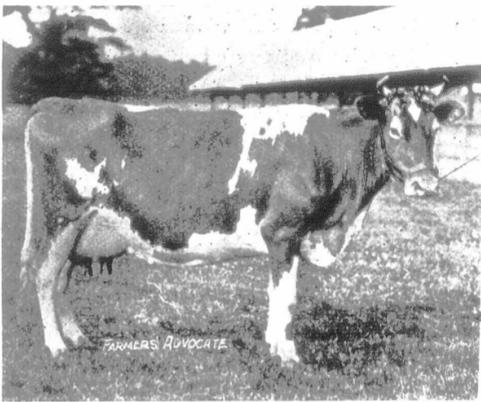
Feed the sows after farrowing upon foods calculated to produce a large flow of milk.

Growing pigs relish sweet and wholesome food much better than that which is sour.

There is no objection to making corn the staple food for hogs. The bad results come from making it the only food.

The success of a young sow with her first litter has much to do with her future value.

The first litter is always the hardest draft on the young sow; hence she should be given a rest.



CHARMONTE OF THE GRON.

First-prize Guernsey cow, Royal Show, Cardiff, 1901.
OWNED BY MR. E. A. HAMBR, HAYES PLACE, KENT.

The time of weaning must depend a good deal on the conditions of the sow and the quantity of the milk she gives.

After the pigs are weaned so far as possible, the sow should be put in a good gaining condition before being bred again.

Supply the pig with clean, fresh water in hot weather, and plenty of green feed if the grass is dry in summer, and with roots in winter.

Keep a good supply of ashes—three parts, and salt one part—where the pigs can have access to it. Burn up wood into charcoal, and allow the pigs to eat it, as they will do with a relish. The pigs seem to demand by nature earth substance for some purposes, and are much healthier when supplied with it.

FARM.

Honor for Agriculturists.

There is in France a National Order of Merit which is known as the "Merite Agricole," and year by year many farmers who have won distinction are decorated with it. They are, in a word, recognized by the State as men who have done good service in their day and generation. It is no answer that the Brothers Colling in improving the Short-horns, or Fisher Hobbs in improving the pig, made money by their sale; these men performed a service to their country, and through their country to the world, which could not be recognized in hard cash. In our own time hundreds of men have been engaged in the improvement of all our breeds of horses, cattle, sheep, pigs, and even poultry. Others have devoted their attention to methods of draining, forestry, and horticulture, to the production of improved varieties and larger yield of seed or plant, to investigation and research in relation to manures, to influence of climate, to physics of soil, to invention of implements and machines, to improvement of cottages, or to elevation of the laborer. It cannot be said that these men have been repaid by the profits which they have acquired, for it is notorious that in agriculture proper fortune-making is out of the question. If 99 farmers in every 100 can pay their way and live in some little comfort, it is as much as is expected, for even the adequate education of their families is next to impossible, in spite of the number of colleges which have now been established.

We call to mind the names of many men who devote time and thought and labor to agricultural affairs, and we ask what reward these men receive. They are, we hope and believe, impelled by a knowledge of the necessities of agriculture, and they step into the ranks of workers, or it may be into the breach, to act on behalf of other less thoughtful brethren. If a man is wealthy and expends his money wisely, even on agricultural lines, he may be honored with a title, and it is well that it should be so, but in this country honor is not for those who have not the advantage which money confers. In the North of England a society, now several years old, has enabled hundreds of poor men to acquire houses or land without the help of a single man of wealth or distinction. The brain which planned and carried out this work deserves honor, and its owner distinction. The producer of the homely potato—let us say, for example, the old Magnum Bonum or Up-to-Date—would in France receive the Order of Merit. In this country it is customary to suggest that virtue is its own reward, and that the honors of Government are quite unnecessary among a practical people like our own. Nevertheless, honors in the shape of titles and orders are nowhere so freely bestowed nor so commonly sought as in England, but they are reserved in chief part for a class, and of all sections of our people, agriculturists are those who are honored least, because, as a matter of fact, they are least covetous and exacting.

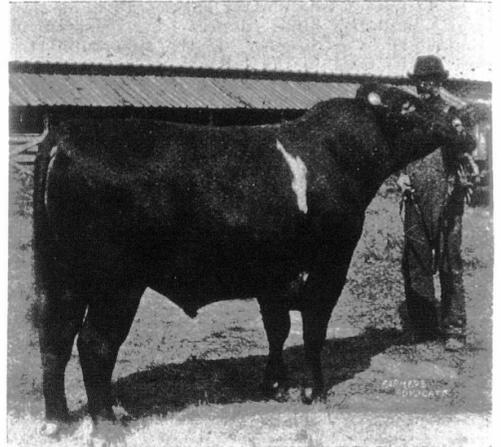
Public honor, so far as it is associated with the great middle or lower classes, depends in chief upon some relationship and officialdom. The titled and the wealthy have always friends in high places, and thus it is that claims, however small, are never forgotten, and that honors accumulate like idle money. In a few instances farmers have actually become temporary Justices of the Peace, but without any regard to their merit as cultivators of the soil or breeders of stock, and this fact proves the truth of our remarks, for it is only in connection with authority and Government, and not with material or individual merit, that honors are bestowed. The jolly good farmer who presides at the market ordinary and in due course becomes Chairman of the District Council and gets his J. P., like the popular merchant who becomes mayor or sheriff and receives a knighthood through the accident of a Royal visit, is, perhaps, to be congratulated—we say perhaps, for at bottom this form of honor is as hollow as it is ephemeral. Where, however, is the comparison between the recipients and those who in the quiet of life are working for the welfare of others? Many among us have lived to find that those who represent us in Parliament simultaneously misrepresent us, that their promises during every contest are broken with as little compunction as they were made, and that as far as they are concerned agriculture may die unhonored and unsung.—J. L., in the Farmer's Gazette.

Fat Cattle and Sheep in Algoma.

A valued subscriber of the FARMER'S ADVOCATE, near Iron Bridge, Algoma, Ont., writes us to know if something cannot be done for the farmers of that locality, who have lots of fat cattle and sheep to sell, but no buyers to take them? The latter, he says, come as far as Thessalon, where they get the impression that there is nothing worth going further for. He states that several carloads of good fat cattle could be got there now. Algoma is a particularly fine district for stock-raising. Some of the Toronto or other dealers who have local buyers there, or who send buyers to that part of the country, should get into communication with the Iron Bridge feeders. We trust they will find buyers at remunerative prices for their stock at an early date.

Corn and the Silo.

Corn is fast becoming a favorite crop in Canada, and an increasing number of our farmers and feeders are becoming convinced of its great value in the feeding of cattle and other stock. By experiment and the introduction of varieties suitable to the several districts, it has been found that very considerable areas in most of the provinces are well adapted to the maturing of the crop, and in many of these sections it is ripened and the grain used for feeding purposes in place of peas, which have long been the favorite fattening food for cattle and hogs in this country, but are now practically abandoned for a time in many parts owing to the depredations of the bug. In many portions of the country in which, owing to the

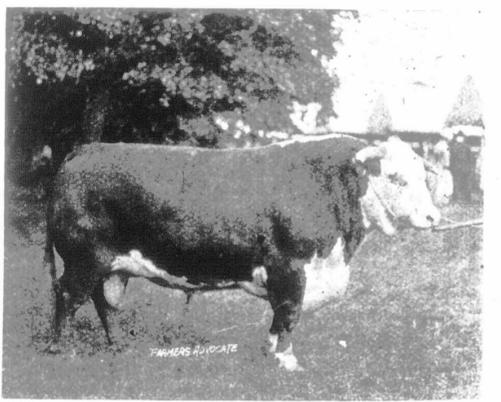


SIR COLIN CAMPBELL (IMP.).

At the head of the Shorthorn herd of Roderick McLennan, Moropano, Man.

nature of the seasons, corn fails to ripen satisfactorily, certain varieties have been found well adapted for silage purposes or for feeding green when pastures fail, or to be cured in field for winter feeding, coming so nearly to maturity as to make excellent and profitable feed for stock. Those who have not enough corn this year to make it an object to build a silo can make good use of what they have by curing it in the field and storing it (standing on end in barns) for winter feeding, while those who have five acres or more will find it a satisfactory and paying investment to build a silo for its preservation. The building of the silo need not be expensive. The round stave silo with iron bands will probably be found the cheapest, as far as present outlay is concerned, and it answers a good purpose, but cement concrete makes the most enduring and in all respects the most satisfactory silo. A silo of this description, 24 feet high and 13 feet in diameter, will hold about 70 tons of silage, or about five acres of an average crop of corn, which will be sufficient for 20 cows, or a larger number of young cattle, for six months, fed in conjunction with hay or other coarse fodder.

The labor involved in the harvesting of the corn crop may at first sight seem a serious problem, but where sufficient help is not present on the farm, or



BRITISHER.

First-prize and champion Hereford bull, Royal Show, Cardiff, 1901.

PROPERTY OF MR. E. FARR, PEMBROKE.

cannot be conveniently secured, the principle of co-operation between neighbors in the exchange of work has been found to work out satisfactorily. In many neighborhoods co-operation has extended to the purchase by two or more farmers of one or more of the improved corn harvesters, which cut and bind the crop in bundles, and which have proved a decided success, and these, together with the blower attachment to the ensilage cutter, make short work of each man's corn harvest, putting in, where two harvesters are at work in a field, from 80 to 100 tons in a day. Where these improved facilities are not available, patient persistence, with such help as can be had, will dispose of the harvest usually within a week, and the quality of silage will be just

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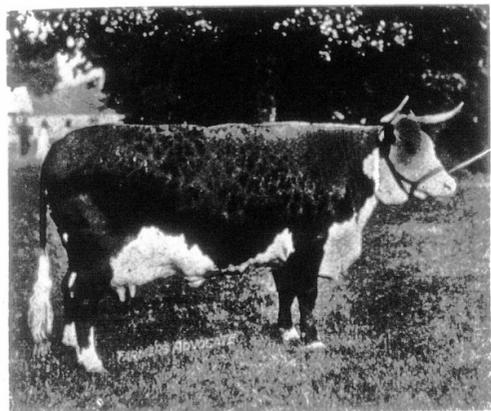
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as good as if put in in one day. Where an engine is hired to drive the cutter, of course it is economy to get help enough to finish the work in a day or two. An important point to be observed is the mixing of the silage by the man in the silo and keeping it high on the outside and well tramped there.

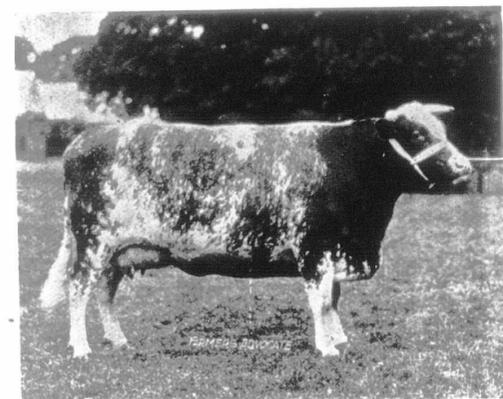
It is well to harvest the corn when it is sufficiently matured to make the best silage, which experience has taught is when the kernels on the cob are well glazed, or in what is commonly known as the roasting stage. In order to have it reach this stage before frosts come, it is necessary to plant varieties that have been found to mature early in the district. It has been proved beyond a doubt that the quality of the silage made from matured corn is vastly better than that obtained from green, immature corn, usually the result of being too thickly sown,



DAINTY 10th.

First-prize Hereford cow and female champion, Royal Show, Cardiff, 1901.
OWNED BY MR. R. D. CLEASBY, BRECON.

which develops an excess of acid in the silo and produces sour silage. While frost certainly does not improve the quality of silage, we believe it is a mistake to hurry the harvesting of the corn, if it is green, in order to escape the frost. We would prefer to risk the exposure to frost in hope of securing more maturity in the crop, as we have known instances where the leaves had been whitened by frost and when dry would grind into powder, and yet the corn made sweet silage of excellent quality. The leaves are the poorest part of the plant for feeding purposes, and are no great loss, though, of course, the crop being well matured, it is preferable to secure the leaves in succulent condition. Two years ago the writer saw a 12-acre field of corn, in the Province of Quebec, that looked to be good for 20 tons an acre, being harvested in October and put into the silo by the use of a small gasoline engine. We were since informed that it was the middle of October before it was all in the silos, and that it made excellent silage, although frost had tried it repeatedly before it was all harvested. If from being frozen, or from unavoidable delay in harvesting, or other cause, the stalks and leaves become very dry, it is wise, and indeed necessary to good silage, that water be sprinkled on it as it goes into the silo, which is readily done, where the blower is used, by placing a barrel with a spigot alongside the drum of the blower, near the wind hole, and the



WARRIOR QUEEN.

First-prize Shorthorn cow, Royal Show, Cardiff, 1901.
BRED AND OWNED BY CAPT. W. H. O. DUNCOMBE, WARELEY PARK, HUNTS.

suction will take in the water and distribute it evenly. Cover the silage with cut straw or green clover to exclude the air, or water the top well and sow oats on it, which will grow and form a mass of roots and leaves that will serve the same purpose.

Cannot Do Without It.

DEAR SIRS,—We are all well pleased with the FARMER'S ADVOCATE, and would not think of doing without it. There is no paper that suits the farmer as well as the ADVOCATE. Wishing you every success, I remain,
Yours truly,
Grey Co. ROBT. G. DUNCAN.

To Combat the Hessian Fly.

In an emergency bulletin issued last month by Professors Roberts, Slingerland and Stone, of Cornell University Agricultural Experiment Station, on the Hessian fly and its ravages in the State of New York, the authors state that experience with a three-years siege of the fly some 40 years ago, together with this year's experience, lead to the following conclusions:

1st. That wheat-raising need not be abandoned, but the number of acres should be reduced until by reason of such reduction every acre sown will be raised under superior conditions.

2nd. That the soil must be so well fitted and so fertile that a strong, healthy growth will be secured in the fall, though the sowing of the seed be delayed 10 to 15 days beyond the usual time. Such preparation of the soil will also help the wheat to recover from the winter injury.

3rd. That the Hessian fly injures the wheat more on dryish and poor land than on moist but well-drained, rich soils.

4th. That thick seeding and vigorous growth tend to ward off the fly.

5th. That the resisting power of varieties varies greatly. Those with large, coarse, strong straw are less liable to injury than weak-strawed and slow-growing varieties.

6th. That there were at least six varieties grown in the State this season that were not appreciably affected by the fly, though numerous other varieties in the same neighborhoods were much injured. Of these only Dawson's Golden Chaff has been tested at the station, and this has been found to be a superior wheat for general culture. The other resistant varieties are Prosperity, No. 8, Democrat, Red Russian, and White Chaff Mediteranean.

7th. That farmers in this State cannot be induced to cut and burn stubbles with a view to destroying the insect, since the practice of seeding to grass and clover is almost universal, and burning the stubble, if possible to do so, would destroy the young meadow plants. Work is too pressing also in midsummer to justify destroying the volunteer wheat that comes from the harvest shatterings. Much may be done, however, by sowing early in August, one or more strips on the side or sides of the field. The plants on these strips come on early and form ideal conditions for the laying of the eggs of the fly. Later, after the remainder of the field has been sown, the strips are plowed deeply (using a skim or jointer attachment to the plow), fitted and sown. This preventive measure is about the only one which is worth considering in addition to the late sowing of hardy varieties on well-fitted, naturally fertile soil, or soil made fertile by the liberal application of farm manures and commercial fertilizers.

Much stress should be laid on the proper fitting of the land for wheat. Plowing should be done early—at least six weeks before sowing—to give abundant time for repeated working of the soil in order to recompact the sub-surface soil and secure a fine but shallow seed-bed in which there has been developed by tillage and the action of the atmosphere an abundance of ready, available plant-food. Manures and fertilizers should be kept near the surface and the young roots encouraged to spread out in the surface soil, thus avoiding much of the damage by heaving in winter and leaving the deeper soil for a fresh pasturage for the plants during the following spring and summer.

Unfortunately, it is not possible to give a uniform date for seeding in New York which may be relied on year after year, as such abnormal weather conditions as existed last year upset all calculations which one might deduce from the latitude and altitude of a place. From experience, many New York wheat-growers have learned that wheat sown after the 20th to the 25th of September is usually much less infested with the Hessian fly. Hence, we advise our farmers to fix this date in their minds, and we feel sure that if one can get his neighbors to hold off seeding until about this date, he will win against the fly many more years than he will lose.

Co-operation against the pest.—It is very important to get neighboring farmers to co-operate in late sowing, for one infested field of early-sown wheat may furnish flies enough in the spring to work serious injury in nearby fields. The unusual destructiveness of the pest during the past season should discourage no one from continuing to grow wheat. One must take risks in growing any crop. Sow as late as your local conditions will permit, sow intelligently in a well-prepared seed-bed and on good soil, get your neighbors to do the same, and you will circumvent the Hessian fly nearly every time.

Notes on other methods.—A method which is often recommended, but, unfortunately, little practiced, is to sow narrow decoy strips of wheat about September first or late in August. Many of the fall brood of flies emerging from the midsummer "flax-seeds" will be decoyed to lay their eggs on these strips, and their progeny can be destroyed by plowing under the decoy plants; do not let the decoy strips stand more than four weeks, or but a few days after sowing the main crop.

There is no way of getting at the spring brood of the insect, except to destroy the crop by plowing or cutting for fodder. And the use of insecticides of any kind would be impracticable in a wheat field, even if one could thus poison or otherwise kill any stage of the insect, which is very doubtful.

The pest must be fought by an intelligent appli-

cation of farm practices based on a knowledge of the habits of the insect. A prominent entomologist, Prof. Webster, of Ohio, who has studied the Hessian fly for fifteen years, says he believes that four-fifths of its injuries may be prevented by a better system of agriculture.

The Root Growth of Plants.

The North Dakota Experiment Station has made a special study of the root system of growth of various grains and roots as indicating the nature of the cultivation that should be applied:

CORN ROOTS.

"Several samples of corn roots have been taken at different stages of growth. Thirty days after

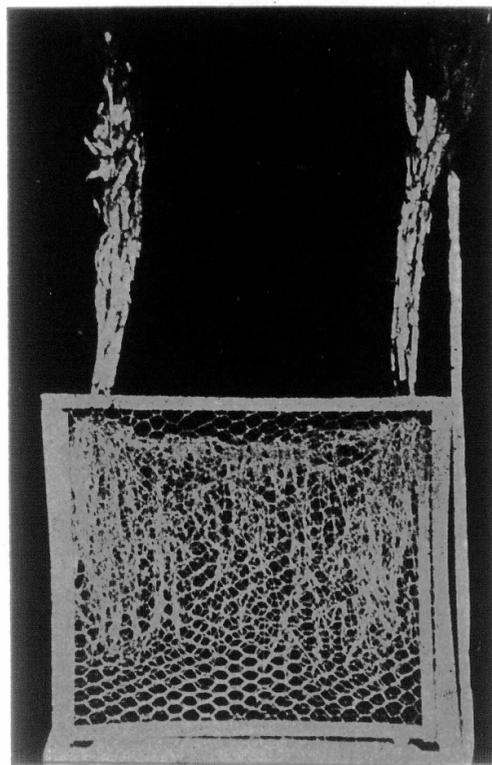


FIG. I.—Showing distribution of roots between two rows at end of growing season. The corn was frosted 90 days after planting.

planting, at the second cultivation, the roots from adjacent hills (hills three feet apart) already meet and interlace. The main development in the early part of the season is laterally or to the side. A few roots have reached a depth of twelve inches, but the bulk of the growth is within eight inches of the surface of the ground. Six inches from the hill the main roots lie within two and one-half to three inches of the surface. Midway between the hills they have reached a depth of four and one-half inches. Deep cultivation even at this stage of growth would have injured the roots.

"The sample of corn roots taken fifty-five days

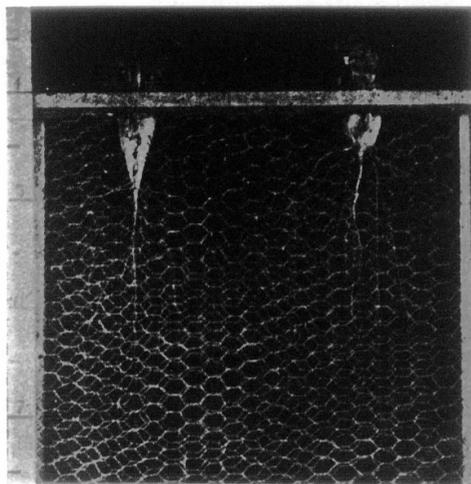
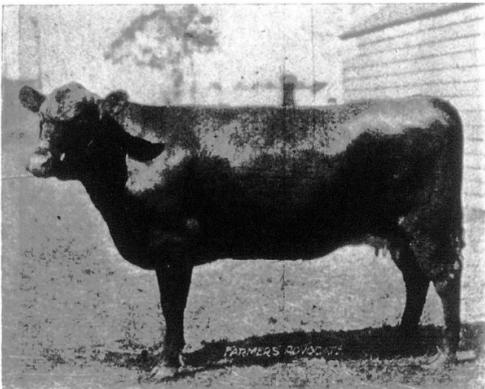


FIG. II.—Sugar-beet roots at maturity on ground plowed six inches deep, but not subsoiled.

after planting, at the last cultivation, shows that at this stage the main roots have penetrated to a depth of two and one-half feet. The number of horizontal roots has increased and their length is much greater, many extending now from hill to hill (three feet eight inches apart), inclining most of their length, but finally, at about three to three and one-half feet from the hill, they dip often almost vertically downward. The horizontal roots, as well as the vertical, send out numerous branches and small feeders in all directions. Many vertical branches from the horizontal roots have penetrated

the hard layer of soil beneath the furrow slice and have already reached depths almost equal to those of the primary vertical roots. The branches in turn give off other branches, and these produce fibers and root hairs so that the whole soil at this stage of growth to the depth of two feet was practically filled with roots. In this sample the main roots were three inches from the surface of the ground at six inches from the hill and about four inches below the surface midway between the rows. Numerous feeders or small, fibrous roots were noticed in washing, within two inches of the surface, and some were caught on the wires. After corn is ten inches high, it should not be cultivated deep. A sample of corn roots taken after the corn was killed by frost, ninety days after planting, showed that the whole field to the depth of three



DORMOUSE.

First-prize and champion Red Polled cow, Royal Show, Cardiff, 1901.

PROPERTY OF MR. J. E. PLATT, BEDFORD.

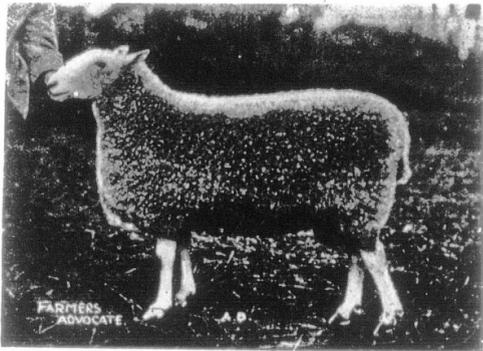
and a half feet was fully occupied by the roots. (See Fig. I.)

SUGAR-BEET ROOTS.

"The root system of the sugar beet differs from that of any of the other plants studied. The vegetable itself is really the enlarged upper part of the taproot which extends almost perpendicularly downward into the ground, becoming rapidly smaller in diameter in the upper part of its course, the lower part being quite small and threadlike, and reaching, in several samples, a depth of over three and one-half feet. From this central root, branches spread outward and downward into the soil on all sides. The upper main branches are the largest and extend outward almost horizontally for more than two feet. Those deeper down incline more and more until the last branches run nearly parallel to the taproot. The diagram (Fig. II.) merely represents the skeleton of the root system."

Attributes of Alfalfa.

It is stated that millions of dollars are annually added to the wealth of arid portions of the Western States through the growing of alfalfa for feeding animals, and that it has added immensely to the production of honey in those sections—that each blossom has its honey, and that the bee in gathering it, spreads the pollen which fertilizes and gives



BORDER LEICESTER.

Shearling ram. First prize and champion of the breed at the H. & A. S. Show, Inverness, and Royal Northern Show, Aberdeen, 1901.

BRED AND OWNED BY DAVID HUME, BARRELEWELL, BRECHIN.

to the plant a superior quality and more vigorous growth, particularly the power to produce seeds.

It has been demonstrated that alfalfa does not seriously exhaust the strength of the soil, though it produces a series of crops each year without the introduction of fertilizers, which shows that its growth in large part is from drafts upon the atmosphere.

It is a truth demonstrated by the whole human experience that the fertility of the soil is much sooner exhausted in wet than in dry countries, which is philosophical. An abundance of water carries the fertilizing elements downward or causes them to evaporate, when in periods of what may be called droughts, or in dry countries, the tendency of moisture is towards the surface, bringing with it the elements that contribute to vegetable growth.

Alfalfa at Annandale—A Great Crop for Pigs and Cows.

To the Editor "Farmer's Advocate":

I would like to tell you some of my experience with growing and feeding lucerne or alfalfa. As there is at best very little of it grown in Canada, farmers know very little of it, and as I have now had ten years' experience with it. I am getting pretty well posted as to the best way of growing, harvesting and curing it; and also its good qualities as feed for both hogs and cattle, particularly milch cows. I think it one of the best, most valuable and most economical forage crops we can grow, either for soiling or for cured hay. It is the greatest milk producer of any fodder grown on our farms, and produces the greatest crops—three to four good crops in one season. I have cut two crops this season, and now have a third crop two and a half feet high, standing as thick on the ground as possible—the most beautiful clover crop you ever saw. The first cutting, May 20; second cutting, July 1; third cutting, Aug. 9; expect a fourth in Sept. First cutting, 7 tons per acre (green weight); second cutting, 4 tons; third will go 7 to 8 tons; fourth, can't say how much, probably 4 to 5 tons. Second cutting was after a long dry spell, and it did not do so well as the first and third crops. I cut a field for cured hay about the middle of June, 2½ tons dry hay to the acre; a second crop now (Aug. 10th) as good or better, and will have a third crop, making 7 to 8 tons per acre.

The above was seeded down last year. I have seeded down six acres this season—the finest and most beautiful growth I ever saw—clean and nice. I cut it once about the middle of July, and will soon cut it the second time. First cutting I left the greater part lying spread over the ground for a mulch, but some of it was too heavy, so took it off for feed. About the last of August I will have to cut it a second time, and will get a very fair crop. This is great for this summer's seeding—the best I have ever had. I am always learning and improving in my way of managing it. It seems to be a very difficult matter to get it well started. Not one in a hundred can succeed with it at first, and so many give it up as a failure. I have held on and kept at it until I have learned how to manage it. The great secret is in knowing how to prepare the land, when to sow, and how much seed to sow per acre. The land must be thoroughly cultivated and worked the year before, and again early in the spring before sowing, so as to kill all weeds and have a fine seed-bed. I sow 30 lbs. seed to the acre, harrow, and roll well so as to pack the earth well down after sowing, and when six to eight inches high mow it so as to cut all weeds, if any; but cut it anyway, as it makes it root better and grow stronger. It never should be allowed to go to seed, as that would weaken it very much. For hay it is best cut as soon as it begins to show the blossom; cut later, it is not nearly so good for feed. For soiling, cut before it blossoms and cut often.

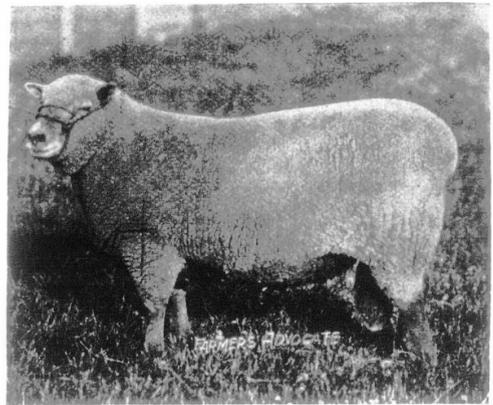
There is no better feed for soiling either cows or pigs. I feed my 300 pigs all they will eat of it every day, and they fairly love it—eat it ravenously, both young and old pigs—and it does them good; and the cows like it better than any other green feed, but we have so much old ensilage left over this summer we are feeding that to our cows. I have fed it all summer, and will continue to do so even with good or bad pasture. I have a new book on alfalfa (besides several old ones) which tells wonderful stories about alfalfa. The writer says that one ton of alfalfa hay (properly cured) is worth as much as four tons of timothy hay for milch cows, or two tons of red clover, and that a ton of the leaves is worth as much as a ton of wheat bran. If you feed your cows or pigs alfalfa hay in the winter, you do not require to feed any grain. Just think of it—five to six tons of alfalfa hay to the acre, and that worth as much as 20 tons of timothy hay! A big story, is it not? But this is what this Professor of Agriculture says in this new book. But even if it is one half as good as he says it is, and all the older books and professors say it is, it certainly is a good thing, and why do our farmers not grow more of it? If one had a few acres of it, he could cut it continuously all summer, from the middle of May to October, and feed his cows and pigs every day all summer, fresh and good, the richest and most convenient of any soiling crop, and the greatest growth to the acre.

I have fourteen acres growing this summer, and intend seeding down a lot more next spring. It should be sown as early in the spring as the ground can be got ready, but better sown later if the land is not in proper shape. It must have a good seed-bed. It requires a good deal of skill and patience to cure it properly for hay. It should not be dried too much in the sun, nor handled about too much, as the leaves, which is the best part of it, are so very easily shaken off one could easily lose one fourth to one half its value. In a dry day it should be tedded or shaken up an hour after cutting, and two or three hours after raked and raked and the cocks

covered over with cotton hay-caps, and then left standing two or three days or more so as to cure in the cock. This makes the sweetest hay I ever saw. It has a sweet, fragrant aroma, very pleasant to smell.

Now, this is my experience with alfalfa. I guess I must be a crank on this subject, but just let others come and see it for themselves and they will be convinced.

I am also on another experiment with soja beans. I think I have the finest field of them that was ever grown in Canada. They are now over three feet high and will soon be four feet high, and as thick as they can stand—the most beautiful sight in that line you ever saw. Last year they were just loaded with bean-pods filled



SOUTHDOWN RAM.

Two years old. First prize and champion, Royal Show, Cardiff, 1901.

PROPERTY OF THE DUKE OF RICHMOND AND GORDON.

with ripe beans right from the ground up to nearly the tops. We planted our own growing of seed this summer, and had a lot of nice beans left over. Our own seed grew better than the imported. We cut the greater part of it green and put it in silo. We are also experimenting with grass peas and Egyptian peas, and never had better corn.

E. D. TILLSON.
Annandale Farm, Oxford Co., Ont.

Ontario Wheat Growing.

"Shall Ontario farmers continue to grow wheat?" I believe they will for many years hence. My reasons for this belief are as follows: Scarcely a year passes that crops yielding 25 to 35 bushels are not harvested in some sections of the Province.

Ontario wheat possesses certain qualities which no other wheat possesses. It is true it does not produce as good bread-flour, used alone, as does Manitoba or Kansas flour. But it is far superior as a pastry flour. Manitoba-wheat flour is quite unsuitable for the making of biscuits and buns, which is no important factor in the products of flour.

The soil of Ontario is, I believe, as well fitted for wheat as the soil of Manitoba or Kansas; but it is older, and in many cases more worn-out



CLOVER BAR KING.

First-prize Berkshire boar at Edmonton, 1901.

THE PROPERTY OF T. SWIFT, STRATHCONA, ALBERTA.

than most of the prairie fields of the West, and must be built up by the growing of clover, the application of farmyard manure or special fertilizers, and a rotation of crops. I believe that the prairie soils will wear out as quickly as the soil of Ontario has worn out.

The Hessian fly is now perhaps the worst menace to our wheat-growing industry. The fly has made its worst ravages in this section of the Province, as the crops are not one-third what they should be. Late sowing in fall has been tried, with little or no success.

I believe the fly will flourish for some little time, but will disappear as quickly as it came. This has been its history of the past.

Oxford Co., Ont. JOHN H. ROCK.

Do Farmers Encourage Their Sons?

To the Editor "Farmer's Advocate":

Sir,—Your articles that I have read on "Do the daughters get fair play?" have roused me to ask the question, "Do farmers encourage their sons?" If you keep the sons on the farm, will the daughters need or wish to go to the city? No! They will be needed as helpmates some day to brighten the sons' homes. You go to most farmers' homes, and will you find a father who takes his son into his counsel and asks his opinion on his daily work? Do you find him sending his sons to the Agricultural College, Guelph, to see and learn agriculture, stock-raising, and dairying? Does he send him to the best fall and winter fairs, where he can see and study the best that farm and factory can produce? Does he ask him for his opinion on buying this breed of cattle or sheep, or working this field by some method different to what he has done? Does he give him an interest in anything on the farm to rouse his curiosity and interest to study and observe what is the best for that thing? I have seen enough of just the reverse to drive his son from the farm. If you enquire the reason you will find that in nine cases out of ten the father says: "Time enough yet for you to bother your heads. What do you know? You have had no experience. Wait until you are as old as I am, then you will know something and be able to give advice." Do we have to wait that long? What is more active and sharper in taking in everything than the brains of a farmer's son, who has an interest in everything he likes? He has ideas his father never thought of. Is there any harm to hear them? Canada sends men to different countries to encourage immigration. Fathers, go into the city and make an emendation. Migrate your sons back to the farm, and this fair land will need no foreigners. Give them an interest. Give them good literature to read, which can be procured so cheaply. Get the "Farmer's Advocate" and the books they offer. You will get more than 5 per cent. return on your \$1.00 invested. You will develop the ideas of your sons, who will govern this Dominion in the future. Send them to Guelph and good fairs, so they may study the line they are interested in. Let your farm be run as Brown & Sons, not Brown and his hired boys who never receive their wages. Farmers want their sons to be doctors, lawyers, druggists, or business men, which is all right, and proud we ought to be to know that the most of the best business men and doctors in our cities to-day, and representatives in Parliament, were one time farmers' sons. But because farming is hard work, should we go to the overcrowded city? What is more pleasant than working with Nature, where, no matter which way you turn, God's pure light is shining there. Fathers, don't drive your sons from the best part of God's earth—"The Farm"—but make them your partners, thoughtful, pure men.

York Co., Ont.

W. G. H.

Sugar Beets at London.

One of the "Advocate" staff, recently, in company with Mr. J. Sisler, of Aylmer, Government Inspector of sugar-beet growing in the districts of London and Alvington, visited a number of the 21 farms in the townships of Westminster and London on which one-quarter acre plots of beets are being grown from seed supplied by the Ontario Government, and from each of which ten average beets were taken, on August 22nd, for shipment to the Agricultural College, Guelph, for the first analysis for sugar content. The plots, with very few exceptions, were found in excellent condition, the beets looking healthy and vigorous and having grown and developed satisfactorily, the foliage, especially of those growing on clay-loam soils, looking exceedingly fresh, while on gravelly or light sandy soils, though the roots had made good growth, the leaves were, owing to the drought, considerably wilted, but if rains come soon will doubtless revive and produce satisfactory crops.

The growing of sugar beets presents no more difficulties than does the culture of mangels, and any land that will grow a good crop of mangels will, with the same preparation, produce a good yield of beets, with about the same amount of labor, the only difference in the treatment required being the sowing in rows closer together, and a larger quantity of seed to ensure a full and continuous row of plants, which should be thinned, or singled, to a distance of about seven inches apart in the row, the rows being 21 inches apart, and sown on the level. The object is to have the foliage when nearing maturity almost completely covering the ground, a condition which is said to contribute to the highest percentage of sugar content in the beets.

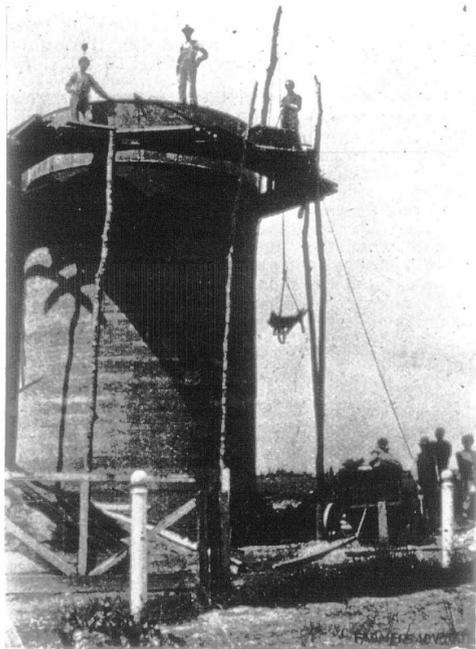
The improved variety of sugar beet, unlike the mangel, grows and develops below the surface of the ground, and cultivation should be such as to keep the beet covered by the soil to the very crown, the exposed parts being almost if not quite devoid of sugar. The improved sugar beet has no straggling rootlets, but a single straight taproot which runs down deeply into the ground,

finding moisture if any be present, and being thus prepared to resist the effect of drought to a large degree. The secret of success in the culture of this crop is the frequent stirring of the soil when the plants are young, to kill all weeds while they are small, and to thin the plants properly, at the proper time. This time, fortunately, comes between seeding and haying, when other farm work is not pressing, and the same may be said of the season for harvesting the roots, which is in the first half of October, as a rule. We believe it is beyond doubt that the experimental plots being cultivated this season will prove that large areas of the Province of Ontario are admirably adapted to the production of the sugar beet to a high degree of perfection. The preparation for next year's crop should be commenced in the present month by plowing and cultivating the land to secure the germination of as many weed seeds as possible, and by applying manure where it is needed and can be had. Clover sod on land in good heart, plowed at this season, well worked on the surface during the fall months and ridged up before winter, to be levelled by cultivation in spring, will make an ideal preparation.

A Commission on Agricultural Education.

In accordance with the intimation made last session by the Minister of Agriculture, Mr. R. P. Roblin, a commission has been appointed by the Manitoba Government to report on the advisability of a provincial agricultural college. The following is a report of the committee of the executive council, which was approved on Aug. 1st:

The honorable the president of the council submits to council a report setting forth:



CIRCULAR CEMENT-CONCRETE SILO, BUILT FOR MR. GEORGE LETHWAITE, HURON CO., ONT.

Whereas the Province of Manitoba possesses a large area of arable land, an intelligent cultivation of which it is desirable to foster and encourage;

And whereas it has been urged upon the attention of the Government that great benefits would accrue to those at present engaged and hereafter to engage in agricultural pursuits by establishing and conducting within the Province a college or institution wherein scientific and practical knowledge, applicable to agriculture, would be afforded

And whereas the question of establishing and maintaining such an institution, together with its radiating benefits, is one involving and connected with the good government of the Province, and the conduct of part of the public business thereof, and it is desirable, prior to action being taken in the premises, that the fullest possible inquiry be made with regard thereto, as hereinafter provided.

On the recommendation of the honorable the Minister, the committee advise:

1.—That pursuant to provisions of chapter 22 of the Revised Statutes of Manitoba, a commission be issued, addressed to the following named persons, that is to say: Reverend Principal Patrick, J. A. M. Aikins, K. C., the Hon. Thos. Greenway, Harvie C. Simpson, of Virden; George H. Halse, of Brandon; John S. Miller, of Manitou; and Harry Irwin, of Neepawa, for the purpose of inquiring into and reporting upon:

(a) The wisdom and advisability of establishing and maintaining an agricultural college in the Province of Manitoba.

(b) The best method of conducting or operating such an institution.

(c) The probable cost thereof.

(d) Such matters or things connected with or growing out of the subject of inquiry as will afford to the said commissioner the fullest possible information and material to enable them to report fully and comprehensively upon all and singular the premises.

2.—That power and authority be conferred upon the said commissioners to summons before them any party or witnesses, and to require them to give evidence on oath, orally or in writing, and to produce such documents and things as they may deem requisite for the full and complete inquiry and report upon the subject matter aforesaid.

3.—That the said commissioners shall at their first meeting appoint one of their number to be and to act as chairman of the commission during the sittings thereof.

4.—That the said commissioners report to the said Minister upon the subject of inquiry (transmitting at the same time all the evidence taken and information derived) with all reasonable and convenient dispatch.

5.—That the commissioners, subject to the approval of said Minister, be empowered to employ such clerical or other assistance as may be necessary.

6.—That the said commissioners for their services be each paid a sum equal to the amount respectively expended for travelling, living, and other incidental and necessary expenses.

Brandon in Line for an Agricultural College.

A meeting of the Brandon Farmers' Institute was recently held for the purpose of discussing the advisability of establishing a provincial agricultural college, and to consider the best location for such an institution. The principal speakers were Dr. McInnis, M. P. P., Prof. Wolverton, Mr. G. R. Caldwell, and Mr. Finlay, principal of the city schools. Each of the speakers strongly urged the need of higher education for the farmers' sons and daughters. Dr. McInnis thought that a building suitable to the requirements of the Province would cost about \$100,000, and that \$40,000 would be required for annual maintenance. The desirability of having such a college located at Brandon was strongly urged by the speakers, and before the meeting adjourned, the following resolution was passed: On motion of Alderman Caldwell, seconded by Prof. Wolverton,—That, in the opinion of this meeting, it is altogether desirable to establish an agricultural college in Manitoba, and that it should be located in the vicinity of the Experimental Farm at Brandon, that place offering the greatest advantage for that purpose; that a petition be prepared by the Farmers' Institute, and signed on its behalf by as many farmers as can be got, embodying the above resolution, and forwarded to the Minister of Agriculture of Manitoba and of the Dominion; that the Brandon Board of Trade and City Council be asked to co-operate with the Farmers' Institute.

A Model Silo.

We present on this page an engraving made from a photograph of the circular cement concrete silo built this summer on the farm of Mr. George Lethwaite, of Huron County, Ontario. The silo is 30 feet high and 14 feet in diameter. It required 30 barrels of Beaver Portland cement. The work was done by Mr. A. E. Hodgert, of Exeter, and occupied the time of four men 8½ days in building it. The cement was mixed in a Hodgert mixer, one part cement to 12 parts sand and gravel. Steel rings were used, 14 feet in diameter by 2½ feet high. The cement was placed in the first ring, and then a second one was placed on top and filled while the first was setting. As soon as the second ring was filled, the first one was unbolted and hoisted by four men with ropes. Doors were put in every 2½ feet; size of doors, 2½ feet wide by 3 feet high. The holes for the doors were made by inserting a wooden frame, until the cement set, and on the inner side of the silo the frame was made about two inches the largest so that when the doors are put in they will be flush with the surface. The roof is to be of galvanized iron. The cement cost at Goderich \$3 per barrel.

Prizes for Photographs.

In our Home Department of this issue, several handsome prizes are offered for the best amateur photographs of country scenes. We direct the attention of all interested in photography to this interesting competition, the conditions of which should be carefully read. We trust that many will compete.

So They All Say.

DEAR SIRS,—I have taken your paper for nearly nine months, and never had a paper that I was so delighted with. Am sending you a few names to send the paper to.

WALTER E. HOOKER.
Bury Co., Que.

Our Scottish Letter.

After an abnormally dry season, farmers are now busy harvesting. The weather has broken, and heavy thunderstorms have been general throughout the country. This has retarded harvest work, but greatly facilitated the growth of the root crops and grass. I saw some magnificent fields of turnips on very high land in the historical territory of Sheriffmuir to-day, and the rain has come in time to put heart into the buyers at the store-lamb sales. The future of this trade may not be as bright as it was last year, but it is certainly ever so much brighter than it was a month ago. Foggage is scarce in the South, and English buyers are not operating to any appreciable extent at the sales. Scottish buyers are, however, doing their best to make up for their absence, and prices are going the right way for all parties. They are, however, much lower than last year's rates, and in no case can the flockmaster expect a bright year. The grain crops have a heavy head, but straw is bulking poorly, and the self-binders are at work everywhere. Had the rains and storms kept away, this would have been an ideal year for the self-binder, the straw standing well up and not too heavy.

The autumn so far has been fruitful in meetings of all kinds of learned institutions. By far the most notable of these events, from an agricultural standpoint, was the Congress on Tuberculosis, which met in London. Your Professor MacEachran was one of the members, and aired his well-known views on tuberculin and the test conducted by its means. The great event of the Congress, however, was Dr. Koch's startling announcement that bovine tuberculosis and human tuberculosis are not the same disease; that the disease is not communicable from animals to man. It would be impossible to exaggerate the consternation to which this wholly unexpected deliverance has given rise. It is right in the teeth of every kind of accepted theory on the subject, and no one can tell where it may lead to. For one thing, if it were established as a correct thesis, the alarms of the past few years would soon subside, and saner counsels bear sway in all communities. Dr. Koch's view is flatly opposed to current ideas, and should it prevail, it will follow that much restrictive legislation will need to be revised, and not a little harassing of the agricultural interest will be mitigated. At the same time, few hereabout are prepared to accept the new theory as an accurate representation of the case. The need of accurate and independent experiment is everywhere recognized, but our Government is terribly slow to take action in connection with such matters, and in the end we will likely be indebted to Southern parties for anything we may know of a definite and conclusive character. One good effect of the deliverance has been to moderate the demands of unreasonable inspectors. Some of them are prepared to maintain that they know better than Koch, and no doubt the German scientific man is scared, but, altogether, he had a cordial reception, and the Congress of 1901 adjourned without doing anything very special or making recommendations which may be generally followed. A Veterinary Congress has also met in Edinburgh, and very much the same kinds of subjects have been dealt with in the North as in London. The most notable answer to Koch so far has come from Professor MacFadyean, the head of the Royal College of Veterinary Surgeons. His analysis of Koch's reasoning is admirable and leaves us in no doubt as to the precise effect of the work in which local authorities here are engaged when endeavoring to combat tuberculosis. That work must go on, as it has mainly been directed to improving the sanitary condition of byres and their surroundings. Cleanliness and fresh air are indispensable to successful dairying, and they are also inimical to this disease. The moral, therefore, is, relax no effort to put milk on the market of absolute purity, and rest assured that healthy bodies are the best protection against this disorder.

When the Hon. Sydney Fisher arrived here some time ago, he intimated that he was prepared to give full information to all parties regarding the health of cattle in Canada, and he specially emphasized the fact that there is no pleuro-pneumonia in Canadian cattle. The parties chiefly interested have, since the date of this information, been very active in working up an agitation in favor of repealing the Act which made it impossible to import store cattle from over the sea. The most formidable aspect of the movement has been presented this week, when a meeting of representative farmers from the feeding districts, with members of the Harbor Trusts of Glasgow, Dundee and Aberdeen, and Canadian ship-owners, was held in the City Chambers, Glasgow. It was a well-conducted meeting. Lord Provost Chisholm presided, and the meeting had a kind of official status, having been organized by the sub-committee of the Local Authority of the City of Glasgow. The farmers who spoke are well known for their advocacy of advanced economic measures in land-holding and cultivation, but they rather overstated the case in favor of the Canadian stores.

Readers of this letter will be interested to know what prospect there is of the status quo being modified to meet the case of Canadian cattle. It would be folly for me to deny that in my opinion no hope whatever need be entertained that the Act of 1896 will be meddled with. It is generally admitted that Canada has a clean bill of health, and that the restrictions might be removed tomorrow so far as Canada herself is concerned. The difficulty is that no one seems able to see how it would work to differentiate Canada from the rest

of the world. Except on grounds of high political expediency no reason exists for differentiating, and breeders in Canada would do well to abandon all idea of reviving the trade in stores. Although they are as a rule wealthy farmers in good districts who favor the introduction of Canadian stores, they are in a hopeless minority, and the overwhelming proportion are breeders who desire the security which the Act gives of immunity from disease, and this enables breeders to extend their labors in that particular direction. There is a big market here for all kinds of fat cattle, and Canada seems to be making a good job of sending such to this country. Let her adhere to this trade, which hits our farmers sorely enough, but they must bear that. It will take very strong evidence indeed to convince the British Parliament that it should repeal an act passed in 1896 at the expiry of five years.

"SCOTLAND YET."

DAIRY.

Lessons from the Model Dairy.

The subject receiving most attention at present in the model dairy barn, Pan-American Exposition, is that of TWO VS. THREE MILKINGS A DAY. Since the falling off in milk flow incident to the excessive heat and flies, as well as to the natural shrinkage from advanced period of lactation, it is the belief of every herdsman in the barn that two milkings only would be conducive to better results, in that the animals would have more opportunity to rest in the evening when the noisy throng of people is gone and the flies least aggressive. More time to rest and make milk would seem better so long as the total quantity given for the 24 hours is not enough to be burdensome or painful when carried for one-half that time. Besides, it would seem more reasonable to conduct the test on lines practicable by the dairy farmer rather than on lines of an occasional test for high records.

Canadian authorities in charge of the test claim that the owners of all cows from that side wish their cows milked three times a day throughout the test, and orders have been issued to the herdsmen accordingly.

It would seem to the writer, however, that some of these owners have not been made acquainted with all the circumstances and conditions at the model dairy, or they might feel differently about it.

Some of the American herdsmen would have gone over to two milkings some weeks ago, except for the fact that this plan would increase the duties of the men who weigh and sample the milk, so long as some continued the three milkings, and the good-will and courtesy existing among all the herdsmen tended to delay any change which might disturb any neighboring herd in the barn at an unusual or unnatural hour.

Up to a short time ago there was some assurance of a change to two milkings by all, but with this gone, some of the American herdsmen have finally made the change. About a week ago the Polled Jersey herdsman began milking one cow only twice, with such satisfactory results that yesterday (Aug. 21st) the Dutch Belted, Brown Swiss and Polled Jersey herdsmen adopted the plan with their full herds, and one Guernsey cow was put in the twice-a-day plan.

The yield of milk from these herds for the day has been quite satisfactory, and it is not at all unlikely that all the Americans will have adopted the plan by another week.

For nearly three weeks the weather has been very favorable to man and beast, until Tuesday, the 20th, when the hot wave struck us. The cows are suffering a good deal from the heat and there is quite a noticeable loss in milk in consequence. As was observed in previous hot spells, the lactometer tests show a less per cent. of solids not fat in milk, the drop being quite striking in some cases.

THE COMPOSITE TEST.

The men in charge of the testing department have for some weeks been carrying on a series of tests of each milking of the five cows of some herd for a full week corresponding with the week for which the composite test is accumulated. The latter method being the official one in this test, it is interesting to note how nearly this agrees with the fat for the week as shown by the sum total of products of milk and test for the 21 milkings of the week.

This work has been completed for a week with each of the following breeds: Shorthorn, Holstein, Ayrshire, Jersey, and Guernsey.

Besides the data thus furnished to further establish the correctness of the composite method of sampling (when properly done), the tables will be interesting in showing the variations and fluctuations in per cent. of fat from day to day and milking to milking.

The publication of these tables by a paper which reaches such a number of dairy farmers and patrons of creameries should be of great practical value, as the composite method of sampling and testing milk is the usual one in creameries and cheese factories.

For the herd of five Ayrshire cows the total difference in yield of fat for the week when calculated by the two methods was but .26 lb. The method of testing each milking would mean 105 tests, while the composite required but five. Composite samples here are all tested in duplicate, and when a variation of more than one per cent. occurs another test is made from the jar. Up to date, from May 1st, in all the testing of the ten herds weekly, but seven cases have occurred where a second trial was required.

TESTS OF EACH MILKING FOR THE JERSEY COWS FOR ONE WEEK COMPARED WITH COMPOSITE FOR SAME PERIOD.

	Gipsy of Spruce Grove.		Primrose.		Queen May.		Rexina.		Mossy of H.						
	Lbs. milk.	Test.	Lbs. milk.	Test.	Lbs. milk.	Test.	Lbs. milk.	Test.	Lbs. milk.	Test.					
Aug. 7—noon	9.1	5.2	4.732	8.1	6.9	.5589	9.4	6.	.5640	10.6	5.6	.5936	10.1	5.2	.5252
—night	9.6	5.1	.4896	7.3	6.	.4380	8.7	4.7	.4089	10.	4.9	.4900	9.4	4.2	.3948
8—morning	10.4	4.1	.4264	9.9	5.8	.5742	10.9	4.5	.4905	11.4	3.7	.4218	11.7	3.8	.4446
—noon	10.4	5.1	.5304	8.8	6.5	.5720	9.5	5.6	.5320	10.	5.6	.5600	10.2	4.9	.4998
—night	9.1	4.8	.4368	7.3	5.4	.3942	8.4	4.7	.3948	10.3	5.2	.5356	9.9	5.	.4990
9—morning	10.8	3.8	.4104	10.1	5.3	.5353	11.1	4.2	.4662	8.5	2.5	.2900	10.9	2.6	.2834
—noon	10.	4.8	.4800	8.4	6.5	.5460	8.8	4.7	.4436	9.5	4.7	.4465	11.1	5.	.5550
—night	9.	4.	.3600	10.	7.4	.5400	9.3	4.8	.4164	8.4	3.8	.3192	9.1	4.1	.3731
10—morning	11.2	4.	.4400	10.	5.	.5100	10.5	4.3	.4515	11.4	2.9	.3306	10.8	3.1	.3348
—noon	9.4	4.6	.4324	8.3	7.	.5810	9.	4.6	.4410	8.9	3.5	.3115	10.6	5.4	.5724
—night	8.6	4.3	.3698	8.1	6.3	.5103	9.4	4.8	.4512	9.1	3.5	.3185	8.6	4.2	.3612
11—morning	9.6	3.7	.3552	8.8	5.6	.4928	11.1	4.5	.4995	10.9	2.9	.3161	10.5	2.8	.2940
—noon	9.9	5.6	.5514	8.	6.2	.4969	9.	5.4	.4890	10.6	5.9	.6254	9.2	4.2	.3864
—night	8.2	5.3	.4346	6.	4.6	.2760	9.1	5.2	.4732	8.7	5.2	.4524	9.4	5.	.4700
12—morning	10.3	3.6	.3708	10.8	6.5	.7020	11.3	4.6	.5198	11.4	3.7	.4218	10.2	3.4	.3468
—noon	10.3	5.9	.6077	7.4	6.9	.5106	9.6	5.4	.5184	9.7	4.6	.4462	9.4	5.2	.4888
—night	8.4	5.2	.4368	7.6	6.4	.4864	8.6	4.8	.4128	2.6	2.8	.0728	9.7	4.1	.3567
13—morning	10.8	4.1	.4128	9.	6.2	.5580	10.8	4.5	.4860	16.6	3.8	.4308	11.1	4.1	.4351
—noon	9.	4.8	.4320	4.8	4.1	.1968	9.3	5.3	.4929	10.7	7.5	.8925	10.6	7.3	.7738
—night	8.1	3.9	.3150	7.	4.	.2800	9.	4.8	.4320	9.3	4.8	.4464	9.4	4.8	.4512
14—morning	10.7	3.9	.4173	12.3	7.4	.9102	10.9	4.4	.4796	10.9	3.	.3270	10.6	3.8	.4028
Totals	202.9		9.2245	171.7		10.4937	203.7		9.8333	209.		9.0687	211.5		9.2619
Test computed from daily wt. and tests	4.541			6.061			4.822			4.32			4.38		
Composite test and fat from same	4.5	9.1305		6.1	10.656		4.85	9.8794		4.4	9.196		4.4	9.306	

TEST OF EACH MILKING OF AYRSHIRE COWS COMPARED WITH COMPOSITE METHOD FOR SAME PERIOD.

	Kirsty Wallace.		Lady Flora.		Betsy 1st.		Alice 2nd.		Pearl of Woodside.						
	Lbs. milk.	Test.	Lbs. milk.	Test.	Lbs. milk.	Test.	Lbs. milk.	Test.	Lbs. milk.	Test.					
July 31—noon	9.2	3.9	.3588	8.6	3.7	.3182	10.2	4.4	.4488	8.3	5.1	.4233	9.3	5.1	.4714
—night	9.9	3.5	.3165	8.4	3.6	.3024	11.	3.6	.3960	8.5	4.6	.3910	9.5	4.	.3800
Aug. 1—morning	12.9	3.6	.4614	9.6	3.4	.3264	13.7	3.4	.4658	10.4	3.6	.3744	12.1	3.4	.4114
—noon	10.6	4.	.4210	7.3	4.3	.3139	11.1	3.7	.4107	9.8	4.8	.4740	10.5	4.6	.4830
—night	10.	3.9	.3900	8.1	3.6	.2916	11.3	3.2	.3616	8.7	4.	.3480	10.3	3.8	.3914
2—morning	12.4	3.7	.4588	10.9	3.3	.3397	14.8	3.4	.5032	11.4	3.6	.4104	13.4	3.3	.4122
—noon	11.1	4.	.4440	8.9	3.4	.3026	11.	3.8	.4180	10.3	5.1	.5253	10.8	4.3	.4614
—night	10.7	3.8	.4066	9.6	3.4	.3264	11.7	3.6	.4212	9.3	4.2	.3906	11.8	4.3	.4674
3—morning	11.	3.6	.4040	12.5	3.5	.4375	14.9	3.5	.5215	12.2	3.8	.4636	13.5	3.3	.4455
—noon	11.1	4.4	.4834	9.7	3.7	.3589	10.7	4.	.4280	9.4	4.5	.4230	11.	4.5	.4930
—night	10.7	3.7	.3959	10.2	3.1	.3162	11.1	4.	.4440	9.3	4.4	.4092	10.2	3.1	.3162
4—morning	14.	3.4	.4760	13.	3.2	.4160	13.7	3.	.4110	11.8	3.5	.4130	14.6	3.7	.4502
—noon	11.1	4.	.4440	10.	3.5	.3500	10.6	3.7	.3922	9.8	4.5	.4410	10.8	4.6	.4968
—night	10.7	3.8	.4066	10.6	3.2	.3392	11.8	4.	.4720	9.5	4.3	.4085	10.4	3.2	.3328
5—morning	13.4	3.3	.4122	12.8	3.4	.4352	13.9	3.4	.4726	11.7	3.7	.4229	14.1	3.4	.4794
—noon	12.4	4.1	.5084	10.7	3.3	.3531	10.7	3.6	.3852	9.9	3.8	.3762	11.5	4.9	.5635
—night	11.1	4.	.4440	11.1	3.3	.3663	11.7	3.8	.4446	9.9	3.5	.3465	10.8	3.9	.4212
6—morning	13.3	3.8	.5054	13.4	3.5	.4690	14.2	3.6	.5112	13.1	3.9	.5109	13.2	3.1	.4092
—noon	11.	3.9	.4290	10.7	3.2	.3124	11.5	4.	.4900	10.8	4.6	.4968	10.9	3.8	.4412
—night	10.3	3.2	.3296	10.6	2.9	.3074	11.	3.2	.3520	9.7	3.9	.3783	11.	3.6	.3960
7—morning	13.6	3.2	.4352	15.	3.4	.5100	15.5	3.8	.5890	13.	3.5	.4550	14.2	3.4	.4828
Totals	213.5		9.1018	221.7		7.5424	256.		9.3086	216.8		8.888	243.9		9.3169
Test computed from daily wt. and tests	3.73			3.4			3.63			4.1			3.83		
Composite test and fat from same	3.7	9.0095		3.4	7.537		3.65	9.34		4.05	8.78		3.8	9.298	

How the High-scoring Cheese at the Pan-American Were Made.

1. What precautions did you observe when taking in the milk?
2. Did you use a "starter"? If so, what kind, how prepared and used?
3. Did you wash the curds? If so, how, at what temperature of water, and at what stage or stages of the curd?
4. At what temperature did you put to press, how long was the cheese pressed, and how often was it turned in the press?
5. (a) At what temperature was the cheese cured?
- (b) Describe your system of ventilating and cooling?
- (c) How long was cheese held in curing room?
- (d) How often was cheese turned on the shelves?
- (e) What per cent. of moisture was maintained in the curing room?

Let it be remembered that these makers, while they follow the standard rules for Cheddar cheese-making, also have picked up many little methods and practices for improvement by reading dairy literature and observation and experiment, so that the lessons they teach in their respective letters are the results of keen effort anxiously and wisely pursued, and their cheese tells the tale of the wisdom of their practices.

THOS. GRIEVE, WELLINGTON CO., ONT.

I had no intention to send cheese to the Pan-American, for I had all my June cheese dated. The instructions were that no cheese should be dated or any mark whatever on the cheese that was sent to

5. (a) The temperature of curing was running from 72 to nearly 80 degrees in that hot weather.
- (b) Ventilation is poor. Cool with ice.
- (c) From June 15th to July 2nd.
- (d) Turned once daily on the shelves.
- (e) I have no instrument to tell the moisture in curing room.

In regard to exhibition cheese, the weather was so fearfully hot and milk in such poor condition that, really, one had no time to observe very much. I have been making cheese 33 or 34 years, and from the last week of June to the last of July I never had such a hard time with milk. How I got through so well I many times wonder.

R. K. CRANSTON, ELGIN CO., ONT.

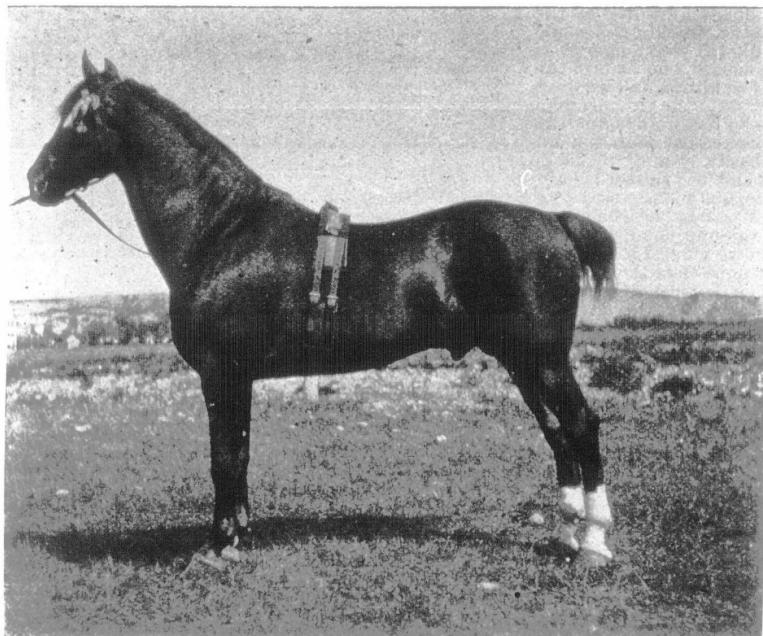
1. I used no unusual precaution selecting milk, other than the usual daily watchfulness; or, to use a brickmaker's term, it was kiln run.
2. Did not use starter. I am opposed to using starters for good milk.
3. Curds were not washed. I do not wash curds that are in good condition. I can see no good in washing a curd that is all right before it is washed. I wash only gassy curds (a thing I rarely have) or a curd that the flavor is not clean. I think that is where many cheesemakers err, in running to the extreme in innovations, which are good in their place, but no use when not needed.
4. I did not note temperature when cheese were put to press. They were 24 hours in press, and turned only once.
5. (a) Cured at a temperature from 65 to 70 degrees.
- (b) Ordinary ventilation and ice boxes.
- (c) Turned on shelves once per day.

C. H. CHANDLER, LAMBTON CO., ONT.

1. In taking in my milk, I took all that came to the factory, for there was none of it that was very good.
2. Yes, I did use a starter. I just took cold water, about one-third as much as I did milk, and put them in a can and set them away in a good clean place and let them sour, and used it for a starter.
3. Yes, I washed the curd with water at a temperature of from 92 to 96 degrees. I always wash my curds just after milling.
4. I put the curd to press at about 86 degrees, for the room was no cooler. The cheese was pressed about 22 hours, and it was turned only once in the press.
5. (a) The cheese was cured at from 80 to 90 degrees temperature. It was never lower than 76 degrees all through June.
- (b) The only means of ventilating is just by opening the windows at night. The curing room is only a good shade in hot weather.
- (c) The cheese was made on the 13th day of June, and we shipped on the 2nd of July.
- (d) The cheese was turned on the shelves every morning except Sundays.

STEWART R. PAYNE, PETERBOROUGH CO., ONT.

1. I took only the usual milk, and did not make any special effort, but selected exhibition cheese from curing room.
2. Yes, I kept some good milk from the day before and added water, allowing it to sour.
3. No. We do not usually wash curds, except sometimes when working too fast, and then with water about 60° F., when running off while on the racks.



ROBIN ADAIR.

Champion Hackney stallion, Calgary Fair, 1901.

PROPERTY OF RAWLINSON BROS., CALGARY, AND RECENTLY SOLD TO ROBT. BEITH, HOWMANVILLE.



ACTIVITY.

Winner of Clydesdale Cup, Calgary Fair, 1901.

PROPERTY OF JOHN A. TURNER, CALGARY, ALTA., N.-W. T.

the Pan-American. The directors of this factory boxed the cheese, and they said that I must send two cheese to Buffalo. They were boxing a carload on June 15th. I had good curds that day, so I did not date a vat. So you see that there was no testing done. I had better cheese, but, as I said, they were dated. It is great gratification that the Canadian cheese has done so well at the Pan-American contest. Twenty or twenty-five years ago if we had such hot weather and the milk in such bad condition, I am sure there would have been some very poor cheese made. It was nearly impossible to make cheese out of the milk that was delivered. Our curds in the vat were not properly cooked; dipping when they were very soft. We could not let them lie any longer, for the acidity came on very rapidly. Cheesemakers should be thankful to the leading men in the cheesemaking industry for the trouble they have taken to school us up to the high standard we now hold. I am sure, Mr. Editor, you have done your share in this educational work. I thank you for the extra copy of the FARMER'S ADVOCATE you sent. I am going to send it to England.

1. I had not much time to observe anything when taking in the milk. Glad to get it in and add the rennet as soon as possible.
2. Did not use a starter; milk did not require it. I don't believe in a starter if I can get along without it.
3. I wash all my curds. Temperature of water, 96 degrees. I wash them as soon as they are milled.
4. The temperature of the curds is generally 82 or 84 degrees when put to press. Cheese is pressed from 16 to 18 hours, and turned in the hoops next morning.

- (d) Was made 6th of June; was at the Pan-American about the 10th of July.
 - (e) Did not note moisture in curing room.
- I consider one of the principal points of success in my case is eternal vigilance in cleanliness, more especially in regard to whey tanks, which I clean out thoroughly every day, and I fully believe it is from that fact I have got rid of, or nearly almost all, gas. I believe more bad milk comes from dirty whey tanks than from any other source.

W. P. STACEY, HASTINGS CO., ONT.

1. Not to take in overripe or tainted milk.
2. Didn't use a starter.
3. Didn't wash curds.
4. Put to press at a temperature of from 80 to 86 degrees. Pressed about 20 hours. Turned twice in press.
5. (a) Cheese were cured at a temperature of from 65 to 70 degrees.
- (b) We have no way of cooling only by opening the windows at night. The building is a frame one, bricked and plastered inside, two stories high, and on a foundation about four feet high. About eight air holes are in the floor, 6x8 inches; the same above in ceiling, and ventilator in center of the building. I may say our curing room has been as high a temperature as 78 degrees since those cheese went away.
- (c) Cheese were 25 days old when they left here on the 3rd of July.
- (d) Cheese were turned every morning on the shelves.
- (e) Don't know the per cent. of moisture in curing room.

4. At about 80° F. Twenty-two hours. Not turned at all after "dressing."
 5. (a) At about 70° F.
 - (b) Just the ordinary way, by ventilators in the walls, floor and ceiling. Cool a little by pumping up water into a pan and letting it drip from small perforations at the lower end of the pan to floor, about six feet.
 - (c) It was made on the 14th of June.
 - (d) Daily for two weeks, and then once in two days.
 - (e) Eighty per cent.
- This cheese was made in quite an ordinary way and without more attention than is usual for us to give. It was selected from the lot of cheese on hand for the first part of June. We aim to have our curds well cooked, and use about 1/4 inch of acid before dipping, and salt when soft, mealy, and considerable grease or fat is showing. We air curds nicely before salting.

JOSEPH CRAMER, FRONTENAC CO., ONT.

1. I took milk for Pan-American Exhibition cheese that was nearest the factory and of good flavor.
- 2 and 3. I did not use starter nor wash curds.
4. The cheese was put to press at eighty degrees. Pressed 24 hours and turned once in the morning in press.
5. (a) The cheese was cured at 65 degrees.
- (b) Open windows and doors at night.
- (c) Twenty-three days.
- (d) Turned on shelves once a day.
- (e) I sprinkled the floor with cold water 3 times a day. The cheese the last 4 days before shipping was kept at a temperature of 62 degrees.

ANDREW CLANCY, WELLINGTON CO., ONT.

1. When taking in milk on the morning in question, I did not depart from my usual precautions of excluding all tainted and impure milk, but I had on this occasion a good flavored milk, and no bad odors developed, as we often have when milk is heated—odors we are quite unable to detect otherwise.

2. Used starter prepared after instructions given by R. W. Stratton, O. A. C., in Bulletin 114.

(a) Pure starter only to be used.
(b) Starter not to be put in milk until ripeness of milk is ascertained.

(c) Add starter in proportion to ripeness of milk.
3. Did not wash curds.

4. Put to press at 84 degrees temperature, and kept in press 46 hours. I never turn cheese in press after bandaging, which I do about an hour after putting curd to press. I do not think it necessary to turn cheese in hoops, as I find no difficulty in pressing the cheese evenly at both ends with gang press.

5. (a) Cheese was cured at about 70 degrees.
(b) I have never used any of the prescribed ventilators. My curing room is of brick, ceiled on the inside with matched lumber, a four-inch air space between. The ceiling above is of matched lumber, which is covered with felt paper and sawdust. Ventilators come through the stone wall below the floor and up into the curing room from each corner. Then, in the ceiling there is a ventilator connected with the outside air at the roof, and arranged so that it may be opened or closed at will. The room is supplied with double doors and windows. The ventilators and shutters are closed during the heat of the day, and opened in the cool of the evening, being open until morning.

(c) Cheese was held in curing room about a month.
(d) Turned on shelves every day, Sunday excepted.

(e) Curing room moist, but I do not know the degree of moisture.

I grind curd early and mature well before salting. I consider that at this point the curd needs skill and watchfulness, since it is a very important period in the making of a fine cheese. I never salt until curd assumes a mellow and velvety feeling. I never use more than 1/4 lb. of salt to 100 lbs. of milk in summer. After salting curd I let it lie until the rough, hard feeling which salt produces is entirely gone, and the mellow, velvety feeling has returned.

(To be continued in next issue.)

The Lawrence-Kennedy Milking Machine.

In dairy machinery there has perhaps been a greater advance made during the past twenty-five years than in any other branch of the farmer's business. A modern dairy fitted with all the latest appliances must be something of a revelation to the uninitiated. Science has done much to advance modern dairy practice, and whether the aid has been in the mechanical or in the chemical departments of research, it has been welcomed and appreciated to an extent which guarantees to those who can render effective help a substantial recompense for their labors. There is one operation in dairying, however, which, so far as general practice is concerned, still remains open for the inventor, and where the dairy farmers would cordially welcome help. We refer to the need of an efficient substitute for the present scarce and costly labor of hand milking. That the difficulties hitherto preventing the general adoption of mechanical milking will be, if they have not already been, successfully surmounted, we have little doubt—difficulties which are not purely mechanical, but extend to the widely differing conditions of what may be best described as temperament in the individual animals.

It was, therefore, writes a correspondent of the *Agricultural Gazette*, of London, Eng., with considerable interest that we accepted an invitation to view the Lawrence-Kennedy cow milker in practical work at Riding Court, Datchet, where the occupier, Mr. J. Kinross, farms some 1,100 acres, has 150 milch cows, and is the holder of that much-coveted trophy, the Prince Consort's cup, presented by Her late Majesty the Queen. The machine, we were advised, has been in use on the farm for a year, with the view of having it thoroughly tested under ordinary working conditions, so that any defects noted, or improvements required, could be remedied. The apparatus was erected in a shed containing 48 cows, but at first half the number were milked by hand so as to be able to compare the yield and other conditions of the two methods. The result is reported as being altogether satisfactory and decidedly in favor of the machine in economy of labor, cleanliness, keeping qualities of the milk, and without any ill effects on the animals. The machine is operated by suction, which may be obtained by a suction pump operated by an engine, electric motor or water wheel, or, as in this instance, where the vacuum is obtained by an ejector attached to a small boiler, the steam jet producing the vacuum and dispensing with the necessity of an engine. A vacuum-container tank is connected, so as to give more steady working, and a range of iron pipes runs along the shed immediately over the cows, with a short branch, fitted with a vacuum cock, descending between every alternate animal. A rubber tube, slipped onto the iron pipe, connects with the milking apparatus, which may be described as a cone-shaped part, the lid carrying a double-action pulsator of simple construction, from which branches two rubber tubes, one to each cow, to which are attached four rubber teat-cups. The

speed and strength of each pulsation can be finely regulated by means of a screw, to suit the peculiarities of each cow, and as the pulsations only occur in the teat-cups and in the short rubber tube leading therefrom to the pulsator, the milk is not brought into direct contact with the air. The lid and the pipes are kept in place by the vacuum, no screw or other fitting being required, while the milk, on its way from the teats, can be seen passing through a glass trap, and when the cow is milked clean, the cups remain on the teats until removed by the attendant. The cups are unique in that a thin piece of rubber with a hole in the center is inserted immediately inside the cup, giving a more tenacious hold than in previous patterns, while at the bottom of the cup a smaller detachable rubber cup is inserted, so that the cow is milked wet, as the fluid has to flow over this inner vessel before leaving the large cup, and in practice this has been found of considerable advantage to the success of the operation. In work, the appliance is exceedingly simple. The pail is placed between the cows, the rubber tube slipped onto the iron pipe, the vacuum cock turned on, and the cups held to the teats, to which they at once adhere, and the milking begins.

The pulsations regulating the collapse and expansion of the cups are close imitations of the calf sucking, and the vacuum pressure is very small. The milking was done quickly and cleanly, and the animals did not exhibit any signs of inconvenience, as in most cases they stood quietly feeding during the operation. The value of the regulation of the pulsations as regards speed and strength to suit the temperament of the various animals was particularly noticeable, and altogether the work was completed in a very satisfactory manner. The vendors—the Dairy Outfit Company, Limited, King's Cross, London—claim that by the use of the machine 48 cows can be milked in an hour, with the help of a man and a boy, and that no more hands would be required for 60 cows. Cleanliness is ensured by the milk being drawn direct into the air-tight pail, while it has been found that the milk will keep longer than where the milking is done by hand. The teats of the cows appeared to be in capital condition, and we were advised that after the first few days the animals take kindly to the machine, while heifers milked for the first time take to it much more readily than to hand milking. The apparatus is easily cleaned by sucking water through the cups, and the rubber is kept sweet, soft and pliable, when not in use, by being immersed in lime water. The cost of the plant is not heavy, and if under varying conditions the work is done as well as when we viewed it—and we see no reason why it should not—then it will soon repay its cost in wages. The Lawrence-Kennedy machine, at any rate, marks a decided advance in meeting the need indicated at the beginning of this article; time alone will tell whether or not it has solved the problem of mechanical milking, but we commend its claims as worthy of the attention of readers.

Secret of Success in Cheesemaking.

To the Editor FARMER'S ADVOCATE:

I wish to say, through your valuable paper, that the two greatest factors in successful cheesemaking in this country, and the maintenance and elevation of the high standard of excellence Canadian cheese now holds, are: 1. The production of a superior quality of milk by the farmers, and much-improved methods of caring for it till delivered in charge of the milk-hauler. 2. A very great improvement in the curing rooms, that this finishing process, which is so all-important to this great industry, may be as properly done as the dairy schools of our Province would have their students do. The most valuable element in cheese is the flavor, and if this is not made by the *feed*, through the *cow*, and then preserved by the *patron* in its VERY BEST possible condition, no amount of skill on the part of the maker of cheese can make or recover that fine property, though by the aid of a thoroughly first-class curing room he may improve the quality very materially. On the other hand, all the work may be first-class, and the quality of the article too, when first laid upon the shelf, but the very poor condition of the curing room may, before shipping time, have converted all these into a third-class article, and then the poor cheesemaker is often—too often—required to make this loss good. Should he do it? I will give briefly the method I adopted to improve my room. It was simply a good frame, boarded up and down with matched inch siding, battened, and ceiled up inside with 1-inch matched lumber, but not overhead, except the upstairs floor. I took off all the inside lining, set studding back to outside boards, filled this space (4 inches) up to 6 inches above the floor with sand, put on the old lining and 2-ply paper (best), furred this 2 1/2 inches, filled this space 6 inches deep at bottom with sand, boarded up with half-inch hemlock, then two ply best building paper, followed by 1-inch dressed and matched hemlock. Each run of boards and paper and furring ran over the ceiling as well as sides. I set all the windows in, and put on solid, double-glassed, 4-light sash, with hinges. I also put double-glassed sash on the cellar windows, frosting all the glass. I cannot now give exact cost, but it took about 5,000 feet, face measure, of lumber and \$25 worth of paper. I also put in sub-earth duct about 178 feet long, constructed of four rows of 8-inch field tile at a cost of about \$70, besides the digging, which the patrons did. These are laid about 7 feet deep at one end and 10 feet at the other, through gravel soil. It works all right. Lambton Co., Ont. S. P. BROWN.

Dairy Test at the Pan-American.

REPORT OF THE MODEL DAIRY AT THE PAN-AMERICAN EXPOSITION, GIVING TOTALS OF EACH HERD COMPLETE FROM THE COMMENCEMENT OF THE TEST, MAY 1ST, UP TO AND INCLUDING WEEK ENDING AUG. 13, 1901.

BREED.	Milk.	Amt. of Butter	Value at 25c.	Cost of Feed.	Profit.
	lbs.	lbs.	per lb.		
Guernseys	17755.7	916.99	\$229.23	\$81.91	\$147.36
Jerseys	17082.9	883.51	220.87	79.74	141.13
Ayrshires	21106.0	889.33	222.32	81.93	140.39
Holsteins	24099.1	887.45	221.85	91.61	130.24
Red Polls	18664.7	841.05	211.01	82.61	128.40
Brown Swiss	20040.1	826.87	206.70	89.60	117.10
Shorthorns	20342.9	811.43	202.55	93.89	108.66
French-Canadian	16961.4	714.11	178.52	69.71	108.82
Polled Jerseys	13027.5	691.72	172.92	64.18	108.74
Dutch Belted	15232.9	587.35	147.58	76.72	70.86

REPORT OF THE MODEL DAIRY AT THE PAN-AMERICAN EXPOSITION FOR THE WEEK ENDING AUGUST 13, 1901.

BREED.	Milk.	Amt. of Butter	Value at 25c.	Cost of Feed.	Profit.
	lbs.	lbs.	per lb.		
Jerseys.					
Gipsy	202.9	10.74	\$ 2.68	\$1.00	\$1.68
Primrose	174.7	12.33	3.13	.91	2.22
Queen May	203.7	11.62	2.90	.85	2.10
Rexina	209.0	10.81	2.70	.81	1.89
Mossy	211.5	10.94	2.73	.87	1.86
Total	1001.8	56.64	14.14	4.44	9.75
Guernseys.					
Vega	173.5	9.38	2.34	.90	1.44
Cassiopea	224.0	11.06	2.76	1.06	1.70
Mary Marshall	202.2	13.55	3.39	1.05	2.34
Madora Fern	172.7	9.11	2.28	.92	1.36
Procris	224.7	11.76	2.94	1.06	1.88
Total	997.1	54.89	13.71	4.99	9.72
Ayrshires.					
Kirsty Wallace	239.9	10.73	2.68	.88	1.80
Lady Flora	229.0	9.42	2.35	.84	1.51
Alice 2nd	217.4	10.99	2.75	.88	1.87
Betsy 1st	243.8	10.32	2.58	.88	1.70
Pearl of Woodside	230.2	10.29	2.57	.88	1.69
Total	1160.3	51.74	12.93	4.36	8.57
Holsteins.					
Meg	188.7	8.98	2.25	1.16	1.15
Tidy	290.7	11.45	2.86	1.25	1.61
Inka Mercedes	307.8	11.22	2.80	1.24	1.56
Hulda	300.7	11.67	2.92	1.25	1.67
Beauty	297.9	11.91	2.98	1.22	1.76
Total	1385.8	55.23	13.81	6.12	7.75
French-Canadians.					
Liena Flory	209.4	10.34	2.58	.78	1.80
Rouen	187.9	10.16	2.54	.78	1.76
Denise	207.7	9.65	2.41	.78	1.63
Luna	176.9	7.90	1.97	.75	1.22
La Bouchette	142.0	6.18	1.54	.46	1.08
Total	923.9	44.23	11.01	3.55	7.49
Shorthorns.					
Princess of Thule	207.6	9.89	2.47	1.24	1.23
Daisy D	204.4	9.01	2.25	1.23	1.02
Miss Molly 2456	272.5	11.86	2.96	1.24	1.72
Queen Bess 21786	238.5	10.21	2.56	1.24	1.32
Rose 3rd 113205	247.6	9.75	2.44	1.24	1.20
Total	1170.7	50.75	12.68	6.19	6.49

Butter Tests and Milking Trials at Tring Show.

The annual one-day show at Tring, on the estate of Lord Rothschild, is regarded as one of the most interesting events of the sort in England. The show was held this year on August 8th, the entries numbering 54. Judged by inspection, Jolly Brown, the first-prize Jersey cow at the Royal Show at Cadriiff, had to take fourth place at Tring.

The following are the results of the butter test and milking trials, only Jerseys and Shorthorns competing:

BUTTER TEST.					
Cows of any breed or cross, not exceeding 900 lbs. live weight.					
	Days in Milk.	Yield of Milk.	Yield of Butter.		
	lb.	lb. oz.	lb. oz.		
1st prize, Tuddie's Queen (Jersey)	67	47 1	2 11		
2nd prize, Gloaming 4th (Jersey)	130	34 11	2 2		
3rd prize, Primrose Day (Jersey)	67	49 14	2 7 1/2		
Cows of any breed or cross, exceeding 900 lbs. live weight or over.					
1st prize, Lady (cross bred)	59	58 10	3 6		
2nd prize, Lady of the Sunny Isles (Jersey)	125	45 6	2 5 1/2		
3rd prize, Trefoil (Shorthorn)	79	72 10	2 9 1/2		

MILKING TRIALS.					
Cows of any breed or cross, exceeding 900 lbs. live weight.					
	Days in milk.	Yield of milk.	Yield of Points.		
	lb. oz.	lb. oz.	lb. oz.		
1st prize, Trefoil (Shorthorn)	79	72 10	76.52		
2nd prize, Lady (cross bred)	59	58 10	60.52		
3rd prize, Model Mary (Shorthorn)	11	59 6	59.37		

London Asylum Dairy Herd.

HOGS AND CROPS.

It is always a pleasure to see a useful herd of dairy cows in good working form, and especially at this season of the year, when so many are compelled to get their feed from dried pastures. At the London, Ontario, Asylum for the Insane the cows kept to supply milk for the staff and inmates are a good lot. The present herd of 40 head giving milk and five soon to calve might well be termed general-purpose cows, as a large proportion of them will weigh quite 1,200 pounds each, and are of a sort that would produce good steers from a Shorthorn sire. The farm manager, Mr. William Murdock, likes a good, substantial cow that will give a liberal quantity of milk when well fed. The herd is kept up by purchase, as no cows are reared on the farm, and it speaks well for Mr. Murdock's judgment in purchasing that the herd is of such a high average quality. The cows are largely Shorthorn grades, but a few good grade Holsteins are also in the herd. The 40 head now milking give from 440 to 450 quarts per day, and the best ten average 20 quarts each in 24 hours. If pasture alone had been depended on, the cows would not be doing so well, but apart from a rough pasture, the cows have been getting green corn twice a day since July 5th, until recently, when they get corn once daily in the afternoon, and a run on alfalfa pasture in the morning. Mr. Murdock is a great believer in green corn to keep up the milk flow during dry, hot weather, and each year sows a few acres of corn thick for that purpose. This year he sowed three acres at the rate of 2½ bushels of seed per acre, and this will yield two months' feeding for the 45 head. The cows are brought from the pasture at 4.30 in the morning, milked, fed corn or alfalfa in stable for two hours, then turned to pasture, brought up again at 3 p. m., fed corn, milked, and returned to the pasture field. The cows receive no grain of any sort, and are holding their own well in

How I Built a Silo.

Four years ago, when I decided to build a silo, I did not feel able to build a cement one and did not like a tub, so I thought I would try a new plan. Having a good dry place, I dug out about two feet, cemented the bottom and built a cement wall above the ground a little, making it eight sided and of such a size that 14-ft. scantling would cut in two lengths. We then built up with 2x4 scantling, like an old-fashioned rail fence, 24 ft. high, making the silo 26 ft. deep. On the inside we laid tar paper on the scantling and then boarded it up and down with 1x10 in. hemlock and battens half an inch in the center, rounded off to nothing at the edges, and we sided the outside with inch hemlock well nailed, making a silo that will not blow over with the wind at any rate. Now, as to cost:

The cement foundation cost.....	\$10 00
Lumber and scantling (5,196 ft.).....	51 96
Battens.....	3 00
Four-in. spikes (120 lbs., at 2½c.).....	3 00
Twenty-four lbs. 2½-in. nails (at 3c.).....	72
Work, not including foundation.....	11 25
	\$79 93

I have not had a roof so far, but will put one on this fall, when I think I will have a silo good enough for any one. ALEX. MUSTARD.
Huron Co., Ont.

POULTRY.

Poultry Notes.

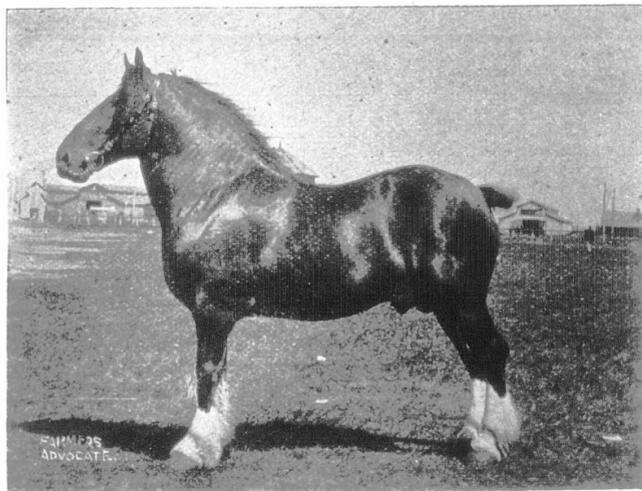
The wise poultry-keeper will be ever looking ahead, and now is full time to consider the stock for next season. The useful life of a hen is unfortunately very brief, and every moulting time the owner is confronted with the necessity of clearing out all those hens that are two and a half years old; in other words, those moulting for the second time. Of course, there is no rule without its exception. Some hens pay to keep a third season, but the average hen does not. The

year's stock, to take the place of the old hens, unless the stock is to be diminished. It is only by keeping the best of the pullets that the quality of the stock can be kept up and improved. Every farmer knows the value of quality in cattle and sheep breeding, that only the best should be bred from, and that keeping the best pays. The same is true of poultry. By the best I mean well grown, healthy specimens, that come from healthy stock, bred for laying or table points, or both. Such birds can be relied on, while some cheap-purchased stock is an unknown quantity—we know nothing of the pedigree of the birds, or if they are constitutionally sound.

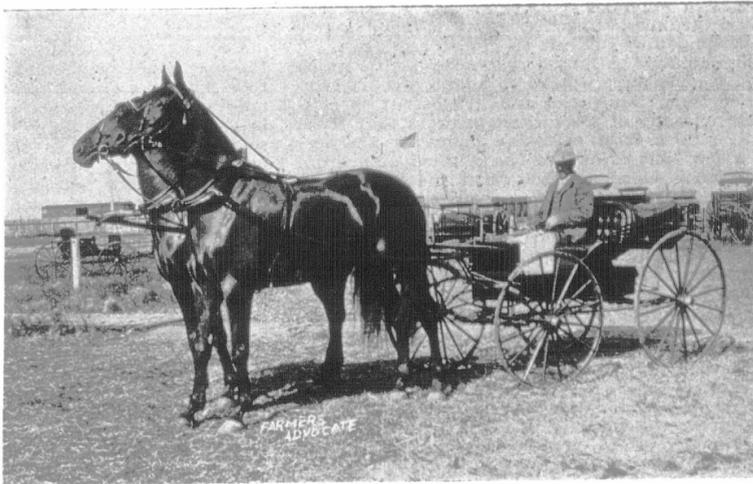
When your fowls do not lay, and you seek about for the reason, you may be told, perhaps, that the houses are not warm enough. Even if this be so, and you remedy the defect, the time has been lost, eggs have not been forthcoming when they ought to have been, and what is quite as bad, nothing you can then do will be followed by an immediate supply of eggs. Has this been your experience, reader, in the years gone by? If so, try this year to have your henhouse made warm and comfortable before winter sets in. "Why," you say, "it is not fall yet." Yes, I know, but do not put it off until November; there will be so much to do then you will not find time to patch up the old henhouse. I think most of us feel the first cold of autumn and winter more than severe weather later on. So it is with the poultry, and, unfortunately, many of the fowls are not in full feather yet, and therefore feel it the more.

Should the house stand in a very cold place, a covering of felt will help to keep it warm, and this should be tarred just as soon as it is put on. Your early hens and pullets may look like laying any day, and nothing on your part should be left undone which may check them doing so.

By keeping on your place unprofitable fowls you must be keeping poultry at a loss. Yet on



ROSEMOUNT, CLYDESDALE STALLION.
First-prize 3-year-old and sweepstakes at Winnipeg Industrial Exhibition, 1901.
OWNED BY W. SWENERTON, V. S., CARBERRY, MAN.



FIRST-PRIZE CARRIAGE TEAM.
Shown at the recent (1901) Winnipeg Industrial Exhibition.
OWNED BY T. D. STICKLE, CARBERRY, MAN.

flesh. Considerable credit for this should no doubt be given to the fact that the cows are treated for the fly pest once a week with an application of fish oil and carbolic acid mixed in the proportion of two table-spoonfuls of the latter to one gallon of the former.

Other live stock on the farm includes some 200 hogs of various ages. The brood sows, some 18 to 20, are choice individuals, largely of Yorkshire and Tamworth breeding. These are kept to utilize the kitchen refuse, getting little else except at finishing period, when a little home-grown grain is given. By the end of October there will have been sold of hogs in one year some \$3,000 worth, all of which went to the packing house, except a few pure-bred Tamworth boars sold for breeding purposes. The sows have abundance of liberty, are not overfed, and invariably produce large litters. One sow that had previously had three litters, of 18 each, farrowed 19 on August 7th this year.

The crops grown on the farm are very heavy, the mangels, and corn for silage and husking, being extraordinary in bulk and evenness over the fields. The potato crop, usually very good on this farm, promises to be poor this year, as few have set in the rows. The oat crop was very heavy, and in all the stubble is now growing a first-class catch of clover and timothy, even where the oats were badly lodged. The crop rotation followed is oats, clover, hoed crop, and sometimes two hoed crops in succession. The farm is rich and clean, and with the good treatment it receives, yields abundantly.

In a recent issue of the FARMER'S ADVOCATE a correspondent complained of the increasing number of old bachelors throughout the country, and in the Home Department of this issue a contributor—"Uncle Daniel"—gives some wholesome advice to young men in search of a wife. We commend a perusal of his letter.

latter will take a long time moulting, and probably rest the whole winter, not laying till spring has come, the weather mild, and eggs cheap and plentiful. In fact, she will, probably, not pay for her keep. Still, it must be confessed that it is a great drain on the poultry-keeper to clear out so many birds and fill their places with pullets which otherwise could be sold at a profitable figure. The stock birds should be hatched in March, April or May, the three great hatching months; March or April for the heavy birds, April or May for Leghorns, the latter taking a shorter time to reach maturity. We need not overdo it and take early-hatched birds and force them on to maturity, for perhaps they will lay in late summer a batch of eggs, then moult and take a long rest. I had a pen of twelve early-hatched pullets. They laid a few eggs early in the fall, and then I noticed they were losing the feathers from their necks and heads. In a short time they had every appearance of a moulting hen. This was my first experience with early-hatched moulting pullets. It is not likely to occur again. I did not get a dozen eggs from them for three months, and then they were nearly bare when cold weather set in, when they should have had good warm coats. Then, too, I lost the eggs when prices were the highest. Experience is a grand teacher, but sometimes an expensive one. October is quite soon enough for pullets to lay, for then there is no fear of their moulting.

I mentioned before the drain on the owner in having to fill the places of the old hens, instead of selling pullets, but some escape the difficulty by ignoring it and selling recklessly, arguing, apparently, that it is best to make a profit when it is to be had. But this is a very short-sighted policy. There must be young pullets for next

scores of farms are hens found in food and house room through the winter which lay never a penny's worth of eggs; and besides eating their heads off, they are occupying the room and consuming the food other fowls would turn into money. These old hens make excellent soup.

Then, the same weeding out process must be continued among the chickens; some go ahead, the majority are a level lot, and to a certainty there will be some which lag behind. Th's third class is the one whence disease springs, whereon insects are bred and scattered, and wherein your money is sunk past recovery.

These, then, are better cleared away, no matter at what price; they will never make large nor profitable birds, and never should they be used for stock.

Perhaps I have been too emphatic. Maybe by skillful treatment, expenditure of valuable time, and a large slice of luck, some sickly, weedy chicken may ultimately be pulled around into a decent fowl, but the chances are heavily against it. The time, food and care can be more profitably employed in keeping the best chickens still the best; it is a mistake to think you can bring the consumptive, the ropy, the liver-diseased chicken up to their standard.

Perhaps, too, up to now many of the fowls have been roosting out of doors, but are now driven by the weather to seek the shelter of a roof; this generally means overcrowding the house, and this is attended by the greatest evils. In all ways, then, thinning out and selling or eating all the old stock should be rigorously proceeded with.

Here is a sum, readers, for mental arithmetic: Which is the more profitable, fifty fowls in full profit, or a hundred which do not lay an egg.
FARMER'S WIFE.

GARDEN AND ORCHARD.

The 1901 Fruit Crop.

The far-famed "Garden of Canada," the Niagara fruit district, is this year—the first of the new century—taking a comparative rest, and as a consequence of the shortage in the fruit crop the people of Canada are paying more for that product than they have for some years past. That part of Ontario lying between Hamilton on the west and Niagara Falls on the east, Lake Ontario on the north and "the mountain" on the south, has well been termed the "Garden of Canada," and it is to that district that the inhabitants of the Dominion have learned to look for the bulk of their fruit supplies. Such will always be the case, for there is no other section in this vast Dominion where the soil and climatic influences are so favorable to bringing excellent fruit to perfect maturity.

The reason of the short crop in this district this season was not a late spring frost, nor a hard winter, but it was a cold, damp spring. During nearly the whole of the blooming period we had daily rains and cool weather, and as a consequence the bees and other insects, and the winds, could not do their work in the fertilization of the blossoms. There never was a more magnificent display of bloom, and the growers anticipated a record crop, but their expectations were not realized. As a consequence, those growers who have fruit are wearing long smiles to correspond with some of the long prices they are getting for their products, while those who have not been so fortunate are trying to enjoy the success of their neighbors.

The early small fruits ruled high, strawberries ranging from \$1.50 to \$2.50 per 24-qt. crate, and red and black raspberries kept to \$2 or above most of the season. This was much in advance of previous years, and very satisfactory to the growers. Cherries were a very scarce article, and were difficult to get at any price.

Coming to the larger and later fruits which are now ripening, we have to admit a short crop in everything but pears and grapes. It is estimated by many of the largest growers that there is not half a crop of either plums or peaches, and a few put it as low as a third of a crop. Early varieties of peaches, that last year sold for 15 cents to 40 cents per 12-qt. basket, are this year bringing 50 cents to \$1. These are such varieties as Sneed, Alexander, and Ey. Rivers. Abundance and Saunders plums, that last year were a glut at 25 cents per 12-qt. basket, are now going freely at double that amount, and in some instances more. Thus, one can easily form an opinion as to "supply and demand" in the case of plums and peaches.

Apples are a complete failure in this district, and those who are fortunate to have any should be extremely thankful. Never was there greater demand for them. Manitoba and the Northwest, with her enormous grain crop and consequent good times, is calling for them, and has been for months past. The people of those Provinces understand that they must pay long prices for apples this season, but that does not seem to discourage them. To those who have apples I would say, "Ship them West." But in doing so, grade high, be honest in your packing and dealings, and endeavor to elevate the name of the Ontario fruit-grower, instead of bringing it into disrepute. Then, there is the European market. The United States has a short apple crop this year, and they will not be likely to flood the European markets. I am not one that believes in "hanging on" to fruit, or anything else, when once I consider I am offered a reasonable price, and unless you are sure of being able to preserve your apples in good condition on into winter, you might better part with them soon after they are harvested, as it will not take many rotten ones to count up considerably.

Pears in this district are a splendid crop and of excellent quality. These will no doubt have to take the place of apples to a great extent. There will be a big demand for them in the West. Then, as they are of such fine quality this season, we should endeavor to our utmost to get a fine lot of them over to England in prime condition, and show the Englishmen that if we cannot produce "dukes," we can produce fruit, and that the finest in the world. JOHN B. PETTIT.
Wentworth Co., Ont.

The shortage in the apple crop in most sections of Canada and the United States will certainly be accompanied by higher prices for export than has prevailed for several years past, and for this reason attention should be paid to the picking of the fruit at the proper time, and to packing in the best possible condition so as to secure the top price. This, of course, applies specially only in cases where growers are likely to have any to sell; but even where none are likely to be sold, the gathering should be timely, in order to the fruit keeping through the winter in good condition.

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.

TOO ANXIOUS TO BREED.

I have a pure-bred Yorkshire sow, nine months old, who, when she weighed 125 lbs., and was five months old, I bred to my pure-bred Tamworth hog. She was due to farrow on the 15th of July. I had her in a hot, close pen, and she had always been fed on grain and whey, consequently at that date she was quite fat, and so could not give birth to her progeny. Engaging the services of a farmer experienced in such matters, he took the pigs from her (ten in number), the best I had ever seen. Three were dead and badly decayed; the other seven were living, but she was so sick they died. She is getting well rapidly now, and all her organs seem to have come to a normal state. Would you advise keeping her for a breeder? Will her generative organs ever be perfect again? What diet is best for a breeding sow at all times, and also for the last month with pig, and after the pigs have come?

Frontenac Co., Ont.

SUBSCRIBER.

Ans.—Taking all things into consideration, you have had better success with your sow than could reasonably be expected. In the first place, you bred her too young. In some cases, a young female, especially one in good flesh, will reach the state of puberty very early, though not sufficiently matured to reproduce without great danger. Such was the case with your young sow. You should not have bred her until she was older and more developed. In the second place, the surroundings in which you placed her to farrow indicates either gross carelessness or gross ignorance. The weather about the middle of July being excessively hot, any careful man would have selected a cool and as well-ventilated building as possible. Again, the sow was too fat for breeding, and we are not surprised to learn that she had trouble; on the contrary, we are surprised that she recovered. If allowed to run for four or five months before breeding her again, I see no reason why she should not make a good breeder. Breeding sows should be kept in moderate condition, neither excessively fat nor yet lean. The food given will depend upon what the owner has to feed. All food should be of good quality, easily digested, given regularly in small quantities. The sow should have plenty of exercise. In summer time she will be able to get grass; in winter time, substitutes for green food should be given in the form of roots. If confined in small quarters in cold weather, where little exercise is taken, a sufficient quantity of some laxative should be given daily in the food to keep the bowels open. I find for this purpose, equal parts of powdered charcoal, sulphur and Epsom salts act well. After farrowing, the same principles in feeding should be observed, but, of course, she will require food in larger quantities after the litter is a few days old. J. H. REED, V. S.

ENLARGED TENDONS—BLOODY MILK.

I have a mare, 12 years old, which has enlargement of the back tendons of nigh fore leg, between knee and fetlock joints, till the leg is almost round. She is a trifle lame, and after driving holds it out in front as if resting. Would you advise a blister, and what kind?

2. Also have a cow, four years old, that had a calf in March, and since that time has given bloody milk at times, but is getting worse. I tried Glauber salts and carbolic acid, but it did very little good. Please give cause and treatment.

W. K. WILLITON.

Algoma District, Ont.

Ans.—Enlarged tendons, such as you describe, are very hard to reduce. Blistering may help. Use the following: Two drams biniodide of mercury, two drams powdered cantharides, two ounces vaseline; mix. Clip the hair off, rub blister well in, tie head so that she can't bite the parts. In 24 hours rub well again with the blister, and in 24 hours longer wash off and apply vaseline. Let her head down now, and apply vaseline every day until the scale comes off. Then tie her up and blister again. After this blister every four weeks.

2. The bloody milk is due to rupture of some of the small vessels of the gland. Some cows are predisposed to this condition, and it is very hard to treat. Do not feed to cause great flow of milk. Bathe the udder long and often with cold water, and after bathing apply camphorated oil, made by putting one pint sweet oil and half ounce camphor in a jar. Place the jar in a pan of warm water and leave it there until the camphor is dissolved. J. H. REED, V. S.

LAME MARE AND RUPTURED COLT.

1. I have a mare eleven years old; was sprained in the right ankle when four years old; got all right in about a month. Carried herself all right until a year ago last June, when she showed lame again, large puffs coming on each side of her leg above the ankle. I blistered them, and she got better, until this summer she became lame again. I took shoes off and let her run a month, but it did not help her any. Blacksmith says her feet are all right; shows some symptoms of founder; some tender on the coffin bone. What could be done for her? Does it hurt her to breed from?

2. Also a suckling horse colt, about three months old, has an enlargement in bag as big as a large potato, about four inches long. Is it a rupture; if so, can it be cured, or would it be better to kill him at once? E. P. L.
Compton Co., Que.

Ans.—It is possible the bursal enlargements or puffs above the fetlock joint are causing the lameness. These enlargements, when quite large and tense, frequently do. All that can be done in such cases is long rest and repeated blistering. If the lameness be in the feet (and it is impossible for me to tell without seeing her), long rest and repeated blistering around the coronet will help her, as it will insure her a rest. Of course, if there has been a congenital weakness of the parts, there is a danger of the progeny having a like predisposition.

2. Your colt has scrotal hernia, or rupture.

Do not think of destroying him on that account. It is very probable a spontaneous cure will result before he is a year old. If nature should not effect a cure by the time he is to be castrated, the operator must perform what is known as the covered operation. If, instead of getting better as the colt grows older, the rupture should increase in size, you will have to have him operated on at once. The operation necessary in such cases consists in casting him, placing him on his back, cutting down into the intestine, returning it, and stitching up the opening and also the skin. It requires a veterinarian to operate.

J. H. REED, V. S.

INJURIES TO COLT'S LEG.

Will you please tell me what to do for a colt's leg, as follows: First he got bitten by a dog. We kept the wound dressed with carbolic acid and sweet oil. When about healed he ran away with doubletrees, and bruised it. I policed with linseed, and it is healed over now, but there seems to be a fleshy lump inside skin. Seems loose, not fast on cords, as it is just above fetlock on outside of hind leg.

When he ran away he also bruised his hocks bad. Both are capped, and one seems like a curb. We blistered both with fly blister, then oiled with castor oil. They seem quite tender, especially the curb place. When he is exercised, the swelling goes down some, but keeps swollen badly when stabled. We work him some. Is three years old. What would be best to do? Have we done right so far? B. P.
Algoma, Ont.

Ans.—The growth is a fibrous growth, the result of inflammation, and it is hard to remove. The lumps on the hocks are also hard to lessen. If there is any considerable quantity of fluid beneath the skin on the points of the hocks, which can be detected by manipulation, it will be necessary to lance to allow the escape of it. But it is better to not open unless necessary, and if it has to be done, a veterinarian should operate. You will be able to reduce all the enlargements and probably entirely remove them by the use of the following liniment: Iodine, 4 drs.; potassium iodide, 2 drs.; glycerine, 4 ozs.; alcohol, 4 ozs. Rub a little of the liquid into the parts once daily. If it blister, cease applying it, and apply vaseline until the parts become smooth again, when you will again apply the liquid. Keep this treatment up and have patience, as chronic enlargements disappear slowly.

J. H. REED, V. S.

DEPRESSIONS IN SOW'S BACK—PANTING MARE.

1. I have a pure-bred Yorkshire sow, 10 months old, that has a number of small depressions in her back, varying from just noticeable to half an inch in depth and two inches long. Can you give any cause or cure; has had plenty outdoor exercise and has just farrowed a litter of four pigs.

2. Have a draft mare, 8 years old, in good condition; pants very much when working; respiration twice those of ordinary horses. Fed damp food. No cough. Can you suggest any relief? York Co., Ont. IGNORAMUS.

Ans.—1. The depressions are not serious, and will, in all probability, disappear spontaneously.

2. The symptoms given indicate a weakness of the lungs. Careful feeding will mitigate the symptoms. Feed good clean food in small quantities, and dampen all food with lime water. It is probable when the weather gets cooler the panting will not be so severe. J. H. REED, V. S.

PROBABLY INFLUENZA IN COLT.

A colt, which came the last of May, has been on pasture with the mother for a month, with access to spring water at will, and has been healthy from the start. I have just noticed, however, that the hind legs, including the knees, are swollen quite large, and it moves about like an old horse with puffed legs. I think the front legs are also a little swollen, but very little. Kindly let me know what is the trouble; if it is serious, and what can be done for it?
Hastings Co., Ont. J. S. MCGURN.

Ans.—It is probable your colt has influenza, a disease that is quite common in some sections. In many cases the legs swell and the joints become sore. Of course, the swelling may be from other causes, but, from symptoms given, I think not. Keep mare and colt in the stable during the day, and protect from flies by darkening the stall. Feed the mare new hay or grass and a liberal supply of chopped oats and bran. Encourage the colt to eat by arranging a feed box at the proper height. Put 20 grains chlorate of potash on a teaspoon, catch the colt's tongue in left hand, insert the spoon in the mouth with right hand and upset the spoon well back on the tongue. Give this dose three times daily. Do not attempt to drench. As long as the colt will take nourishment you need not be alarmed; if it refuses to do so, you had better employ professional assistance. If the weather be fine, turn them out at night, but do not leave out in a rain storm or cold.
J. H. REED, V. S.

ground clean, all stacks of corn which are infected should be removed and destroyed before the smut balls burst open and begin dropping their spores. Again, the spores may be distributed by cows if they are allowed to eat corn infested with smut, for the droppings will contain living spores, which will go on reproducing in the semi-solid medium. As a matter of fact, it is generally believed that the main source of infection of the young corn plant is manure containing smut spores. On this account it is advisable to use only thoroughly rotted manure for corn crops.

2. Regarding treatment for seed corn before planting, there is considerable difference of opinion. Some authorities claim that soaking the seed in bluestone assists in preventing infection, but there are many cases on record where such treatment was valueless. However, if it is true that corn smut spores in the ground infect young corn plants, then it is also natural to assume that smut spores attached to seed corn when planted will infect the young plants. A strong solution of bluestone, 25 pounds in 25 or 30 gallons of water, may be used to kill the attached spores. This solution may be sprinkled on the corn so that every grain is thoroughly wet. A solution of formalin, 1 pound in 30 or 40 gallons of water, may be similarly used. Probably the latter treatment is the better one.

W. LOCHHEAD.

**Ontario Agricultural College.
GEESE BREEDING FOR PROFIT.**

I have two pure-bred Embden geese. Which would be more profitable, to mate them with a

CLOVER SEED CROP—BEST FARM PAPER ON EARTH.

This is my first year as a subscriber to the best farm paper in the world, and I am very much pleased with it. I will try and procure some more subscribers for you. What yield of seed should I get per acre from the second crop of clover which would cut 1½ tons per acre, and what condition should it be in when fit to cut to thresh?
J. R. GREEN.

Leeds Co., Ont.

Ans.—In harvesting, some use an old self-rake reaper set low, and others a mower with small table attached to the cutting-bar, an extra man following to pull off in bundles with fork or rake. Unless of fairly good length, the clover is difficult to gather left in the ordinary mower swath, though many harvest it that way. Take in when dry.

The yield will depend on the number of well-filled heads evenly ripened. A first-rate crop in these respects should yield you four bushels per acre, though it is quite possible to have a heavy growth of stalk (fodder) and a smaller return in clover seed. At least two thirds of the heads should be turned brown before cutting, but it is not advisable to wait for the later ones to ripen, as they are frequently smaller, and the earlier-matured heads being overripe, there would be loss from shelling.

CHEAP SHEEP HOUSE.

A friend of mine is going into sheep-breeding, and purposes to keep two or three hundred. Can you give me, through your paper, an idea of the most approved kind of pens, feeding racks, etc.? I would be obliged if you could help me in this way.
C. P. BLANCHARD.

Colchester Co., N. S.

Ans.—A fair description of a cheap sheep house was given in the May 1st issue of the "Advocate," page 308, and the plan of a more expensive one, the main features of which could to some extent be adapted to a cheaper structure, was given in the April 1st issue, page 222. A location sufficiently high that the water will run off in all directions should, if at all convenient, be chosen, and a hard earth floor is as good as any. A shed built with posts and poles, and covered with board and batted roof and sides, would perhaps be the cheapest for the present and for a short term of years, and may be made to answer the purpose very well, but a cheap, light frame, with shingled roof and stone foundation, will look better and last longer.

GRASSES FOR PERMANENT PASTURE.

What kind of grasses are the best to sow for permanent pasture?
A SUBSCRIBER.

Ans.—It is well to have a mixture that will give variety, as well as a thick sward. In all mixtures we find clover and timothy suitable especially to depend on the next year after seeding. Other varieties should also be sown to fill in later. We recommend timothy, 3 lbs.; red clover, 2 lbs.; blue grass, 6 lbs.; red-top, 4 lbs., and white Dutch clover, 1 pound, per acre. This will do best sown without nurse crop on well-prepared, rich land, free from weeds. When the crop is 9 inches high the mower should be run over to cut down any stray weeds and make a mulch to protect the roots.

SUITABLE SOIL FOR CRANBERRIES.

I have on my farm about an acre of land that is too wet for ordinary crops. Water lies upon the surface up to about midsummer, and cannot be conveniently drained. The soil is black and swampy in nature. Would it be suitable for growing cranberries? What class of soil and what method of cultivation do their require?
DURHAM CO. ENQUIRER.

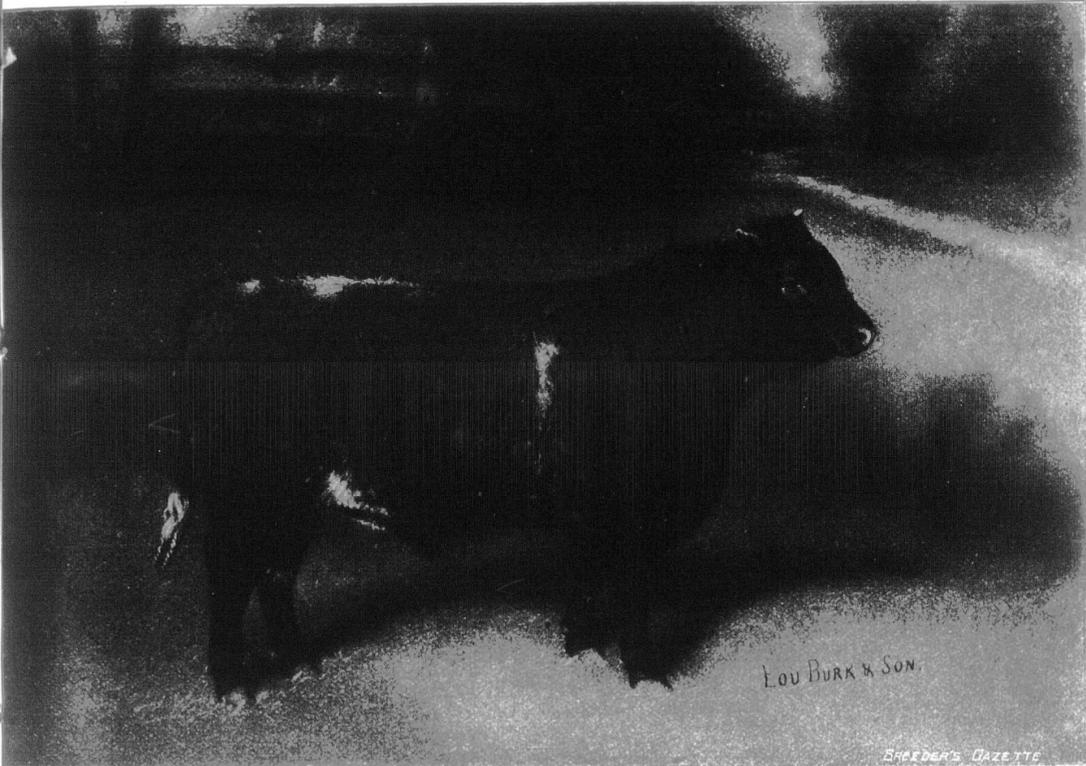
Ans.—In reply to your correspondent's enquiry as to the suitability of his soil for cranberry culture, I may say that a muck soil in which there is considerable proportion of coarse sand is the best for cranberry culture, providing there is sufficient moisture. From the description of his soil, I should think that cranberries might be grown successfully in it, but I would advise him to go into the business on a small scale at first, until he learns what his soil will produce and also gains experience. A good book on the subject of cranberry-growing is "Cranberry Culture," by J. J. White, published by the Orange Judd Co., New York (price, \$1.25), which he would do well to read beforehand.
W. T. MACOUN, Horticulturist, Central Expl. Farm, Ottawa.

NOTE.—The FARMER'S ADVOCATE can supply "Cranberry Culture" at the regular retail price.—ED. F. A.

PIGWEEED.

I enclose to you a very troublesome weed which I would like to know how best to get out of the land and what it is? Pigs seem to be very fond of it. Whether eating too much of it would hurt them I do not know. Thanking you for past information.
NORTHUMBERLAND CO. HARVIE DOAK.

Ans.—The plant enclosed is *Amarathus retroflexus*. Farmers call it pigweed. It is an annual, free-seeding plant, and easily subdued with a hoed crop. We are not aware that it has any injurious properties that will affect the pigs eating it.



IMPORTED SHORTHORN BULL, WANDERER'S LAST 158478.
IN SERVICE IN THE HERD OF CAPT. T. E. ROBSON, M. P. P., ILDERTON, ONTARIO.

Miscellaneous.

TREATMENT OF CORN SMUT.

The reading of Prof. Lochhead's valuable letter regarding grain rusts, in your issue of August 15th, leads me to ask: First—If there is not danger to the next crop of other grains from corn smut, which I find is very prevalent in my field this season, if the bunches are allowed to fall upon the ground? Will these spores infect other grain in that way, and if so, what disposal should be made of the smut balls? Second—In planting corn next season, should not the seed be bluestoned, and how strong may it be applied, and how, or is there any better remedy?
W. S. Middlesex Co., Ont.

Ans.—There is no danger whatever to the crop of grain following corn infested with corn smut, for the smuts which damage wheat, oats or barley are distinct from it, and cannot possibly reproduce it. One might just as well expect to get a crop of white clover from sowing purple clover seed. The smut of wheat will not affect oats or barley or corn; neither will the smut of oats affect wheat or barley or corn. Each of these smuts is a distinct species, as we say, and the general biological law that "like produces like" holds true here as with the higher plants and animals. Care should be taken, however, to keep the ground from becoming filled with spores of corn smut, which may be done by preventing the smut balls from falling to the ground. Smut spores retain their vitality for several years, and are not readily destroyed by heat. To keep the

pure-bred Embden gander and sell the stock for breeding purposes, or mate them with a pure-bred African gander and raise the stock for the market?
SUBSCRIBER.

Wellington Co.

Ans.—An expert poultry judge assures us that the produce from a cross of the African gander and Embden goose is very satisfactory for market purposes, being hardy, vigorous growers. The Embden at maturity is about equal in size and weight with the African. If you have a first-class quality of Embden geese, and have reason to believe you can readily find buyers for breeding purposes, it would seem likely that there would be more money in keeping them pure, as you could at least sell part of them for breeding, and the remainder, if well handled, will bring about as much on the market as the cross-bred stock would. As a rule, when one has a good market variety of pure-breds, it is wise to keep them pure and to make judicious selections of males to improve the stock.

BUCKTHORN.

Enclosed you will find a sample of a tree I found on my farm. I do not know the name of it, and cannot get anyone to tell me what to call it.

Ans.—The shrub is the common buckthorn (*Rhamnus catharticus*). It makes one of the best hedges, being a rapid grower and firm. The fruit is sometimes used for medicinal purposes, as it makes a strong purgative.
Horticulturist, Ottawa. W. T. MACOUN.

HELLEBORE FOR SQUASH BUGS—TO ROT HORSE MANURE—ENJOYS THE F. A.

First, I wish to say that I enjoy very much the reading of your valuable paper. I used to enjoy it years ago, and I enjoy it more now.

I notice in your last issue you ask your readers to give "successful methods of dealing with the squash bug," and in response I would say, that when my cucumber and musk-melon vines were about 3 or 4 inches high, I was a little alarmed to find them swarmed with the bug. The only thing I had at hand was some hellebore, so I put some in my spray pump and gave them a liberal spraying, and repeated it in seven days, and have not been bothered since with the bug.

Is there anything I can put with horse manure that will make it rot? Of course, I know that when I used to be home on the farm we were not bothered, because we used to mix the cow manure and horse manure together; but I do not keep a cow. I have kept it piled up neatly and have turned it twice, but still it does not seem to rot.

Essex Co., Ont.
 W. E. MILLSON.

Ans.—Probably the manure is too dry, or else it heats too violently and burns, fire-fangs, turns light in color, and goes to waste by volatilization. Usually, the trouble with horse manure alone is that it ferments too rapidly. We would recommend mixing a quantity of soil with the manure, then keep it well tramped down and moistened with water. It should then rot without undue waste by fire-fanging.

BLACK HEAD IN TURKEYS.

Our turkeys are dying of some disease of which we do not know. They get diarrhea and become very weak, turn dark in the head, will not eat, but are very thirsty. Color of stool yellow, sometimes green and quite watery. Will you kindly publish cure.

Ontario Co., Ont.
 G. N.

Ans.—The trouble with your correspondent's turkeys is no doubt black head (*Entero Hepatitis*). I have not been able to find any cure for the disease, and it is generally admitted to be incurable. The disease is due to a small organism which is taken into the bird's system along with the food that is gathered from the ground, and is chiefly spread in this way. The droppings of a sick bird contain more or less of these organisms. The disease can be avoided somewhat by feeding good, pure, wholesome foods, either from clean troughs or from the hand, but never feed from the ground, and removing the bird to new ground. If a bird is opened you will find the liver is covered more or less with creamy-white spots from the size of a pea upwards. A case came under my observation this summer, where turkeys were dying from this disease, on a farm where there had been no turkeys for ten years or more, so from this it is evident we have a very serious disease to deal with. If your correspondent would be good enough to ship a sick bird or two to F. C. Harrison, Bacteriologist at the College, Mr. Harrison will be pleased to examine the birds for him and advise the best methods of stopping the disease.

W. R. GRAHAM.
 Poultry Supt., O. A. C., Guelph.

SPRAYING WILD MUSTARD.

Would you kindly inform me, through the columns of your paper, how to get rid of wild mustard? Will sulphate of copper kill it? If so, please give directions.

C. T. D.
 Westmoreland Co., N. B.

Ans.—Both at the Guelph and Ottawa Experimental Farms, copper sulphate solution completely killed the mustard, and did very slight damage to the grain. The 2 per cent. solution of copper sulphate (2 lbs. in 10 gallons of water), sprayed on the crop just as the mustard was commencing to blossom, gave entirely satisfactory results. Prof. Shutt, who conducted experiments, concludes that about 50 gallons are necessary for an acre, and that if heavy rain comes within 24 hours after the spraying, the operation should be repeated. In other experiments where the mustard was very thick, it was found necessary to spray a second time in about two weeks after the first, to catch plants that came up after the first spraying, or that somehow escaped the full dose that was intended for them. The Spramotor Co., London, Ont., make special machinery for this purpose.

REGISTRY OF STANDARD-BREDS AND HOLSTEIN-FRIESIANS.

1. Would you please let me know, through the ADVOCATE, who the secretary of the Standard-bred Horse Association is, and his address?

2. Also, who registers Holstein cattle, and his address?
 J. M.
 Prescott County, Ont.

Ans.—I. J. H. Steiner, Chicago, Ill., is Secretary of the American Trotting Register. There is no Standard-bred Horse Breeders' Association and no recognized registry in Canada for Standard-breds.

2. The Secretary of the Holstein-Friesian Association of America is F. L. Houghton, Brattleboro, Vermont. The Secretary of the Holstein Breeders' Association of Canada is G. W. Clemons, St. George, Ont.

QUALITY OF CEMENTS.

Could you, or some of your readers, tell me through your valuable paper if the Thorold cement is as good as Queenston cement?

Hastings Co., Ont.
 C. B.

Ans.—Both are what are called rock cements, and we have had equally good reports of each from readers who have used them extensively.

MARKETS.**FARM GOSSIP.****South Perth.**

The harvest is past, and the results so far are not very encouraging to the grain farmer. Wheat, from which much was expected, has turned out considerably below the average, for while but little real damage was done by the Hessian fly, the hot weather during the filling period caused much shrunken grain, lessening the yield both in bulk and weight. The average will probably not be over twenty bushels of cleaned grain, testing from 56 to 60 lbs. Barley and oats are exceptionally short in the straw and thin on the ground, with a corresponding decrease in yield of grain. Peas show the same indications as regards the straw, but appears to be fairly well podded. A few are trying the grass, or bugless, variety, and in some instances under my own observation they are superior to the common kind both in yield of straw and apparently better podded, though I have not yet seen any threshed, and I have not seen any indication of the weevil, while the common variety in the same field is badly infested. Early potatoes are exceedingly scarce, the price ruling at 35c. and 40c. per peck. The same is true of early apples, which sell readily at 20c. per peck. "Few vegetables and less fruit," is the cry, though with the present showery weather field potatoes will probably "pick up," and fall and winter apples yield much better than the early varieties. Pears, plums and grapes are fair crops, though there are comparatively few of them grown here. Honey is a fair to good crop, and, with the scarcity of fruit, ought to command a good price; extracted is retailing at 9c. and 10c., with 12c. and 15c. for comb. Mangels and corn are doing well, but turnips are very "patchy," and many fields, through press of work, are abandoned, apparently, to the reign of fox-tail and other weeds. Many of our farmers have too many strings to their bow, and, we think, would do better with a more special kind of farming, which would admit of more rapid methods of handling the produce by machinery, and thus less need of hired help. The prospects for a yield of red clover seed, we think, are good. During sunny weather we have noticed many bees of the Italian strain working on the blossom, and if there is anything in the theory that bees are necessary to distribute pollen for the production of seed, the yield should at least be fair. Certainly what few heads are ripe are well supplied with seed. If, then, as scientists claim, bees are the most necessary agents in the production of fruit and clover seeds, it will surely pay farmers and Government to encourage the industry. As usual, we have this year continued using our two-foot-high flat wagon rack for taking off the harvest, and having had occasion to assist a neighbor who uses the old style, we could not help but marvel why any intelligent man would persist in dragging around a heavy, rocking, nerve-destroying receptacle, into which, higher than his head, he laboriously casts all kinds of heavy produce, throwing away time and money with every forkful.

Prince Edward Island.

Dry! Dry!!! Dry!!! We have had an exceedingly dry time down here during the last half of July and so far in August. The pastures are pretty well burnt up, and the farmers who are not supplied with green feed for stock are learning a lesson that may do them good for some time to come. Since our dairy industry was started, we have not had such a falling off in the milk supply in August as we are now experiencing. Some of the smaller factories are closing up on account of scarcity of milk. The horn-fly is also very troublesome, which makes matters worse for stockmen. We are now pretty well through with grain-cutting, and the great bulk of the harvest is already saved in fine condition. Earlier sown grain, in all but the western part of the Island, is a fairly good crop. Up west, in Prince County, the drought was much worse, and crops are very short. Wheat has stood the dry weather best, and on most of the Island is a good crop, well filled and on rust or midges. The earliest oats are pretty good in the straw, and will thresh out well. Potatoes are making a good appearance yet, but the drought is beginning to tell on them. Early-sown turnips are looking well, but the late sowings that did not get a good start before the dry spell set in will not yield much. The cattle on the pastures are not gaining flesh, as the after-grass has not made much start. Beef cattle are not very much enquired after just now, and are not in very good condition for market. The lamb trade has not begun yet, though S. H. Jones, of Quebec, the man who handles most of them, is here making arrangements for handling them later on. Podder corn has made a fine growth this season. Our exceedingly hot summer has been in its favor. Horses have not been in such demand here for over 20 years, all suitable ones being picked up for export as soon as offered. This is the earliest harvest this country has had during the last half century. If we do not have rain soon, it will be very difficult to get the fall plowing done.

W. S.
 August 23rd.

Delta, B. C.

Mr. Thomas Cunningham, fruit inspector, on returning from a recent visit to the Delta district, reports that he took particular notice of the dairy stock, and states that he has never seen cattle in better condition. Many of the herds showed fine breeding, the scrub cow being conspicuous by her absence. The young cattle now rapidly coming forward give evidence of judicious breeding; they are mostly cross-bred from pure-bred stock on both sides. Dairy Shorthorn bulls seem to have the preference, and they certainly appear to nick well in breeding with Ayrshires and Holsteins. This, he states, is evident by the quality, shape and size of the young heifers now coming in. "The Delta farmers are good, liberal feeders, their pastures being rich in sweet, succulent grasses." Mr. Cunningham gives a glowing report of the harvest and general agricultural outlook throughout the Delta. Speaking of the dairying industry, he states that three of the chief creameries on the Delta are turning out no less than 15,000 pounds of butter per month, the Delta Co-operative Creamery making 400 pounds per day, or 12,000 pounds monthly. L. Guichon's creamery is producing 1,700 pounds per month, all from his own cows, and the Wellington Farm, owned by R. Rithet, is turning out 1,300 pounds.

Huntingdon Co., Quebec.

The harvest has all been gathered in, except some late grain, and while not a heavy crop, is a fairly good one. The grain is of very good quality. The weather has been quite showery, except last week, which was a splendid harvest week. There is grass in abundance, hence the flow of milk is good for this season. Corn promises well.

W. F. S.

The Census Returns.

Census Commissioner Blue has issued his first statement of returns, showing the population of Canada to be 5,338,883, an increase of 505,644, compared with 1891. Of the seven Provinces, Quebec exhibits the largest gain in population, having 132,439 more than in 1891. Manitoba comes next, with 93,958, while British Columbia is third, with 91,827. Ontario is fourth on the list, with 53,657 to her credit. New Brunswick is considerably behind Ontario, with a gain of 9,830, while Nova Scotia, closely approaches the former, with 8,720. Prince Edward Island laments a loss of population, in which unenviable position she stands alone, amounting to 5,820. The Territories are able to boast of a gain of 78,201. An analysis of the returns shows that the population has uniformly decreased in the older rural sections, and increased in cities and towns and in the new regions. Judging from the comments of the press, a greater increase was expected. As immigration has been fairly heavy, the natural increase could not have been very large in the past decade. In the last issue of the "Farmer's Advocate," Mr. David Lawrence, writing on the farm labor question, laid part of the blame for this upon the old bachelors, who are becoming numerous in nearly every township. The Toronto Globe thinks that economic changes, such as the introduction of machinery and the adoption of mixed farming, have resulted in a great decrease in the amount of labor needed on the farms of old Ontario, and have accordingly brought about a proportionate decrease of population. The singular uniformity with which in eastern, central and western Ontario the rural districts have lost population emphasizes this point. The farms of old Ontario are as carefully tilled as ever. They earn considerably more money than they did ten years or more ago. There are fewer farmers to share this increased income, and so they are better off on two counts. While the rural districts everywhere, except on the Detroit frontier and in the Ottawa Valley, have receded in population, all the cities except one have made heavy gains. A portion of the population from these rural districts has drifted to the towns and cities and a part to the newer districts, such as New Ontario, British Columbia, and the Yukon.

Chilliwack, B. C.

In the Victoria Colonist we find the following statements, elicited in an interview with L. W. Paisley, a well-known resident of Chilliwack:

The crops are looking fine. Wheat, oats and barley will yield fully up to the average, while hay will give a splendid return. Mr. Paisley mentioned a field of Alsike clover which stands 5 feet 6 inches high, timothy 6 feet 10 inches, and rye grass 7 feet 8 inches. Roots and vegetables are splendid. Fruits of all kinds are also looking well. There was a phenomenal crop of berries, of excellent quality. Apples, plums and prunes give promise of a very large yield. The Eden Bank creamery, established four years ago, on the co-operative plan, is a good example of what is being and may be done in dairying. In 1900 it produced 130,000 pounds of excellent butter, which was sold at 25 cents a pound, and at the end of the season there was a surplus of \$1,400. On Monday, 1,457 pounds of butter was made; on Tuesday, 1,070 pounds, the daily average being about 1,200 pounds. More than half the farmers in the district make their own butter in the old-fashioned way, so that there is a good field for the establishment of other creameries. Last year the butter cost, to make, 1 cent per pound, while this year the cost of manufacture will be reduced to one quarter to one third cent per pound. The butter produced at Eden Bank Creamery finds a ready sale in Vancouver, New Westminster, and Victoria, the latter being the best market.

Northwest Horses for the Army.

Lieutenant-Colonel Dent, who has been in the Northwest for some weeks purchasing horses for the War Office, has completed his tour and returned to Montreal. He expresses himself as being very much pleased with the assistance given him in his work by Secretary C. W. Pearson and other members of the Territorial Horse Breeders' Association, particularly Capt. Inglis and Messrs. W. R. Stewart, J. A. Turner and G. S. Goddard. From the knowledge gained by a personal inspection of the leading horse-breeding districts of the Northwest and British Columbia, he is inclined to think that a future visit might be much more productive of results than has been. Colonel Dent considers that a great deal of improvement might be made in breeding the right class of mares and using a Thoroughbred stallion. It would also greatly facilitate business if breeders would devote more attention to having their horses better broken in, so that they would be handier and more tractable. Colonel Dent also recommends that a law be passed similar to that in force in England, compelling the railway companies to properly clean and disinfect all stock cars after each shipment. Following is a statement of the number of horses purchased in the Northwest and British Columbia by Colonel Dent, with the prices paid for each class of horse, and the total amount expended:

Horses bought.	No.	Price paid.	Amt.
Mounted Infantry cobs	377	\$ 85	\$32,045
Cavalry	255	100	25,500
Royal Artillery	146	100	14,600
Total	778		\$72,145

Of these 778 horses, 26 were secured at Kamloops and Vernon, B. C.; the others at various points in the Northwest, as follows: Calgary, 217; High River, 98; Cochrane, 61; Lethbridge, 18; Macleod, 231; Pincher Creek, 48; Medicine Hat, 27; Maple Creek, 44; Moose Jaw, 8.

Warton Sugar Beet Industry.

The Warton (Ont.) Beet Sugar Manufacturing Company is corresponding with the farmers in that district for a supply of beets for refining in the season of 1902. The farmers are promised \$4 per ton, delivered at the factory. If the beets test 14 per cent., \$4.50 will be paid. The company states that last year it shipped nine car loads of beets to Michigan, and they averaged 14½ per cent. The company has 1,500 acres contracted for and it wants 1,000 more. Similar enterprises are under way at several other points.

Failure of Western Corn Crop.

Mr. W. J. White, Inspector of Immigration Agencies in the United States, after a tour of some of the Western States, says that the corn crop in Nebraska and Kansas is a total failure, owing to the drought. In other States the yield will be only half a crop. The drought has also affected wheat and roots to some extent. A large number of immigrants from the Western States are going into the Territories, but they are mostly men with capital, and not poor settlers.

Corner-stone Laying at the O. A. C.

Mr. Walter B. H. Massey, of Toronto, on August 14th, laid the corner-stone of the new Massey Memorial Hall, to be used as a convocation and library building, at the Ontario Agricultural College, Guelph, in presence of a large concourse of people. Dr. James Mills, President, in the chair. The erection of this structure to the memory of the late Hart A. Massey was rendered possible through the gift to the Ontario Government of \$10,000 by the trustees of his estate for the purpose in question, and is greatly required, owing to the overcrowding of the College with students. The proceedings began by the presentation of a silver trowel to Mr. Massey by Mrs. Dryden, wife of the Ontario Minister of Agriculture. Mr. Massey, in accepting it, said that he was glad to receive it, particularly at her hands. With the assistance of the Masons, he placed the corner-stone in position, saying, "I lay this corner-stone for the foundation of a building to be erected to the memory of the late Hart A. Massey, to be used as a library and hall in connection with the Agricultural College." Addresses were also delivered by Hon. James Young, of Galt; Dr. Goldwin Smith, of Toronto, who, alluding to the fact that he had just entered upon his 79th year, said that "just as he was leaving the world a man was beginning to fly"; Major Mutrie, M. P. P.; Hugh Guthrie, M. P.; Capt. T. E. Robson, M. P. P.; Nelson Monteith, M. P. P.; Rev. Dr. Sutherland, and Warden Springer.

The New Stock Yards.

Work on the new stock yards to be erected at Toronto Junction by the Union Stock Yards Company, Limited, is to be commenced at once, according to a statement made by Mr. Andrew Dods, manager. It is the intention first to proceed with the yards and pens, and afterwards to put up the general offices and the hotel. The first part of the work will be done by the company, and it is expected they will be in a position to receive transit cattle some time this month. The offices and hotel will probably not be fully completed and equipped till next spring. The by-law granting them exemption from general taxation for 30 years, and fixing the school rate assessment at \$300,000, has received its second reading in the Toronto Junction Council. The third reading was deferred.

Toronto Markets.

Trade at the Western cattle market was dull, and the offerings heavy. The near approach of the Toronto Exhibition is given as the cause of the extra supply; all sold towards the close of the day. Export cattle higher. Butchers' cattle higher. Hogs steady and unchanged, but there are signs of a lower market in the near future. To-day's receipts were: Cattle, 659; sheep, 1,693; hogs, 1,500; calves, 40. Export Cattle.—Cables from the Old Country markets are not encouraging. Space on the ocean steamships is scarce, and against the exporters. Two weeks ago, agents were asking consignments; this week, prices have returned to the old figure. The quality of export cattle was fair; prices remained steady, at \$4.75 to \$5.12½ for choice. Light export cattle from the farm of the Hon. E. J. Davis were sold by Messrs. Kennedy & Patton, to Messrs. Dunn Bros., at \$5.15 per cwt., average 1,239 lbs. per head. These went forward to-day. Mr. Gould shipped 14 carloads of export cattle. Butchers' Cattle.—The market was slow, except for choice, picked loads. These were steady, at \$4.40 to \$4.75 per cwt. Choice were steady, at from \$4.00 to \$4.50 per cwt. Poor and medium were slow of sale, at from \$2.75 to \$3.75 per cwt. Mr. Wm. Leveck bought 300 best butchers' cattle and exported from \$4.35 to \$5.00 per cwt. Mr. Wm. McClelland bought four loads of butchers' cattle, average 1,115 lbs. each, at \$4.50 per cwt. Feeders.—Messrs. Gooderham's distillery byres will be occupied by Messrs. Dunn Bros., W. Harris, and Sheridan. The prices are advanced per tie-up or stake. The advance in corn is given as the cause. Prices at from \$3.25 to \$4.50 for choice short-keep feeders. Bulls.—Offering only moderate; quality not very good. Prices steady and unchanged, at from \$3.00 to \$3.50 per cwt. Mr. W. Harris purchased two loads of bulls for feeding purposes, at \$3.00 per cwt. Stockers.—The supply of stockers is slightly improved. Prices hold fairly steady, at from \$3.00 to \$3.25. All under 400 lbs., off colors, mixed breeds, are quoted at \$2.25 per cwt. Sheep.—The prices of sheep were steady, at from \$3.50 to \$5.65 for ewes, and \$2.50 to \$3.00 for bucks. Everything sold at the close of the market, but at forced sales. There is a good demand for export sheep. There is some talk of 100,000 being required in the next two months. Lambs.—Prices firm, at from \$4.25 to \$5.00 per cwt. Towards the close of the market prices weakened, and \$4.75 was the top price. Buffalo market is very dull in this line; some sold down as low as \$3.00 per head. Calves.—About 25 calves on offer; very few choice milk-fed veals on offer. These fetched from \$7.00 to \$10.00 per head; all others at prices ranging from \$3.00 to \$5.00 per head. Milk Cows.—Trade dull; very few on offer. Prices ranged from \$25.00 to \$45.00 per head for choice milkers and early springers. Hogs.—Cables from the Old Country rule strong on all bacon products. Supply does not equal the demand at present. About 1,000 on offer, at \$7.25 for tippertops, best singers, long, lean, bacon sorts not below 160 lbs., not above 200 lbs., live weight, off cars—that is, not fed or watered. Light and thick fat at \$6.75; not many on offer. The high price of corn is one factor in the shortage of hogs. American corn is quoted at 65c. E. O. B. Toronto. We see prospect of a decline in the price of hogs in the course of the next two weeks, and advise all holders to market their hogs at once. Packers are not making any money, and there must be a let-up shortly.

Extreme comparative prices to-day.	2 weeks ago.	Same date last year.
Export cattle.....	\$ 5.12½	\$ 5.10
Butchers' cattle.....	4.00	4.70
Bulls.....	4.25	4.00
Feeders.....	4.25	4.25
Stockers.....	3.25	3.10
Sheep.....	3.65	4.00
Hogs.....	7.25	6.25
Milk cows, per head.....	45.00	45.00
Lambs, cwt.....	5.00	4.50

Grain Markets.—Receipts of farm produce on the St. Lawrence market were light. The receipts of fruit were heavy, the supply of tomatoes abnormally large, and prices have about touched bottom, at 10c. per basket. Potatoes have advanced, 50c., 60c., and 70c. per bushel by the load for choice. Wheat.—Four loads of new wheat, the first for this

season, sold at 6½c. per bushel. One load of red sold at 70c. One load of goose at 66c. per bushel. Oats.—Two hundred bushels of old oats sold at 41c. per bushel. Five hundred bushels of new oats sold at 37½c. per bushel. Hay.—Twenty-five loads of new hay sold at from \$9.00 to \$11.00 per ton. No old hay on offer. Straw.—One load of sheaf straw at \$10.00 per ton. Fresh Meats.—Abattoir quotations: Beef fore quarters, cwt., \$5.50; beef hind quarters, cwt., \$8.50; mutton carcass, lb., 7½c.; veal carcass, cwt., \$8.50; lamb carcass, cwt., \$9.00; dressed hogs, cwt., \$9.75. Hides, Skins and Wool.—No. 1 green, per lb., 7½c.; No. 1 green steers, per lb., 8c.; No. 1 cured hids, per lb., 8½c.; calskins, per lb., 9c.; pelts, each, 40c.; lambskins, each, 40c.; wool fleece, per lb., 13½c.; wool, unwashed, per lb., 9c. August 23rd, 1901.

Toronto Market Notes.

A correspondent writes: Is the present cattle market badly managed; if so, what are the improvements necessary to render it a first-class, up-to-date market? Early in the season a market committee was appointed to visit and suggest improvements. Certain buildings and offices were promised; offices, sheds and building were talked of by the chairman, but up to the present moment nothing has been done. Now, the same gentlemen who so loudly declared that these buildings would be ready for the fall business are particularly interested in another venture, and one of the same committee has the promise of the post of manager for the new concern, at a salary of \$2,000 per annum. Yet, as an alderman of the city council, he has promised to the best of his ability to execute and protect the interests of the citizens of Toronto, and not become a partner, either directly or indirectly, in any interest on behalf of any corporation against the city's interest.

Montreal Markets.

Montreal, Aug. 26.—There were about 600 head of butchers' cattle, 75 calves and 500 sheep and lambs offered at East End Abattoir to-day. Cattle.—There was a larger proportion of pretty good cattle to-day than has been the case lately, and all kinds, except the best, were rather lower in price. Mr. G. Martel bought ten of the best, beeves at from 4½c. to 4¾c. per lb.; pretty good stock sold at from 3½c. to nearly 4½c. per lb.; common dry and thrifty young stock 2½c. to 3c.; canners paid from 1½c. to 2c. per lb. for small bulls, and from 1½c. to 2c. per lb. for old cows. Calves from three to four weeks old sold at from \$1 to \$5 each, or about 4½c. per lb. Calves two to three months old bring \$8 to \$12 each, or about 4c. per lb. Sheep.—Shippers paid 3½c. per lb. for good large sheep, and the butchers paid from 3c. to 3½c. per lb. for the others. Lambs.—The supply of lambs is not equal to the demand, and prices are firm. Fair to good lots of lambs sell at from \$3 to \$3.75 per head, with a few choice ones at from \$4 to \$4.50 each, or about 4c. per lb. Hogs.—Fat hogs sold at from 6c. to 7½c. per lb., the latter for selects.

Buffalo Markets.

East Buffalo, Aug. 26.—Cattle.—Receipts, 150 cars; good demand and higher; good to fine finished steers, \$5.65 to \$6; medium to choice shipping steers, \$5.30 to \$5.60; coarse rough, \$4.15 to \$4.65; fat smooth, \$5 to \$5.25; green steers, \$3.85 to \$4.50. Hogs.—Receipts, 60 cars; excited and higher; heavy grades opened at \$6.35 to \$6.40, closed at \$6.50; mixed, \$6.30 to \$6.35, closed at \$6.40; Yorkers, common to best, \$5.15 to \$6.25, closed at \$6.35; roughs, \$5.40 to \$5.70; stags, \$4.50 to \$4.75. Sheep and lambs.—Receipts, 51 cars; market steady to firm for lambs; top, \$5.60 to \$5.95; one load fancy corn-fed, \$5.85; culls to fairly good, \$3.25 to \$3.50; sheep, top mixed, \$3.30 to \$3.50; wethers, \$3.60 to \$3.90; yearlings, \$3.75 to \$4.

Chicago Markets.

Chicago, Aug. 26.—Cattle.—Receipts, 22,000; butchers' stock firm; Texans strong; westerns slow; good to prime steers, \$5.30 to \$6.30; poor to medium, \$3.60 to \$5.25; stockers and feeders steady, \$2.25 to \$1.25; heifers, \$2.50 to \$4.85; canners slow, \$1.25 to \$2.35; steers, \$4 to \$5.25; Texas grass steers firm, \$3.40; western steers, \$3.75 to \$4.35. Hogs.—Receipts, to-day, 32,000; top, \$6.50; mixed and butchers, \$5.75 to \$6.40; good to choice, heavy, \$5.90 to \$6.50; rough heavy, \$5.70 to \$5.85; light, \$5.70 to \$6.25; bulk of sales, \$6 to \$6.25. Sheep.—Good to choice wethers, \$3.25 to \$4; fair to choice, \$3 to \$3.40; native lambs, \$3 to \$5.25; western lambs, \$3.90 to \$5.10.

Toronto Market Profits.

Commissioner Cootsworth, in defence of the management of the Toronto cattle market, has prepared a schedule showing profits to the city of \$67,000 since 1896, as follows:—

	Receipts.	Expend. Balances.	
1896.....	\$25,223	\$16,816	\$ 8,407
1897.....	26,836	19,986	6,850
1898.....	33,848	15,466	18,382
1899.....	34,137	17,363	16,773
1900.....	35,208	18,065	17,143
Total.....	\$155,254	\$87,591	\$67,656

British Markets.

London (Eng.), Aug. 26th.—Canadian cattle, 6d to 6½d; sheep, 6d. Liverpool.—Canadian cattle, 6d to 6½d; sheep, 6d. Glasgow.—Canadian cattle, 6½d.

SHOWS AND SHOWING.

Live Stock Exhibits and Meetings at Buffalo, N. Y.

As the time approaches for the live-stock show at the Pan-American Exposition, the indications are that one of the largest and best shows ever brought together will be seen at Buffalo, the dates for which are as follows:—

Swine.....	Aug. 26th to Sept. 7th.
Cattle.....	Sept. 29th to Sept. 21st.
Sheep.....	Sept. 23rd to Oct. 5th.
Horses.....	Oct. 7th to Oct. 19th.
Poultry.....	Oct. 21st to the 31st.
Pet Stock.....	Oct. 21st to the 31st.

During the time of each exhibit, arrangements have been made for the holding of meetings of breeders of the various classes of live stock, and through the courtesy of the New York Commission, the meetings will be held in the audience room of the New York State Building, as follows: Swine Breeders, September 4th; Cattle Breeders and Dairywomen, September 19th and 20th; Sheep Breeders, October 3rd; Horse

Breeders, October 17th; Poultry and Pet Stock Fanciers, October 25th. An interesting programme has been in course of preparation, and invitations have been extended to the officials of the South and Central American countries to participate in the deliberations, as well as to all those of the United States and Canada who are interested in live-stock meetings. These meetings are a result of an anxiety expressed on the part of live-stock men to get in closer touch with the live-stock interests of not only our own country, but of South and Central America as well. A general invitation is extended to all stockmen to be present at these meetings.

F. A. CONVERSE,
Superintendent of Live Stock.

Royalty at the Ottawa Fair.

The Central Canada Exhibition, at Ottawa, Sept. 13th to 21st, in addition to all its other attractions this year, announces an unprecedented feature in the visit of the Duke and Duchess of Cornwall and York during the exhibition. The visit of the future King and Queen of the British Empire is attracting wide-spread attention, and thousands of dollars will be spent in decorating the city in a manner befitting the Capital of Canada. The grounds will come in for their share of embellishment, and a visit to Ottawa during Fair week will be a show in itself.

Last Call for London.

Secretary Nelles, of the Western Fair, to be held on Sept. 5-14, reports all arrangements more than up-to-date, and feels confident that the initial show of the century in the beautiful Queen's Park of the "Forest City," will be one of which Western Ontario can well be proud. As usual, the live stock and other substantial features will be exceptionally strong, meriting the careful study of the multitudes of visitors; and besides the afternoon entertainments, there will be four evenings of grand fireworks display, including "Fall of China" and "Relief of Peking," a most brilliant spectacular representation of recent events.

Fall Fairs.

CANADA.	
Eastern, Sherbrooke, Que.....	Aug. 31-Sept. 7
Toronto Industrial, complete.....	Sept. 2-7
Western Fair, London, Ont.....	Sept. 5-14
Kingston, Kingston, Ont.....	Sept. 9-13
Brome Corner, Que.....	Sept. 10-11
Bowmanville Fair.....	Sept. 12-13
Nova Scotia, Halifax, N. S.....	Sept. 14-21
Central Canada, Ottawa, Ont.....	Sept. 14-22
E. Zorra, Tavistock.....	Sept. 16-17
Lennox, Napanee.....	Sept. 17-18
Scuzog Agricultural Society, Pt. Perry, Ont.....	Sept. 17-19
South Lanark, Perth, Ont.....	Sept. 17-19
Strathroy Fair, Strathroy, Ont.....	Sept. 17-19
East Elgin, Aylmer, Ont.....	Sept. 17-19
North York, Newmarket, Ont.....	Sept. 17-19
N. Middlesex, Ailsa Craig.....	Sept. 17-19
N. Leeds, Merrickville.....	Sept. 19-20
North Waterloo, Berlin.....	Sept. 20-21
Russell County, Metcalfe, Ont.....	Sept. 23-24
Wellesley Fair, Wellesley, Ont.....	Sept. 24-25
Haldimand, Cayuga.....	Sept. 24-25
Palmerston.....	Sept. 24-25
South Huron, Seaforth.....	Sept. 24-25
Exbrige.....	Sept. 24-25
Central Bruce, Paisley.....	Sept. 24-25
Victoria Road.....	Sept. 24-25
Atwood, Ont.....	Sept. 24-25
North Lanark, Almonte, Ont.....	Sept. 24-26
Prescott, Vankleek Hill, Ont.....	Sept. 24-26
Peterborough Central, Peterborough, Ont.....	Sept. 24-26
Northern, Walkerton, Ont.....	Sept. 24-26
Great South-western and Union, Essex, Ont.....	Sept. 24-26
Great Northern, Collingwood, Ont.....	Sept. 24-27
Streetsville.....	Sept. 25-26
Prince Edward County, Picton, Ont.....	Sept. 25-26
Centre Simcoe, Barrie.....	Sept. 25-27
Kamloops, B. C.....	Sept. 25-27
North Brant, Paris, Ont.....	Sept. 26-27
South Renfrew, Renfrew, Ont.....	Sept. 26-27
Central Wellington, Fergus, Ont.....	Sept. 26-27
East Grey, Flesherton.....	Sept. 26-27
North Brant, Paris.....	Sept. 26-27
Mornington, Milverton.....	Sept. 26-27
Amabel and Albemarle, Warton.....	Sept. 26-27
London, Milton.....	Sept. 26-27
Whitby.....	Sept. 26-28
Central, Lindsay.....	Sept. 26-28
York Township and Weston Fair.....	Sept. 27
Tyendinaga, Shannonville.....	Sept. 28
Carleton, Richmond, Ont.....	Sept. 30-Oct. 2
Peel, Brampton.....	Oct. 1-2
Great North-western, Goderich, Ont.....	Oct. 1-2
Huntley, Carp, Ont.....	Oct. 1-2
N. R. of Oxford, Woodstock, Ont.....	Oct. 1-2
Stayner.....	Oct. 1-2
Orillia.....	Oct. 1-2
Arran, Tara, Ont.....	Oct. 1-2
South Waterloo, Galt.....	Oct. 1-2
S. Perth, St. Mary's.....	Oct. 1-2
New Westminster, B. C.....	Oct. 1-5
Victoria, B. C.....	Oct. 1-4
North Grey, Owan Sound, Ont.....	Oct. 2-4
East York, Markham, Ont.....	Oct. 2-4
E. Huron, Brussels.....	Oct. 3-4
North Renfrew, Beachburg, Ont.....	Oct. 3-4
Bolton.....	Oct. 3-4
S. Oxford, Otterville.....	Oct. 4-5
World's Fair, Rockton, Ont.....	Oct. 8-9
Elmvale.....	Oct. 8-9
Beaverton.....	Oct. 8-9
North Perth, Stratford.....	Oct. 8-9
Peninsular, Chatham, Ont.....	Oct. 8-9
Caledonia, Caledonia, Ont.....	Oct. 10-11
Georgia and North Gwillimbury.....	Oct. 10-11
Sutton.....	Oct. 10-11
Ashfield and Wawanosh Branch, Dungannon, Ont.....	Oct. 10-11
Orford, Highgate.....	Oct. 11-12
Norfolk Union, Simcoe, Ont.....	Oct. 15-17
Woodbridge, Woodbridge, Ont.....	Oct. 16-17
Bradford and West Gwillimbury.....	Oct. 22-23
Ontario Winter Fair, Guelph.....	Dec. 10-14

UNITED STATES.

Iowa, Des Moines.....	Aug. 23-31
Ohio State, Columbus.....	Aug. 26-Sept. 7
Minnesota, Hamline.....	Aug. 30-Sept. 6
N. Y. State, Syracuse.....	Sept. 9-14
Wisconsin, Milwaukee.....	Sept. 9-14
Missouri, Sedalia.....	Sept. 16-21
Indiana, Indianapolis.....	Sept. 16-21
Interstate, Louisville, Ky.....	Sept. 23-Oct. 5
Illinois, Springfield.....	Sept. 30-Oct. 5
Kansas City Show and sales.....	Oct. 7-11
St. Louis.....	Oct. 7-26
Chicago International.....	Nov. 30-Dec. 7
Buffalo (Pan-American)—Dogs, Aug. 27-30; swine, Aug. 26-Sept. 7; cattle, Sept. 9-21; sheep, Sept. 23-Oct. 5; horses, Oct. 7-19; poultry and pet stock, Oct. 21-30.	
National Live Stock, Chicago.....	Dec. 3-6



Widow Gray on Homemade Worries.

It was a quiet summer evening, cool and pleasant, the thunderstorm having cleared the air and brought the temperature down most acceptably. The cottage was of medium size, bearing signs of wear-and-tear, but none of poverty or neglect. It was on a corner lot in one of our larger cities, and sometimes the question of the heavier taxes this desirable situation entailed became a burning one with its owner; but so far she had managed, by the strictest economy, to meet all claims, and she hoped that for the remaining span of her existence, which could not, in the natural course of things, be a long one—she might be able to remain in the dear little place to which her John had brought her as a young bride some forty years ago, and in which her children had been born and brought up. Some of them had gone to other elsewheres, from which they came to visit her from time to time; and two others had gone to the best Home of all, where, "please God," she would say, "I hope to join them presently"; but meanwhile life held many blessings for her which her grateful heart was not slow to recognize. Widow Gray was seated in her rocking-chair, on a snug corner of her little veranda, with its peephole through the thickly-leaved creeper which almost covered it—"kind o' thinking," she would have told you, adding, "but perhaps not so much thinking as letting little thoughts and little ideas and little fancies run helter-skelter, one after another, through my head." To-day a very joy-bell of anticipation was ringing in her ears, for to-morrow, John, her eldest, and Jim, her youngest, were coming with the crowd of "Old Boys" whom the city was preparing to welcome, but who (in her case, and perhaps in the case of many others also) really came "to see another." At church the minister's sermon had been all about joy—about rejoicing, not "sometimes," but "always," and Widow Gray had recalled an oft-repeated saying of her dear old husband: "We are meant to be joyful, Bessie. I cannot understand a child of God being anything but cheery and happy. There must be something wrong if a Christian man or woman carries a long face."

"Well," thought Widow Gray, "I know that's how it should be, but there's many a cloud of our own making which comes between us and the light. And so it is that some of us, who should be so bright, look so gloomy. It seems to me that we get the good and the bad, the sunshine and the shadow, all mixed up somehow. Some are so afraid of cares which may come to-morrow, that they have no eyes for the blessings which are already theirs to-day. My John was fond of quoting what Robbie Burns had to say about this:

Human bodies are sic fools,
For a' their colleges and schools,
That when nae real ills perplex them,
They make enow themselves to vex them."

"Now, for instance, how many young couples spoil the happiness of their whole married lives by the terrible mistakes they make by beginning, so to speak, at the wrong end. They lay up untold worries for themselves by their want of common sense, if not common honesty, though they would think that a hard name to give it. There's that dear young couple over the way. Any one who knows what he earns, and how unfit, from want of proper training, she is to spend his wages wisely, can see with half an eye that it will not be long before their troubles begin; and that they will be troubles of their own making won't make them easier to bear. They have furnished their little cottage on a scale far beyond their means. They got one of those circulars headed, 'Why pay cash when you can buy everything on the instalment principle?' and nothing I could say, and I did try to say it kindly and lovingly to them, could persuade them that it was not the very easiest thing in the world to pay by degrees. 'Why, Auntie Gray, we shan't feel it. It's called the "hire system," and is ever so much better than having to pay for it all in a lump. Besides, we can get married NOW, instead of having to wait for goodness knows how long!' My talking wasn't of any use, and but too soon will come for these deluded young people, not only worry, but sorrow, for sorrow always follows sharp upon the heels of worry.

"This 'pay by degrees' plan is a downright snare to our young men, too—a regular pitfall. I call it. They want bicycles, they want musical instruments, they want all manner of things good enough in their way, but which should be earned before bought; and but too often, even after really pinching themselves to meet the pay-

ments, their so-called possessions are forfeited or find their way into the pawn shop. All these are what I call homemade troubles. Our dear Lord never sent them to us, and I can't help thinking that they are amongst 'the crooked paths' cut of which He leaves us to find our own way—they are not those which He has promised to make straight. I cannot be too thankful for the manly uprightness of my dear old John. Bessie, my woman, he would always say when I showed a hankering after something we could not rightly afford, 'we'll only have what we can pay for on the nail, and then there'll be no sorrow with it.' Our children knew his way and respected his motives even when sometimes they seemed difficult to understand. Now that they are fathers and mothers themselves, they realize what a good foundation he was laying by precept and example for our future happiness. To his self-denial and careful provision I owe the comfort of my declining days and the prospect of my boys' home-coming to-morrow without a thought of bitterness to mar our pleasure." Here Mrs. Gray suddenly remembered that it was time to put on the teakettle, and having done so, and partly to prevent her thoughts upon this fruitful subject "running away with her," as she termed it, she took from the top shelf of her bureau, which held many such treasures, the following extracts, which, she said to herself, "express so much better than I can what are the best of all remedies for every trouble, whether of our own making or which may come to us in the Providence of God." And as the dear old white-haired lady bends over the pages we will bid her good-bye for the present. This is what she reads:—

Two remedies for worry.—The first by Daniel Quorn: 'Start the day thinking like this: There will be nothing to-day but He will help me through it. There will be nowhere to-day but He will be with me; no temptation but He can deliver me; no burden but I can cast it upon Him. He looks over the day for us. There's a worry waiting, He sees it, and here's the patience. There's a temptation; yes, He knows, and here is wisdom and strength. There's a bit of a trial, and here He is waiting to give thee a bit of courage and faith. But don't let that be all. Ah! He will make thee glad with His favor and send thee forth cheerful to thy work.'

The second remedy by Mary D. Brine:

Cheer up; cheer up, ye moody ones,
Look for the bit of blue!
And when you find it you will feel
The warm sun shining through.
And if the shadows come, why, then
Just wait awhile; you'll find
That clouds can't last forever,
When the sun lies just behind."

H. A. B.

Do You Know?

Do you know that every cruelty inflicted on an animal in killing or just before death poisons to a greater or less extent its meat?

Do you know that every cruelty inflicted upon a cow poisons to a greater or less extent its milk?

Do you know that fish killed as soon as taken from the water, by a blow on the back of the head, will keep longer and be better than those permitted to die slowly?

Do you know that birds destroy millions of bugs, mosquitoes and harmful insects; that without the birds we could not live on the earth, and that every little insect-eating bird you may kill and every egg you may take from its nest means one less bird to destroy insects?

Do you know that a check-rein which will not permit a horse to put his head where he wants to when going up a hill is a cruel torture to the horse?

Do you know that the mutilation of a horse by cutting off his tail compels him to suffer torture from flies and insects every summer as long as he lives?

Do you know that every kind act you do and every kind word you speak to a dumb animal will make not only the animal but yourself happier, and not only make you happier, but also better?

GEO. T. ANGELL.

His Amazed Daughter.

The wife of a Gordon Highlander received, some time ago, an invitation to visit him at the barracks in Scotland. She did so, taking with her their little six-year-old girl. When they arrived, as it happened, the husband was engaged on sentry duty, and so they could not approach him.

The child eyed her "daddy" with a rather sorrowful but amazed expression, as he paced up and down the square, shouldering his rifle and wearing a kilt. She had never before beheld him thus arrayed, and for a few minutes the spectacle seemed to be quite beyond her; but for no longer could she keep silent.

"Mamma," she said, in a voice that betrayed a trace of childish coyness, "if daddy finds the man what stole his trousers, will he gumme dat little frock?"

The Secret of How to Secure a Good Wife.

(Written especially for the bachelor readers of the "Farmer's Advocate.")

Whoso findeth a wife findeth a good thing and obtaineth favor of the Lord, and a prudent wife is from the Lord.—(Solomon, the Wise Man.)

While giving advice to a canny Scotchman regarding the better way of getting married, rather than living alone, I was confronted with the question, "Are ye mairitt, yersell?" When I answered in the affirmative, my questioner replied, "Oh, weel, ye'll ken a' about it."

When God at the beginning created man, he said: "It is not good that the man should be alone. I will make him an help meet for him." God does not change, but what He says in His wisdom is always true, and certainly the farmer, of all others, should not think of living alone. While these facts will at once be admitted by all reasonable men, some will at once tell me that they have friends who are unhappily married, and that it is very difficult to get a good wife. Others will say that it is a question of falling in love, etc. Now, let us reason this matter out. What do you fall in love with? One married man, whose wife was very homely, was heard to say that he did not marry his wife for her beauty, but because she had such a beautiful gesture. It is told of a man who was in the habit of calling where there were three sisters: One day, while at dinner with them, he noticed that one cut off all the rind from the piece of cheese she was eating. He decided that she might be a little wasteful. The second ate her piece of cheese, rind and all. He then feared that she might not be as cleanly as he would like. The third scraped the rind very carefully and neatly. He at once decided that she was both economical and cleanly, and concentrated his affections upon her and won her.

Young men's tastes are often very different, but it might be possible to lay down some general principles that might be applicable to all.

Common Sense and Good Taste are perhaps the best talents and gifts that any woman—or man either, for that matter—can possess. It is certainly nice to have a fine healthy wife, strong and of good physique, and a man ought certainly to see to it that the one who is to be the mother of his children would not be likely to impart to them any disease or weakness of body or mind that she might have inherited from her parents. Then the mind is very important. As the body requires training and development, so does the mind. The model farmer's wife should have both: be well trained and developed in all ordinary accomplishments, and should, above all things, be a good cook. Very few people, however strong, can continue to eat badly-cooked food and retain good health.

But the soul, or spiritual part, is not that the most important of all? A bachelor used to sigh for "a little farm well tilled and a little wife well willed."

A man who had a fine-looking team of horses got stuck fast in a soft place on the road. A neighbor, whose team would not bring as much money as either one of the other horses, came along and pulled the load out of the hole. The fine-looking team would only pull only one at a time; when the one was ready and willing, the other was sure to hang back; but the shabby-looking team pulled together as one horse and easily took the load out.

Now, this is the secret of getting along well in the married life—pull both together.

But the question still confronts the bachelor. How am I to know the mind?

The story related in Genesis, of Abraham sending his servant to get a wife for Isaac, is a very beautiful one, in that it shows the Patriarch's implicit trust that God would direct. It is written that it is God only that knows the heart, and Abraham believed this and acted accordingly.

While a young man and woman were walking in opposite directions, on the deck of an Atlantic steamer, the Lord sent a heavy wave which gave the vessel such a sudden jerk that the young man and woman, who up to that moment were entire strangers, were literally thrown into one another's arms. A long time afterwards the mother of that young man, after telling me how well she was pleased with her daughter-in-law, remarked, "Was it not a queer way that they became acquainted?" Truly, God moves in a mysterious way.

To sum up, God is willing to give a prudent wife to every lonely bachelor who consecrates himself to the Lord and asks him for an helpmate. "No good thing will He withhold from them that walk uprightly." "Ask and ye shall receive." Of course, you must use means: you must become acquainted with her, pay attention to her, gain her affections, and by your real worth and manliness make yourself worthy of her love and affection. Of course, it is better never to be late, but better late than never. If you are a little old, never mind, go on in the right way and God will bless you.

Yours faithfully, UNCLE DANIEL.

THE CHILDREN'S CORNER.

"Grandmother's Pets."

Do you know what it is to have a dear grandmother to visit? These little girls, Gladys and Nan, are perfectly happy when they are allowed to visit "Dear Granny" for a few days. Grandmother has a lot of chickens and little yellow ducks, and there are generally kittens too. When the eggs are gathered, and the chickens frightened out of their wits by their devoted admirers, the children nestle up to grandma and beg for a story.

"Here are some flowers, grandma," cries little Nan. "Now please tell us about mother when she was a little girl."

Gladys knows how to coax, too, doesn't she? When any of you little ones want anything, don't storm and cry for it, but try her plan. Grandmother, I am sure, will never be able to resist the tender pressure of those soft little fingers. Children have a great deal of power, and can influence grown-up people far more than they think, but they must go the right way about it. Never scream and scold when you want anything. Take my advice and copy Gladys and Nan.

Did you ever hear the old story about the argument between the Sun and Wind as to which of them was the strongest? The Wind said he could blow the cloak off a man who was walking along; but the harder he blew the more closely the man wrapped his cloak about him. The Sun shone brightly down, and the man soon took off his cloak, because he found it too hot. Sunshiny ways have far more influence than rude or angry words.

"If only you'll think of it, dearie,
When people are vexing and rude,
And be pleasant for two,
When one's scolding at you,
You will conquer the opposite mood.

"If only you'll think of it, dearie,
When a certain troublesome elf,
With pens in his shoes,
And a look of the blues,
Comes calling upon you himself—

"If only you'll think of it, dearie,
And laugh, like the sun, in his face,
He will scamper away;
You'll be happy all day;
And I'd like to be in your place."

COUSIN DOROTHY.

The Son of His Father.

"I shall have to make a lawyer out of that boy of mine. I don't see any other way out of it," declared a well-known lawyer with a laugh. He came into my office the other day on his way home from school and laid a threepenny bit down on the desk before me.

"What is this for, son?" I asked.

"Retainer," he answered, soberly.

"Very well," said I, entering into the joke. "What have I been retained upon?"

My boy dug down into his pockets and produced a note from his teacher, and placed it before me without comment. It was to the effect that he had been "cutting up," and advised a whipping.

"Now, what would you advise?" asked he in a businesslike voice after I had read the note and saw the trap that the young rascal had led me into.

"I think that our first move should be to apply for a change of venue," said I.

"Very well," he answered, "you're handling the case."

"Then we will turn the note over to your mother," said I.

I saw the young imp's face fall at this, but he braced up and said:—

"See here, dad, you're bound to see me through on this 'cause you've accepted my retainer, you know!"

"I'll argue your case before the court," I answered, "but you will have to accept the decision. I would not dare to attempt to influence the court."

Well, I pleaded the boy's case, promptly had it thrown out of court, and the boy got what he deserved—a good whipping.

It was the first time I ever played false to a client.

A Secret.

Shall I be like grandma when I am old?
Shall I wear such a queer little bonnet—
No feathers, no posies, but just a plain fold,
With a little white edging upon it?

Shall I sit in the easy chair all day long,
With a great ball of wool and a stocking?
Shall I think it quite dreadful for folks to do wrong,
And dirt and disorder quite shocking?

Just wait till I tell you what grandma once said—
I hope you won't think me quite crazy—
It happened one day when they sent me to bed
For being ill-tempered and lazy.

She came and sat by me, and patted my hand,
And told me, "There's no use crying;
It's by stumbling, my pet, that we know how to stand,
And we always grow better by trying."

"Was anyone ever so wicked as me?"
I asked her between my sobbing.
Then grandma laughed just as hard as could be,
And her little white curls went bobbing.

"Was any one ever so naughty as you?"
I'm sure that I know of one other."
Who was it?" I asked. "O please tell me, do."
She whispered, "Your own grandmother."

Now isn't it strange? But of course it's true.

I can tell you just one thing about it—
She'd not tell a story, whatever she'd do,
And we'd only be silly to doubt it.

But, of course, I feel certain you never will tell,
For how perfectly dreadful 'twould be
To have people know, who all love her so well,
That grandma was ever like me.

Dress for Elderly Women.

How often do we find the notion fixed in people's heads that because women are middle-aged, beyond that period, say elderly, they should not dress well. We do not put it quite so crudely as that, but we expect them to quietly retire into a permanent uniform of dead black. Now, of course, elderly women should not dress the same as young people, but they should certainly as well, always having in view, of course, the existing circumstances. It is a mistake for a woman to say: "I am not as young as I used to be: it doesn't matter much what I look like now."

One should give enough thought to determine what one may and what one may not wear to advantage, and after that, one can effect a great saving in time by not needing to bother further with what one should not wear.

The woman who no longer has the girlish contours of her younger years should frankly recognize this in her dress, and select for gowns and wraps such designs as are not constantly at war with her figure, as is the case when the woman of sixty years and two hundred pounds dresses in clothes designed for twenty years and one hundred and twenty-five pounds. To be beauti-



"GRANDMOTHER'S PETS."

ful in the true sense, a dress should hide all departure from beautiful outlines, and not call attention to them. When a woman who at twenty had a waist measure of twenty-six inches finds herself at fifty with a waist measuring thirty-six inches, she is not so gracefully proportioned as she was at twenty; therefore, she must take the more pains to add grace to her attire.

Elderly women may wear almost any color if it is deftly combined. Nothing is so attractive for the old lady with white hair as some shades of pink, when worn as roses placed among velvet or lace in a bonnet. Dull browns and lifeless grays are too cold for women with colorless faces and hair. The dark, rich purple-reds and red-purples especially suit elderly women with clear skins, and all the softened colorings that seem to be one color overspread with a haze, in the manner of so many colors now in vogue, are becoming to age. Wraps should invariably have irregular and not stiff and set outlines. Brims of bonnets should be draped about the face, and not laid in plain folds. When faces and necks show time's irresistible impress, pliant strings and neckwear alike should be of pliable and fluffy fabrics, as of lace, chiffon, mousseline, nets and so on; plain ribbon strings on a bonnet and a plain linen collar are too severe for the face that should be dealt with gently.

It takes no more time and costs no more money to look well than to look ill, once one knows what to select and what to let alone.—(Ladies' Journal.)

THE QUIET HOUR.

Go Forward.

Hearing so much in these days of the comfortable doctrine, that "we can do nothing, God will do all," we are apt to sit down complacently with folded hands—leaving everything for Him to do. It is true enough that without His help we are powerless, it is just as true that we are allowed and commanded to be workers together with God. Faith can remove mountains of difficulty, but it must be an active faith, faith which worketh by love. The disciples who were commanded to feed the multitudes knew that the task was far beyond their strength. Did they, therefore, sit idly down, leaving Christ to do all the work? No, they brought their small supply of food for His blessing, and went quietly on with their preparations for the meal, trusting to Him to provide necessary help. He did not multiply the loaves and fishes until they had begun their apparently hopeless task. Lazarus was not raised from the dead until willing hands had prepared the way by opening the tomb—doing what they could. The ten lepers were not healed until they had started to show themselves to the priests. The widow's meal and oil were not renewed until she had taken of her scanty store to feed the prophet. The miraculous supply of oil was not provided for another poor widow until she had borrowed vessels to contain it. It is the same with our duties, God will not supply the needed strength for any task unless we do what we can ourselves. That would only encourage idleness. I read a little poem on this subject the other day, and as it expresses more forcibly than any words of mine can do the possibility of trusting too much of our work to God, I will insert it here.

"For a web begun God sends the thread,
Over and over these words I read;
And I said to myself with an easy air,
'What need to burden myself with care
If this be true,
Or attempt to do
More than my duty?' For here is proof
That we are to hold ourselves aloof
Until from the Master we receive
The thread for the web we are to weave!"

"So day after day I sat beside
The loom, as if both my hands were tied,
With idle shuttle and slackened warp,
Useless as strings of an untuned harp;
For I took no part
With hand or heart
In the work of the world. To the cry of need,
The voice of the children, I gave no heed.
'When the task is ready for me,' I said,
'God will be sure to supply the thread.'

"Others might go in cellars and slums,
And weave a web out of scraps and thrums,
Finding excuse for the daily toil,
The reckless waste of life's precious oil,
But as for me,
I could not see

How I was to follow them, or believe
That the needed strength I should receive,
Unless I waited, how'er time sped,
For God to send me the promised thread.

"I had no strength of my own, I knew,
No wisdom to guide, no skill to do,
And must wait at ease for the word of command,
For the message I surely should understand,
Else all in vain
Were the stress and strain
For the thread would break, and the web be spoiled—
A poor result for the hours I'd toiled;
And my heart and my conscience would be
at strife
O'er the broken threads of a wasted life.

"But all at once, like a gem exhumed,
The word 'begun'—by a light illumed—
From the rest of the text stood boldly out,
By the finger of God revealed, no doubt;
And shocked and dazed,
Ashamed, amazed,

I saw as I had not seen before
The truer meaning the sentence bore,
And read as Belshazzar might have read:
'For a web begun God sends the thread.'

"The man himself, with his mind and heart,
'Toward the Holy City must make a start,
Ere he finds in his hands the mystic clew
That shall lead him life's mazes safely through.
And if loom and reel
And spinning-wheel
Idle and empty stand to-day,
We must reason give for the long delay,
Since the voice of the Master has plainly said,
'For a web begun God sends the thread.'

Like the Israelites who stood on the shore of the Red Sea, our orders are to "Go forward!" The path may look difficult or even impossible, but if we take the first step, trusting our Leader, the next will become possible. Difficulties melt away if we advance boldly: the troubles we dreaded are found to be bearable. I do not write this from hearsay only. A few days ago two bright boys—my nephews—who were as dear to me as any young brothers could be, were laid side by side in one grave. They were here to dinner, and then went merrily off with a party of young people for a swim. When I next saw those dear lads they were lying side by side with peaceful faces and hands quietly folded. We might have expected that such a sudden and overwhelming sorrow would have almost broken the hearts of those who loved them so dearly, but when it came God's comfort came with it. "They were lovely and pleasant in their lives, and in their death they were not divided," were the words of peace that seemed to come instinctively to our lips. God's heaviest blows never crush those who trust in Him. HOPE.

Ingle Nook Chats.

My dear Guests,—

One of the pleasantest afternoons I have had for some time was spent in reading and judging the thirty-eight sets of Memory Gems sent in response to Contest XII. To read them was a delight, to judge their respective merits oftentimes a trifle puzzling, but I at length got through them all. I then counted up the marks obtained by each, and selected about a dozen of the highest; these I carefully went over again, after which I arrived at a decision. An unprecedented occurrence was the sending of two prize sets by one contributor, but this should remind others that there is nothing like trying to do one's best. The prizewinners are (1st) Miss Kate E. Crane, Burnstown P. O., Ont.; (2nd) Miss Margaret L. A. Matheson, Massie P. O., Ont., and (3rd) Miss Kate E. Crane, A. L. McDiarmid and "Mossback's Daughter" and Jean Lane were very close contestants for 3rd prize, while Jennie MacVannel, Nettie MacCallum, Annie E. Newlove, "Morag," Mrs. Philip, Bernice Devitt and Robt. B. Forsyth were but little behind. Contributions of merit were also received from "Imperialist," Pearl Shepherd, "Nancie," Charlotte Borrowman, Alan R. G. Smith, Fannie Newman, Ethel M. Lewis, Maud Jose, Douglas E. MacVannel, Janet Waterman, "McGinty" and David A. Ashworth.

I am pleased to note the popularity of this sort of contest, but would like to see keener competition in the essays.

Miss Mary Gillies acknowledges receipt of prize, and comments kindly upon the Ingle Nook. Thank you, Miss Mary.

Our Camera Contest should excite a friendly rivalry among many of our guests, as the prizes offered are very liberal.

The winning Memory Gems (also others which have not won a prize) will appear from time to time, as space permits. In order to allow room for as many as possible this issue, I shall bid my guests good-bye for the present.

THE HOSTESS.

Ingle Nook Chats, Pakenham, Ont.

FIRST-PRIZE MEMORY GEMS.

(By Miss Kate E. Crane, Burnstown, Ont.)

How'er it be, it seems to me,
'Tis only noble to be good;
Kind hearts are more than coronets,
And simple faith than Norman blood.
—Tennyson.

Talk not of wasted affection; affection never was wasted. If it enrich not the heart of another, its waters, returning back to their springs, like rain, shall find them full of refreshment. That which the fountain sends forth returns again to the fountain.—(Longfellow.)

Look not mournfully into the past; it comes not back again. Wisely improve the present; it is thine. Go forth to meet the future without fear, but with a manly heart.—(Longfellow.)

Endeavor to be patient in bearing with the defects and infirmities of others, of what sort soever they be; for thou thyself also hast many failings which must be borne with by others. How seldom we weigh our neighbor in the same balance with ourselves.—(Thomas a Kempis.)

You can't isolate yourself and say that the evil in you shall not spread. Men's lives are as thoroughly blended with each other as is the air we breathe. Evil spreads as necessarily as disease. Every sin brings suffering to others besides those who commit it.—(George Eliot.)

How happy is he, born or taught,
Whose serveth not another's will,
Whose armor is his honest thought,
And simple truth his highest skill.
This man is free from servile bonds
Of hope to rise or fear to fall;
Lord of himself, though not of lands,
And having nothing, yet hath all.
—Sir Henry Wotton.

I hold it true, what'er befall;
I feel it when I sorrow most,
'Tis better to have loved and lost,
Than never to have loved at all.
—Tennyson.

Small service is true service while it lasts;
Of friends, however humble, scorn not one;
The daisy, by the shadow that it casts,
Protects the lingering dew-drop from the sun.
—Wordsworth.

Sow love and reap its fruitage pure;
Sow peace and reap its harvest bright;
Sow sunbeams on the rock and moor,
And find a harvest home of light.
—H. Bonar.

He prayeth well who loveth well,
Both man and bird and beast;
He prayeth best who loveth best
All things, both great and small,
For the dear God who loveth us,
He made and loveth all.
—Coleridge.

Make yourselves nests of pleasant thoughts. None of us yet know, for none of us have been taught in early youth, what fairy palaces we may build of beautiful thoughts, proof against all adversity. Bright fancies, satisfied memories, noble histories, faithful sayings, treasure-houses of precious and restful thoughts which care cannot disturb, nor pain make gloomy, nor poverty take away from us—houses built without hands for our souls to dwell in.—(Ruskin.)

SECOND-PRIZE MEMORY GEMS.

(By Miss Margaret L. A. Matheson, Massie, Ont.)

No stream from its source
Flows seaward, how lonely so ever its source,
But what some land is gladdened.
No star ever rose
And set without influence somewhere. Who knows
What earth needs from earth's lowest creature? No life
Can be pure in its purpose and strong in its strife,
And all life not be purer and stronger thereby.
—Mrs. E. B. Browning.

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

For mankind are one in spirit, and an instinct bears along,
'Round the earth's electric circle, the swift flash of right or wrong;
Whether conscious or unconscious, yet humanity's vast frame,
Through its ocean-sundered fibers, feels the gush of joy or shame;
In the gain or loss of one race, all the rest have equal claim.
—J. R. Lowell.

It isn't the thing you do, dear,—
It's the thing you leave undone,
That gives you a bit of a heartache
At the setting of the sun.
The tender word forgotten,
The letter you did not write,
The flower you might have sent, dear,
Are your haunting ghosts at night.
—Margaret Sangster.

We never can tell what our thoughts will do,
In bringing us hate or love.
For thoughts are things, and their airy wings
Are swifter than a carrier dove;
They follow the laws of the universe—
Each thing must create its kind—
They speed o'er the track to bring us back
Whatever went out of our mind.
—Ella Wheeler Wilcox.

By the cynic, the sad, the fallen,
Who had no strength for the strife,
The world's highway is cumbered to-day—
They make up the stem of life.
But the virtue that conquers passion,
And the sorrow that hides in a smile—
It is these that are worth the homage of earth,
For we find them but once in a while.
—Anonymous.

How sour sweet music is,
When time is broke, and no proportion kept:
So it is in the music of men's lives.
—Shakespeare.

We know not half the power for good or ill,
Our daily lives possess o'er one another;
A careless word may help a soul to kill,
Or by one look we may redeem a brother.
'Tis not the great things that we do or say,
But idle words forgot as soon as spoken;
And little thoughtless deeds of every day
Are stumbling-blocks on which the weak are broken.
—Anonymous.

To serve with lofty gifts the lowly needs
Of the poor race for which the God-man died,
And do it all for love—Oh, this is great.
—J. G. Holland.

I count this thing to be grandly true,
That a noble deed is a step toward God,
Lifting the soul from the common sod
To a purer air and a broader view.
—J. G. Holland.

THIRD-PRIZE MEMORY GEMS.

(By Miss Kate E. Crane, Burnstown.)

To live well in the quiet routine of life; to fill a little space because God wills it; to go on cheerfully with a petty round of little duties, little avocations; to smile for the joys of others when the heart is aching—who does this, his works will follow him. He may not be a hero to the world, but he is one of God's heroes.—(Dean Farrar.)

Life is real! life is earnest!
And the grave is not its goal;
"Dust thou art, to dust returnest,"
Was not spoken of the soul.
Lives of great men all remind us,
We can make our lives sublime,
And departing, leave behind us
Footprints on the sands of time.
—Longfellow.

Then gently scan your brother man;
Still gentler, sister woman;
Though each may gang a keemi wrang,
To step aside is human.
—Burns.

Honor and shame from no condition rise;
Act well your part, there all the honor lies;
Worth makes the man, the want of it the fellow,
The rest is all but leather or prunella;
A wit's a feather and a chief a rod,
An honest man's the noblest work of God.
—Pope.

Think truly, and thy thoughts
Shall the world's famine feed;
Speak truly, and each word of thine
Shall be a fruitful seed;
Live truly, and thy life shall be
A great and noble creed.
—Bonar.

We live in deeds, not years; in thoughts, not breaths;
In feelings, not in figures on a dial;
We should count time by heart-throbs,
He most lives who thinks most, feels the noblest,
acts the best.
—Bailey.

The boast of heraldry, the pomp of power,
And all that beauty, all that wealth e'er gave,
Await alike the inevitable hour;
The paths of glory lead but to the grave.
—Gray.

Kind words are the music of the world. They have a power which seems to be beyond natural causes, as if they were some angel's song which had

lost its way and come on earth, and sung on undyingly, smiting the hearts of men with sweetest wounds, and putting, for the while, an angel's nature into ours.—(Faber.)

There's a wideness in God's mercy,
Like the wideness of the sea;
There's a kindness in His justice,
Which is more than liberty.
For the love of God is broader
Than the measure of man's mind,
And the heart of the Eternal
Is most wonderfully kind.
—F. W. Faber.

Life is a leaf of paper white,
Whereon each of us may write
His word or two, and then comes night.
Greatly begin! Though thou hast time
But for a line, be that sublime:
Not failure, but low aim is crime.
—J. R. Lowell.

CAMERA COMPETITION.

As a new departure, we announce a "Camera Competition," which will surely give pleasure to the many lovers of amateur photography.

We offer six prizes, as follows:—1st, \$3; 2nd, \$2; 3rd, \$1; 4th, \$1; 5th, 50c; and 6th, 50c.; for the best photographs of country homes, groups of animals, gardens, pretty bits of scenery, or anything of that nature, subject to the subjoined rules:

All photographs must not be less than 4x5 inches in size, and mounted, and must be the work of amateurs.

All photographs must be clear and distinct in detail, and well finished. They must reach the FARMER'S ADVOCATE, London, Ontario, not later than October 1st, 1901.

The photographer's name and post-office address, and the name and location of scene, must be written on back of photograph.

Any person is at liberty to send more than one photograph if desired. We reserve the right to use any photograph entered in competition.

All the prizewinning photographs will become the property of the FARMER'S ADVOCATE for the purpose of illustration. We also reserve the right to purchase at a fair valuation any photographs that do not win a prize.

Postage stamps must be enclosed if competitors wish photographs that do not win a prize returned. Do not make any mistake in the address, as such delay might debar you from the competition.

THE HOSTESS.

Ingle Nook Chats, Pakenham, Ont.

Harvest.

"While the earth remaineth, seedtime and harvest, and cold and heat, and summer and winter, and day and night, shall not cease." Such was the promise given to our common ancestors long centuries ago, when out from the ark, the dove, that messenger of peace, flitted far over the lowering water-wastes of the East, and found her a home upon the dry land.

The ages since then have recorded changes in the world without number. Slowly, but surely, the power of men's thoughts has deepened and widened, probing the mysteries of science, and grasping the hidden meaning of things that are and have been. Men have discovered, and men have invented; but each, like the coral insect, wrought his part and ceased to be—sowed his seed, as it were, leaving the harvest of benefits to be reaped by his fellow-men. So the longest and most useful lives have ceased, and in the same way, customs, beliefs, laws, cities, empires, and continents, have changed, or ceased to be; but always, since primeval ages, has there been summer and winter, heat and cold, seedtime and harvest; and at the present time, in Canada, we have summer, and heat, and harvest.

Just what that means, we rustic women know best. It means flies; it means long days with pitiless, scorching sunshine blazing in the back yard; it means early breakfasts, and sharp dinners, and suppers just on time; it means washings and ironings, and bakings, that make one long for Switzerland, not because of its scenery, but because of its half-yearly wash and baking of bread; it means fruit, and sugar, and a preserving-kettle; it means chickens that take the "gapes" and die, and ducks that will fall on their backs and die, and turkeys that die for no apparent reason whatever; it means—but there! "nuff sed" about the disagreeables. Ruskin says, "There is no solemnity so deep to a rightly-thinking creature as that of dawn," and to those who will see and hear, the time of harvest means still, solemn mornings, with the mists lying white in the valleys, and the wheat-stocks showing yellow in the early sunshine; it means cool evening shades, redolent with harvest perfumes, and with the cooing twitter of the cat-owl, and the song of the cricket sounding soft and clear; and what can be pleasanter than a ride through country lanes when "fades the glimmering landscape on the sight," or a slow paddle across the lake? If we cannot have these recreations, we can at least keep near us a book of favorite poems, and its restful thoughts will help to lift us above the small vexations of the day, and lead us into nobler lives.

Harvest is full of blessings and delights apart from its poetic side. The clusters of fruit in our gardens are good to the eye, and better to the

palate, and the sound of the binder speaks of full barns, with the happy possibility of our having to "build greater."

"Then glory to the steel
That shines in the reaper's hand,
And thanks be to God, who has blessed the sod,
And crowns the harvest-land!"

But the use of that "steel" has been long since obsolete, and although our farmers work early and late during harvest, it is by no means the slavery it used to be. Customs change in harvesting, as in other things. The only gleaners we have now are the birds, instead of the Ruths and Maud Mullers of old. We no longer thresh with the horse-power; and maidens nowadays do not bear to the reapers at noontide "flagons of home-brewed ale," as did Evangeline in Acadia. But they sometimes bear baskets of substantial food and tea, and never was ambrosia more sweet to the gods than the cold ham and cookies to the weary harvesters.

Finally—when the last sheaf is in, and the dog has watched for the mice under the stooks for the last time until another year—comes the harvest-home. That custom, too, has fallen into disuse, for the most part, but in ancient days the Romans always held a great festival, with games called Cerealia, in honor of the Greek goddess of agriculture, Ceres, on the last day of harvest; and the custom is still observed to a certain extent, in parts, in a christianized form.

I think that the harvest season, more than any other, should bring to us serious thoughts. We are greatly blessed, we people of Canada, for never yet have we known such "harvestless autumns" and famines as other lands have experienced. We sometimes have blights, such as the Hessian fly, but there are always other crops, and whether those are great or small depends largely on our sowing; for in all things, "whatsoever a man soweth, that shall he also reap"; and sometimes the harvest, whether bitter or sweet, must be reaped by other hands. With St. Augustine let us say: "Let us not leave Thee alone to make in the secret of Thy knowledge, as Thou didst before the creation of the firmament, the division of light from darkness; let the children of Thy spirit, placed in their firmament, make their light shine upon the earth, mark the division of night and day, and announce the revolution of the times; for the old order is passed, and the new arises; the night is spent, the day is come forth; and Thou shalt crown the year with Thy blessing, when Thou shalt send forth laborers into Thy harvest sown by other hands than theirs; when Thou shalt send forth new laborers to new seed-times, whereof the harvest shall be not yet." CHRYSOLITE.

Del's Art.

The Clusi Cooking-Club had given a banquet, and each member had invited a representative of the "higher criticism," i. e., a man; for, as Mr. Howells says: "the mind of a man is the court of highest appeal for the wisest women. Until some man has pronounced upon their wisdom, they do not know whether it is wisdom or not."

I cannot think that any one of the eight young gentlemen favored with the dainty, hand-painted C. C. cards could have found it in his heart to criticize unfavorably any dish prepared by such cuisinieres; so the ample justice done the viands may be taken, like celery, with a grain of salt. But one bit of candor came to the ears of Delys Dillon, chef of the club, as she walked home with her particular critic—a young lawyer whose long silences made Del doubt the common report of his eloquence. She didn't want to seem glum, but as they turned down an avenue which gave them the wind full in their faces, she gladly made that an excuse for imitating his example; and thus, without being perceived, they came up behind another pair of banqueters, two gentlemen, who, having been the chosen partners of the hostess and her sister, had only each other as company home.

"That chicken pie was delicious!" said Mr. MacDonald.

"Delicious, you mean," said Bert Bates. "Del Dillon made it. She throws in brains; the other girls use blunders—when they don't hire a substitute. But Del is a genius; and a little art Dels-arte would make her a Venus!"

With a laugh at this brilliant play upon words, the young men hurried on, quite unaware that the wind had maliciously borne their remarks to the ears of Miss Dillon, who blushed, feeling vaguely mortified; for no praise of a woman's skill can sugar-coat a cavil at her beauty. But just then the young lawyer found his tongue—he had probably been on a still hunt for it all that time—and he used it so cleverly that Del enjoyed the rest of the walk too much to think any more of Bert Bates' criticisms until later, when she was in her room preparing for bed.

She regarded herself intently as she stood before her mirror. Yes, it was true; the only fault of her beauty was that it was "too thin!" Her eyes, large and gray, were lovely; her skin, snow-white; her lips had the vivid red of health; but the roundness, the softness, the exquisite curves of perfect feminine beauty were wanting.

And would a "little Delsarte" supply this grace that was lacking? There was a physical-culture class in the town, conducted by Mrs. Raum, a minister's wife, and Del had been begged to join. She now remembered with envy the beautifully rounded arms and statuesque bust of Mrs. Raum as she had seen them displayed at a dressmaker's. But Delys could not join. The amount which it cost her father to maintain her in society was "conscience money" to her now; a debt which sooner or later she was determined to pay.

"I wish I could do something for him, right away," she thought, dreamily, that night.

Wishes, like riches, sometimes "take unto themselves wings"; only, instead of flying away, they hurry home to their originator, there to roost as persistently as any "Raven."

Del was awakened early next morning by her father "tapping at her chamber door."

"Del," he croaked, rather crossly, "you must get up and get me some breakfast. The girl's gone, and your mother has a headache."

Much surprised, Del proceeded to "get up and get," as required.

"Why did Mary leave?" she asked of her father, whom she found hovering around downstairs, doubtful of her value as a volunteer at the oven's mouth.

"Her father came for her; her mother is ill. Others besides us, you see, are compelled to call on their daughters for help, in a crisis. Lucky you belong to a culinary club, isn't it?"

Del suspected an insinuation; but she smiled, and said, somewhat saucily: "Don't mistake the crisis for a panic, sir! I'm equal to it."

Mr. Dillon laughed and went off to the library, while Del, her pride aroused, flew around and served an excellent breakfast in time for her father to enjoy it fully before office hours.

Where the larder is so liberally supplied and the kitchen so convenient as ours, it is no task to cook," she said, loftily waiving the praises of her admiring family.

"Take care!" said her father. "If you make so light of the work, it may fall to you entirely. Mary will not come back, she is going to be married; and it is hard to find help—especially with a cook in the family."

"I'll agree to fill Mary's place at the same wages that you paid her, papa," said Del, while Delsartean visions danced through her head.

Mr. Dillon, surprised, referred the unexpected applicant for the domestic portfolio to his wife.

"We-e-ll," said the lady, doubtfully. "If you think you can, you may, Delys. It will be a harmless fad, at least."

Thus Delys Dillon deliberately descends from her place as budding belle, to take that of domestic drudge; but it was not exactly a freak which had prompted her. First, she felt a dutiful desire to contribute to the comfort and to the funds of the family; secondly, she was sure it would be useful to understand what should and what should not be expected of that labor-saving machine, a hired girl; thirdly, she wanted the money which Mary had received as wages.

She was as conscientious as clever, so the work

look so magnificently well? You used to be a scrawny child!"

"Doing? Why, housework," said Del.

"Then Bert Bates was right!"

"About what?"

"Oh, he and brother Tom were talking about the present rage for gymnastics among women, and Bert said he did not believe in it. 'Look at Del Dillon,' I heard him say. 'She has the shape of Venus, and the grace of Ganymede; but she is the only girl of our set who did not go in for Delsarte.'"

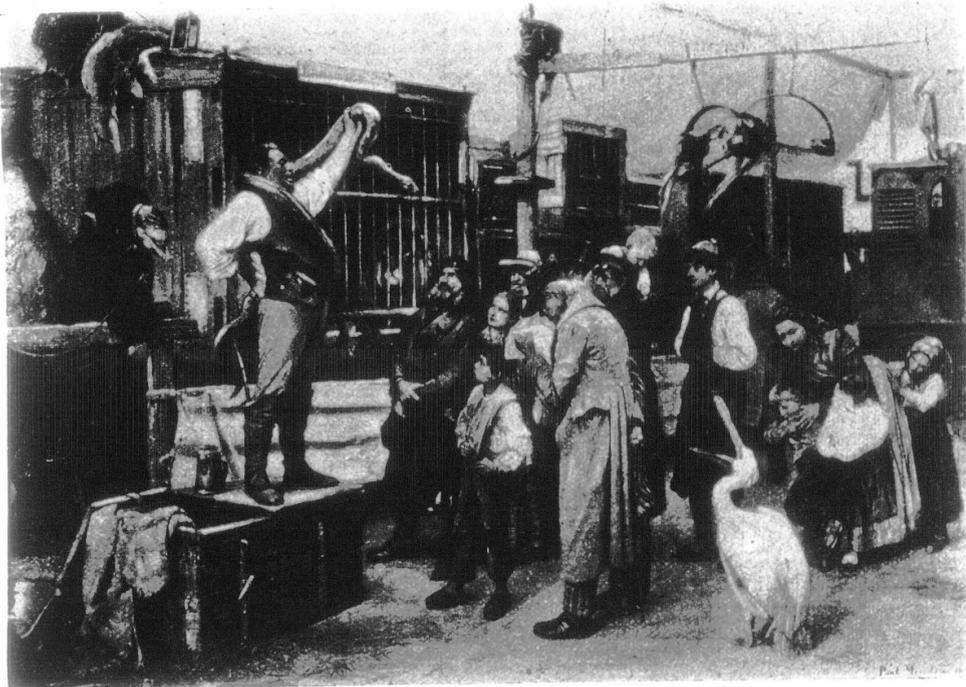
Delys laughed and blushed.

"Another of Mr. Bates' mistakes," she said; but before she had time to explain, the gentleman mentioned came up and claimed her for the dance. He would have claimed her as a partner for life, had Del been willing; but she was already engaged to the young lawyer herein above mentioned. He, from their first meeting, not only had divined, but also had worshipped, the goddess concealed in the unrounded marble.

"A Menagerie."

Our picture represents a veritable "Multum in parvo," and all "alive 'o! alive 'o!" The owner of the show has made the most of his possibilities, and has pitched his tent out of the beaten track, where the good country folk have seldom a chance to see, even if they have ever read about such living wonders as he now presents before their astonished eyes.

The only apparently unmoved spectator is an old man with long coat and big umbrella, who is either reading the programme or is studying up a chapter on snake-charming, that he may confront the portly showman with questions which it may tax his ingenuity to answer. There is a look of disgust upon the face of the young man with the leather apron, of wonder and almost awe on the comely countenance of the young girl standing just behind her father, who has planted himself sideways before



(From the original painting by Paul Meyerheim.) "A MENAGERIE."

was well done; but she found, to her dismay, that although time is money, money is not convertible into minutes. You may have the brain of a Webster, the conscience of a coin-scale, the mind of a miser, yet will you not be able to make time and money too. What Mary did in twenty minutes, often took forty of Del's very longest ones; she found herself compelled to give up one or two society meetings, and that "little Delsarte" seemed more than ever impracticable.

"Not that I feel the need of exercise," thought Del, "but I did want to try it." In fact, Bert Bates' "random shaft" had gone rather deep.

But an idea had seized Del. Why might not housework, just as well as any other kind of exercise, be made the means of physical culture? Might not the sweeping and scrubbing, the lifting and carrying, the going up and down of housework result in the development of an "all round" physique, if intelligently directed to accomplish such an end?

Del was doubtful; it seemed like turning a treadmill into a ladder; but what is genius for, if not to find its own means, in spite of circumstances? She resolved to try it; and she began by dressing for her work much as she would have done for the gymnasium. She looked as well as she felt, in the loose, large-sleeved gowns which she adopted; and she found her taste called into pleasant activity in choosing colors and fabrics.

But while it was easy to cut the new gowns, it was hard to "cut" the twins Hurry and Worry, who dog to death so many energetic, ambitious women; nevertheless, Del did both, and conserved energy for the time of need. Then she strove to divide her work equally between her right and her left hand; to be as graceful while using the broom and mop, as when using the racket or the mallet.

Perhaps the cooking had some share in the result—for cooking, like conducting, seems to be a fattening occupation—but certain it is, that at the end of six weeks Del had gained five pounds; in six months she felt assured of success; and still later she smiled with inward triumph when a girl friend said to her, giving the bare arm, which Del was no longer ashamed to display, an affectionate squeeze.

"Del, what have you been doing to make you

the lion's cage, and is gazing fixedly almost down the very throat of the performing snake, which looks so vicious and yet which is so powerless to injure him. The errand boy with the boots given him by the cobbler to deliver has run the risk of his master's displeasure by slipping under the tent, and he stands there fascinated and yet repelled, wholly unconscious that the mischievous monkey upon the pole above their heads is about to make a sudden descent upon the group, with the intention of stealing a hat or two to tear into ribbons with its humanlike claws. Perhaps the most speaking figures of all are those of the mother and two children, who, startled by the unexpected opening of the long beak of the otherwise quiet-looking big white bird, fly to her protection, believing that it is quite capable of swallowing them up at one gulp. The patient-looking camel, the caged lion, and the screaming cockatoos are all novelties to the remote country folk our artist has so cleverly portrayed, but not so to us, who are almost surfeited with circus exhibitions and the living wonders from almost every corner of the globe. H. A. B.

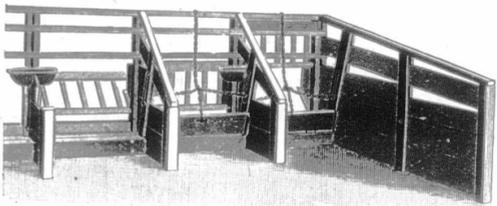
The Sponge and Its Uses.

Two little girls with snub noses and public school voices stood in front of the window of a Third Avenue drug store yesterday afternoon.

"My!" said one. "Look at the sponges. 'Most a thousand of 'em. What d'yer 'spose they use 'em all for? I didn't think they was so many slates in the world.'" The other little girl looked at her companion with withering scorn.

"Don't yer know," she sniffed contemptuously, "that windows has to be washed?"

THE Patented Cattle Stalls and Fixtures



FARM RIGHTS CHEAP.

Buy a Right and it will tell you how to have your lumber cut.

Bill of lumber given.

A set of patterns sent, to enable you to make exact style as cuts.

A printed scale showing plan of your stable.

In short, the Right explains it all.

Up-to-date Stalls.

Suitable for all kinds of stock feeding. Less lumber will build the above stall than any other in use.

Special tie chains adapted for single stalls. Stock drinking basins a specialty.

A full line of all stable fittings in stock.

Write for circulars, blank forms, and full particulars.

A. M. RUSH,
Box 178. HARRISTON, ONTARIO, CAN.
Canada Patent: Sept. 30th, 1899, No. 61144. United States Patent: Feb. 19th, 1901, No. 668118.
J. W. SNELL, WINGHAM, ONT., sole agent for Huron County.

U. S. and Canada RIGHTS Promptly Issued.

FOR SALE:
Ram, two-shear (winner); yearlings, both sexes; ram and ewe lambs. N. W. SWITZER, Streetsville, Ont.; C.P.R.

DAIRYMAN WANTED.
To take charge of dairy farm. Stock, about twenty-five cows. Must be expert at judging cows, and a competent manager. Excellent position for the right man. In applying send references, which must be good both as to character and ability, to
E. D. SMITH, M. P.,
WINONA, ONT.

GOSSIP.
About five miles east of Markdale, Ont., in the county of Grey, is situated Orchard Hill Stock Farm, the property of Mr. Arthur Johnston, whose P. O. is Vandeleur, Markdale being the nearest R. R. station. Mr. Johnston has been breeding pure-bred Shorthorns for a number of years. His herd was founded on the favorite family of Missies, a number of which are now to be seen on the farm. One of the first dams purchased by Mr. Johnston was that grandly-bred Missie cow, Lady Clonmore. She was sired by Baron Gano 2nd 2804, dam Imp. Melrose 2202, by Rapid Rhone. Another of Mr. Johnston's dams is Missie Melrose, sired by Imp. Royal George 1706, dam Lady Clonmore, described above. This cow is a beautiful red, of grand build and great substance. An extra nice Crimson Flower bred dam is Crimson Maid 3rd, sired by Imp. Clan Campbell 17096, dam Crimson Maid 15915, by Imp. Duke of Lavender. The Scotch Kibble Beauty family is represented by a nice square, fleshy red heifer, Imp. Beauty 21st, sired by Mirabeau 150158, by the great Star of Morning, a bull whose record as sire of prizewinners stands as a bright gem in the firmament of Shorthorn breeding annals. To the selection of sires Mr. Johnston has paid particular attention, choosing only those showing the right kind of individuality as well as breeding. The sire in use at present belongs to that famous old Indian Chief tribe. He is Greenwood Boy 30880, by Aberdale 23330, by Imp. Aberdeen, twice a first-prize winner at Toronto, dam Nellie, by Imp. Indian Chief, of immortal memory. In color he is a dark red, and is lengthy, deep, meaty, and well proportioned. His calves are certainly a superior lot, and should develop into choice animals. Mr. Johnston has lately purchased from Mr. H. Parker, Durham, to head his herd, the bull, Lord Lavender 26855, who has proved his worth as a sire while at the head of the River Farm herd. He is sired by Imp. Sittytan Stamp 18963; bred by Mr. Duthie, of Collynie; by First Choice. He is a massive, deep, lengthy animal, with splendidly sprung ribs. At the same time Mr. Johnston purchased, as an addition to his breeding cows, two extra nice ones, one a Kinellar Claret, the other a Buttercup, both now in calf to Lord Lavender.

River Stock Farm is situated in the outskirts of the town of Durham, Ont. The owner, Mr. H. Parker, has been engaged in the breeding of pure-bred Shorthorns for some 25 years, and his herd, which now numbers some 40 odd, contains a number of representatives of such fashionable Scotch families as Missies, Princess Beatrices, Clarets, Lustres, Floras, Waterloos and Butterflies. In the selection of sires Mr. Parker has always been very careful, as a glance over the list of a few of them will show: Sir Walter 13557, by Imp. Baron Lenton, bred by Mr. Cruickshank, dam a Miss Ramsden, by Guardian 18928, who is a full brother in blood to St. Valentine, the champion; Lord Lavender, a Scotch Cruickshank Lavender. Following these is the present stock bull, Verschoyle (imported in dam), a beautiful roan, sired by Prince of Archers 71210, a son of Scottish Archer, and considered by competent judges to be as good a bull as his half-brother, the champion Marengo. Verschoyle's dam is Imp. Velvet Beauty, by Velvet Jacket 66161, a richly-bred Nonpareil. In symmetry and conformation Verschoyle is hard to fault, and coupled with such dams as are to be found in Mr. Parker's herd, the results cannot fail to be very gratifying indeed. Prominent among the dams is the Missie-bred cow, Missie of Neidpath 12th. She is sired by Guardian 18928, dam Missie of Neidpath 11th, by Royal Baron. She is an extra good type of animal,

showing in her make-up those typical points of superiority one would expect to see in a cow so richly bred. A roan bull calf 11 months old, out of this cow and sired by Lord Lavender, is a jewel. He is for sale, and the man that gets him to head his herd will make no mistake. Another extra good cow is Butterfly of Durham 3rd, sired by Sir Walter 13557, dam Butterfly of Durham 14631. She is one of those deep, fleshy, short-legged kind that always look well. In the Clarets, a very sweet representative is Claret Princess 2nd 14632, sired by Imp. Neptune 53340, a Kinellar Nonpareil, dam Claret Princess (imported), by Golden Prince. The cow, Princess Beatrice 8th, is certainly a credit to her illustrious family. She is sired by Guardian 18928, dam Princess Beatrice 2nd, by Duke of Leicester 8th (Imp.). A number of yearlings and two-year-olds in this herd are good models, and cannot fail to develop into superior and useful animals, and if fashionable breeding counts for anything, no more desirable sorts can be found. Mr. Parker will price any animal in the herd, old or young, and is not asking fancy prices either. See his advertisement in this paper.

BOGHALL FARM, HOUSTON, RENFREWSHIRE, SCOTLAND.
This farm, belonging to C. Bien Renshaw, M. P. for West Renfrewshire, is carried on by Messrs. J. & A. Wilson, and for over fifty years pure-bred Ayrshires have been bred on the place. It contains 280 acres, and is particularly well adapted to stock-raising, being well supplied with springs throughout the farm. The herd number at present about 140 head, about 70 cows from the Dasher, Ann, Susie, Daisy and Heather Honey families, and a choice lot of commercial cows they are. Cows that do not produce a large quantity of milk of good quality have always been disposed of on the public market. Great care is always exercised in selecting the bull for the herd. The dam must be a good milker, with large teats. Messrs. Wilson, instead of handling the dairy business themselves, let the cows to dairymen at so much per head, furnishing pasture in the summer and food in the winter. At present two dairymen have 25 cows each, for which they pay £16 for the use of each cow for the year. The dairyman is supplied yearly with 840 pounds of bean meal per cow, three acres of turnips for the 25 animals, 50 pounds of bran, and same quantity of treacle, which is given in the spring when the turnips are scarce, and what straw is required for feed and bedding, with a limited quantity of hay, averaging not more than six tons each season for the entire 25 head. The cows are allowed from 11 to 13 acres of pasture land each. The contract for the year is made in November in the above cases. Each party has 25 cows. If a cow should die, she must be replaced by another free. The milkmen do not like to have any cow replaced from the public market; they prefer to wait a month or six weeks, rather than have a cow not bred on the farm, as the cows purchased do not, as a rule, turn out anything like as profitable. Following is a summary of about the cost of feed per cow per year:

Meal	.....	£	s.	d.
Turnips	.....	2	12	6
Bran	.....	1		
Treacle	.....	2		
	.....	2		

Incidentals make the estimate amount to about 45 lbs. each. See Messrs. Wilson's advertisement in this issue.

DATES OF JUDGING AT PAN-AMERICAN.

F. A. Converse, Superintendent of Live Stock, Pan-American Exposition, writes that dates of judging the different classes in the live-stock division at the Exposition are as follows:

Swine class	.....	Aug. 28 and 29
Cattle class	.....	Sept. 16 and 17
Sheep class	.....	Sept. 25 and 26
Horse class	.....	Oct. 9 and 10
Poultry and pet stock	.....	Oct. 23 and 24

Auction Sale of Clydesdales.—At the request of a number of farmers and breeders who will be in Toronto on Wednesday, Sept. 14 (farmers' day), the sale of Clydesdales will be held on that day instead of Sept. 3rd, as announced in last issue. The catalogue is now

"The Grange Farm" for Sale.
AN IDEAL GENTLEMAN'S RESIDENCE.

It consists of 115 acres, situate half mile north of town of Hespeler, 7 from Galt, and 8 from City of Guelph—all good markets.

80 acres are under a high state of cultivation; 16 acres of hardwood bush; 19 acres cedar swamp.

Buildings all comparatively new and in first-class shape. Consist of white brick residence—twenty rooms; bath room; excellent cellars. Heated by hot air. Lighted by electricity.

Red brick, 9-room dwelling; good cellar.

Bank barn, 50x70; horse stable, 30x50; pigpen, 18x20; henhouse, 18x20; ice house, and workshop.

There are four wells on the place, and the fences are in good repair.

There are 10 acres in orchards and garden.

In orchard are 180 Northern Spy, 10 R. I. Greening, 20 Russet, 10 Duchess of Oldenburg, 10 Snow, 10 Wealthy, 10 St. Lawrence; 10 Ontario, and a number of other varieties. About fifty each of pear and plum, 25 cherry, about 40 choice grapevines, and several varieties of raspberry and currant bushes.

For further particulars and terms apply to
J. R. PHIN or A. J. BREWSTER, or **GEO. B. PHIN,** or **W. E. PHIN, Esq.,**
Hespeler. On the Premises. 59 Sussex St., Toronto.

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).
I. LAHMER, OLIVE, ONT.

BRITISH COLUMBIA AGRICULTURAL ASSOCIATION.
PROVINCIAL EXHIBITION
— AT THE —
CAPITAL CITY, VICTORIA
(OPEN TO THE WORLD).
OCTOBER 1st, 2nd, 3rd, 4th and 5th, 1901.
Will be opened by His Royal Highness the Duke of Cornwall and York.

Largest Cash Prize List Ever Offered in the Province.
Live Stock, Agricultural, Horticultural, Mineral, Industrial and Machinery Exhibits.
Horse Racing and Other Sports.

Exhibits delivered in unbroken cars in Victoria.
For prize lists and programme address
BEAUMONT BOGGS, Sec. Victoria.

1859 - 1901.

The London Mutual Fire Insurance Co.

OF CANADA,
476 RICHMOND ST., LONDON, ONTARIO.

THIS COMPANY HAS THE HONOR OF BEING THE PIONEER OF CHEAP FIRE INSURANCE IN CANADA.

The Only Fire Mutual Licensed by the Government of Canada.



Safe!
Sure!
Successful!
Forty Years!

Business in force, \$55,000,000. Losses paid, \$3,000,000.
It has been established for over FORTY YEARS, and during that time has built up a record for fair and honorable dealing with its policy-holders. It has large resources; its rates are low, and in settlement of losses it is prompt.

HON. JNO. DRYDEN, PRESIDENT. **GEO. GILLIES,** VICE-PRESIDENT. **H. WADDINGTON,** SEC. & MAN, DIRECTOR.
LAUCHLIN LEITCH, SUPERINTENDENT. **D. WEISMILLER, JNO. KILLER,** INSPECTORS.

ready, and may be had by applying to the auctioneer, Mr. Walter Harland Smith, Grand's Repository, Toronto. This splendid collection of eighteen two-year-old fillies, two geldings and one choice stallion is the best lot ever offered at auction in the Province, and will be sold in Toronto on the above date without reserve, by instructions from the consigners, Messrs. Edwards & McGregor, Blenheim, Ont.—Adv't.

THE BELLE CITY MFG. CO., of Racine Junction, Wis., have a new attachment for their feed cutters, and are now putting on blower carriers, as well as the different styles of carriers they have used before on their power machines. There will be a large shortage of feed this fall in many sections where the drought has cut off hay and corn fodder, and this is when the demand for feed cutters will come in, as the value of cutting is well known to most up-to-date farmers.

We recommend that our readers write to them for their latest printed matter, etc. Their advertisement will be found in another column.

BOOK REVIEW.

Any book reviewed in this department may be ordered through this office, at the price stated.

All About Alfalfa—The letter which we publish elsewhere in this issue, from Mr. E. D. Tillson, on alfalfa or lucern clover growing, over the results of which he grows enthusiastic, will arouse the interest afresh of many Canadian farmers on this subject. To those who would pursue it further, and desire a treatise, we call attention to a volume entitled "Alfalfa," written by Mr. T. D. Coburn, the widely-known Kansas State Secretary of Agriculture, and published by the Orange Judd Company. It deals with its production, qualities, worth and uses, especially in Canada and the States. It is a well-printed and well-illustrated, cloth-bound book of 163 pages, which may be ordered through this office at 50 cents.

NOTICES.

The O. A. C.—The halls of the old Ontario Agricultural College, at Guelph, should be thronged with young men during the approaching season. The courses, advantages, fees, and, in fact, all information desired regarding this splendid institution, are fully set forth in a circular recently issued. Every one interested should at once drop a post card to President Jas. Mills, Guelph, for a copy.

The Ontario Veterinary College, Limited, Toronto, Canada.—The annual announcement of this well-known institution has just been received by us. The session will commence this year on October 16th, and we understand from the number of applications received for entrance, that there are excellent prospects for a successful session.

Central Business College, Toronto.—If the success of this excellent school may be measured by its annual enrollment of over 700 students, and this enrollment is any evidence of the popularity of the school, based upon the thoroughness of the work, it will be readily conceded that this institution occupies the foremost position among the leading schools of our Dominion. Its circulars afford interesting reading matter, and are mailed free to anyone writing for them. See card in this issue.

Harding Hall, a favorite residential school for the primary and higher education of young ladies, is beautifully situated on the bank of the River Thames, in the City of London, Ontario, and enjoys an enviable reputation for the character of teaching and training given. The Principal, Mr. J. J. Baker, M. A., has had long experience and much success in the conduct of this and similar schools, while the teaching staff is efficient and thorough in methods. See the advertisement in this paper, and write for terms, etc.

The Woodward Watering Basins, for watering stock in the stables, are manufactured by the Ontario Wind Engine & Pump Co., Toronto, as advertised in this issue. The system of supplying water in the stall, where the animal can drink at will, has been proved a decided success, especially in the case of milking cows, the additional production of milk paying the whole expense in a very short time. In the case of cattle being fed for beef, the results are also quite as satisfactory, and the expense is such that any farmer can have the basins, and few can afford to be without them.

The Dorset Ewe is the title of a useful little book published by H. H. Miller, manager of the sheep department of the Tranquility Farms, and one of the most successful shepherds in America, and Mr. Joseph E. Wing, a well-known breeder of Dorset sheep and feeder of lambs. The book is in paper cover, is well illustrated and printed, and is full of useful information, not only about Dorset sheep, but about the care and management of sheep and the treatment of ailments to which they are liable. It contains but 51 pages, but it is a case of much in little. The plans of sheep barns and hints on feeding are well worth the price—50 cents. The book may be had from Joseph E. Wing, Mechanicsburg, Ohio.

Blower Attachments for Fodder Cutters.—No farm implement of recent invention is more successful than the blower attachment for fodder and ensilage cutters. A pipe attachment designed to carry the cut fodder to any desired place. The blower manufactured by the Belle City Manufacturing Co. is especially popular for its simplicity and ease with which it may be adjusted to old or new machines. This can be done in a short time and without the aid of a mechanic or the return of the cutter to the factory. Piping can be used to carry fodder almost any distance without scattering. Write the Belle City Manufacturing Co., Racine, Wis., and get their latest printed matter on this line of machinery.

GOSSIP.

Mr. Henry Dudding's annual sale of Shorthorn cattle and Lincoln sheep, held at Riby, Lincolnshire, on August 7th, was largely attended, and the stock offered superior in quality and condition, but to the absence of South American buyers, owing to the closing of their ports, must be attributed the serious falling off in the prices realized as compared with the brilliant successes of the Riby sales in former years. The only Canadian buyer present was Mr. E. Battye, Game Bay, Algoma, Ont., who was a liberal buyer, securing no fewer than 12 head, 10 females and two bulls, including the roan four-year-old Duthie-bred bull, Pride of Fortune, by Pride of Morning, dam Flora 2nd, by William of Orange. The highest price of the day was 15 guineas for the two-year-old heifer, Onbersley Bride, bought by Mr. Thorley. The prize-winning heifer, Floradora, went to the Marquis of Camden, at 100 guineas. Mr. Dudding was allowed a reserve bid of 200 guineas on Hawthorne Blossom 10th and she remains at Riby Grove, and the four two-year-old heifers made an average of £90 (\$450). The average on the 49 head sold was £30 14s. The same causes that affected adversely the sale of the cattle accounts for the low prices obtained for the sheep, which figured an average of only about \$65 for the rams. By far the largest buyer was the firm of Patrick Bros., Ilderton, Ont., who secured about 50 head, including all of the 23 yearling ewes offered.

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 The best dip in the market. Thorough, permanent, effectual. Cheapest and best disinfectant for surgical and medical purposes, barns and outhouses. Used in the proportion of 1 to 100.
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 Lot 11, con. 1, Hope Tp., Co. Durham; half mile west of Port Hope. Soil good clay loam; well watered by two living streams. New brick house—11 rooms, kitchen and woodshed attached; also six-room cottage. Good barns and stables, and 10 acres full-bearing orchard. For further particulars apply to
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 Present offering: A choice lot of ram lambs and ewe lambs. Also 50 extra nice yearling ewes.
PETER ARKELL & SONS,
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GOSSIP.

James Sharp, Rockside, near Cheltenham (C. P. R. and G. T. R.), Ont., advertises Aberdeen-Angus bulls and females.

English Shorthorns, topped with Cruickshank bulls, are advertised in this paper by Mr. Wm. Bell, Alnwick, Northumberland, who has been a very successful prizewinner at English shows.

Mr. George D. Fletcher, Binkham, Ont., reports the recent sale, from his Greengrove herd of Shorthorns, of a choice young bull, of the Missie family, to Mr. Hugh Thomson, of St. Mary's. Mr. Thomson has been a frequent visitor to this herd, and states that he never visited it without purchasing one or sometimes a number. As Mr. Thomson is a judge of pedigrees as well as animals, this is sufficient proof that the breeding in this herd is all right. During the past few years, stock from this herd has circulated throughout Alberta, Manitoba, Ontario, and the United States. In each case where introduced the result has been greatly increased demand; so much so, that it has been found necessary to increase the number of the herd to supply the demand. Mr. Fletcher will exhibit his stock bull and a few young things at Toronto Exhibition.

W. R. Bowman, whose farm is about three miles north of Mount Forest, which is his P. O. and R. R. station, is engaged in the breeding of Aberdeen-Angus cattle and Suffolk Down and Shropshire sheep. In Angus cattle Mr. Bowman has some extra good animals. His herd was founded on animals purchased from Capt. Varcoe, of Goderich. The present stock bull is Prince of Elm Park 35770, sired by Emlin of Willow Grove 20681, dam Kyma 2nd 18920. He is a very lengthy, nicely-formed bull, and is half-brother to Kyma's Heir, the bull that has won sweepstakes for three years at Toronto. His calves are showing fine form, and among them should be a number of prizewinners. The cow, Hilda of Willow Grove 595, sired by Lord Forest 106, dam Heather Blossom of Willow Grove 511, by President of Bli Bro. 339, is a large, well-balanced cow that has bred Mr. Bowman many good ones. Mayflower 3rd of Bli Bro. 6882 is another large, meaty cow, sired by Corporal 4991, dam Waterside Mayflower 1461. This cow is the dam of Maple Grange Masher King 06601, a yearling that now weighs 1,400 lbs., a grandly-proportioned, deep, short-legged youngster, that will compete for honors at the leading shows this fall. He is sired by Oxford King 24350, Lady Bate of Metcalfe 22881, by Lord Forest 13152, dam Bate 2nd of Earnside 8103 is suckling an extra nice bull calf, that possesses more than ordinary merit. The heifers in this herd are nice, smooth, beautifully-moulded animals, of good substance. The Suffolk Down flock of sheep was founded on importations bred by the Earl of Ellesmere. The rams used as sires have all been imported from the flock of the Suffolk Stock Co., Iowa. This flock, which is a large one, contains a number of large, squarely-built animals of good quality. This season's crop of lambs are looking well. The Shropshire flock was founded on importations made by Hamner, of Mt. Vernon, and Campbell, of Woodville. They are an even, well-covered lot. Mr. Bowman has a number of shearing rams that intending purchasers should see. He will be offering his entire flocks of both breeds for sale by auction some time in October next, as he finds his time fully occupied in looking after his rapidly-increasing herd of cattle. Make a note of this.

Lake View Stock Farm is situated in the County of Grey, about nine miles south-west of the town of Meaford, on a beautiful eminence overlooking Georgian Bay, and is the home of an excellent herd of choice Scotch-bred Shorthorns, also of a splendid lot of Clydesdale horses, and up-to-date Yorkshire and Berkshire hogs. The owner, Mr. James Bowes, whose P. O. address is Stratbairn, is a man of modern ideas, who believes that it is just as cheap to raise a pure-bred animal as a scrub. Acting on that belief and principle, years ago he founded a pure-bred herd of Shorthorns on such noted families as Crimson Flowers, Strawberries, and Lavinias. These, coupled with the best Scotch bulls he could procure, have produced a herd that will stand favorable comparison with any to be found. The stock bull in use at present is a substantial, evenly-built fellow, weighing 2,600 lbs., dark red, of grand character, and has proven himself a great sire, stamping his progeny with a perfect conformation. He is Royal Tim 23562, sired by Imp. Royal Member 17107; dam Coristine 18744, by Win 13079, by Imp. Albert Victor 6315. Prominent among the cows of this herd stands the roan Crimson Lily, sired by Scots Nobleman 17391; dam Rose of Lynden 13078, but that noted bull, Barmpton Hero 321. This cow, besides her rich breeding, possesses grand individual merit, being very thick fleshed, broad backed, and evenly proportioned, with well-sprung ribs. Another good one is Mary C., sired by Golden Lion 4994, of the Stamford family; dam Queen of Scots 3rd 4405, by High Sheriff. She is a beautiful type of Shorthorn, and is an extra heavy milker. This cow should have been in the test at Buffalo. The Strawberry-bred cow, Srynga, is a very large, nicely-moulded animal, and has proven herself a breeding for her owner on account of her grand breeding qualities. She is sired by Sarawak 14314, by Monitor 2117. A yearling bull that, if present indications are a criterion to judge by, will certainly make his mark in the show-ring is Crimson Robe 35228, sired by Imp. Golden Robe 29396; dam Crimson Lily (described above). This youngster is an extra good one, showing those true characteristics of Shorthorn perfection so eagerly sought after. Another youngster that will surely come to the top is the 7-months-old heifer sired by British Crown, by British Statesman; dam Gloria, by Boulderman 2nd. A large number of 2- and 3-year olds in this herd are nice ones, some in milk, some carrying their first calf. All the stock is in the pink of the condition, and will be sold at a price. The Clydesdales are a good lot, large, well-developed, perfectly broken, useful farm animals, with the best of legs and feet. The York-hires and Berks-hires on this farm are on a par with the rest of the stock kept there. Mr. Bowes' motto is, "The best is none too good." See his advertisement in this issue.

F. B. Dood, Branchton, offers Egyptian seed wheat for sale elsewhere in this issue.

A FEW FACTS

About the New Catarrh Cure.

The new Catarrh Cure is a new departure in so-called catarrh cures because it actually cures, and is not simply a temporary relief.

The new Catarrh Cure is not a salve, ointment, powder nor liquid, but a pleasant-tasting tablet containing the best specifics for catarrh in a concentrated, convenient form.

The old style of catarrh salves and ointments are greasy, dirty and inconvenient at the best; the new preparation, being in tablet form, is always clean and convenient.

The new Catarrh Cure is superior to catarrh powders because it is a notorious fact that many catarrh powders contain cocaine.

The new catarrh cure is called Stuart's Catarrh Tablets, a wholesome combination of bloodroot, beachwood tar, guaiacol and other antiseptics, and cures by its action upon the blood and mucous membrane, the only rational treatment for catarrhal trouble.

You do not have to draw upon your imagination to discover whether you are getting benefit from Stuart's Catarrh Tablets; improvements and relief are apparent from the first tablet taken.

All druggists sell and recommend them. They cost but 50 cents for full-sized packages, and any catarrh sufferer who has wasted time and money on sprays, salves and powders, will appreciate to the full the merits of Stuart's Catarrh Tablets.

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LIVE STOCK.

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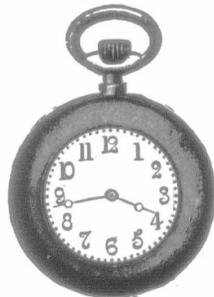
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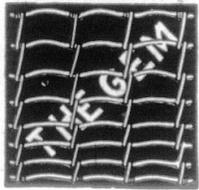
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Five years old. Prizewinner and sweepstaker. Quality perfect. One yearling Shorthorn bull. Brood sows, Tamworth-bred.

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

THOS. GOOD,
 Richmond P. O., Ont.
 R. R. Station, Stittsville, C.P.R.

W. G. HOWDEN, COLUMBUS, ONT.,
 BREEDER OF

CLYDESDALE HORSES, SHORTHORN CATTLE

PLEASE MENTION FARMER'S ADVOCATE.

What Ontario Farmers Say About the Massey-Harris Binder.

Newcastle, Ont., July 31, 1901.
MASSEY-HARRIS Co., Limited, Toronto:
 DEAR SIRS,—I purchased a No. 4 Binder, 7-ft. cut, from your agents, Moon & Staples, and I must say it excels all ideas I had of what a binder ought to do or would do. I started it in as heavy a crop as could grow, opened up the field and never had to stop once. It will elevate and handle any crop. Intending purchasers of binders should not hesitate in buying a No. 4 Massey-Harris, 7-ft. I have cut 25 acres in a day. I cut 15 acres yesterday afternoon with three small horses, and the ground was soft after the heavy rains. The No. 4 Binder is perfectly balanced, there being no weight on the pole. The knoter does its work in a perfect manner. I have now cut 150 acres, and can cheerfully recommend it to all intending purchasers. Wishing you the success such machines merit,
 Yours truly,
 D. J. GALBRAITH.

Omemee, Ont., July 27, 1901.
MASSEY-HARRIS Co., Limited, Toronto:
 GENTLEMEN,—The No. 4 Binder I purchased from your agent, T. A. McCrea, is all, and even more, than you claim for it. The application of roller bearings makes the draft extremely light. The tilting, reel and knoter shifting levers are simple and easy to handle. I have cut 15 acres of short and tangled barley and wheat, and made a clean job of it; part of it was on a very bad hill. I have tested the machine thoroughly and am satisfied that I have a perfect machine in every way, and do not see that you can make any improvement on it. I can freely recommend it to intending purchasers.
 Yours truly,
 C. CORNEIL.

St. Thomas, Ont., July 26, 1901.
MASSEY-HARRIS Co., Limited, Toronto:
 GENTLEMEN,—The 6-ft. binder purchased from your agent, A. C. Campbell, has given entire satisfaction, runs light with two horses, misses no sheaves, requires no repairing, and I can fully recommend it to anyone wanting a first-class binder.
 Yours truly,
 THOMAS FUTCHER.

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

NO BETTER IN THE WORLD!

Hersee's Reliable INSECT KILLER

Kills all kinds of insects on horses, cattle, sheep, calves, and plants, and that's what you want. No guesswork about it. It's the stockman's friend.

The manufacturer will give a one-horse cultivator to the farmer or poultryman who writes and sends us the best testimonial on either Hersee's Reliable Stock Food, Poultry Food, Insect Killer. All testimonials to be in our hands by Jan. 1st, 1901.

Send for stock book, free.

EDWIN HERSEE,
 MANUFACTURER,
 WOODSTOCK, ONTARIO.

W. R. BOWMAN, Mt. Forest, Ont.,
 BREEDER OF

Polled Angus CATTLE.

Six bulls for sale; also a few females. Suffolk and Shropshire Down sheep. Twenty rams and 40 ewes for sale, at \$10 to \$15 each.

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

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,** Shipping stations: Port Perry, G.T.R.; Myrtle, C.P.R.

LAKE VIEW STOCK FARM.
 SCOTCH SHORTHORNS, both sexes, all ages. As good as the best.
 Menford Station, G.T.R. North **JAMES BOWES,** Strathdalm P. O.

ABERDEEN-ANGUS FOR SALE.

Females and four lusty bulls, 10 months old, whose sire, grandsire and great-grandsire all stood first at Toronto and other big exhibitions.
 Cheltenham Station, **JAMES SHARP,** C.P.R. and G.T.R. **Rockside P. O.**

Gulline collars wear like Iron.
 Leather bodies, plated steel rims.
 Open or closed throats.
 Straw-stuffed or pneumatic in all styles and all sizes.
 Progressive dealers sell them, if yours doesn't, we'll ship to you direct and prepay the railroad freight to any part of Canada.
Best Farm Collars ever made.
 Our 40 page illustrated Catalogue gives prices and tells all about them; we mail it free.
WANT ONE?
THE GULLINE HORSE COLLAR CO.
 GRANBY, P. Q. CANADA.

Men Wanted

To sell Nursery Stock and Seeds on salary or commission. Part or full time.

First-class Outfit furnished

FREE OF CHARGE

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

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

THIS CUT ILLUSTRATES THE ONLY

"Hinge" Stay Fence

It will not sag, and is cheap, strong and durable. Write for circular and prices.
 Good Agents Wanted in every locality, to whom we guarantee good returns.
The Strathy Wire Fence Co. (LIMITED), OWEN SOUND, ONT.

SHEWING HINGE MOVEMENT OF STAYS UNDER PRESSURE. STAYS CANNOT BEND & WILL SPRING BACK TO PLACE WHEN PRESSURE IS REMOVED. **Nº13**

LATELY IMPORTED, A FRESH LOT OF

Clydesdale 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.

Agricultural College, GUELPH.

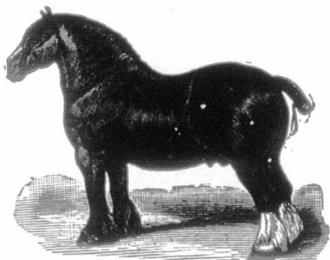
A large staff and first-class equipment, furnishing the kind of education needed by young men intending to live on the farm or follow any kind of practical or professional pursuit connected with farming.

- (1) **Two Years' Course for Associate Diploma, Sept. 13th.**
- (2) **Four Years' Course for B. S. A. Degree, Sept. 13th.**
- (3) **Dairy Course, Jan. 4th.**
- (4) **Two Weeks' Course in Judging Live Stock and Seed Grain, Jan. 8th.**
- (5) **Four Weeks' Course in Poultry Raising, Jan. 10th.**

Send for circular giving full information as to cost, terms of admission, etc.

July, 1901. **JAMES MILLS, M.A., President.**

CLYDESDALE STALLIONS ALL SOLD.



MR. DALGETY
sailed on July 10th for the home-land to bring out another large importation. Expects to arrive in Canada early in September with a grand lot.

Anyone having first-class heavy draft or high class carriage horses may find a purchaser by writing

DALGETY BROS.,
London, - Ontario.



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.

J. & W. B. Watt, SALEM, ONT., BREEDERS OF Clydesdale horses, Scotch Shorthorn cattle, Leicester and Oxford sheep, Berkshire pigs.
(Post and Telegraph Office.)

Our **SHORTHORN** herd was founded over 30 years ago, and contains such tribes as the Village Ruds, Matchless, Missies, Mildreds, Stamfords and English Lady, upon which we have employed such bulls as *Barnpton Hero 324, Young Abbotsburn 6236, Challenge 2333, Perfection 9100, Lord Lansdowne (imp.) 2712, Clan Stuart 14381, Canada 19536, Sibyton Chief 17060, Royal Sailor (imp.) 18959, Royal George 22513, Clipper King 16293 and Judge 23419*, all of which have been first-prize winners wherever shown. *Royal Victor 34681* and *Royal Wonder 34682*, by *Royal Sailor (imp.)*, and out of English Lady and Mildred dams, now head the herd, assisted by *Roan Cloud 31317*, by *Lord Gloster 26995*, and out of *Melody 21992*, a descendant of the Buckingham family. We are now offering young bulls, cows and heifers for sale, of Scotch type.

Farm 2 miles from Elora Station, G. T. R. and C. P. R., 15 miles north of Guelph.

6 imp. Bulls, 14 months to 2 years. Our imp. cattle are representatives of the following Scotch families: Claret, Claras, Beautys, Marr Roan Ladys, Urys, Orange Blossoms, Secrets, Matildas, Miss Ramsdens, Jilts, Floras, Annes, Lady Fragrants, and others.
20 imp. Heifers, 2 and 3 years old. Safe in calf.
2 Home-bred Bulls, 12 and 16 months old.
10 Home-bred Heifers, Scotch topped.
25 Choice Yearling Ewes, from imp. Ram.
Burlington Junction, G.T.R., is our station. Telegraph and telephone office within half a mile of the farm.
Catalogues on application.
W. G. PETTIT & SON, Freeman P. O., Ontario.

Farmers!

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

VENTILATION.

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

For pamphlet, prices, and other particulars, write to

ISAAC USHER,
QUEENSTON, - ONTARIO.

HILLHURST SHORTHORNS

THREE COLLYNIE-BRED BULLS IN SERVICE:

Scottish Hero, Joy of Morning, Scottish Beau,
By Scottish Archer. By Pride of Morning. By Silver Plate.

The herd comprises straight Scotch, Cumberland, Gloucestershire, and Canadian strains; bred to produce the best and most economical **MEAT and MILK MAKERS.**

Shropshire and Hampshire Down Sheep.

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



THE NATIONAL Cream Separator

MANUFACTURED BY THE RAYMOND MFG. CO. OF GUELPH, CAN.

Has every valuable improvement to make it serviceable, reliable, easy and handy to operate.

Has no complicated parts to wash, only two loose pieces inside of the bowl.

Anti-friction ball bearings, to save power and cost of oil.

The neatest in design and finish.

Proven beyond a doubt to be a necessity to make dairying profitable on the farm when making butter or when sending cream to the creamery or city trade.

It makes more butter and improves the quality so as to command the highest price.

Saves labor, and earns an extra increased profit of from \$4 to \$8 per cow annually.

Ask those who have them. Consider the waste of money by feeding the most valuable constituent in milk to calves, when grain meal, having the same feeding value, can be substituted at 1-16 of the cost of the butter-fat.

"NATIONAL" NO. 1 HAND POWER.

The "National" is sold entirely on its merits. A free trial given at your own home.

THE CREAMERY SUPPLY CO., GUELPH,
GENERAL AGENTS FOR ONTARIO.

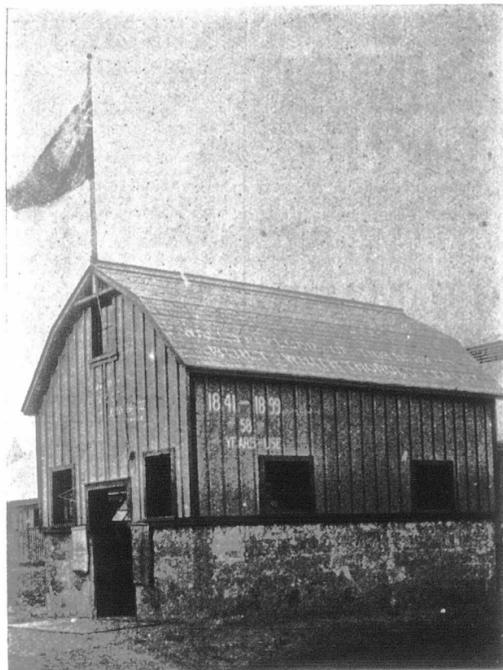
Industrial Exhibition, Toronto.

THE EXPOSITION HEADQUARTERS OF

BATTLE'S THOROLD CEMENT.

ACROSS THE ROAD FROM THE DAIRY BUILDING.

Every Farmer Visiting the Exposition is Invited to Call and See this Model Barn.



All will be Welcome. Hundreds Who Have Called Say it is the Coolest Building on the Grounds.

In this building will be found actual demonstrations of the adaptability of **THOROLD CEMENT** for use in the construction of Concrete Houses, Bank Barns, Horse Stables, Cow Stables, Piggens, etc. Also the office of the **ESTATE OF JOHN BATTLE**, where our **MR. JAMES BATTLE** will be constantly in attendance, and will be pleased to give all information.

ESTATE OF JOHN BATTLE, THOROLD, ONT.
MANUFACTURERS OF THOROLD CEMENT.

FOR SALE:
DURHAM BULL, 10 months old, by Grand Sweep (imp.); also heifer calves.
JAMES LENTON, Park Farm, Oshawa, Ont.

PLEASE MENTION FARMER'S ADVOCATE.

HIGH PARK STOCK FARM.
GALLOWAYS of the choicest breeding and most fashionable strains. Inspection or correspondence invited. **A. M. & ROBERT SHAW,**
P. O. Box 291, Brantford, Ont.

PLEASE MENTION FARMER'S ADVOCATE.



90 HEAD

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

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

H. D. SMITH, COMPTON, QUE.

FOR SALE:

Three Guernsey bulls, 5, 9, 13 mos. old, sired by Masher (Imp.). Six Ayrshire bulls, 1 year and under, sired by Matchless. Shropshire lambs, sired by Canadian Flagstaff (1 imported direct). Address—



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

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.

For Sale Two choicely-bred **SHORTHORN BULLS**, 12 and 18 months; also cows and heifers, with calves at foot and bred again to imported Red Duke = 36084 = (77585). 54 head to select from. **DAVID MILNE & SON,** Ethel, Ont.

SPRING GROVE STOCK FARM

Shorthorn cattle and Lincoln sheep. Herd prize and sweepstake at Toronto Industrial Exhibition, 1897 and 1898. Herd headed by the Marr Missie bull, Imp. Wanderer's Last, last of the get of the great sire, Wanderer, of the Cruickshank Brawith Bud tribe. High-class Shorthorns of all ages for sale. Also prizewinning Lincolns. Apply om



T. E. ROBSON, ILBERTON, ONT.

LAI DLAW'S CONCENTRATED TOBACCO POWDER



Sheep Dip.

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

ROBERT MARR, WALKERTON, ONT.

RIG. CASTRATION.

DR. J. WILSON, V. S., WINGHAM, ONT., Specialist in the castration of ridgelings. Terms and testimonials on application.

SHORTHORN BULLS AND HEIFERS

Choice quality and best Scotch breeding. Imported and home bred. Imported Knuckle Duster (72793) and Imp. Royal Prince head the herd, which has furnished the Provincial Fat Stock Show champion three out of the last five years. Catalogues on application.

H. SMITH, HAY, ONT. Exeter Station on G. T. R., half a mile from farm.

AUCTION SALE

SHORTHORNS, FARM STOCK AND IMPLEMENTS, ETC.

J. A. Marshall, of lot 3, con. 3, block 4, Township of Binbrook, having leased his farm for a term of years, will sell by public auction his entire herd of Shorthorns, on October 15th, 1901, consisting of cows, heifers, heifer calves, bull calves, and two fine yearling bulls: 17 head in all. For further particulars, write

J. A. MARSHALL, BINBROOK, ONT.

GOSSIP.

A. D. M'GUGAN'S SHORTHORNS AND LINCOLNS.

About three miles south of Rodney, Ont., on the M. C. R., is the beautiful and well-appointed home of Mr. A. D. McGugan, importer and breeder of Shorthorn cattle and Lincoln sheep. Here is an ideal home for pure-bred stock, the beautiful stables being laid out with an eye to economy of space, comfort of the animals, pure air, and abundance of sunlight. There are a large number of nicely-arranged box stalls, and the floors throughout are of cement concrete, the whole kept sweet and clean. These model stables, surrounded by 300 acres of as nice farm land as can be found in Ontario, the pastures being decked with flocks of typical Lincoln sheep, in all their pristine beauty and perfection, and a high-class herd of imported and home-bred Shorthorn cattle roaming the fields—truly a picture for the gods to gaze upon in admiration. What more could man wish for? Yet Mr. McGugan is not entirely satisfied, for he is talking very strongly of making a trip to the Old Sod this summer to bring home some of the Royal winners, both in Shorthorns and Lincolns. Few, if any, Shorthorn sires in Canada have a record in provincial prize lists to that of the superb old bull, Abbotsford 19446, now at the head of Mr. McGugan's herd. It is doubtless safe to say he has won more first prizes and sweepstakes than any bull alive in Canada today. Sired by Blake 15177, by Imp. Hospodar, and out of the celebrated Cruickshank cow, Imp. Village Blossom, he is the sire of Bruce, who won first at Fat Stock Show in 1897; also sire of Free Trade, winner of first at the same show in 1899. He weighs 2,500 pounds, and is all beef from the ground up, and still as plimble on his feet as a yearling. The cow, Frieda, winner of first at London in 1897, and at Winnipeg and Brandon in 1898, is a daughter of Abbotsford, and a number of his sons are to-day heading herds of Shorthorns in different parts of Canada and the United States. Among the dams on this farm are a number of representatives of the blood of that noted prize Cruickshank bull, Imp. Indian Chief; also a number sired by that great bull, Imp. Scottish Pride. The cow, Rosetta 8th, imported by H. Cargill & Son, was bred by J. Young, Rothnick, Kincardine, Scotland, and sired by Alan Gwynne, by the noted Star of Morning, sire of the Highland Society and Royal winners several years in succession. Rosetta 8th is all that could be desired both in breeding and conformation, being very evenly made up. She is of the Kinellar Roan Lady tribe, and richly bred. Another sweet one is Scottish Red Lady (Imp.), by Scottish Prince, dam Rosetta 9th, of the same excellent family. The cow, Queen, by Imp. Indian Chief, has a clean record in the show-ring, having never been beaten. Another gilt-edged-bred one is the cow, Day Spring (Imp.), sired by Marshfield, bred at Uppermill, and got by the great William of Orange. The younger things on this farm are a really grand lot, having deep, square, lengthy conformation, with level, broad backs and very short legs, all of which go to make up the ideal Shorthorn of to-day. The Lincolns on this farm will stand comparison with any to be found in the country. The flock was founded some seven years ago on importations made by William Oliver, and during this time, additions by direct importation, have been annually made. The sires that have been used have all been directly imported or bred from imported stock. The present imported sire is from the world-famous flock of Mr. Henry Dudding, and is a noble specimen of the breed. This season's crop of lambs are an extra large, well-formed and perfect-covered lot, and should turn out a number of prizewinners.

NOTICE.

A Good Thing for Farmers.—Small threshing machines for the individual farmer are coming more into popular favor in some districts every year, and in proof of this we give our readers part of a letter received by the manufacturers from Samuel & Jones, of De Groat, N. Dakota, dated July 7, 1901: "Two years ago we bought a 32-inch Columbia separator, manufactured by the Belle City Manufacturing Co., of Racine, Wis., and have run it with a 12-horse-power gasoline engine and a Parsons feeder, to our entire satisfaction. As a flax machine, the Columbia has no equal. We average 50 bushels per hour, using four teams in the field, and our crew consists of seven, all told. We find that we have been able to thresh all kinds of grain and put it in the wagon at a less cost than it would take to stack the same. We thresh from 750 to 800 bushels of wheat per day, and have threshed 1,400 bushels of oats in one day. We threshed 350 bushels of flax several times in the afternoon, and expect to make a better record this fall, as the machine is just as good as new, and we have more experience."

SOUTH AUSTRALIA Professor of Agriculture.

Applications will be received by the Government of South Australia, Adelaide, or by the State Agent, 1 Crosby Square, London, E. C., England, for the position of Government Professor of Agriculture.

The duties of the office are: (1) To superintend the Agricultural College and Experimental Farm and teach classes thereat; (2) To advise the Government on all points relating to agriculture. (3) To lecture to agriculturists when required.

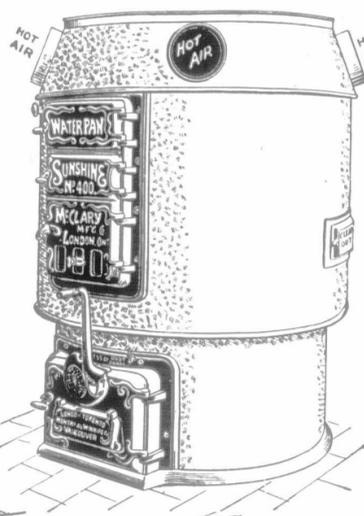
The applicant must be competent to make analyses of soils and to conduct such scientific and practical experiments as the Government shall consider necessary. The salary will be £500 per annum with rations, house and fuel. The term of engagement is five years, subject to satisfactory performance of duties. Applicants must be in good health and under 45 years of age. The passage of the successful applicant will be paid to South Australia, and his salary will commence on his arrival there.

Further information may be obtained upon application to the Honorable the Minister of Agriculture, Adelaide, or to the State Agent for South Australia, 1 Crosby Square, London, E. C., England. Applications will be received up to 1st of November, 1901.

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

ROBT. GLEN, Owen Sound, Ontario. PLEASE MENTION FARMER'S ADVOCATE.

Sunshine Patterns Sold



Two weeks ago the Summit Foundry Company, of Geneva, N. Y., bought duplicate iron patterns of the "Sunshine" Furnace, so that they could manufacture and sell this splendid Canadian heater in the United States.

The Summit Foundry Company could have bought duplicate iron patterns of any other furnace made in Canada, but they preferred the "Sunshine."

This in itself proves that the "Sunshine" is the best heater made in Canada.

Free Pamphlets telling all about this heater sent to any address.

THE McCLARY MFG. CO.'Y. London, Toronto, Montreal, Winnipeg, Vancouver; St. John, N. B.

A FEW FACTS ABOUT

Cream Equivalent

FOR RAISING CALVES ON SEPARATED OR SKIMMED MILK.

CREAM EQUIVALENT supplies at a small cost what every calf-rearer wants, viz., a gruel that will enable him SUCCESSFULLY to supplement the supply of milk, or enrich skim or separated milk, or rear calves on occasion without any milk at all.

It represents the net results of hundreds of practical tests carried out at our Experimental Farm at Hall o' Coole, Cheshire, England. This farm, with a herd of about 80 dairy cattle, is kept for the special purpose of carrying out experiments in feeding, in order to put before our patrons foods which will give the best and most economical results. It enables us to turn out products of real practical value.

"CREAM EQUIVALENT" is the most popular food on the market, and probably rears more calves than all other manufactured calf foods put together. Calves take to it readily and thrive well on it. The calves reared on it are stronger, healthier, and better-grown animals in every way than those reared on any other preparation of the kind.

It contains no chemicals or materials which might be in any way injurious; it is not a condiment or spice, but a PLAIN, WHOLESOME FOOD CONTAINING THE NUTRIMENT ESSENTIAL TO VIGOROUS GROWTH.

An important point that should not be overlooked is that the cost of feeding with "CREAM EQUIVALENT" is small, and there is, therefore, no excuse for using an inferior article.

The price is: 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, ONT.

Rapids Farm Ayrshires.

REINFORCED BY A RECENT IMPORTATION of 20 cows, 2 bulls, and a number of calves, selected from noted Scotch herds, and including the male and female champions at leading Scottish shows this year. Representatives of this herd won the first herd prize at the exhibitions at—

Toronto, London, and Ottawa, in 1900.

Come and see or write for prices.

Young Bulls and Heifers for Sale, bred from High-class Imported Stock.

Robert Hunter, Manager

for W. W. Ogilvie Co., Lachine Rapids, Quebec.

Please Mention The Farmer's Advocate.

WORKS WONDERS. **Gombault's** WORKS WONDERS.
Caustic Balsam

IT REMOVES BUNCHES

ON HORSES OR ANY OTHER LIVE STOCK, THEREBY INCREASING THE VALUE OF THE ANIMAL FULLY 50 PER CENT.

IT CURES Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Windpuffs, all Skin Diseases or Parasites, Thrush, Diphtheria, Pink Eye, all Lameness from Spavin, Ringbone, and other bony Tumors; also all obstructions in circulation, and imparts new life and vigor. It is a peerless remedy for all Throat and Bronchial Troubles. Impossible to produce any scar or blemish.

It is the safest and best blister. A trial will surely convince you of its merits.

For Sale by all Druggists OR SENT BY PREPAID EXPRESS ON RECEIPT OF \$1.50.

THE LAWRENCE-WILLIAMS CO.,

SOLE AGENTS FOR THE UNITED STATES AND CANADA.

CLEVELAND, OHIO. - - - TORONTO, CANADA.

GOMBAULT'S CAUSTIC BALSAM IS THE ONLY GENUINE
 AND ABSOLUTELY SAFE AND RELIABLE BLISTER.

Horse Owners Should Use

GOMBAULT'S

Caustic Balsam

The Great French Veterinary Remedy.
A SAFE, SPEEDY AND POSITIVE CURE.



Prepared exclusively by J. E. Gombault, ex-Veterinary Surgeon to the French Government Stud

SUPERSEDES ALL CAUTERY OF FIRING

Impossible to produce any scar or blemish. The safest best Blister ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses or Cattle

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, Etc., it is invaluable.

WE GUARANTEE CAUSTIC BALSAM will produce more actual results than a whole bottle of any liniment or spavin cure mixture ever made.

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 CO., Toronto, Ont.

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

ARTHUR JOHNSTON
 Greenwood, Ontario, Canada.
 HIGH-CLASS SCOTCH SHORTHORNS
 (First Importation Made in 1874.)

(My recent importation of 30 head has just arrived home from quarantine. Herd now numbers over 120 head.)

OFFERS FOR SALE

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

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

JOHN DRYDEN,
 BROOKLIN, ONTARIO,

BREEDER OF CRUICKSHANK SHORTHORNS AND CHOICE SHROPSHIRE SHEEP.

Fifty superior yearling rams ready for August delivery.

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

SPRINGBANK FARM.
 Shorthorn Cattle, Oxford Sheep, and Bronze Turkeys. Young bulls for sale. JAS. TOLTON, WALKERTON, ONT.

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

PLEASE MENTION FARMER'S ADVOCATE.

Live Stock Labels
 Send for circular and price list. R. W. James, Bowmanville, Ont.

SHORTHORNS.
 FOR SALE.—Bulls: Two 1 year old and one 8 months. A few heifers of choice breeding and superior quality. AMOS SMITH, Trowbridge P. O., Listowel Stn. ONT.

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

SHORTHORN CATTLE AND LINCOLN SHEEP.

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

J. T. GIBSON,
 DENFIELD, ONT.

SPRINGFIELD FARM
 HERD OF Shorthorns, Oxfords, AND Berkshires. Young bulls and Heifers on hand. Also a few choice Berkshires. CHAS. RANKIN, Wyebridge, Ont. SIMCOE CO.



High-class Shorthorns and Yorkshire Pigs.
 Just now three 10-months bulls, got by imp. Sirius 15231, great big massive fellows with lots of flesh and quality—away head above the average. Also a few superior young cows in calf, and 5 or 6 heifers. We are booking orders now for the spring trade. Can ship some in six weeks. JAS. McARTHUR, GOBLE'S, ONT. Goble's Station, G. T. R., 10 miles east of Woodstock, 2 miles from farm. Visitors met.

NOW, FOR THE FIRST TIME,

We offer you two herds to select from. Having purchased the entire herd of T. G. Yeomans & Sons, we now have 250 head on hand, of the best families, and with largest official backing. We want to sell 100 head before fall at least 50 or 60 before starting for the fairs. Great inducements to quick purchasers.

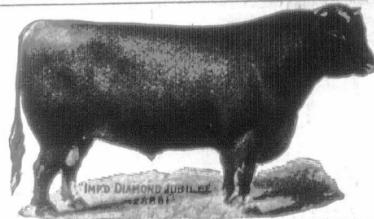
HENRY STEVENS & SONS,
 LACONA, OSWEGO CO., N. Y.

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

Scotch Shorthorns

100 HEAD TO SELECT FROM.

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



To Rid STOCK of Flies, Lice, AND ALL SKIN DISEASES, USE

West's Fluid

WHICH IS ALSO A SURE CURE OF

CONTAGIOUS ABORTION.

Standard Sheep Dip is Good, also Cheap.

Manufacturers: The West Chemical Company, TORONTO, ONT.

Pedigree forms free to customers.

NEWCASTLE HERD OF Shorthorns and Tamworths.

One choice 2-year-old heifer. About a dozen boars, ranging from 2 to 4 months old; also a few nice young sows—all from Toronto prize stock. Be sure to write for prices. COLWILL BROS., Newcastle, Ont.

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

YOUNG SHORTHORNS FOR SALE
 Our present offering includes several choice young bulls fit for service, sired by "Scotland Yet," and out of Warfare (imp.) dams; also bull calves, from Blue Ribbon (imp.), and out of Royal George cows. Inspection and correspondence solicited.

A. & D. BROWN, M. C. RAILWAY. IONA, ONTARIO.

Shorthorns and Berkshires

FOR SALE. Choice calves of both sexes. One aged boar, one yearling boar, and a grand lot of young pigs. JOHN RACEY, Jr., Lennoxville, Que.

GREENGROVE HERD OF SHORTHORNS.

This herd was founded over 18 years ago, and contains such Scotch-bred tribes as the Misses and Mysies, Languishes and Butterlys, and is now headed by the famous stock bull, Spicy Robin = 28250 =, a worthy grandson of Imp Royal Sailor = 18959 =, and of Barmpton Hero and of Ruby Vengarth = 15559 =, and is of the noted English Lady family. Some good young stock for sale. For prices and particulars, address GEORGE D. FLETCHER, BINKHAM, ONT. C. P. R. Station, Erin.

Shorthorns, Berkshires, Leicesters

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

Hawthorn Herd of Deep-Milking Shorthorns

Stock for sale of both sexes. Herd headed by the Isabella bull, Golden Eagle = 30943 =, by Golden Measure.

Wm. Grainger & Son, Londesboro, Ont.

SHORTHORNS.
 High-class (imp.) bulls, heifers and young cows of highest merit and belonging to superior Scotch families, personally selected from the leading herds of Great Britain; also a number of home-bred heifers bred to our imp. bulls. Write for catalogue and full particulars.

R. MITCHELL & SON, Burlington Jct. Station, Nelson P. O., Ont.

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.

WM. BELL, Ratcheugh Farm, Alnwick, Northumberland, Eng.

GEO. RAIKES, BARRIE, ONT.,

BREEDER OF SHORTHORNS & SHROPSHIRE. YOUNG STOCK FOR SALE.

SHORTHORNS

SCOTCH IMPORTED.

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

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

160
Head

AUGUSTAS
CLARAS
NECTARS
GOLDIES
JENNY LINDS
VICTORIAS
MATILDAS
BESSIES
CROCUSES

ROSEBUDS
BRAWITH BUDS
LANCASTERS
MAYFLOWERS
AMARANTHS
BUTTERFLYS
CLIPPERS
EMMAS
BROADHOOKS

MEDORAS
MINAS
VILLAGE MAIDS
BEAUTYS
MISS RAMSDENS
FLORAS
RAGLANS
LUSTRES
GEMS OF THE VALE

160
Head

Herd headed by the Imported Bulls, **GOLDEN DROP VICTOR** and **PRINCE BOSQUET**.

IF INTERESTED, COME AND SEE US, OR WRITE

H. CARGILL & SON,

CATALOGUE FREE.

CARGILL, ONTARIO, CANADA.

TROUT CREEK HERD OF SHORTHORNS.

We now have a select importation of thirty-three head in Quebec quarantine, the greater portion being from the noted herds of Duthie, Marr, Willis, and Earl of Roseberry.

Bulls in Service

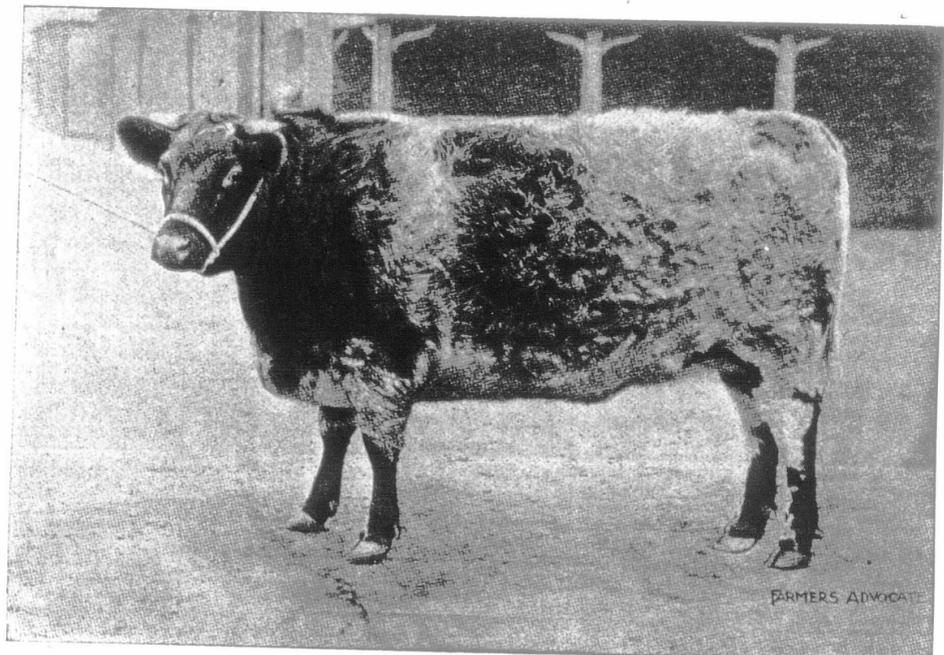
IMP. LORD BANFF 150718, A. H. B.; bred by A. Watson; of the Campbell Bessie family.

IMP. SPECULATOR 158475.—A prizewinner in Great Britain.

IMP. CHOICE GOODS 76350, E. H. B.; bred by J. Durno; of the Cruickshank Belona family; dam by Champion of England. Choice Goods has an undefeated show record: 1900—First prize Aberdeen Spring Show; first prize Strathbrogie Farmers' Club at Huntly; first prize Garioch Farmers' Club at Inch; first prize Central Banffshire at Keith. 1901—First prize Strathbrogie Farmers' Club Spring Show; first prize Highland A. Society at Inverness; President's champion medal at same show; Tweeddale gold medal for best Shorthorn bull, and \$100 prize for best Shorthorn; first prize Royal Northern at Aberdeen, and cup as best Shorthorn bull.

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

Hamilton is a city of over 50,000 inhabitants, located on main line of Grand Trunk Railway, between Chicago and Buffalo; also connected by Canadian Pacific Railway and Michigan Central Railway—branch lines.



CICELY.

Bred by Her late Majesty the Queen; undefeated in her class and many times champion; imported by W. D. Flatt.

W. D. FLATT, 378 HESS ST. SOUTH, HAMILTON, ONT.

JAS. SMITH, MANAGER, MILLGROVE, ONT.

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

BONNIE BURN STOCK FARM 40 rods north of Stouffville Station, Ont., offers Shorthorns, Shropshires, Berkshires. Pigs just weaned, good breeding, good quality, including a few choice out of imp. sow. Pairs not akin at low prices. D.H. RUSSELL, Stouffville, Ont.

FOR SALE: SHORTHORN BULLS AND HEIFERS from such sires as Mariner (imp.), Royal Judd 17499, Sultan Selam (imp.), Grenadier 26251, and Roseville Abott 30874, on a Victoria foundation. Also one extra Kinellar Stamp 10-mos. red bull. Come or write. HURON COUNTY. THOS. CUDMORE & SON, Exeter Station and Telegraph Office. Hurondale, Ontario.

Maple Lodge Stock Farm ESTABLISHED 1854.

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

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

HOLSTEINS FOR SALE.

I am now offering Holstein calves of both sexes, out of such cows as Panarista Patine, Inka D.r.k. 3rd's Jessie DeKol, DeDicket's DeKol, Belle Burke Mechthilde, Pietertje Hartog DeKol, and others, all closely related to DeKol 2nd and Netherland Hengerveld, the greatest of Holstein cows.

J. A. CASKEY, Madoc, Ont.

SHORTHORNS. We are offering three choicely-bred young bulls, 1 yr. old, two 8 months old— heavy-milking strain.

JAMES BROWN, NORVAL STN. and P.O.

Riverside Holsteins

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

Matt. Richardson & Son, Caledonia, Ont.

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, Warkworth.

BROOKBANK Is headquarters for Holstein bulls. They are going fast; be quick if you want one. In writing, state age, etc., preferred.

GEO. RICE, Currie's Crossing, Ont. Oxford Co.

SPRING BROOK Holsteins, Tamworths & B. P. Rocks. Will exhibit a few Holsteins at Toronto. Hope to meet many old friends and make acquaintance with new ones. Holsteins, highest quality, young stock, all De Kols. Over 60 head of choice Tamworths to select from.

A. C. HALLMAN, New Dundee, Ont. Waterloo Co.

Maple Glen Stock Farm. EXHIBITION OFFERING: Two bull calves under 1 year. Also a Sylva and an Abbekirk bull calf, with spring and fall heifer calves of Sylva breeding, bred from winners and ones that will make winners. Prices according to quality.

C. J. GILROY & SON, Brookville, on C.P.R. and G.T.R. Glen Buell, Ont.

UNADILLA FARM.

F. L. GREEN, GREENWOOD, ONTARIO, BREKDER OF

St. Lambert Jersey Cattle and Yorkshire Pigs.

My Jerseys are bred for business. B. th sexes for sale. I offer an extra choice bull, dropped Feb. 27th, 1901, for sale, a son of Queen May of Greenwood, who made 18 lbs. butter in 7 days, and is at Pan-American now. A lot of very choice Yorkshires on hand. Also Banded Rocks, Light Brahmas, and Bronze turkeys. Prices right.

BRAMPTON JERSEY HERD.

For sale: 2 yearling bulls; 8 bull calves, sired by Brampton's Monarch (imp.), and out of first-class cows. A number of cows and heifers in calf. Also some unregistered cows and heifers, fresh-calved and springers—grand family cows.

B. H. BULL & SON, BRAMPTON, ONT.

JERSEYS FOR SALE. Two choice bull calves of the highest breeding and of true dairy type, at moderate prices.

W. W. EVERITT, Chatham, Ont. DUN-KDIN PARK FARM, P. O. BOX 552.

CHOICE JERSEYS.

Am offering 1 cow, 4 yrs. old (very choice); 1 bull 17 mos. old; 2 bull and 1 heifer calves. W. N. HASKETT, "Avon Manor," Markdale, Ont.

SPLENDID Jerseys for Sale.

Two bull calves and two heifer calves that will equal anything I know of; age, 1 to 3 months; price, \$30 to \$60. One yearling heifer, blood of old Massena, 400 pounds butter in one year, \$100. One yearling bull, extra breeding, \$80. All registered. Crated and put on express car.

MRS. E. M. JONES, Box 324, BROCKVILLE, ONT., CAN.

Jersey Calves

From large, deep-milking cows, who have given 7,000 lbs. each of 1 1/2 per cent. milk during the past year; good colors, and from two to six months old.

For description and prices write

W. C. SHEARER, - BRIGHT, ONT.

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.

CHOICE AYRSHIRE BULLS.

OFFER: Five bull calves, one dropped in each of the months of August, November, December, January, and April. Good individuals, and from deep-milking strains.

W. W. BALLANTYNE, STRATFORD, ONT.

"Neidpath Farm" adjoins city, on main line G. T. R.

Spring Farm Stock Farm. H. J. Whitteker & Sons, Proprs. North Williamsburg, Ont.

AYRSHIRES. Five bulls ranging from 11 to 23 mos., from such noted cows as Jean Armour, Lady Ottawa, Sprightly and Prirose (imp.), and from the best sires procurable. Also heifers and cows all ages, and poultry.

WM. STEWART & SON, MENIE, ONT.

Water Basins.



The Woodward Water Basin.

For four months we have endeavored to set out why you should adopt the Woodward Water Basin. We are prepared to guarantee all we have said and let facts substantiate our statements.

Get further particulars by writing the

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

THE ONTARIO VETERINARY COLLEGE (LIMITED).

TEMPERANCE ST., TORONTO, CANADA.

Affiliated with the University of Toronto.

Patrons: Governor-General of Canada, and Lieut.-Governor of Ontario. Fee \$65.00 per session. Apply to ANDREW SMITH, F.R.C.V.S., Principal. 18-2-y-om

TREDINNOCK AYRSHIRES

Imported bulls at head of herd: Glencairn 3rd, Napoleon of Auchenbratin, 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, Quebec. G.T.R. & C.P.R., 20 miles west of Montreal.

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, Renfrewshire, Scot'and.

PEDIGREE AYRSHIRES.

Cows and heifers, all bred from prizewinning stock at the leading shows.

Robert Wilson, Mansuras, Bridge of Weir, Renfrewshire, Scotland.

IN WRITING PLEASE MENTION FARMER'S ADVOCATE

FOR SALE: High-class IMPORTED AND HOME-BRED AYRSHIRES,

including cows, heifers and young bulls out of our prize and sweepstakes cows. Foundation selected with due regard to quality and productiveness. Come or write.

WM. WYLIE, - HOWICK, QUEBEC.

SHEEP BREEDERS' ASSOCIATIONS

American Shropshire Registry Association, the largest live stock organization in the world. Hon. John Dryden, President, Toronto, Canada. Address correspondence to MORTIMER LEVERING, Secretary, Lafayette, Indiana.

AYRSHIRES AND LEICESTERS

We breed for milk and quality, and employ only the best sires. Are now offering young Ayrshires of both sexes.

DONALD CUMMING & SONS, Lancaster, Ont.

DAVID A. McFARLANE, Breeder of high-class KELS0, P. Q. AYRSHIRES.

Young stock for sale from imported and home-bred foundation. Prices reasonable.

Great Dispersion Sale of Ayrshires

ON - OCTOBER 23RD, 1901.

Will offer our herd of 50 Ayrshires at public auction, at our farm near Rockton, 4 miles north of Copetown, on the Grand Trunk Railway, at which station rigs will meet all trains the evening before and morning of day of sale. Sale to start at 12 o'clock, noon, sharp.

TERMS—\$50 and under, cash; over that amount, 11 months' credit, or 6% per annum off for cash on all sums entitled to credit. Catalogues ready after Oct. 1st, and will be mailed on application to

TIHOS. INGRAM, JRS. McCormack & Son, Auctioneer, Guelph, Rockton, Ont.

Ayrshire bulls for sale: The celebrated bull, Klondyke of St. Ann's 8897, bred by R. Reford, sire Glencairn 6355 (imp.), 4 years old in Aug., for immediate delivery. Also several young bulls fit for service this fall, and several calves. All from the above sire, and from good milkers. Prices reasonable.

W. F. STEPHEN, TROUT RIVER, QUEBEC.

AYRSHIRE FEMALES FOR SALE

Carrying the same breeding as our prize-winners, including such offspring as Floss and Tom Brown, the World's Fair winners. We breed for constitution, quality, and production.

DAVID BENNING & SON, Williamstown, Ont.

Ayrshire Bulls: Write to J. YULL & SONS, Carleton Place.

For special prices on Ayrshire bulls from 1 1/2 years to 6 months. Four over 15 months, fit for service, from special milking stock. Sired by prize bull, Jock of Burnside—1684—, also females of all ages. Shropshire sheep of all ages; a number of fine ram lambs. Berkshire pigs of either sex, of the best bacon type. B. P. Rocks.

Maple Cliff Dairy and Stock Farm. BREEDERS OF AYRSHIRE CATTLE, IMPROVED BERKSHIRE AND TAMWORTH PIGS.

FOR SALE: 5 bull calves, a few heifers; young pigs, not akin; 2 boars, 4 months old; young pigs. Farm adjoins Central Experimental Farm, Ottawa.

R. REID & CO., Hintonburg, Ont.

Ayrshires for Sale: 4 yearling bulls and a number of spring calves of deep-milking strains. Prices reasonable.

F. W. TAYLOR, Wellman's Corners, Ont.

FOR SALE: That choice Ayrshire bull, Royal Star of St. Ann's (7916), by Glencairn 3rd (import-d), winner of first prize at Toronto, first prize and sweepstakes at London. He is large size, and a sure stock-getter and one of the finest show bulls in Canada. Also bull and heifer calves. For particulars write—

WM. THORN, Lynedoch, Ont. Trout Run Stock Farm, Norfolk Co.

Ayrshires and Yorkshires

We offer at low prices any two of our three Feb. and March bull calves, bred from our imported bull and from heavy-milking dams. We reserve one 6-months bull calf for showing. All are in show fit. Choice females of different ages. A few spring pigs still on hand.

Alex. Hume & Co., Menie, Ont.

EUROPEAN ADVERTISEMENTS.

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.

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.

REGISTERED Southdown Sheep, Suffolk Sheep AND Berkshire Pigs.

THE Cheveley flocks and herds, the property of Col. H. L. B. McCalmont, M.P., are unique for the purity of their blood, typical character, and individual merit. In their foundation, etc., no expense has been spared in securing the best and most perfect specimens of the different breeds. In each case full records are kept of individual pedigrees, so that any selections made from these flocks will, in addition to being of the highest merit and typical character, have also the great advantage of individual pedigrees.

The Southdowns have secured the highest show-yard honors during 1900, including first prizes at the leading summer and winter shows. The Suffolks are equally well bred, and numerous prizes have also been won. In fact, for individual merit, pedigree, and purity of breeding, it would be difficult to find better and more suitable flocks of either of these breeds from which to perpetuate their high individual merits. Apply to—

H. J. GARROD, Cheveley, Newmarket, England.

HENRY DUDDING, RIBY GROVE, STALLINGBOROUGH, LINCOLN, ENGLAND. Breeder of Lincoln Longwool Sheep and Shorthorn cattle.

The Riby Flock of upwards of 1,400 Ewes holds an unequalled record for true type, merit, and quality. Its produce and their descendants have won the highest honors at all the principal exhibitions and shows throughout the world; its wool exhibits being unbeaten. Established upwards of 140 years. Its produce leads the way from the fact that satisfaction is given. The Riby Shorthorn Herd of upwards of 300 selected specimens of Booth, Baten, Cruickshank, and Scotch strains, is one of the largest herds in Great Britain. Its principal Stud Bulls are: "Pride of Fortune" 78240, s. "Pride of Morning" 145094, d. "Flora 2nd," by "William of Orange" 50694; "Golden Robin" 68718 (rich roan), s. "Roan Robin" 57992, d. "Golden Sunshine," by "Royal James" 54972; "Prompter" (Vol. XLV.), by "Prefect" 69255, d. "Risington Lass," by "Umpire 13th," 1st s. "Wiltshire Count" 69824, out of "Rose Blossom" (G. Harrison). This bull, his sire and dam, won 84 prizes, including first and champions. Telegrams: "Dudding, Keelby." Rail Stations: Stallingborough, 3 miles; Great Grimsby, 7 miles.

HAMPSHIRE DOWN SHEEP.

SPLENDID MUTTON, GOOD WOOL, GREAT WEIGHT.

THIS HIGHLY VALUABLE

English Breed of Sheep

Is unrivalled in its rapid and wonderfully early maturity, possessing, too, a hardness of constitution adapted to all climates, whilst in quality of mutton and large proportion of lean meat it is unsurpassed. Full information of

JAMES E. RAWLENCE, SECRETARY HAMPSHIRE DOWN SHEEP BREEDERS' ASSOCIATION, SALISBURY, ENGLAND.

MANSELL'S DISPERSION SALE. Shropshires.

Andrew E. Mansell, Harrington Hall, Shipnal, England, who is settling in Tasmania, will sell by auction, without reserve, on Thursday, August 29th, 1901, his unrivalled flock of Shropshires. Sheep bought for America and Canada will, if desired, be sent in charge of Mr. Robert Mansell. Particulars and catalogues obtained from Alfred Mansell & Co., Auctioneers, Shrewsbury, England. Commissions carefully executed.

J. E. CASSWELL'S LINCOLNS. Laughton, Folkingham, Lincolnshire, England.

Breeder of Lincoln Longwool sheep. Flock No. 46. At the Palermo Show, 1900, 25 rams bred by J. E. Casswell averaged £51 each; 14 of the best averaged £63 each, this being the highest sale of the season in the Argentine. Ram and ewe hoggs and shearlings for sale; also Shire Horses, Shorthorns, and fowls. Telegrams: "Casswell, Folkingham, Eng." Station: Billingboro, G. N. R.

LEICESTER RAMS.

Ram lambs and ewes sired by the first-prise ram at Toronto, '99. Also Shorthorn cattle and Berkshire pigs.

MAC. CAMPBELL, NORTHWOOD, ONT.

PLEASE MENTION THE FARMER'S ADVOCATE

SOUTHDOWNS AND COLLIES.

Imported and home-bred prizewinning aged sheep. After the Pan-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.

ROBT. MOEWEN, BYRON, ONT.
ALLOWAY LODGE STOCK FARM. Railly Stn., London.

GOODWOOD FARM.

Shropshires for sale.

One- and two-shear ewes. Ram and ewe lambs.

C. H. ROWE,
P. O. BOX 192, ORILLIA, ONT., CAN.

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 OSHTAWA STATION, G. T. R.

COTSWOLDS FOR SALE.

Pure-bred Cotswold ram and ewe lambs. Extra choice ones.

JOSEPH FERGUSON,
Uxbridge P. O. and Station.

LEICESTERS.

Our present offering are all ages and both sexes. Choice animals.

C. & E. WOOD, FREEMAN, ONTARIO.

Dorset Horn Sheep

The largest flock in America. The most celebrated prizewinners at the Columbian Exhibition and Canadian exhibitions. Contains more Royal winners than any other. Awarded 5 out of 8 first prizes at Toronto, London and Ottawa in 1900. Flock of 300. Stock for sale always on hand.

John A. McGillivray, Uxbridge, Ontario.

BROAD LEA OXFORDS.

We have a choice lot of lambs this year, bred from our imported rams, Royal Warwick 3rd and May King 1st, some weighing 17 lbs. at birth. Also some good shearing ewes and rams. Also a few shearing ewes and rams fitted for show purposes. All of which we are offering for sale at reasonable prices.

HENRY ARKELL & SON,
Teeswater, Ont.

"Farnham Farm" Oxford Downs.

FLOCK ESTABLISHED 20 YEARS.

Forty superior yearling and two-year rams. Two extra fine imported rams. Sixty yearling ranch rams. Forty yearling ewes. One hundred ram lambs. Stock good and prices reasonable.

HENRY ARKELL,
Guelph, Ont., G. T. R.

Linden Oxfords

A few choice yearling rams and ewes. Also ram lambs sired by 1st-prize winners at the Royal, Toronto and London. Also a nice 9-months roan bull.

R. J. HINE, DUTTON P. O.
STATIONS: Dutton and Glencoe.

Shropshires...

At present I offer for sale: Shearing rams, shearing ewes, ram and ewe lambs. Also a few age ewes. Prices reasonable.

GEORGE HINDMARSH,
ALSIA CRAIG, ONT.

SHROPSHIRE TO HEAD FLOCKS.

ESTABLISHED 1881.

20 Yearling Rams, 30 Ram Lambs, 20 Ewe Lambs, of superior quality, form and covering, the get of an extra good imported ram and choice dams, a number of which have been imported from Thomas, Farmer, Tanner, Minton, and Barber flocks. Also a few choice English Collie pups ready for shipment.

GEO. B. PHIN, HESPELER, ONT.
Waterloo County. G. T. R. and C. P. R.

Stop! Look!! Listen!!!

FAIRVIEW SHROPSHIRE

Good rams having the best of quality. Do you want one or two? If so, write for circular.

JOHN CAMPBELL, WOODVILLE, ONT.

SHROPSHIRE

Shearing rams, ram and ewe lambs. Well covered. Good colors. Good individuals. CHESTERS: Bacon type. Litters ready to ship.

W. E. WRIGHT, Glauworth, Ont.

SHROPSHIRE

LAMBS FOR SALE.

WM. PIERCE,
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PLEASE MENTION FARMER'S ADVOCATE.

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.,
Phelpston station, G. T. R., 5 miles east. Simcoe County.

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Eight good shearing rams; 1 two-shear stock ram, bred by John Miller—a prize-winner. Fifty lambs. Also a choice young Shorthorn bull, 7 mos. old.

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FOR SALE: Yearlings of both sexes—extra good ones. Also this season's crop of lambs.

N. W. SWITZER, Streetsville, Ont., Peel Co.

1901 Importation

of Shropshire rams and ewes of finest quality, from the best breeder, now being offered at reasonable prices.

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IMPORTER AND BREEDER OF

Shropshire sheep, collie dogs, White Holland and Mammoth Bronze turkeys, and Barred Rocks.

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.**
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AT HOLWELL MANOR FARM.

Extra choice ram and ewe lambs from imported Mansell rams. Single or in large lots. Satisfaction guaranteed or money refunded. Also Barred Rock cockerels at \$1.50 a pair.

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Extra fine. Young stock for sale later.

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POULTRY SUPPLIES. **A. J. MORGAN, MFR.,**
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Stock boar, Defiance, 2nd prize, Toronto. First-prize boar, six months; boars, sows, 5 months. Prices right.

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WILLOW LODGE BERKSHIRES FOR SALE

Young boars and sows for sale, from 8 weeks to 6 mos. old; sired by Long-fellow 10th of Hood Farm No. 8633 and Gallant Prince No. 7691. Pairs supplied not akin.

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FOR SALE: Berkshires (both sexes), Shorthorn

stock bull, cows, heifers and young bulls. Prices reasonable. Write or come and see us.

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LARGE ENGLISH FOR SALE.

YOUNG boars and sows carrying the blood of

Baron Lee 1th, Bright Star (Imp.), Enterprise and Highclere on Bow Park, Teasdale and Snell females, with Allendale Boy 5875 and Royal Lad 3rd 4307 heading the herd.

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"RAPID-EASY" GRINDERS



Do MORE WORK with SAME POWER than ANY OTHER Grinder. Made for use with Tread Power, Sweep Power, Windmill or Steam Engine.

Perth, Ont., Feb. 26th, 1901. I bought one of your No. 2 Rapid-Easy Grinders from your agent, Mr. John Ditrick, and I must say that it more than pleases me and exceeds my expectations. It is no noiseless, RUNS EASY, grinds FAST; there is no bother with it. On one occasion we brought from our granary what we considered a good day's grinding, but, to our surprise, were done before two o'clock, and it took two men doing all they could to carry the grain fast enough to keep the Grinder going. I do not say this for any blow, but am just speaking of the machine as I found it. I got the machine on trial. We have used other Grinders, but NONE TO COMPARE WITH THIS.

JAMES McLAREN,
[NOTE.—Mr. McLaren is son of Senator McLaren, of Perth.]

RENFRW, Ont., Aug. 12th, 1901.

The Rapid-Easy Grinder I bought from your agent, Mr. P. O. Reilly, of Renfrew, is a dandy. I use a three-team sweep power, and can grind 40 bushels per hour. It is a very fast Grinder, and the best in the market, judging from my experience.

JOS. ROUBELLE,
Buy your machine and prepare now to do your grinding.

Further particulars upon application.

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Medals: World's Fair, Chicago, 1893; Paris, 1900.

FAIRFIELD LINCOLNS.

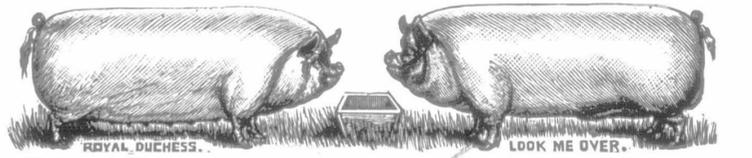
Rams and ewes (all ages), consisting of those bred at Fairfield and importations from the leading shows in '98 and 1900, including Toronto and London, we gained 116 awards. Expert judges both at London and Toronto were unanimous in pronouncing our herd far superior to that of our strongest competitors. Grand most of the best prizes offered, including first prize for best pen of pure-bred bacon hogs, also won sweepstakes over all breeds in a class of 13 entries. The foundation of our herd was laid by personally selecting the choicest stock from the most noted breeders in England and Scotland. We have the ideal bacon type—size without coarseness, and easy feeders. Pigs of all ages for sale at moderate prices. Write us for particulars. Telephone, Millgrove, Ont. Telegraph 254 Bay St. S., Hamilton, Ont.

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One mile from Ilderton. Post office. Telegraph office. 10 miles from London. Railway station.

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The largest herd of imported and Canadian-bred Yorkshires in America. Out of 121 exhibits at the leading shows in '98 and 1900, including Toronto and London, we gained 116 awards. Expert judges both at London and Toronto were unanimous in pronouncing our herd far superior to that of our strongest competitors. Grand most of the best prizes offered, including first prize for best pen of pure-bred bacon hogs, also won sweepstakes over all breeds in a class of 13 entries. The foundation of our herd was laid by personally selecting the choicest stock from the most noted breeders in England and Scotland. We have the ideal bacon type—size without coarseness, and easy feeders. Pigs of all ages for sale at moderate prices. Write us for particulars. Telephone, Millgrove, Ont. Telegraph 254 Bay St. S., Hamilton, Ont.

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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.

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boars ready for service, sows ready to breed, and younger pigs of all ages. Also show pigs can be had by writing.

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Importer and breeder of choice Large White Yorkshires and Shorthorn cattle.

NORTH BRUCE HERD OF YORKSHIRES

Boars fit for service, and young stock of both sexes on hand and for sale.

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YORKSHIRES

Headed by Oak Lodge Prince 5071. Litters 15 weeks, either sex; 2 sows to farrow.

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Northern branch G.T.R., 15 miles from Toronto.

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Best type and quality. Young stock constantly on hand. Prices right.

R. HONEY, on Brickley P. O., instead of Warkworth.

YORKSHIRES A SPECIALTY

OF THE IDEAL BACON TYPE. Boars and sows from 2 to 3 months old, from large, matured stock. Have only one young sow left, safe in pig, for sale—a choice one. Write—

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Standard Scales

For railroad, hay, live stock, dairy, coal and platform. For prices and particulars write or call on

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YORK STREET, LONDON, ONT.

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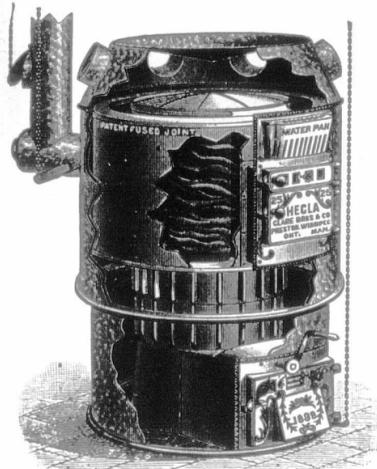
and the Lindenwood Extension Step-Ladder

Are unrivaled for lightness, strength and handiness. For picking apples, peaches, plums, etc., and for stacking and general farm use, no farmer can afford to be without them. The Waggoner Extension Ladder will save you one-fourth more fruit off the high limbs than a common ladder, and will pay for itself 10 times over the first season. We make also a beautiful lawn swing. It stands alone on the lawn, and can be folded and carried indoors.

We shall be glad to send you free our full illustrated catalogue. Our Winnipeg agent is **E. J. Holland;** and **H. L. & J. T. McGowan** handle our goods in St. John, N. B., for New Brunswick.

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Factory: 403-409 York St., London.



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is the most valuable improvement in furnace construction in recent years. By means of this patented method we fuse the steel and iron which go to make up the dome and radiator into **ONE SOLID CASTING**. There is no danger of cement falling out, to let the dust, smoke and gas escape into the house. Another feature of the Hecla is that it will burn

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COAL, WOOD OR PEAT.

Send us a sketch of your house, and let us give you an estimate.

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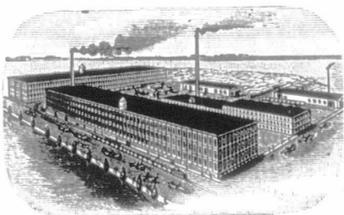
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Rippley's Fly Remover
Instantly removes all flies, mosquitoes, lice and other insects from cattle, horses and other animals sprayed with it. It is healing to any sore. Animals rest easy and feed quietly all day. Cows give 1/4 more milk, which is a big saving. 1 gal. will protect 500 cows. Money refunded if animals are not protected. Endorsed by the best class of people. Order at once and secure agency, you can sell hundreds of gallons. Price, cash with order or C. O. D. - 1/2 gal., 70c; 1 gal., \$1.25; 2 gal., \$2.40; 5 gal., \$5.25; 10 gal., \$10.00. Rippley's Special All Time Compressed Air Sprayer for applying same, 90c; all copper, \$2.00; 5 gal. Galvanized Compressed Air Sprayer for applying on large herds, \$6.25; made of copper, \$10.00.
The Rippley Hardware Co.,
Gentlemen:—For three years I have been experimenting with different things to keep flies off my cows, but not until I tried your Fly Remover and Compressed Air Sprayer was I successful. I used this last year and found that it cost less than one cent per week per cow. With your Compressed Air Sprayer it takes but a few minutes to put it on, and the result has been that my cows were free from flies, and during the year gave 6400 pounds of milk each, which made 320 pounds of butter per cow. I can heartily recommend it to all stock owners.—JOHN ARMSTRONG, Pres. State Board of Agriculture, De Smet, S. D., June 4, 1901.
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U. S. Factory at Grafton, Illinois.

DITCHING PLOUGH

"I have lost more by water this year than would buy 100 ploughs"—so writes Wm. PATERSON, of Almonte, Ont.

"Two men (who never worked at draining before) made ready for the tile in one day, 46 rods of ditch 32 in. deep with this plough, in a hard clay subsoil, in July"—so testifies F. C. ROBINSON, of Port Hope, Ont.

It is working to the satisfaction of farmers in all the provinces of Canada.

All information from—

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ROCK SALT for horses and cattle, in ton and car lots. o Toronto Salt Works, Toronto.

NO HUMBUG.
Three tools in one. Gauges itself. Farmer Brighton's Humane Swine V. Stock Marker and Calf Dehorner. Makes 48 different marks. Stops hogs rooting. Testimonials free. Price, \$1.50. Send \$1.00, get it on trial. If it works, send 50c. more in stamps. Worth \$100.00 to any farmer. Pat. Apr. 23, 1901. S. J. BRIGHTON, Fairfield, Iowa, U.S.A. om

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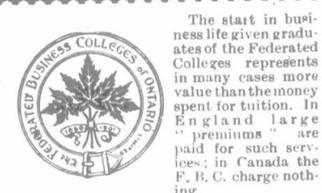
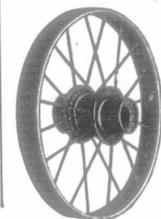
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MADE TO FIT YOUR AXLES.

EVERY farmer should have a set for drawing hay, grain, corn, etc. Are lighter, stronger, and cheaper than wooden wheels. Write for price list. om

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IMPORTERS AND BREEDERS OF
Improved Large Yorkshire and Essex Swine
STREETSVILLE, ONTARIO.

We have some fine young pigs to sell, from imp. sows and by the celebrated boar, Whitton Star. He took first prize at Toronto and London fairs in 1899 and 1900. We have some more imported sows to barrow, bred to him, and have some nice young pigs from our home-bred sows, and got by the imp. boar, Nottingham Monarch, a sire of great promise. o

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SKY LIGHT THE SAFE LOCK SHINGLE BABY CORNICE SHINGLE MAILED FREE

ROOFING
For houses and barns, making them fire and lightning proof.

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ASK FOR FREE CATALOGUE DESCRIBING THESE GOODS. To make old buildings warm and look like new.

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For ornamentation and wear.

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This month's specialty: A few very choice cockerels and pullets in B. P. Rocks, W. Wyandottes, White and Black Minorcas, and White and Brown Leghorns. A few choice young Yorks left. A. B. ARMSTRONG, CODRINGTON, ONT.

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The Cyphers Incubators

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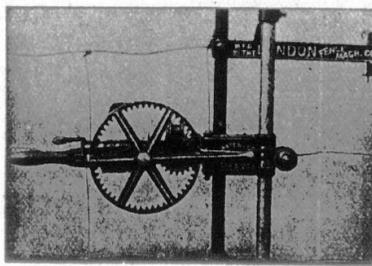


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 Largest Makers of Pianos and Organs in Canada.
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THE LONDON FENCE MACHINE

WAS AWARDED A DIPLOMA AT BRANDON FAIR LAST MONTH.

IT STANDS WITHOUT AN EQUAL.



SEBRINGVILLE, PEARCE Co., Ont., July 19, '01.
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Gentlemen,—I purchased last May from your agent, Mr. D. Haragan, of Kinkora, Ont., a "London" Fence Machine, and can, from a great deal of experience with it, conscientiously recommend it to all my brother farmers who wish to construct their fences for about one-half the former cost. The machine in itself is a marvel of invention, easy to operate, and excels anything that has been produced in its line. I cannot speak too highly of the "London," and am prepared to back every statement I make. Wishing you every success, I am, sirs,
 Yours respectfully, WM. SHERING.

DON'T MISS OUR EXHIBIT AT TORONTO OR LONDON FAIRS.

The London Fence Machine Co.,
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Can supply Egyptian seed wheat testing this year (1901) 56 lbs. per bus., including bags, at 85c. per bus. delivered on cars.
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