

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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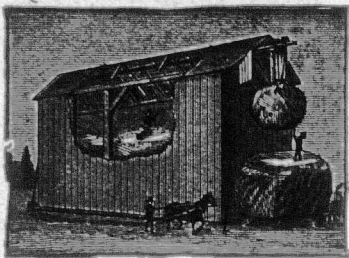
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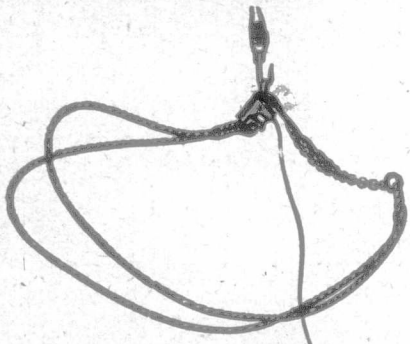
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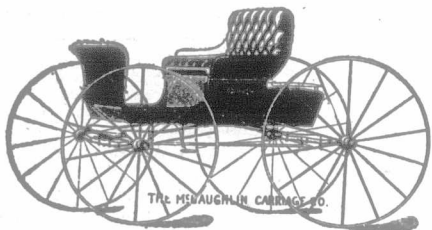
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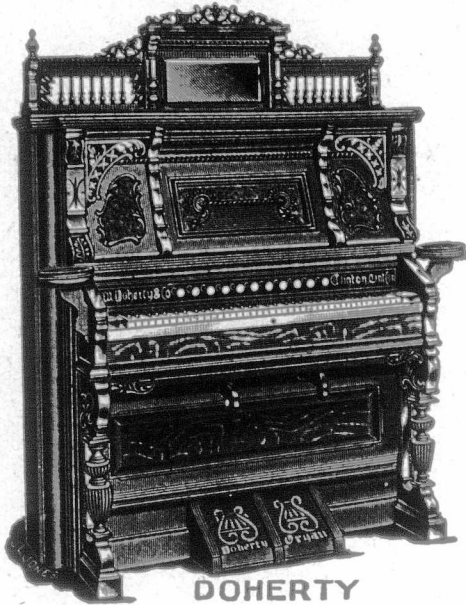
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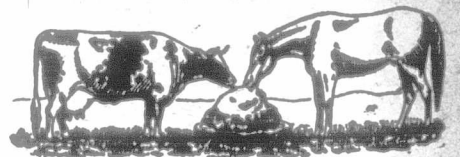
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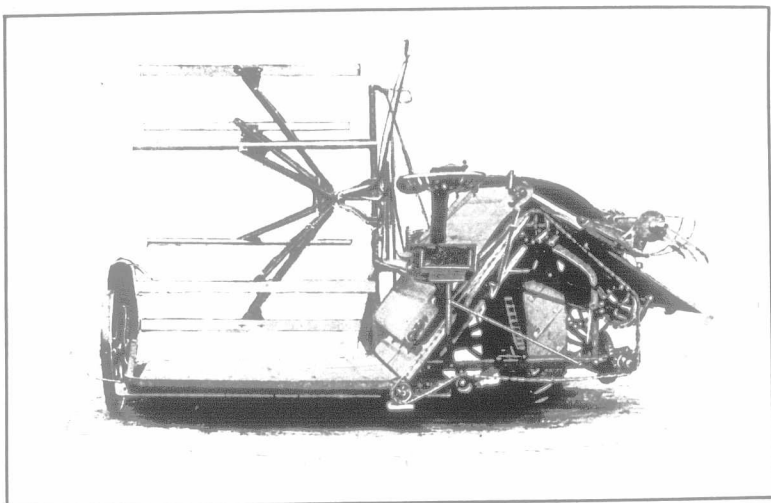
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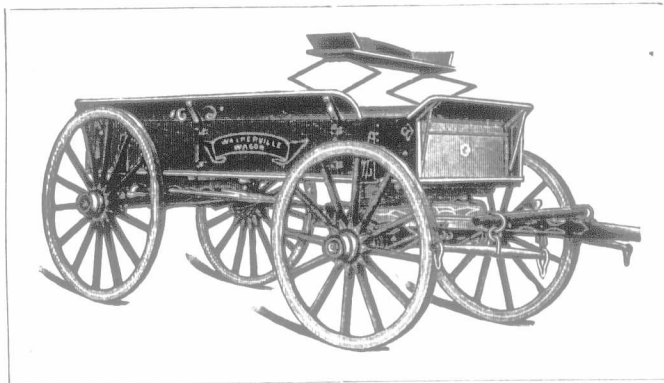
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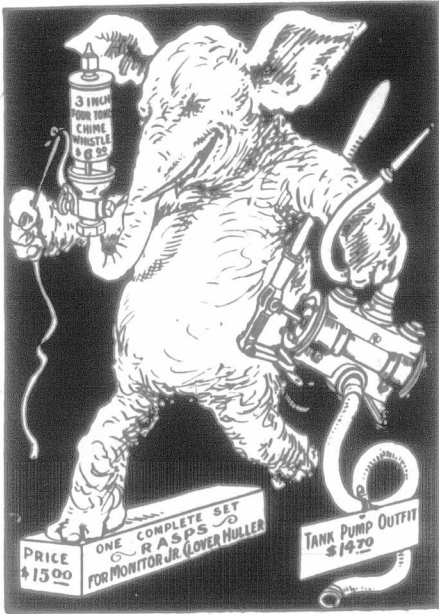
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The Farmer's Advocate

and Home Magazine.

"PERSEVERE AND SUCCEED."

ESTABLISHED 1866.

VOL. XXXVII.

LONDON, ONT., AND WINNIPEG, MAN., JUNE 2, 1902.

No. 551

EDITORIAL.

*"I hear the tread of pioneers
Of nations yet to be,
The first low wash of waves where soon
Shall roll a human sea."*

Westward the Tide of Empire Rolls!

"For Canada the hour of destiny has struck." The eyes of every nation are watching, with intense interest, the rapid strides "Our Lady of the Snows" is making in the world of commerce and agricultural development.

The selection of a future place of residence is, it must be admitted, a momentous matter. Various phases of the question arise for consideration by the prospective settler, such as climate, healthfulness, geographical situation, character of public institutions, educational facilities, religious privileges, and last, but not least, the nature and extent of the natural resources of his proposed home and the scope afforded individuals with the average endowment of capital, brains and muscle.

Perfect, indeed, would that country be which satisfied the demands of everyone. Absolutely perfect conditions are not obtainable, but where upon this round world can an agricultural country open for settlement be found offering attractions surpassing the Canadian Northwest? Success in the establishment of happy and prosperous homes there, perhaps more than anywhere else in the wide world, depends more upon the individual than the personal outfit with which a person makes his start. It is with pardonable pride that Westerners point to scores of leading agriculturists and those engaged in mercantile enterprise, as well as in public life, whose force of intellect and indomitable perseverance have fitted them, from humble walks of life, to guide the destinies of our glorious Western heritage.

The extent of this country can only be imagined by the newcomer until he has travelled over the prairies stretching westward from the Red River to the foothills of the Rockies and from the boundary line to Athabasca, when he may be able to appreciate with a more marked degree of adequacy the vast expanse of country which is now challenging recognition as the greatest agricultural area on the face of the globe, comprising over 200,000,000 acres still unoccupied.

WHEAT IS KING.

Manitoba and the Territories, in 1901, produced 109,000,000 bushels of cereals, 65,000,000 bushels being wheat. Of the wheat crop, 10,000,000 bushels was retained for home consumption and seed, leaving an exportable surplus of 55,000,000 bushels. Estimated at 50 cents per bushel, the wheat crop of 1901, grown by probably 40,000 farmers, was worth \$32,500,000, or about \$800 worth per farmer.

It is only a matter of a few years until we see the crop recorded at a hundred million bushels of wheat.

Fancy the energies that must be exerted by the railway and navigation companies to keep pace with this fast-growing industry! The figures are sufficiently remarkable to attract attention without destroying their value by any exaggeration. They furnish a series of propositions in mathematics that railway kings, elevator promoters, merchants and those engaged in industrial enterprise are trying to solve. How shall the grain in these great new sections be hauled

out, where stored, and by whom marketed? Where will the settlers get their implements, their pure-bred stock, and where their general supplies?

The reader may rest assured that the manufacturers and merchants of the Northwestern States will follow up the thousands of settlers who have come from south of the boundary and seek to retain their trade, tariff or no tariff. Here is a problem for eastern manufacturers and statesmen. The City of Winnipeg and other growing centers will do all within their power to sell Canadian goods, to make this great army of consumers Canadians commercially as well as geographically. Our manufacturers will fight for this market, since it is worth fighting for.

THE FLOOD OF IMMIGRATION.

According to the last official statement available, the number of immigrants coming into Canada in 1896 was 16,835, which has swelled in 1901 to 50,000, of whom 17,987 came from the United States and about as many more from Great Britain. A careful estimate of the probable influx of settlers from the United States this year puts the number at 36,000.

Between January 1st and May 1st of this year, 24,122 immigrants came into the Dominion, of whom 5,164 were from British territories, 7,478 from the Continent of Europe, and 11,480 from the United States. Of these immigrants, 4 per cent. settled in the Maritime Provinces, 9 per cent. in Quebec, 12 per cent. in Ontario, and 75 per cent. in Manitoba, British Columbia and the Northwest Territories. Regarding the amount of money possessed by those coming, it is estimated that with those who arrived during the past four months at Canadian seaports and who were destined for points in Canada, it would be not less than \$1,264,200. The value of settlers' effects entered at the customs ports for the first four months of 1902 was \$1,261,289, which, according to the record, was nearly all from the United States.

WILL THE COUNTRY EVER BE FILLED?

One would imagine, from the immigration that is now pouring into the West with every train, that the great grain areas would all soon be occupied. Such is not the case. It will take a century to people the West even at the startling rate at which the transportation companies are now bringing in the settlers.

THE TIDE HAS TURNED.

It has taken years of persistent toil on the part of the Immigration Department to convince the populace of Great Britain that Canada is not a waste of snow overrun with warlike redmen, and that thousands of acres of the choicest farming and ranching land that the sun shines upon is to be had practically for the asking.

With regard to the destination of the immigration this season, the reader will naturally wonder which portion of the West is receiving the greatest share. Last year, it will be remembered that certain sections were favorites, and there was a great rush for land in those districts. This season it is different. The stream of settlers knows no particular section, since good land is located everywhere.

Eastern Canada is feeling the pulsation of agricultural progress and good prices and commercial activity from P. E. Island and Cape Breton, with its tremendous coal and iron enterprises, westward to New Ontario, into which farm settlers are pouring, and where railways, pulp mills, lumbering and scores of other enterprises are going ahead apace.

The Binder Twine Question.

As the public are well aware, the United States Congress some time ago enacted legislation putting an export duty of \$7.50 per ton on manilla fiber exported from the Philippine Islands, but giving a rebate of the whole amount when shipment was made to the United States "for use and consumption therein." It was contended by some that this would put Canadian twine manufacturers out of business unless high duties were reimposed. When the islands were taken over by the Americans it is understood to have been agreed that none of the existing British trade arrangements would be injuriously affected by tariff preference, such as that resorted to in regard to twine. Mr. James Tolton, of Bruce County, who is in a good position to discuss this question, writes us as follows:

"You ask what, in my opinion, will be the result to the Canadian manufacturers and consumers of binder twine by the rebate by the American Government of the impost duty of \$7.50 per ton on manilla hemp grown at the Philippines in favor of the American manufacturers and consumers of binder twine. This, I suppose, really means three-eighths of a cent per pound in favor of the American as against the Canadian manufacturer, presuming that the interpretation of this order made by the American Government of the words 'consumption in the United States' means converting or changing this hemp from hemp to binder twine. If this interpretation should be correct, it would mean that the Canadian manufacturers would have to content themselves with three-eighths of a cent per pound less profit than their American rivals. In my opinion, the Canadian farmer would not have to pay any more—or this three-eighths of a cent per pound—for the twine he used, for the reason that a very large proportion of the binder twine used in Canada is manufactured in the United States. They, being the competitors of the Canadian manufacturers, would, no doubt, place their product on the Canadian market less this drawback. But I hardly think this would compel the Canadian manufacturers to close their factories. It appears to me there are two methods by which the Canadians can obtain redress: First—The Canadian Government can impose a duty of say one-half cent per pound on American-made twine coming into Canada. Perhaps they may not see their way clear to impose this duty, as it might seem to be taxing the many in favor of the very few. Second—The Canadian Government could give the Canadian manufacturer the same drawback—viz., \$7.50 per ton—on the hemp as the American manufacturer gets. This would not be any more unreasonable than giving bounties to the manufacturers of beet sugar, iron smelting, and other industries, now being given by the Dominion and Ontario Governments. It may be, as has been suggested by some writers in our newspapers, that the Imperial Government may enter a protest against this drawback by the American Government, as being a violation of treaty arrangements between these two Governments.

"JAS. TOLTON."

The Argentine Embargo.

According to the English Live Stock Journal, British stock-breeders are still practically barred from the Argentine Republic by reason of a recent decree which prohibits the importation of animals from any country not free from disease for a period of six months (another writer says twelve months) previous to the shipment. It is hoped that conditions will be so modified as to permit the resumption of trade in the autumn.

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

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The Long Course vs. the Short Course.

[From our Manitoba and Western edition.]

In the "Advocate" for March 20, you present and agree with the criticisms which the New York Produce Review and American Creamery gave my article upholding and advising the four-years' agriculture course. This criticism says: "If Mr. Worthen had limited his recommendations to those young men who expect to become owners or managers of very large farms, or else agricultural professors, we should have found no fault whatever, but when he applies his advice to farmers' sons in general, we must most emphatically agree with those agricultural papers even at the risk of having our arguments called false and being accused of misleading the farmers as to the education they should provide for their sons." My statements then, that the coming farmer must be a business man, that his education should extend beyond the farm, is true in the case of owners and managers of large farms or agricultural professors, but for the average farmer of the future, who tends say one hundred and sixty acres, such is not required or even advisable. This statement will not hold true, for, whether in the case of a thousand acre farm, a hundred and sixty acre farm, or even a twenty-five acre truck garden, the man with the broad and thorough education, an education which extends beyond the mere raising of his crops, will be the man better fitted for successful farming.

It further says: "If some exceptionally bright short-course student should decide that he really wanted a four-years' course, it would not be impossible for him to get it if the faculty deemed him worthy." Many of our short-course students do see the advantage of the four-years' course, and as you say it is not impossible for them to take it, but if the fathers of such young men have been convinced by the advocates of the short-course, that two years of from four to six months was a sufficient education for their sons who intend to follow farming, then these ambitious young men would find their fathers disagreeing with them, and possibly not willing to assist them in taking the four-years' course. It is in this way that I believe the advocates of the two-years' course mislead the farmer, and may often cause him to provide his son with only a special course, when he could well afford to give him the four-years' training.

I do not want to be misunderstood as to the way I look at the two-years' short course, or rather the special course which gives instructions in the strictly agricultural studies. They are of great

value, for they afford a valuable training to those who, for one reason or another, are unable to take the four-years' course. So the agricultural studies should be open to any man who can successfully take them and profit thereby. It is true that such studies afford a training which is of great value to a man, young or old, who intends to follow farming; but I cannot believe a statement like this, that the two-years' short course thoroughly prepares a young man for successful farming, while the four-years' course is only an incubator to hatch out professors.

In presenting the criticisms, the "Advocate" says: "It may be of interest to note that the Illinois University has up to within the last year or two been among the most conspicuous failures as an agricultural college, and as a result of recent agitation has changed its methods, and will now, we hope, take rank with other colleges." Why did this state of affairs exist? Not because the University of Illinois did not have a short course, but because the farmers of the State were asleep and did not realize the importance of an agricultural education. Three years ago they awoke, and through their efforts the State erected a building devoted wholly to agriculture, which is surpassed by none, and now Illinois has an agricultural college which does rank with others of America. It may be of interest to know what the changes of methods have been. The short course, that has dwindled along for years, was discarded; the requirements for graduation in both technical and non-technical studies have been raised, and now every agricultural student who has not had the preparatory work in English is required to take this study in the university. What has been the growth of the department under these conditions? Within three years the corps of instructors has increased from six to twenty-six, and the attendance from twenty to two hundred. This is the greatest growth ever witnessed by an agricultural college.

It is true that many of our agricultural studies require thought on the part of the student, but who is the student that derives the most benefit from these studies? Who is the one that stands at the head of his classes? Is he the special student without the foundation upon which to work, or is he the regular prepared student? Any of our agricultural professors will affirm that the regular prepared student, with his college work outside of agriculture, derives more benefit from the agricultural studies.

It may be true that the Wisconsin short-course students are made to think, but do these men with from three to eight months' training leave the college with the same recommendations as the graduates? Have they the same chances of success in farming?

Prof. Bailey, the well-known Horticulturist of Cornell, says: "The short courses educate hired men, while the four-years' course educates farmers."

How does Prof. Hunt, of Ohio, look at this question? He says: "The four-years' course in agriculture, or in any of its specialized branches, to-day gives a man not only a training for agriculture, but in and by agriculture. It gives him such a professional training as to fit him as a breadwinner of the highest type. When he has finished, he is fitted to do something somebody wants done. Not only are the hand and eye trained; in other words, the course in agriculture offers a sound education. Its graduates are not only educated farmers, but educated men. . . . There is, however, no greater error than to believe that if a man is going to farm, a one or two years' course is sufficient, while if he is going to be a teacher or an experimenter, he must have a thorough undergraduate and post-graduate training. Farming, in its several branches, is no exception to the rule that the greater the ability the greater the success."

Here, then, is the way in which two of the leading men in American agriculture look at this question, and I have no doubt but that Prof. Babcock, Russell, King, Henry or others connected with a short course look at it in much the same way.

There are some farmers who cannot afford a four-years' agricultural course for their sons. This, however, is no reason for not advising them to do so if possible. Remember that fifty per cent. of the college graduates of this country are farmers' sons or daughters. How many of these are graduates of agricultural colleges? A very small per cent. indeed. If a farmer can afford to give his son who is going to follow engineering, medicine, or law, a thorough college training, then he can afford to give the one who expects to follow agriculture the same advantage. Then we should not attempt to convince the farmer that his son who expects to follow practical agriculture needs only a two-years' short course, and that the four-years' course will do him no more good and only tend to lead him from the farm. The better advice would be: give your boy a thorough preparatory education, and then if he take an interest in agriculture, send him to a first-class agricultural college, if such be possible, and there let him work for four years; then he will be, as Prof. Hunt says, "Not only an educated farmer, but an educated man."

EDMUND L. WORTHEN,

University of Illinois.

[Great minds appear to take different views of this subject. In the report of the Royal Commission at present inquiring into the question of university education in Ireland, the quotations of Prof. Campbell, Asst. Secretary of the Department of Agriculture and Technical Instruction, before the Commission, are very interesting, as will be noticed:

"Farmers are intensely practical, and cannot see the necessity of allowing their sons one year to study Latin, mathematics, English, or a modern language, before they begin their agricultural studies. . . . The practical farmer cannot afford to allow his son sufficient time from the farm to take a degree! The degree is chiefly valued as a qualification for some appointment? Yes. Very rarely do you find a student going back to the farm after he has taken a degree. The farmers of Great Britain will not send their sons to college, even for one year, unless they are to be taught something that will assist them in their business."

The Farmer's Gazette, quoting Rev. Dr. Kelly, Bishop of Ross, says: "I think there is, to a very considerable extent, an incompatibility between the education of the working agriculturist and the education of university men."

Prof. Campbell, before the Commission, made special reference to the non-success attendant upon the attempts at higher education in agriculture made at various English centers, and said that at the present time the tendency there was towards providing shorter courses of instruction for those practically interested in agriculture, rather than the extended "degree courses which were so largely in favor years ago."

Prof. Campbell's conception of the agricultural college is that it is the farmer's technical school, something to be of service in the practical work of farming, for he says: "You can only bring the need for agricultural education home to the farmers by showing them that education means money to them." As far as general education is concerned, the farmer is entitled from the public and high schools of the country, to as good opportunities as any other class in the community, but intelligent farmers will not see any justification in that fact for loading up the curriculum of agricultural colleges with French and German. The subject is one that will bear further discussion, and we know of no better way of getting at the truth than turning on the light.—Editor.]

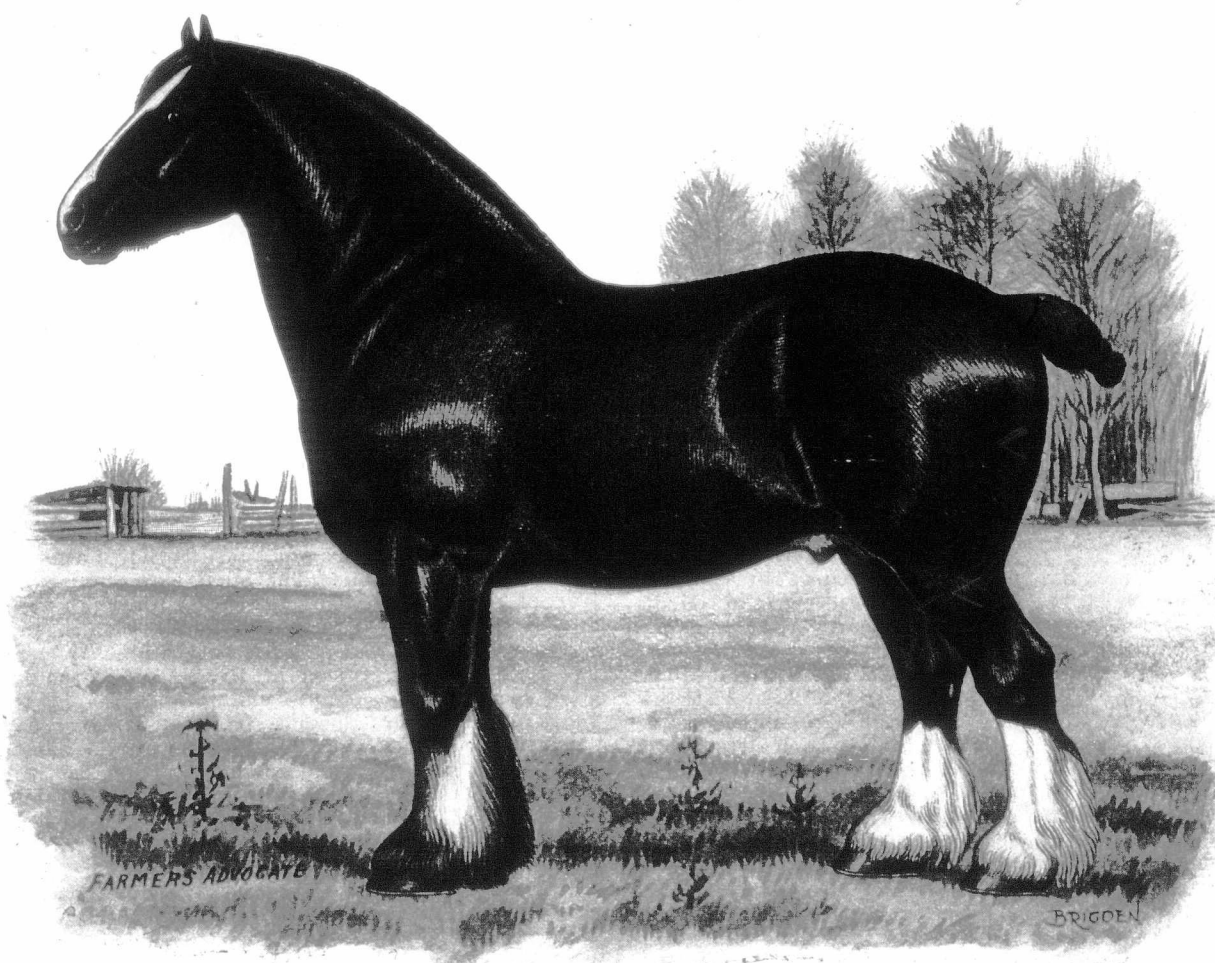
C. P. R. Extensions.

Nearly every spring there is a deal of talk about railway extensions, but frequently the extensions end in talk. This spring, however, it would appear as if a vast amount of railway construction would be pushed vigorously along. For the first time for many years, American contractors have been awarded contracts for railroad work, and large forces of men and teams have come into the country. The proposed extensions on the C. P. R. are as follows:

- West Selkirk extension, from West Selkirk to Winnipeg Beach, 26 miles.
- Forest extension, from Forest on the Great Northwest Central, westward for 42 miles.
- Wellwood extension, from Wellwood, at the end of MacGregor extension, to Brookdale, 10 miles.
- Waskada extension, from Snowflake, 10 miles south-easterly, to Moberly.
- Yorkton extension, from Yorkton 33 miles north-westerly.
- Pheasant Hills extension, 100 miles north-westerly from main line.
- From Lauder on Souris branch to Glenboro, 70 miles.
- From Lauder to western boundary of Manitoba, 24 miles.
- From Osborne, on Pembina section, 36 miles south-westerly.

Why Beef Has Gone Up.

G. W. Ogden, in the World's Work, devotes a clear and vigorous article in showing why the price of beef is high. He contends that it is not due to the U. S. "Beef Trust," but to conditions largely beyond human control: 1st, the scarcity of feed in the great beef-cattle producing section; and, 2nd, to the rapidly-increasing home consumption and the ever-growing export trade, which have outrun the limited expansion of the live-stock-rearing industry. There are fewer cattle in the U. S. to-day, in proportion to population, than ten years ago, and the same is probably true of Canada.

**PRETORIA.**

Clydesdale stallion. Owned by S. McLean, Franklin, Manitoba.

HORSES

The External Parts of the Horse's Foot.

Before any person undertakes to shoe a horse, treat him for ills to which horseflesh is heir, or even to work a horse either on the farm or road, he should know something about the foot of that animal. So important has the work of the horse become, that all possible precautions are now taken by the breeder, the dealer, and the buyer, to get horses with good feet.

The relation existing between good-wearing feet and the length of useful life and economic value of the horse is well known by the breeders of the different pure breeds of horses; in fact, some of those men make the excellence of the feet of the breed they are handling their strongest claim for recognition.

To get a fair idea of the foot of the horse, we may take it up layer by layer, starting at the outside.

The outer layer or shell is the horny box, or hoof, which is insensitive. It is intended to shield the more delicate and sensitive structures it encloses from concussion, nails, stones, germs, heat, cold, and moisture. To be able to do all these things, it must be rather complex in its nature, rendering some variation in structure necessary. This variation will be more readily understood if we divide the hoof into three parts, the wall, the sole, and the frog, each of which, though parts of the same organ, differ slightly in construction and the nature of their work. The wall is that part of the hoof seen when the animal has its foot placed on the ground. At its upper border is a ridge, termed the coronet, which for practical purposes may be considered the blending of dissimilar but related structures, the hoof and the skin. Spread over the wall is a sort of varnish, the periople, intended to protect the horny hoof from moisture, etc.; it should not be removed. The smith should be prevented from rasping the outside of the wall except at the nail holes. The wall of the hoof is a tough tissue derived from the outer layer of the skin, and is composed of hair-like fibers united into horny substance by a kind of cement; consequently it is readily understood how horses with different colored skins show that variation in the color of hoof. The best color for the hoof is yet a matter of more or less contention, although the horseman often states as his ideal, "a blue hoof!" The light-colored hoof is softer than are dark-colored ones, and in this respect we see what savors of inconsistency among the breeders of a noted draft breed who breed a large amount of white on the legs and feet of their favorites, and yet claim superiority for the feet of their breed. For convenience, horsemen, veterinarians and anatomists subdivided the wall (starting with the front portion) into toe, quarter, heel, and bar. The toe is

the thickest and deepest part of the wall, becoming less so the further we go back; therefore it is at once seen why the nailing of the shoe is done as near the toe as possible, another reason being that as the heels spread from pressure of the animal's weight, it would be inadvisable to nail close to the heels, because it would interfere with the normal movements of the heels.

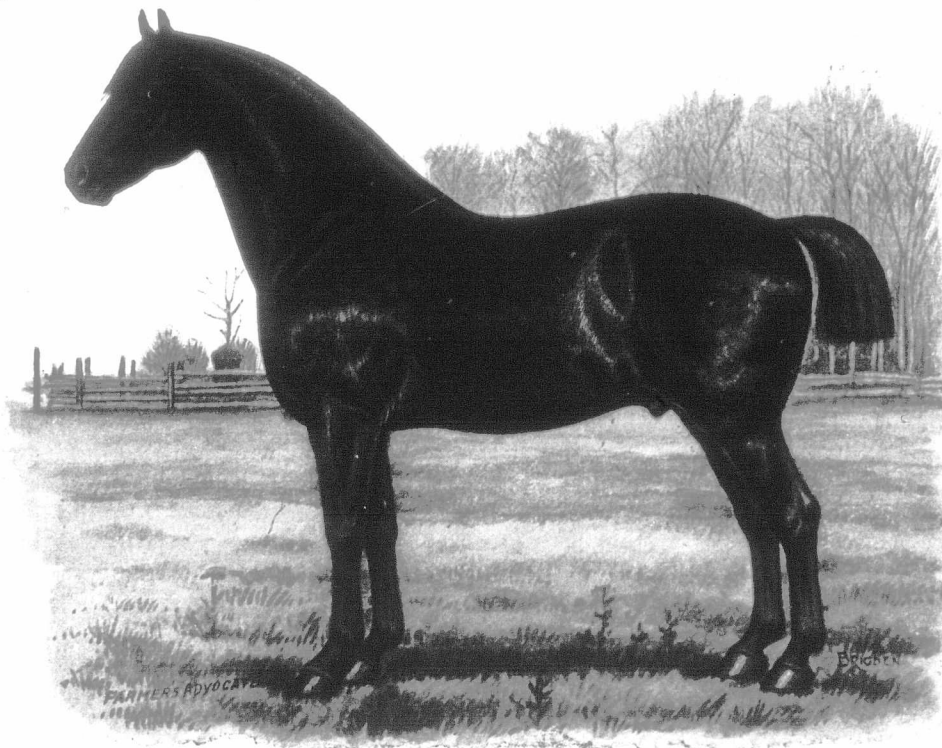
The bars of the inflected portion of the wall are for the purpose of staying or bracing the foot, a point often overlooked by smiths; because they are easy to get at and easy to cut, they do so, and thus weaken the foot. A point of interest, being the location of corns, is the angle formed by the bars and heels. As the wall bears the weight of the animal, it is very important that its ground surface should be kept level so as to avoid strain on the joints of the limbs, which would follow if the feet were unbalanced. The point of union of the wall and sole is termed the white line, which is seen when the foot is pared out, and is one guide to the point to which paring may be done. It is not a good plan to pare the sole until it will yield to the pressure of the thumb. The sole is the least important part of the hoof, not being intended to bear weight, but only to act as a protector to the sensitive parts lying immediately above it. The sole rarely needs touching with the knife, it having a tendency to throw off excess of growth in the form of flakes. The frog is a mass of spongy horn at the back part of the foot, between the heels. Its purpose is to prevent jarring of the body and limbs of the animal, to aid in spreading the heels, and also to protect the sensitive structures above it. Unless in case of loose fragments, the knife is rarely needed on the frog. Its purpose being known, no method of shoeing should be allowed to interfere; therefore the use of high heel calks, thus keeping the frog from contact with the ground, is wrong. One of the commonest results from the above vicious practice is wasting of the frog, owing to lack of work, and, therefore, lack of blood supply, it being nature's plan to gauge the amount of nourishment supplied ac-

ording to the work done. Consequently, as the frog wastes it is unable to do its work; contracted heels and the inevitable concussion from lack of a proper buffer aid the progress of that foot to a disease, the bane of road horses, namely, coffin-joint lameness—technically, navicular arthritis.

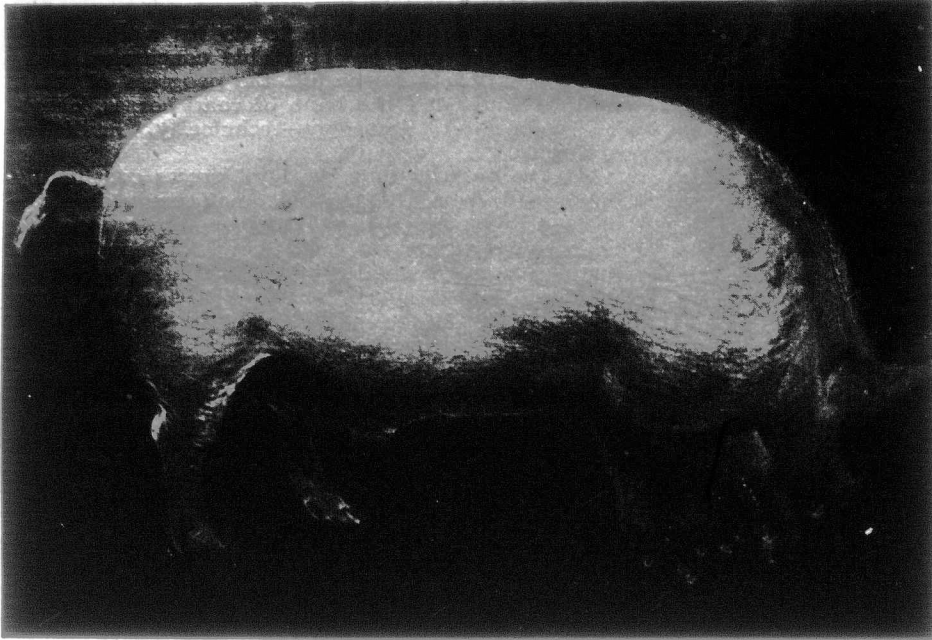
In the healthy foot the hoof grows continually downward from the coronet, moisture aiding the process. The rate of growth from the coronet to the ground is, at the toe, about 12 months, the quarters 6 to 8 months, and at the heels 4 to 5 months; consequently, a new hoof can be grown in one year. Hoof ointments applied to the horny wall, sole or frog are of little practical use. If extra growth is desired, the stimulus must be applied to the coronet.

Judging Horses by Points.

In your issue of May 15th, I notice you quote from the editor of the "Scottish Farmer" re judging horses by points. I think the subject worthy of a little more discussion, hence the following remarks. I quite agree with the said editor that this system of judging is, or was, a fad, and has not given satisfaction. Still, I do not agree with him when he states that a score card of the Shetland pony might be mistaken for one for the Clydesdale or Shire. There are such great differences between the points of perfection in the Shetland and the others, not only as regards size, but in general conformation, that, provided the card were the work of an expert, it would not be possible for any horseman to mistake it for a description of an animal of the heavier breeds. As regards the similarity between the score card for the Clydesdale and Shire, I thoroughly agree with the remarks made, for, as I have before stated in these columns, the desirable characteristics of the breeds are identical. I claim that any horseman should, by reading a score card for any particular class of horses, be able to tell, without any possibility of mistake, the class to which it referred, except in distinguishing between the two classes mentioned. The reason that the use of these cards has not been satisfactory has not been the trouble in distinguishing between the points of the different breeds or classes, but in placing the proper value upon the different points of animals of the same class. As stated in the article referred to, judging by points has been satisfactory in butter, cheese, and other inanimate articles (cheese is not always inanimate, but is usually judged as such). To a certain extent, the score card has been satisfactory in judging poultry, but has not been looked on with favor in cattle, sheep or swine, and has been particularly unsatisfactory in horses. This can be readily understood when we consider that with other stock conformation in most cases alone counts, while with horses, there must be conformation, soundness, style and action. Other classes of stock are judged standing. We notice in some cases the judge will ask to see cattle walk, but never a faster gait, while the horse, in all classes, must walk and trot, and in some cases canter and gallop. Notwithstanding all this, the question might be asked, "Why will the score card not answer?" One trouble is to place a proper value on each point. I do not think this can be done to cover all cases. For instance, we may have a class of carriage horses. We all admit that in this class extreme action, as well as conformation and style, is demanded. One animal may be as near perfection in conformation and style while standing as can be produced. He will score very nearly a possible, but is very defi-

**CONFIDENT SQUIRE.**

Hackney stallion. Property of Stewart Bros. & McLean, Franklin, Manitoba.



SUMMERHILL VICTOR 6TH 3661.

Yorkshire boar, winner of championship at Pan-American and Chicago International Exhibitions, 1901, and sold for \$700.

BRED AND EXHIBITED BY D. C. FLATT & SON, MILLGROVE, ONT. (SEE GOSSIP, PAGE 433.)

cient in action and does not show the style when in motion that he does while standing. Another horse may be rather plain in many points and will score low; he is a pretty good one, but not as perfect as the first in many particulars, but he has extreme, true, straight and attractive action both fore and rear, and when moving surpasses the first in style. The first is allowed very few points for action, and the second is given full points, still No. 1 totals more than No. 2, and according to the score card should win. Now, we can imagine the comments a judge would be subjected to by all horsemen if he awarded the prize according to the card and gave first place to a carriage horse without action above a fairly good animal whose action was typical. Many other possible cases of this nature might be cited were it necessary. My experience in the use of score cards in the horse ring, whether used by myself or others, has been that the judge decides in his mind, from general observation and comparison of merits in the animals competing, which should win. He then scores them, and if the cards do not total in accordance with his ideas, he doctors them until they do. In doing this, he must of necessity dock some animals in points where he should not, and give full points to others where he should dock. The cards, after the decisions are made, are usually handed to the owners of the horses, and each owner will look his card over carefully, and if opportunity presents itself, the judge is liable to be asked some questions that are awkward to answer, as to why a certain horse was docked in a certain point, etc. While I contend that the score card as a means of determining the merits of horses in the show-ring has been a failure, at the same time I consider that it has its value. It is valuable as an educative factor. To the man who is already an expert, it is probably worthless, but to the student who wishes to become an expert it is invaluable. A careful study of a well-worded score card teaches the student what to expect or look for as perfection in the different points; it also teaches him system in looking over a horse, and if he takes the card and scores a few horses under the supervision of an expert, he will gain more knowledge than can be gained in any other way. It teaches him to take in all points. We, unfortunately, notice that many so-called judges of horses do not consider the entire animal, but practically consider only a few points. Some want a certain conformation of head and neck, some are particular about the middle, some about the bone and feet, etc., etc., overlooking in many cases other important points, while the judge that has been taught to criticize a horse according to a score card will not follow this narrow, one-sided method of judging, but consider all points. Therefore, I say to the student or the man who aspires to proficiency in this line, use the card in gaining knowledge, but depend upon your eye when in actual practice. The score card will not satisfy you in the ring. You will do much better work and in much less time by comparing the merits of the animals before you. I have already given in these columns, score cards for two or three classes, and with the permission of the editor, I intend to deal with the other classes in the near future. It is stated in the article that caused the writing of this article that "it is doubtful whether any scale of points that could be devised would in all details meet with the approval of any two experts." I agree with this statement and invite discussion on mine. I have never seen cards that agreed with my ideas of perfection and the value to be placed on the different points and those that appear in these columns are entirely my own; hence, if my ideas do not agree with those of other horsemen, we might all derive benefit from discussion. "WHIP."

mated with the best mares owned by the members of the society. Labori is a four-year-old horse now, and last year was the junior premium horse for the Glasgow district. His sire was the great champion horse, Hiawatha 10067, and at the stallion show in February he created quite a sensation. He travels the Girvan and Ayr district this season. The Seaham Harbour spring sale, held recently, resulted in an average of £53 16s. for 38 lots of breeding stock, and of £62 11s. 7d. for 12 geldings.

Two of the best Clydesdale shows of the season are held at Kilmarnock and Ayr, and these are now things of the past for this season. So far as young stock are concerned, the issue has been an extraordinary series of victories for the produce of Messrs. A. & W. Montgomery's Baron's Pride 9122. The champion male Clydesdale at both events was his son, Royal Edward, a grandly-coupled big horse, owned by Messrs. Montgomery and bred by Mr. William Hood, Chapleton of Borgue. In the three-year-old class at Ayr the winners were, in order, the three sons of Baron's Pride: Royal Baron, bred by Mr. Geo. Bean, the Seaham Harbour stud horse, Silver Cup, bred by the late Mr. Lumsden, of Balmedie; and Dunure Castle, bred by Mr. George Graham, Faraway, Port of Monteith. The first is owned by Messrs. Montgomery, and is a thick, well-coupled, dark brown horse, a good stamp of Clydesdale. The second is a horse of superb quality, with beautiful quality of bone and good feet and pasterns. He was first at the Royal and the Highland last year, and at the Highland as a yearling. The third is owned by Mr. Dunlop, Dunure Mains, Ayr, and greatly resembles his sire. The two-year-old class was headed by Royal Edward, and two other sons of Baron's Pride were third and fifth. A promising dark-colored colt, owned by Mr. James Kilpatrick and got by Cawdor Cup, was second. A fine class of yearlings was led by the Montgomery colt by Mac-Raith which won at Castle-Douglas. He was bred by Lord Polwarth, and is a good hard-boned horse, up to plenty of size. In this and the class of yearling fillies were several young Clydesdales of more than ordinary merit, got by Mr. Dewar's horse, Royal Favorite 10630. This horse promises to make his mark as a breeding sire. One of his gets was second yearling colt, and he is quite like making a strong horse. The female classes were a veritable triumph for Baron's Pride. The only horse which in this section succeeded in wresting a first prize from him was his own sire, Sir Edward 5353, whose daughter, Lady Margaret, the reserve champion at the Highland last year, was first yeld mare. The first brood mare, Beauty's Queen; the first three-year-old White Heather; the first two-year-old, Royal Ruby, which eventually secured the female championship, with the best, and

Our Scottish Letter.

CLYDESDALES AND AYRSHIRES.

Perhaps it may be well that I should devote much of this communication to what concerns Clydesdales. The Scottish horse still holds his own, and horse-breeding is very active in Scotland. A proof of this is seen in that Mr. A. B. Matthews' fine horse, Labori 10791, has already been hired for the season of 1903. Some may perhaps be disposed to ask whether this is madness or business. The hirers are a new association formed of breeders in the central district of Scotland and known as the Scottish Central Horse Breeding Society. The horse will be transferred from station to station by rail, and in this way he will be

second yearling fillies, were all got by Baron's Pride, and many other prizewinners also. Mr. Thomas Smith, Blacon Point, Chester, owns Beauty's Queen and Royal Ruby, and Mr. St. Clair Cunningham, Hedderwickhill, Dunbar, the president of the Clydesdale Horse Society, owns White Heather and the yearling fillies. Beauty's Queen is from the same mare as the champion horse, Royal Gartly 9844, and was bred by Mr. Andrew Mitchell, Barcheskie. She is a very typical Clydesdale brood mare, not very big, but evenly-balanced, level and thick. The phenomenal success of the produce of Baron's Pride is clearly the feature of this year's show-rings.

Ayrshire cattle divide the honors with Clydesdales at this season. The Ayr Derby, as it is called, is the great event in the Ayrshire breeders' calendar. This year the turn-out of three-year-old queys in this class was very fine. There were fewer small-teated ones than has sometimes been seen, and the general impression was that if the Derby of 1902 was not sensational, it was certainly very creditable. The most successful exhibitor of milk stock was Mr. John Drennan, Hillhouse, Galston, who won the Derby with a capital quey, but showed a much better animal in the five-year-old cow, Queen of Hillhouse, which last year secured the female championship and this year repeated her victory. This is a dairy cow having size, scale and frame, at well as capital vessel and the teats dairymaids want to work with. She takes a deal of beating. Mr. Drennan has a fine stock of cows and cannot be beaten this year. A noticeable feature of the Derby was the prominence of red heifers. Near the top were several rightly-colored specimens, very different from the white ones, that are so much disliked by some foreigners. Quite a big trade is being done in Ayrshires this season. Large numbers have been exported to Sweden, Germany, and other parts of the continent, and the Cape of Good Hope and far-off Japan have also bought largely. One agent has this season passed nearly £2,000 worth of young Ayrshires through his hands for export, which, at an average of £15 apiece, means 133 head. Mr. Thomas Barr, Monkland, Kilmarnock, has sold eight bull stirks this spring, and all round there has been good business doing. The male championship at Ayr went to Mr. James Howie, Hillhouse, Kilmarnock, for his bull, Not Likely, a capital specimen, very hard to beat. He had no unworthy opponent in General White, a really good bull owned by the Crichton Royal Institution, Dumfries, and generally the male classes at Kilmarnock were admirably filled, giving first-rate results, and the stirks in particular showed size and substance which was somewhat unusual. Altogether, so far as Clydesdales and Ayrshires and Blackface sheep are concerned, this show at Ayr warrants us in singing—
"SCOTLAND YET!"

500 Horses Per Year Wanted.

The Daily Mail, London, Eng., says: "The idea of breeding their own horses has been practically abandoned by the War Office, who now consider that the registration system is the most practicable, as well as the least expensive. As far as possible, the colonies are to be invited to supply a certain number of horses annually. Canada has agreed to furnish 500 Canadian horses per annum, which will be full-grown and trained by the Canadian local troops, at a cost of £20,000 annually. Australia will also supply a proportion of India's needs."



IN THE SHADE OF THE ELMS ON THE RED RIVER BANKS.

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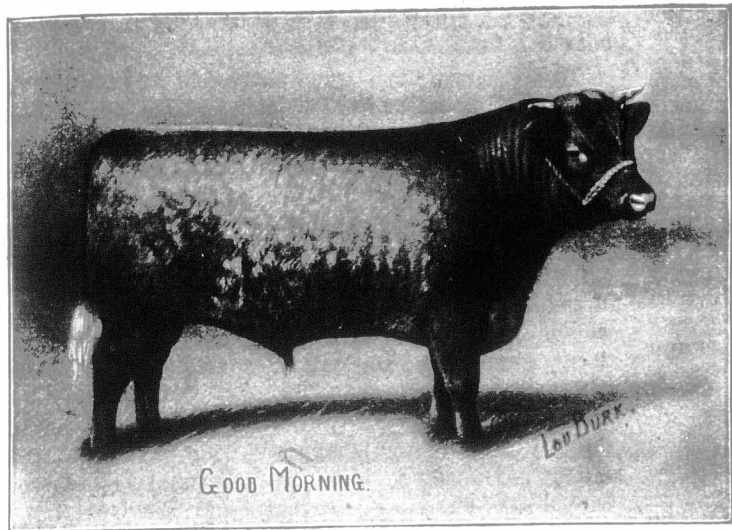
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GOOD MORNING.

Yearling Shorthorn bull included in the Canadian contingent contributed to the Chicago combination sale, June 13th and 14th. A sample of goods "made in Canada."

BRED AND OWNED BY HON. M. H. COCHRANE, HILLHURST, QUEBEC.

STOCK.

Growth of Mutton Industry in the West.

BY J. M'CAIG.

Generally speaking, the initial stages of any phase of agricultural activity are connected with domestic or local necessity. If a pioneer begins with wheat, it is because this is the most representative kind of sustenance product, and subsistence is the first problem to him. So his beef and pork and eggs are subjects of consumption rather than of commerce. His wool, too, answers the fundamental need for covering and his mutton the same use as other meats. In all cases the wool side of sheep husbandry is the important one at the beginning. This is not its position at present. Owing to the improvement in mutton, and to the universal tendency for quick-grown tender meats, mutton has reached a strong position as a table meat, a position that is stable and assured.

In eastern Canada the sheep business has two main phases: the breeding of stock animals and the running of small flocks of butcher sheep for either a limited home market or for domestic consumption. Though the total surplus of this butchers' stuff amounts to a considerable export item, the sheep business in such cases is only a small part of the total of farm interests. It fills a convenient niche and yields a fair profit with small trouble. That is, it does not fill a very dignified place among the several industries that are producing for commerce and exchange.

In the West, resources are so vast, so free and easy to begin on, that the characteristic products from the beginning are in overwhelming excess of local consumption. As much black mould as he can properly work is his for the asking, and he can produce on it the best wheat in the world. In the grazing areas the problem is not to get food, but to get stock to gather up the food. These opportunities must, of course, narrow with the rapid settlement that is taking place in the West, but the country from the beginning is prominently contrasted with the more slowly-developed east in that it has right from the start ranked as a large producer of indispensable food products for export to the world market for food—namely, to England. These export products are wheat and beef. These are staples the supply and demand for which to a larger degree determine the position in the market of most other cereal and meat foods, respectively. But not entirely. The oversupply of any of the subordinate meats, like pork or mutton, may force down the price of that commodity until its substitution for a higher-priced meat may widen the demand, with the result that the price runs up again by reason of a slight change or shading wrought in the relative demands for different classes of meat.

The economic truth that tendencies in demand and supply assume or reach a balance or just equilibrium only by swinging between one extreme and another is not less true of the sheep business than of other producing enterprises. To illustrate the law simply: The demand for an article stimulates supply. The demand for eastern dogies led to feverish anxiety to breed every female in the east to raise stockers. This meant larger supply. It also meant reduction of the average excellence of beef stuff. As high as eighteen and twenty dollars was paid for yearlings in the eastern barnyard four years ago, which was artificially high, if we can call any demand artificial. This is working its own cure by overproduction. The game is not worked out yet. Beef is good just now, but the cure is coming.

Sheep-raising is pretty much subject to fluctuations. The first reason is that sheep multiply very rapidly, and a rapid glut of the market in the face of sharp demand is possible. In the second place, shepherding operations are simple,

and, in the West at least, the outlay can be put almost entirely into stock. In the third place, returns begin to come in at once, as in the case of wool, and this is a temptation to capital, either large or small.

It will soon be time for someone to do a little quiet thinking in connection with the sheep business in the West. Things have been going well so far. Plenty of good range and water, no bad storms and no winter feeding, little or no disease, and good markets. Of course, we mean of mutton. We must try and get over the wool heresy a bit, for it amounts to that now, and keep our eye open for the rotund mutton sires, not the slab-sided Merino. Our mutton market bids us do this; our wool markets bid us do this; our climate and luxurious grasses and the general tendency of sheep husbandry bid us do the same thing.

But about markets. So far our market has been local in a sense, though running sheep on the range implies the absence of very close consumers. The shepherd is not looking for neighbors except to avoid them. The sale of mutton from the ranges has been largely limited to our own borders. Practically, our mutton is all consumed in British Columbia, at least all that represents surplus over the proportion of the whole that is consumed in the towns of the Territories. Some goes to Winnipeg, too, but the direction our output takes is to the Kootenay country.

The increase in sheep stock—in sight from rapid natural increase and from large importations from across the line bids fair to outstrip the demand for mutton within our own borders, and the question arises as to what position our stuff would take in the food markets of the world. Some parts of the Territories are better fitted than others for the making of export mutton. The mixed feeding of a weedy range is more conducive to the production of full, heavy carcasses than a straight grass range. There is a property called "finish" in an export animal that is indispensable, and that depends on abundance and variety together. This property seems to come to cattle on grass range alone easier than to sheep, and the difference is manifest on the table. Compared with western beef and compared with the mutton of the east, western mutton is somewhat dry and almost tough, and likewist lacks the marbled appearance going with good finish and perhaps fatness. Not only is fat necessary of itself, but the presence of it in any meat means superior properties in the lean meat going with it. The English market is a large market, but it is a discriminating one, particularly with respect to meats. The amount of mutton that has gone to the Old Country from the ranges is not sufficiently great to warrant one in saying either that a market for it is or is not assured there. There are, however, circumstances connected with the range business itself which certainly justify the assertion that ordinary range sheep will not in future be export sheep. This results from the eating down of the ranges. The amount of grass available in the total is a fixed quantity, much as there may still be unused; in fact, with its being eaten down it is a decreasing quantity, and the lessening of the average food per head must in the end mean lessening of the average weight and excellence of range sheep. The prospect of rapid increase in the range flocks, more particularly from importation, is more than certain. Montana now carries 6,000,000 sheep, and it is the source of most of our stuff. It is overstocked, the range is eaten down, and the past winter has been a hard one on grass and on sheep on account of drought. Last year we had increases of sheep stock from over the line that amounted to fifty or sixty thousand, and the chances are we shall have more this year on account of the rapid limitation of the range lands of United States.

Our practice, likewise, is likely soon to follow theirs, and this is the important part of the discussion. The two things we want to say is that supply will soon outstrip local demand, and that the character of the surplus must likewise appreciably deteriorate. This deterioration

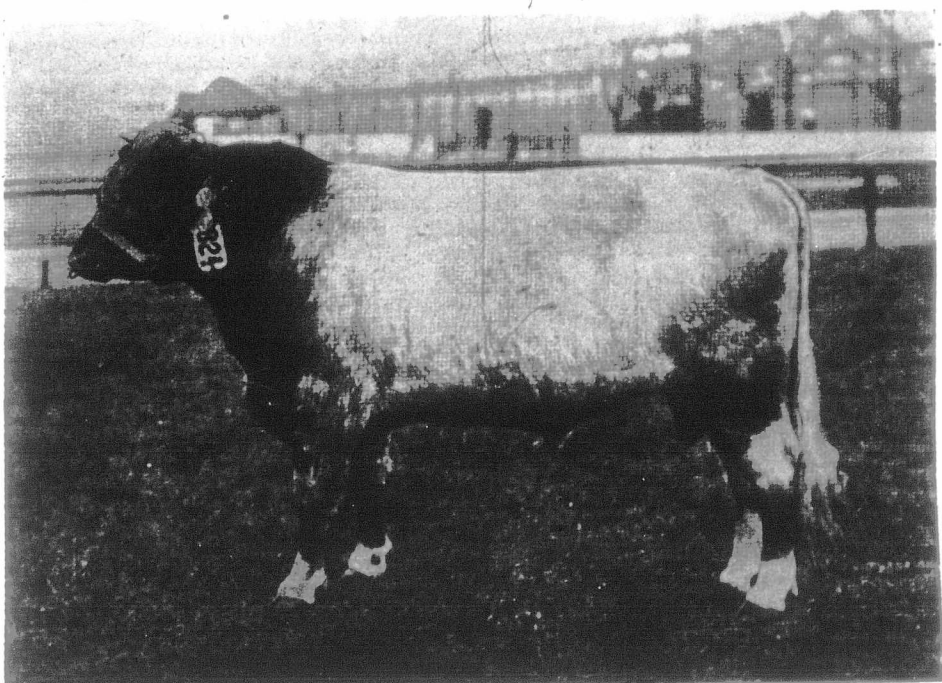
must be met. Foreign demand raises the standard of any commodity. For local demand we use what is most convenient. The prospect is this, that the sheep will have to go through a process of finishing before they are fit for export, and we shall have to go into lamb and wether feeding on a large scale. The character of the range lambs is a good index of the general character of rough mutton. Lambs weigh 40 instead of 75 or 80 pounds at Christmas, and few butchers follow any general practice of butchering anything under a year, and most of it is two years old. Now the demand in all classes of meats is for quickly-grown, tender, juicy meat, which most range mutton decidedly is not. It is a new field for the Manitoba farmer and others in the cultivated areas of the Territories to take the lambs off the ranchers' hands in December or earlier and finish them on his grains, some roots and hay, for the winter or Easter markets of United States, bringing them to an average of 80 or 90 pounds by feeding from perhaps December till March, or a period of the same length beginning earlier or later. Or, perhaps, he may take them at a year older and finish them as yearlings coming two for the British market.

It has been the history of the sheep business that it has been at times away up and at others away down. Probably this has been the case with sheep to a greater degree than with any other class of stock, for reasons given above, incident to the business. If a little foresight is exercised a violent slump may be avoided, and discouragement and disappointment and sacrifice of valuable stock and labor be avoided. The changes coming over both the sheep and cattle business from rapid settlement and development are going to be more or less radical and important, and are coming soon. It is well to be prepared for these.

The Oxford County Show.

This is the first important county show that is held in England, and here one generally meets with some of the best Shorthorns in the south of England, a select lot of Shire horses, Hampshire and Southdown sheep, as well as probably the largest and most important (so far as numbers are concerned) exhibit of Oxford Down sheep made during the season.

The Shires were notable rather for their high merit than number of entries; indeed, it is nine years since we found so good and uniform an entry. Buckingham Premier won for Mr. Rogers in the old stallion class, whilst that for two-year-olds found a very grand typical horse, Lord Llangattock's Hendre Royal Albert at its top, Lord Rothschild's Harold's Heir being a very close second, a fine mover in correct lines. Wood-perry Watercress, from Mr. John Thomson's stud, was selected as winner in the mare and foal class, with Mr. R. W. Hudson's Nateby Aurea, a fine type of brood mare, in close attendance. The well-known stud of Messrs. Thompson, of Desford, sent forward a grand four-year-old mare who went rightly to the top of her class—Desford Flower by name. These same breeders were also owners of a beautiful filly, Desford Stewardess, who won in the three-year-olds, Mr. P. A. Muntz, M. P., being second in the older class, with Buscot Flora, bred by Mr. A. Henderson, and Mr. R. W. Hudson took the same place in the younger class, with an evenly-balanced, good filly, Wern Blossom. Mr. John Parnell's noted old stud secured premier honors in the two-year-old class with a capital filly, Latesbury Flower, Mr. A. Henderson, M. P., being second with Birdsall Stately, bred by Lord Middleton and got by his



SHORTHORN BULL, LORD BRUCE 79236.

First prize and winner of Chaloner Plate, Royal Dublin Society's Show, 1902. BRED BY AND THE PROPERTY OF MR. G. F. KING, ELM FARM, CHEWTON, KEYNSHAM, BRISTOL.

Lordship's noted stud horse, Menestrel, one of the best sires of the hay.

The Shorthorn section has in some former years been stronger in numbers, and amongst the most notable absentees was Mr. Henry Dudding, whose herd, we may here remark, is in grand condition, two first prizes for females being taken at that notable and important show at Otley last week. Vain Lord, owned by Messrs. Little & Sons, secured precedence in the old bull class, though he was run very close by Mr. J. T. Hobbs' noted old bull, New Year's Gift, who came out in great form, beating Mr. J. Deane Willis' grand bull, Granite Chip, by Granite City. The two-year-old bulls were a strong, good lot of eleven, and the winner, Mr. L. de Rothschild's Silver Mint, by Silver Plate, bred by Mr. W. Duthie, is all over a good one, and though it was a close fight between him and Mr. J. Deane Willis' C. I. V., by Brave Archer, out of Carnation, by Count Lavender, we think the award correct. They are a grand pair of Shorthorns. Close up came another real good animal in Mr. J. Thorley's Prince of Troy, bred by Mr. J. Deane Willis and sired by Prince of Sanquhar. A beautiful roan calf, Bapton Florist, won right well premier honors in his class for Mr. Willis, Mr. Hayward being second with Icomb Pioneer, whose classmate was a lengthy, good-fleshed and handsome bull, Lord Monmouth, bred by Mr. Duthie and exhibited by Mr. L. de Rothschild. That notable winner of former years, Mr. J. Deane Willis' White Heather, by Merryman, won easily in the cow-in-milk class, Sir J. B. Maple coming in for second honors, whilst Mr. A. Henderson secured third honors with Grace Darling, who, a few years back, was so successful in Mr. J. T. Thorley's herd. The three-year-old heifers were headed by a grand type of Shorthorn in Mr. J. Colman's Hawthorn Gem III., who was clearly first, her nearest competitor being Mr. Thorley's handsome and evenly-fleshed Fairy Queen. Mr. Willis again led in the two-year-old class with the deep-fleshed heifer, Bapton Jewel, who was very closely pressed by another specially neat and good heifer, Mr. J. Colman's Hawthorn Queen. With a splendid type of the Shorthorn, Malmaison, by Silver Plate, Mr. Willis had no difficulty in taking precedence in the yearling class, Latton Fancy (Mr. S. Dumis') being second. The Earl of Coventry, Mr. G. D. Faber, M. P., and Mr. John Tudge were the principal winners in the small but excellent classes of Hereford cattle.

If one may judge the future by the entry of sheep at Oxford Show, it is very evident that there will be throughout the principal breeds this year a keen fight for the leading honors.

The Oxfords came out in strong force; seldom have we seen better, and in the grand yearling ram that won the breed championship, as well as first in his class, Mr. J. T. Hobbs owns a sheep whose equal for type, substance and character will be hard to beat. This same breeder had also four other rams in competition, all of which were considerably above the average of good ones, the winner being got by the first-prize two-year-old ram at Cardiff Royal last year, whose sire was Mr. J. Treadwell's 100-guinea ram, Jumbo. For second honors a fine type of sheep was selected in Mr. R. W. Hobbs' entry, whose flesh, good fleece and typical head fully entitled him to his position. Next came Mr. A. Brassey's entry, a big and upstanding ram, whose touch was rather too soft and who would have been improved by a bit more bone. For fourth place, a grand ram, square and level all over, one that will go on and improve, from Mr. H. W. Stilgoe's flock, was selected. Mr. W. A. Treweeke's flock was worthily represented, two fine rams of his being h. c. Mr. A. Brassey's flock went clean to the top both in the ram lamb and ewe lamb classes. They were well-grown and lengthy lambs, but many preferred the second winners in each class that came from Mr. J. T. Hobbs' flock, as they were more compact, with quite as good tops, but a bit closer to the ground. Third honors in the ram lambs went to Mr. A. H. Wilson, Mr. G. Adams taking this place in the ewe-lamb class. There was no question as to the winner in the yearling ewes, Mr. A. Brassey's notable pen securing first honors, the second and sixth places being filled by Mr. J. C. Eady's entries. Mr. J. T. Hobbs coming in for third honors, and Mr. R. W. Hobbs fourth, with a pen of very fine ewes, whilst last, but not worst in many ways, came two pens from Mr. W. A. Treweeke's well-known flock.

The Hampshires were in full force, a larger exhibit than usual at this show. The yearling ram class was headed by one from Mr. C. A. Scott-Murray, a very typical and masculine ram, used last season by Mr. J. Flower, whose entry came in for second honors, a capital ram, with real good flesh and quality. Lord Rothschild led in the ram-lamb class with a big, upstanding pen of lambs, excellently covered all along the back, but the second winners, Sir J. Blundel Maple's pen, would have been nearer their proper position somewhere about eight or nine pens lower. Third honors went to a pen of rare merit and quality from Mr. J. Flower's flock, which, wherever they may go, are bound to do good. These were followed by a pen of Mr. Scott-Murray's, which were

quite good enough to have gone second. In the yearling-ewe class, Mr. J. Flower was unquestionably first, with a very fine pen of grand ewes, the like of which no other breeder seems able to produce. A pen of high quality of merit from Mr. Scott-Murray's flock came in for second honors, a well-merited award. The Earl of Carnarvon was to the fore with a notably fine pen of ewe lambs, but the margin of difference between these and Mr. Flower's pen was a very small one. All going well, it will be "touch and go" between these pens at future shows.

The little Southdowns were present in capital quality and numbers. For the second year in succession, Mr. C. Adeane's flock took first place and champion with rams; a fine fellow the winner was, but the same owner's r. n. ram was a better one. Col. McCalmont, C. B., M. P., was, we think, quite correctly placed second. His was a notably good fleshed ram, with nice type, but possibly the best fleshed ram of the class was Mr. J. Colman's third winner, whose place in the class was entirely owing to bad walking. Col. McCalmont won hands down in the ram-lamb class, a noble and well-matched pen, while second honors fell to Mr. E. Ellis, whose reappearance in the award list reminds one of the eighties, when his well-known flock was almost invincible. Third honors went to Mr. Adeane. The contest in the yearling-ewe class was a keen one. Mr. J. Colman's pen went rightly to the top, a pen of high merit and fine quality. Col. Walter was second, a lucky win, with the Earl of Cadogan's third.

Shropshires made a very small entry, but two exhibitors competing. These shared the honors between them, Mr. R. P. Cooper winning with rams, Mr. W. F. Inge with ewes.

Mr. Russell Swanwick won easily for yearling rams in the Cotswold classes, but for ewe and ram lambs he had to take a back seat to two grand pens from Mr. Henry Aker's flock, all of which should be secured for Canada, as they are real good ones.

FARM.

Preparation of Ground for Roots and Corn.

It is an old proverb that Rome was not built in a day. Just so, you cannot thoroughly prepare your field for hoed crops in a few days. There has been a great deal written on this subject, but it seems that it is still necessary to keep at it.

The preparation should begin the previous fall, when the ground should be plowed lightly, early, just after harvest; then, if you have the manure, if you do not have the manure, then plow, and if you do not have the manure, then plow and spread the manure from the sleigh in winter, then in the spring plow as early after the grain seeding as possible, harrow and roll, then leave it alone just long enough for the seeds of weeds to germinate (don't allow the field to get green), then cultivate and in three or four days harrow. These operations should be repeated until it is time to sow or plant, as the case may be.

The preparation of the ground for hoed crops should have a threefold object in view. First, reducing the ground to a fine tilth. Second, conserving the moisture, and third, killing as many of the seeds of weeds as possible. In regard to the time of sowing and planting, this will depend on the season. Mangolds and carrots should be sown as soon as the ground is in good condition and warm enough for the seeds to germinate right away, but not earlier than this. Corn should be planted from the middle to the end of May, according to circumstances. Potatoes not earlier than the first week in June, except for early potatoes. Turnips should be sown from the 10th to the 17th of June; at least, in our experience these are the best dates. Even if the manure has not been applied in fall or winter, a good crop of turnips may be secured by manuring in the drills or ridges opened for that purpose, and then split with the plow, covering the manure. The land must, however, be thoroughly worked and made very fine before manuring in this way; or the green manure from the barnyard may be spread on the surface and plowed under, and by repeated plowing and cultivating thoroughly mixed with the soil. Then drill the land up and sow while it is moist, or, if possible, as soon after a rain as the land is fit to work on.

We find it a good practice to sow a mixture of salt and ashes, with a little plaster of Paris (if you have it handy), on the ground intended for turnips, just before drilling up. If turnips and mangolds can be sown so that the seed will grow up quickly, they are much more easily thinned out than when the seed is slow in coming, because any weed seeds that are in the ground will grow any way, be the weather favorable or otherwise, and when their roots get a hold of the ground around the plants you wish to save, the work is much more difficult.

Oxford Co., Ont.

D. LAWRENCE.

Plowing and Plowing.

To the Editor "Farmer's Advocate":

In the May 15th issue of the "Advocate" I read with much interest the article by J. M., lamenting the decline of plowing in the country. From the tenor of his remarks, I apprehend he has been brought up in some township or locality where good plowing was not only appreciated as a manly art, but an essential factor in securing a good crop. I can fully endorse his sentiments in regard to the abominable specimens of plowing seen in a drive through the country. It is a rare thing nowadays to get a man worthy of the name of a plowman. Twenty and twenty-two dollars a month to a man who knows nothing of the art of plowing is aggravating almost to the end of patience. It seems to me that the "Advocate," the Farmers' Institute and the Guelph O. A. C. have been remiss in not stimulating and urging young men to this important part of successful agriculture. To men who appreciate good plowing, it is sorrow to see prizes given to fiddle-faddle at many of our township fairs and not a shadow of a dollar towards encouraging young men to excel in this, perhaps among the most useful and manly occupations extant.

In the old County of York and the townships adjacent to Toronto, forty and fifty years ago plowing was the magnum opus of the farmer. A farmer's son or his hired man who could not hold the plow in a fairly creditable manner need not apply for first or second man on a farm. If he was engaged at all to work a team he had to practice in a back field under instructions from a master plowman. There was not only a healthy rivalry among hired men, farmers and farmers' sons around home and the township matches, but townships vied with each other for supremacy in producing the largest number of first-prize plowman laddies.

The men of the township of Scarboro were famous in those bygone days for first-class plowmen, beating the township of Whitby, twenty plowmen on each side, on Post's farm in Pickering; beating Vaughan the following spring, on George Miller's farm in Markham; beating Vaughan again the next spring, on the farm of Mr. Walsh in Markham, near Thornhill, where Lord Elgin, then Governor-General of Canada, and his brother, Colonel Bruce, visited the field. They had been spectators of some of the hardest-contested matches in Scotland, but acknowledged they never witnessed a competition where the judges would have more difficulty in deciding than on this occasion. Many of the famous plowmen of the days I have adverted to are gone from this mundane scene. Those who are alive must be wearing towards the fourscore. It is thirty-six years ago since I left the County of York and settled in East Middlesex, but the names and the attitudes of many of these great plowmen are indelibly stamped on my memory. The Hoods, McLeans, Rennies, Patten, Dalziel, of Vaughan, and other younger plowmen, perhaps just as good, who had not the opportunities of winning so many prizes. The plows generally used were the famous Gray of Uddington, number four mould-board. This plow had many affinities manufactured by local blacksmiths throughout the county. They were rather finer finished than the imported implement, and cost from \$35 to \$40, according to extras.

When on a visit to Markham, a few years ago, I observed from the car window that good plowmen had not yet become obsolete in Scarboro and Markham. The surface of the fields had what good farmers half a century ago called a good skin: something that cannot be very well described in words, but when once seen can easily be remembered. In East Middlesex this skin is seldom seen. The wheeled plow now so generally used when well held assists in making a level surface, but the plow must move according to the wheel, and cannot be adjusted to an uneven surface by the plowman so well as the swing plow of old. American manufacturers first introduced the short, wide-bottomed plow. The idea of the maker seemed to be to plow and harrow at the same time, and get over the ground as fast as possible. The Southbend may probably be the prototype of all that class of plows which was so general in the country ten to twenty years ago. The old truss-beamed Cockshutt was a fair specimen of this kind of plow. With skimmer properly set, fairly good plowing could be made, when guided by an experienced plowman who would take the time and trouble to shift the wheel as required, feeling and hinting; still, with the greatest of care, too wide a finish was the result. The desideratum seemed to be how soon can I get over the ground, and that the short plow ran a horse easier than the old iron or wooden plow. This certainly was an egregious error. Although I never knew of a proper test being made to decide the difference in draft, it required but little knowledge of motor power to observe that it would take more power to cut and lift a furrow twelve inches by six from a horizontal position and place it almost in a horizontal position again,

sides completely reversed, as by the short, wide-set mouldboard. It is the same principle as increasing speed, losing power.

Fashion changes in regard to farm implements as well as wearing apparel. A kind of modification of the old long-swing plow is reproduced in the modern Cockshutt, Fleury, Wilkinson, Massey-Harris, and many others. The number 21 Fleury, or Original, is claimed by many to be the best all-round general-purpose plow now in use. Plows to suit all purposes (to perfection) required on a farm is like getting a first-class dairy cow and a prime beeve in the same animal—a rare occurrence.

Good, sufficient plowing can be made in most any ground with any one of the modified plows I have mentioned, and a great deal easier for the plowman than with the old swing plow, where width and depth of furrow had to be gauged wholly by intuitive perception. The old iron plows of 45 and 50 years ago, now almost obsolete or finding a resting place in a fence corner or some out-of-the-way place, exposed to the elements, rusting away, perhaps never more to be rejuvenated, but kept in some museum for the delight of future generations, like the effigies of the knights that had followed and fought with Cœur de Lion are to our day and generation. The cut on the wing of share and side cut on coulter made beautiful plowing to look at, but as to its efficiency, there were different opinions even when it was in vogue. Although I never saw it thoroughly demonstrated, I have heard men tell that on their farms where a plowing match had been held, where the headlands and other parts of the field not plowed by the competitors were plowed afterwards by themselves with plain irons, and the whole field sown alike with oats, the result was that on the plain plowing the oats were a much better crop than on the prize ridges. The reason adduced was that the prize plowing was more susceptible to drought than the work done without cut on share or coulter.

Middlesex Co., Ont. OLD FARMER.

To Prevent Crows Eating Seed Corn.

Do you know anything to prevent crows eating corn that has been planted?

Nova Scotia. SUBSCRIBER'S SON.

Ans.—It is said that a little coal oil, well stirred into the seed, will prevent the crows taking it. Some advocate the use of tar water in the same way. Planting fairly deep and rolling, or if planted by hand, pressing the ground over the seed with the foot, will have the desired effect. If these precautions have not been taken, it is a good plan to string twine around the plantation.

Alfred R. Gibson, Moosomin, Assa., April 27, 1902:—"Many thanks for premium knife received safely. I consider it worth \$2. Will do all I can to advance the interests of your paper. It is, in my opinion, essentially a farmers' paper."

Harvesting the Clover Crop.

Fortunate, indeed, are the farmers who have clover to cut, for it is one of the most valuable of farm crops, in that it admirably serves the double purpose of a first-class food for stock and a cheap and convenient fertilizer of the land, leaving it invariably in better condition than it found it, a statement which can scarcely be made regarding any other crop singly and unaided. Happily, a very large proportion of the Dominion is well adapted to the growth of the clover crop

worth little more than straw two weeks later.

The quality of clover hay is so easily damaged by dampness, after it has been for a few hours exposed to the sun after cutting, that it is of the first importance that it be cured and saved quickly. A heavy dew at this stage is almost as damaging as a shower of rain, and for this reason the harvesting should, if possible, be so managed that after being cut and wilted the crop should never lie spread upon the ground over night, and in ordinarily favorable weather in this country this can usually be avoided. With the aid of the improved machinery now supplied by manufacturers, which is a real boon to farmers in these days of high wages and inefficient help, hay may be made in about one-half the time formerly required, and secured in better condition. With the use of the tedder, the improved horse-rake and the loader from the windrow, the hay may be kept so exposed to the drying influences of sun and wind as in some instances in our fine climate to secure it in the barn on the day it is cut, or at least into windrows or small coils, in which less surface will be exposed to dews and the best quality maintained. Clover, if kept well exposed and frequently shaken in the wind, quickly dries sufficiently to render it tolerably safe to store in the barn, and it is often safer to secure it in a partially green state than to risk possible damage from dew or rain or from excessive drying if left too long exposed to the sun, rendering the leaves so dry that they break off in handling and are lost. The prevailing custom of cutting a considerable area on Saturday, to be left spread on the ground at the mercy of a hot July sun over Sunday, is often a grave mistake, since it is exposed to two possible dews, which may blacken its color, while excessive drying may result in the loss of leaves and much of the sweetness and nourishment which is found in well-saved hay.

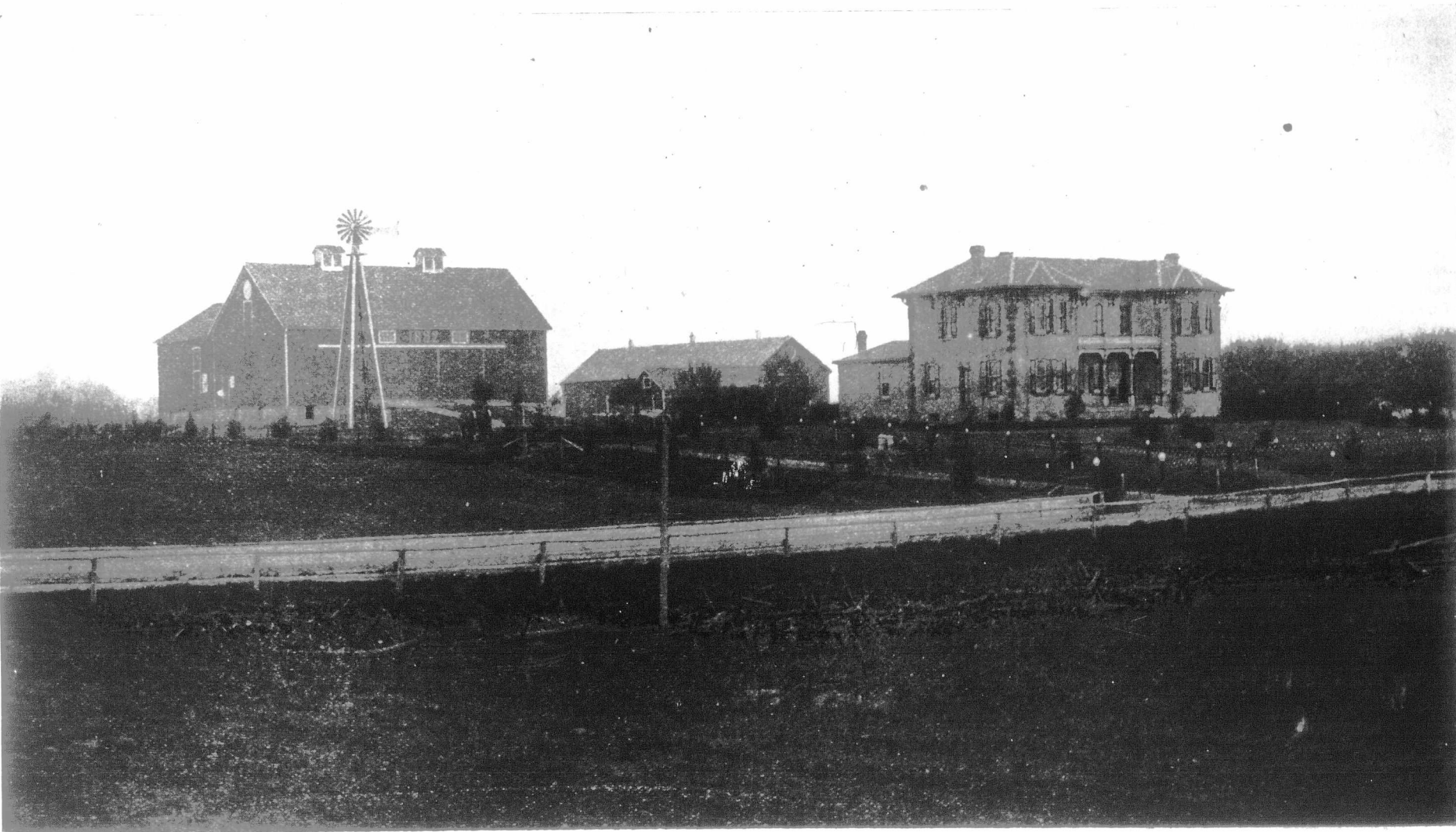
Wireworm Prevention.

As I have seen several inquiries as to the best method of exterminating the wireworm, it may interest some of your readers to know the result of my experience on a field of four acres which was often injured by these pests. Always after grass and clover the oat crop was affected seriously, and even the potatoes were perforated after the oat crop. I rolled the oats repeatedly, but it had little effect. I found that a single run of the seed harrow—followed by the crows working on it for days afterwards—had much better results, but did not quite banish the wireworm. About ten years ago I got a ton of ground rock-salt, and about three weeks before we plowed it out of clover lea I sowed it over the field. In the meantime it got a lot of rain, and was all dissolved, and the result was most satisfactory. I have not seen the appearance of any ever since. I believe the salt destroyed the eggs of the worms about the roots of the clover and completely banished them.—Andrew McKillop, Antrim, Ireland, in Farmer's Gazette.



FARMHOUSE NEAR STONEWALL, MANITOBA.

as we have it, and there is encouragement to hope and believe that experimental work will yet result in the discovery and production of varieties of this valuable legume adapted to the districts where common clover has not as yet been found to generally succeed. In order to utilize clover to best advantage as fodder, very much depends upon the time and manner of harvesting and saving it. We think it safe to say that in a great majority of cases the cutting of the crop is too long delayed, the stems becoming more woody and less nutritious after a certain stage of growth, and much of its value for feeding purposes in this way lost. There is a double gain in cutting it early, the hay making better feed and the after-growth being so much more rapid and vigorous that the pasturage after harvest is much greater in volume and value. No set time can be fixed for commencing to make hay, but, the weather indications being favorable, it is better to begin before the whole crop is in full bloom, for the chances are that before the last is cut it will have reached a stage at which its value as stock food is considerably discounted, and the weather being so uncertain a quantity, an unfavorable turn in its tactics is liable to delay the harvest in any season quite beyond what is expected, so that what was a very valuable crop at the usual time of commencing haying may be



FARM HOMESTEAD OF MR. GEORGE SEBEN, INGERSOLL, ONTARIO.

Whose 150-acre farm is advertised for sale in this paper. (See Farm Gossip, page 426.)

The Windmill as Farm Power.

Anything concerning windmills is always interesting to me, and as I receive the "Advocate" and see from time to time mention made of the uses they can be put to, I trouble you with an account of what we are doing with a good mill in a good position. We have a grinder, with which we can grind about ten bushels of grain per hour with a good wind. We cut all our wood for the stoves and furnace; cut our feed; drive the bean thresher, which is nothing more than the straw-cutter with the knives taken off. It works like a charm, and as we raise between 300 and 400 bushels, it is a great saving of labor over the old "poverty maul." We have also a small circular saw for cutting up lumber for use in building and all jobs where the hand rip-saw would be called into use. We have besides a good homemade turning lathe, which is a handy thing on a farm for making fork handles, fence posts, whiffletrees, and lots of other things. We have a large box churn which we drive with the mill, and have wind enough almost any day to drive it. All that is necessary is to turn by hand for a minute or two to get out the gas, then set the mill to suit and go away. We also have a fixture for driving the pump to water the stock in a dry time. As we have our own blacksmith and carpenter shops, we have an advantage over a great many in the way of fixing up such things, but it will pay any man to harness the wind to his work and stand by and watch the show. Where there are boys on a farm, it makes farm life more interesting and helps to solve the problem of how to keep the boys on the farm. WM. H. BEBEE.

Wright Co., Que.

DAIRY.

The Schmidt Treatment for Milk Fever.

Yet another case illustrative of the efficacy of the new cure for milk fever has just come under our notice. Last year a cow belonging to a farmer living near Lucan "went down" with the disease, and was in an almost hopelessly advanced stage when the word of her condition was conveyed to Mr. Nash's manager, Mr. Smith. Having every confidence in the cure, even in the most extreme cases, Mr. Smith administered the usual injection of iodide of potassium, and next day the cow was on her feet, and, in the words of her owner, "as well as ever." Though her owner was advised to fatten off the cow and send her to the butcher when she had done milking, he failed to do so. He sent her to the bull in the usual course, and she again gave birth to a calf ten days or a fortnight ago. And, as usually happens with cows which once suffer from an attack, she again went down with the disease. Again word was sent to Mr. Smith of her condition, and again that gentleman administered the injection, but this time he employed not the customary iodide of potassium, but chinisol. The result was again very satisfactory; in less than two hours after the injection was given the cow was up and inclined to feed as lustily as if she never had a day's illness!—Farmer's Gazette.

Shipping Store Butter.

To the Editor "Farmer's Advocate":

While on a station platform north of Palmerston, Ont., the other day, I saw two truck loads of butter, about 150 boxes, brought to the station. I took particular notice, as I knew no factory was shipping yet, and made enquiries, and found it was store butter, packed in the store cellars of the town that very day. Some of it had lain in the cellar for months. It was labelled choicest Canadian creamery butter, 56 lbs. net. Is there no law against this? I consider it is an injustice to the farmers, as some of it was not fit to be called butter. A FARMER.

We refer our correspondent and others to an editorial, entitled "Old Butter Made New," and the answer to an enquiry regarding renovated butter, in our May 15th issue, pages 377 and 390.

A New Departure.

The Ontario Department of Agriculture has appointed Mr. Geo. H. Barr to work as an Instructor in a "Model District," and to give his entire time thereto. This district includes a group of cheese factories in the County of Lambton and in a portion of Middlesex contiguous to Lambton, as follows: Vyner, Gallabank, Anderson's, Uttoxeter, Ridgetree, Maple Grove, Thomson's, Keyser, West Williams, Warwick, Watford Union, Walnut, Napier, Kerwood, Sifton's, Mount Carmel, Caradoc, and Appin. The object is, by continuous work among the makers, factory managers, and patrons, to gradually improve the conditions surrounding the production and marketing of the cheese, at the farm, from the farm to the factory, at the factory, from the factory to the cars, thence to the distributing market, that nothing may prevent the pro-

ducers from realizing the utmost that should be realized for their goods. In Mr. Barr they have the right man in the right place. It behooves everyone to lend him every assistance in their power. There is no doubt but the system will be extended till it reaches all over Ontario, if the present enterprise can be made successful.

Mr. Arch. Smith will give his entire time during the making season to the interests of the creameries.

GARDEN AND ORCHARD.

Seed Sowing the Means by which Good Results Can be Obtained.

The sowing of seeds according to the season and the seeds' own peculiarities are not usually taken into account as they should. Seeds may be sown too deep, and, consequently, rot, or be so late in germinating that they have little strength to grow after coming up. Some may be sown too shallow, and thus dry out, and it can be safely said that three-fourths of the complaints of poor seed are due to this cause more than any other. A seed cannot unfold its possibilities until it has the proper chance, and these should be taken into consideration before sowing. Provided the soil is properly prepared and fertilized, some seeds can be sown much earlier than others. Onions and parsnips, which require a long season for their development, are the first staple vegetables I sow, but spinach, lettuce, radishes and early beans stand quite a low temperature and are early at the same time or as early in the spring as the ground is safe to work without becoming lumpy. My soil is a heavy clay loam. Of course, in sandy soil seed could be safely planted earlier. The other seeds should be left for a week or ten days before sowing, and a month is often allowed to elapse before the outdoor temperature becomes high enough to permit tomatoes, corn and peppers or eggplants to start a good growth, which should be secured to ensure a satisfactory crop. The finer the soil is prepared, especially in the case of clay soils, the better the chance of a large proportion of the seed germinating, and when in good condition less seed is required. I have found that thick sowing, unless the seeds are of doubtful quality, is far less desirable than sowing too thin, for the plants usually come up so tight together that in thinning it is exceedingly hard to keep from pulling up the very plants that are desired to remain; whereas, in thin seeding each plant has room to become stocky and independent almost as soon as it breaks through the ground. The smaller the seed the finer the soil, should be the rule. Beans and corn will sprout and thrive in soil in which an onion or carrot seed would germinate with difficulty. I always work the soil intended for small seeds well with the hand rake before sowing, and find it pays me to do so. The old rule is to cover the seed with twice its thickness of soil, but the kind of soil should be taken into account. In sandy soil, which is much more liable to dry out than clayey ground, the seeds can be planted somewhat deeper than this rule suggests, while in heavy, moist soils this rule works satisfactorily. Rolling or pressing the soil does more harm than good on my heavy clay, but is essential on the lighter soil, to make it compact and able to hold sufficient moisture for the proper germination of the seed, but in June, when the clayey soil is dry, then rolling is a benefit. Some seeds are what are called compound seeds and do not need to be sown quite as thickly as some others. A beet seed under a microscope appears to be a sort of husk having several small seeds attached to the sides of it. You have often noticed several beet plants appearing to grow from the one root, when thinning: this is the reason. Other compound seeds are prickly spinach and the potato, which, though considered to be a seed, supplies the food for the eyes or true seed till able to take their nourishment from the soil. As to the complaint of poor seed, this is too often true, but it is seldom the case with seed ordered direct from a reliable firm, who know that selling poor goods will not increase their business. Seed that is kept around the country or city stores from year to year cannot be depended upon. The way practiced by all up-to-date gardeners is to patronize a reliable firm or divide their orders among several and get just what is wanted. It used to pay once to grow seed, but it doesn't now except in some instances. Seed-growing is a business by itself. When you sow your seeds, think of what a delicate object each seed is, and if it is properly planted in soil supplied with sufficient fertility, it will grow and produce abundantly, all things being equal.

Halifax, N. S.

E. M.

I am a reader of the "Farmer's Advocate," and think it is a valuable paper that every farmer should take.

A. B. VAN BLARICORN.
Northumberland Co.

The Garden in June.

Much depends on the work done and care taken of the garden during the month of June in order that the results may be both pleasing and profitable. Pleasing in that the care, especially the first weeding, shall give the growing plants a neat and tidy look and a rapid growth, which is impossible if the young plants or seedlings have to struggle amid weeds, or standing so thickly that they become weak and sickly, as is too often the case in many gardens; and profitable because the work done while the plants are small lessens greatly the work that would otherwise have to be done later in the season, when time is usually more precious and more labor is required to cultivate and care for the garden.

In many parts of the Dominion, especially in the Maritime Provinces, the season does not become warm enough to safely plant certain vegetables until the first week in June, although I have found the 20th of May not too early for corn and squash and also cucumbers. Perhaps a few words may not be amiss as to my methods in planting these crops in order to economize space and secure the best results possible. Corn, I plant in straight drills, about three feet apart, and thin out the plants to ten inches. This is for yellow corn, but the sugar varieties can be grown closer. In this way the rows can be easily cultivated by hand, and as good a crop secured with less labor than when in hills. Pumpkins and squash do best in hills or rows made up around the corn plot, instead of planting them directly among the corn. In this way they secure plenty of sun, ripen earlier and do not interfere with cultivation. Cucumbers are sown in rows also, as they are easier cultivated and gathered. Tomato plants can be set in lettuce and spinach plots, or in almost any bare space, but the earliest fruit I find to be from plants set in rather poor soil, with no fertilizer applied at the time of planting. Towards the last of the month a quantity of hen manure, phosphate or wood ashes (either is good), raked in around the plants starts them fruiting rapidly; whereas if much manure or fertilizer is applied beforehand, a rank growth of vine usually ensues, much to the detriment of the fruit, although the yield is far heavier and for a late crop is all that can be desired. The most important thing in transplanting tomatoes, or any plant, is to have sufficient soil taken up with the roots, otherwise the plants will stand still for weeks and a large percentage will droop and die. This is almost always the case with boughten plants, and for this reason I consider that raising even a few plants pays so much better that I would not take ordinary plants as a present unless they are well rooted, with plenty of soil attached.

After the plants are set and the May-planted vegetables are well up, weeding should commence and be kept up at regular intervals through the summer. The more the soil is stirred, the harder will it be for weeds to spring up and the easier will it be for the plants to secure that rapid and stocky growth which is so essential, both in promoting earliness and heavy yield, and which, even more than the fertilizing, makes the garden a thing of beauty and a joy to the owner. Watering is most important this month, especially after a dry spell. Plants do not suffer so much from dry weather later on, when their roots run deep into the soil and can extract the much-needed moisture; but during the coming weeks watering should be practiced, especially on shallow-rooting and delicate crops and flowers. I found, last summer, that a row of cucumbers watered a week earlier than a similar row of the same variety, at some distance, not watered, and they continued in bearing much longer. The watering of the garden is much neglected, especially on the farmer's garden, but even where water has to be brought some distance, it pays and pays well, as I have proved during recent years. The sooner after watering the soil is cultivated or stirred, the better, unless the soil contains much clay, as the loose soil acts as a mulch, both holding the moisture and preventing loss from evaporation. The fruit garden should be well attended to, especially as to insect enemies. The best way is not to wait until the bushes get full of worms and caterpillars before doing anything, but spray them every week or so from the time the buds expand until the berries are formed, with Paris green or hellebore, diluted with a sufficient quantity of water. Dry lime and soot, dusted on after a rain, I find to be effective preventives, but the poison mixture is the surest remedy. Care should be taken not to apply it after the berries are well formed, but if the bushes are treated earlier this is seldom necessary.

There are many other things in gardening that should be done during the month, and most of my readers are probably well grounded in them, but to the amateur and farmer these suggestions and hints may be useful. The amateur often fails for want of knowledge, the farmer for want of care, or what he usually calls fussing; but a combination of the two, together with a little hard work and common sense, are the essentials to success in gardening as with anything else, and at no time is it more important than during the month of June, for if things are not looked after

by the last of the month the chances of a good crop are greatly lessened.

EDGAR MACKINLAY.

Halifax Co., N. S.

Black-knot Treatment.

Mr. Morton, of Clementsport, N. S., sends us an account of his experience with and study of the black-knot of the plum. He is not entirely in agreement with the standard authorities on the subject; for example, in holding that the spores of this destructive fungus may be found in the sap of all the trees (presumably, all the plum and cherry trees) in the neighborhood of an affected one. He advises soil dressings of salt and quicklime and green soiling with buckwheat. By this treatment and the heroic use of the knife and fire, he says he has saved a fine orchard of 40 plum trees, which was once badly affected.

APIARY.

Work Among the Bees in June.

June, the month of roses, the season when all nature looks its best, should be a busy time for the beekeeper and his bees, alsike and white clover, from which the great bulk of our light honey is gathered, coming into bloom about this time and lasting, as a rule, till the 1st to 10th of July. The beekeeper should put forth every effort to have all his colonies ready for this flow, for no matter how lavishly the clover may yield nectar, if the bees are not in a condition to gather it the apiarist will profit but little. If some stocks are extremely strong and others are a little weak, combs of sealed brood can be taken from the former and given to the latter.

It is a great advantage to have all colonies as nearly alike as possible, as much work is saved by being able to extract from all of them, etc., at the same time. Any colonies given supers in May, that have stored some honey in from fruit bloom, should have the same extracted before the clover yields much, so as not to spoil the quality of the latter. Surplus room should now be given to all colonies not previously provided for, and, in fact, all preparatory work should be done so that the beekeeper may have a free hand when the rush comes on in the course of a few days. If running for extracted honey, a queen excluder should by all means be used between the upper and lower stories, to prevent the queen from going above and depositing eggs in the surplus department. While this in itself may not amount to much, not nearly the headway can be made in extracting, as the operator has to be careful not to injure the queen, which is very apt to occur in rapid work should she be among the extracting combs.

I shall not say anything about the prevention of swarming, as this subject was treated quite fully by Mr. Pettit in a recent issue of the "Advocate." However, I will give a few hints as to how best to manage the swarms after issuing. A great source of annoyance to the beginner is to have a large number of after-swarms all through the season, causing a large amount of work and lessening the honey crop. Different methods are practiced to prevent this, of which I mention the following: 1st, by cutting out all but one of the queen cells seven or eight days after the first swarm has issued; and 2nd, by so depleting the force of the parent stock that they will have no desire to swarm again. The first-named plan has these disadvantages: you may be ever so careful, yet sometimes more than one cell will be left and your object defeated; and, again, the cell you leave may happen to be worthless, thus leaving the colony in a queenless condition. By far the best plan, in my estimation, is that of strengthening the young swarm at the expense of the parent stock, and at the same time preventing after-swarms. To do this, hive the young swarm on the stand previously occupied by the parent stock, place the latter alongside of the young swarm, with entrance of hive facing the opposite way; in three days shift it around so that it is at right angles to the young swarm; in three days more again shift it so that they are side by side, with both entrances facing the same way. On the following day, when the bees are flying freely, move the parent stock to an entirely new location and you will not be bothered with any after-swarms. All the bees that have been flying during the seven or eight days will enter in with the young swarm, leaving the old colony so depleted of its field force that all notions of swarming again will be abandoned. The same object can be accomplished by at once moving the old stock to a new location, then seven or eight days later carrying the combs with adhering bees and shaking the bees off in front of the young swarm. These plans are largely practiced by comb-honey producers, as very strong colonies (preferably young swarms) are essential to the production of choice comb honey. In my opinion, the plan is equally advantageous in working for extracted honey. As the extracting supers become pretty well filled, they should be raised up and another one placed underneath. By this means the honey may be well ripened in the hives and, at the same time, swarming will be greatly retarded.

One of the things most strongly to be condemned among certain beekeepers is the practice of extracting honey unripe; very little, sometimes none, of the combs being sealed. While it is possible with large storing cans, etc., to keep such honey from fermenting, it can in no way compare with honey that has been properly ripened in the hives, and it does not take an expert to tell the difference, either. Large quantities of unripe, fermented honey go on the market nearly every year, doing incalculable injury to the industry and causing annoyance and loss to the commission man or other dealer who may be so unfortunate as to have it on his hands. By all means produce a good article. The wax from the cappings will more than pay for the time spent in uncapping the combs, to say nothing of the reputation gained of being a producer of something that will stand the test of any market under any reasonable conditions. By using two or more extracting supers, it is but little trouble to produce well-ripened honey. The super that has been raised up, as before mentioned, can be extracted when the combs are sealed and then returned to the hive, placing the other super, which will be partly filled, on top of the one just extracted. The mode of taking the combs from the hive for extracting, mostly in vogue among beekeepers, is to first puff in a little smoke and then lift the combs out and shake or brush with a wing or brush all the bees off in front of the hive. A much better way is to go to a dozen or so colonies, after smoking them a little, and lift off the supers bodily, placing them alongside of the hives for a short time. The bees that are able to fly will soon leave the combs; the few that are left on the combs can then be brushed off like beans, without half the stings or trouble that there will be if the bees are brushed and shaken off the combs at once. Of course, this can only be practiced when honey is coming in freely; at any other time it would cause robbing. The uncapping knife should be one made for the purpose, and should have a very keen edge. I prefer to have the knife kept warm by immersing in hot water heated over a small coal-oil stove, but as a great number deem this to be of no advantage, this small matter can best be decided by each individual for himself. As I have laid considerable stress on the danger of extracting the honey too soon, would say do not go to the other extreme and allow the bees to become crowded for storing room, as this will certainly bring on swarming. In swarming, as in many other things, "an ounce of prevention is worth a pound of cure," and colonies that have a reasonably large brood chamber and are provided with abundant storing room should give but little trouble as far as swarming is concerned, provided they receive a reasonable amount of attention at the proper time from the apiarist.

York Co., Ont.

J. L. BYER.

POULTRY.

Poultry Pointers.

In winter, it is necessary to provide sunshine. In summer, it is cruel not to provide shade from the burning sun, and all the fresh cool water the chickens can drink. Ducks greatly suffer if exposed to the heat of the sun all day.

No matter what is said to the contrary, there is a great difference in the flavoring of an egg. Eggs laid by an active, healthy hen supplied with good fresh food, are much finer in flavor, color and smell and taste than those that are laid by hens that are the common scavengers of alleys, backyards, and pigpens.

The better you treat hens the better will be the returns. Of course a hen will give some returns under neglect, and this is the very reason for that neglect.

Don't feed the sitting hen while she is on the nest. She needs some exercise each day, and it does not hurt the eggs to get cooled off once a day. A hen that sets too closely gets cross and feverish, and irritable, and, therefore, very hard to manage. Give her lots of clean water to drink and keep her free from lice.

In feeding little turkeys or poults, wet food is often a source of danger. Dry grains are safer. When first hatched, grind together equal parts of corn, wheat and oats into a coarse meal, and feed it dry. Supply them with plenty of good water and short green grass or chopped onions. Hundreds of poults are killed by sloppy wet food. Take the hen away from the chicks when they are a month old, or three weeks. Make a brooder out of an old cheese box. Cut a door in the side, and tuck a curtain of cloth over it. Turn the box upside down, and set it over some clean, dry chaff. As the chaff gets soiled, remove to another place. Now the chickens can run in and out at will, and cannot get trampled on by the impatient biddy. The chickens grow faster and the hen returns to her life-work of either laying more eggs or hatching another brood.

Ducks are very hardy and are entirely free from vermin. A cheap (very low) fence is sufficient to keep them from any desired place. They are great egg-producers, and their feathers are worth half a dollar a pound.

SARAH ROSE.

Little Chicks.

The first few weeks of a chick's life are the weeks that make the best returns for the care given. Hundreds lose their lives every spring by being jammed into corners and smothered to death. Keep the coops clean and sweet, cover the floor with something, if nothing else than earth, but sand or chaff is better. Have a board or an old carpet to put over the front of the coop each night so the little chicks cannot get out in the morning until you remove it. Early morning dews and cold wet grass are causes of enlarged crops, constipation and bowel diseases in young chicks. If a sudden shower comes on they run for shelter; as it clears up, they get impatient and run out again. Prevent this by placing the boards up as at night.

If hatched with a hen, she will have "mother thought" enough to remain on the nest until the chicks have absorbed all the yolks. This answers for food for the first twenty-four hours. Chicks are much better off without food or drink for the first day, then feed liberally with bread soaked in milk. Don't forget to give the patient old hen a good feast of corn; she deserves it. Porridge, just as you make it for breakfast, is a splendid diet for them. After a week, it is beneficial to give cracked corn or wheat once or twice a day. Corn meal made into common johnnycake is much more easily digested than if merely soaked in water, and it has this advantage: If you feed it raw, every time a mealtime comes it's dip into the meal and always leave a "muss" around; while if you stir up a johnnycake you can make enough to last a week at one time, as well-baked cake does not sour, and stale, dry cakes are just as digestible as fresh cakes made daily.

Don't feed them sloppy food at any time. It ruins the "gizzard" power. Have plenty of pure water at all times, the little things get so thirsty, and if only given water at stated intervals, drink too much. Instinct does much for them, and it is amusing to watch them scratch the very first meal. Give them something they can scratch for, and always some fine, sharp grit.

If the chicks have not a grass run, provide green food by growing lettuce for them. Lettuce sown broadcast repays every minute spent in the care of it. As the spring advances, give them onion tops or ground eggshells.

The faster little chicks grow, the larger and healthier the grown chickens are. They should be fed regularly three times a day all summer, and one meal should be of a soft, ground food. A very good ground ration is equal parts by weight of corn meal, ground oats, wheat bran, wheat middlings and meat; meal mixed with skim milk or water. At noon is perhaps the best time for the soft food. Feed just enough so they will eat it all up clean. At breakfast and supper, feed corn, wheat, or peas. Make them hungry for the next meal.

Another foe of the little chicks is the lice. Don't let them get a headway. Provide a good dust bath. Rub insect powder on sitting hens, and, each spring, whitewash and fumigate the whole henhouse, and paint the doors, windows and all the roosts with coal oil.

Norfolk Co., Ont. "SARAH SAUNDERS."

Death of Mr. Scarth.

Mr. Wm. Bain Scarth, Deputy Minister of Agriculture, at Ottawa, an old resident of this Province, died last Thursday, May 15th. He had been ill at intervals for the past two years, and finally his ailment affected the lungs. He leaves a widow, two sons and a daughter. Mr. Scarth was born in Aberdeenshire, Scotland, November 10th, 1837, and was a son of the late James Scarth. He received his education in his native place and also in Edinburgh, and came to Canada in 1855, engaging in business at Hamilton, Ont., London, and Toronto. He became connected with the North British Canadian Investment Company, and also with the Scottish, Ontario & Manitoba Land Company. In 1884 he came to Manitoba and became General Manager of the Canadian Northwest Land Company. At the general elections of 1887 he was elected to the House of Commons as representative for Winnipeg. He sat until the close of Parliament in 1891, and on the retirement of Mr. John Low, in December, 1895, he was appointed to the position of Deputy Minister of Agriculture.

Mr. Geo. F. O'Halloran, of Montreal, has been appointed to succeed the late Mr. Scarth as Deputy Minister of Agriculture.

Scaly leg is due to the presence of a parasite which burrows under the scales on the legs of the birds and there sets up an irritation which leads to the coming away of the scales. When the poultry houses and yards are kept perfectly clean the opportunities for the development of these parasites are considerably reduced. The best course to pursue is to first immerse the legs of the affected bird in tepid water for a period of five or six minutes and then either soak the legs in paraffin or thoroughly rub in some sulphur or carbolic ointment.—Farmers' Gazette.

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.

LAMPAS.

Do you know of any cure other than burning for lampas in horses? Is not burning cruel, and will the cure be permanent? J. S. Colchester Co., N. S.

Ans.—The practice of burning the roof of a horse's mouth to cure lampas is a relic of barbarity, and any person who does so should be prosecuted for cruelty to animals. Lampas is simply a congestion of the gums caused by dentition. All horses between two and a half and five years of age will have more or less of this congestion. After that age it will cease, as dentition is completed. The engorgement of the vessels causes more or less swelling, which rarely interferes with the animal's health, but in rare cases it is well to scarify with a sharp knife to allow the escape of some blood, and that is all the treatment required. Do not cut back past the third bar, else you may sever the palatine artery and have too much bleeding.

J. H. REED, V. S.

VOMITION IN COW.

I have a cow that vomits every day or two, after feeding. Was feeding wheat chaff and cut straw with meal and roots. I tried hay alone, also cut hay and cut oat sheaf, but the trouble continues. She has been that way for two months and has failed in flesh and gone almost dry.

2. How many mares should a two-year-old stallion be bred to? SUBSCRIBER.

Ans.—Your cow has choked at some time, and the part of the gullet where the obstruction lodged has become chronically distended, and when she eats greedily the food lodges there and then she apparently vomits. Feed her on sloppy food, no bulky or solid food at all for a few weeks. Allow her to run on short pasture. If no improvement is shown in a couple of months, you had better destroy her.

2. Your two-year-old stallion should not be bred to more than one mare every ten days.

J. H. REED, V. S.

TUMOR ON COLT.

A three-year-old colt has a lump larger than a goose egg between the skin and point of the ribs just where the trace rubs about the center of the body. There is no veterinarian available.

B. C. A. C. W.

Ans.—Cast the colt, secure him on his side. Cut through the skin and lump in the center until you reach the bottom of the tumor. Then carefully dissect the skin from one half of the growth and the growth from the underlying tissues; treat the other half the same way. Wash well with a five-per-cent. solution of creolin and stitch the wound with silk sutures. Leave an opening at the lowest part for the escape of pus. Wash the wound twice daily, and inject a little of the lotion into the sac until healed. There is no danger in operating if reasonable care be exercised.

J. H. REED, V. S.

DO NOT CARRY THEIR TAILS WELL.

I have a pair of valuable mares. One carries her tail to one side and the other hugs hers.

2. Is it wise to feed oats to horses when hot? Grey Co., Ont. J. W. B.

Ans.—The tail can be straightened by an operation, which consists in severing the muscles that move the tail laterally on the side to which she carries it. The tail must then be tied to the opposite side to a surcingle for about ten days. This keeps the ends of the severed muscles apart until they grow enough to meet, otherwise the wound will heal quickly and the tail resume its former condition. The hugging of the tail can be remedied by knicking. This consists in severing the depression muscles on each side and keeping the tail elevated by means of pulleys, ropes and weights, or other devices, until the muscles grow and the wounds heal. It requires an expert to perform either operation.

2. It is not wise to give a full feed of grain to a horse that is excessively hot. There is danger of stomachic trouble, which might cause founder or indigestion.

J. H. REED, V. S.

SHORTHORN WITH BLACK NOSE.

If a Shorthorn has a black nose, can the color be removed by drugs? Wentworth Co., Ont. A. Y.

Ans.—No. J. H. REED, V. S.

CHRONIC DISEASES IN TEAM.

My horses had pink eye in 1900. In one abscesses formed around the eyes and ears, and on each side there has continued an oozing of what I consider to be gastric juice. No. 2 is troubled in his legs. They swelled up, but became normal in about a year. Last February the swelling returned and was very painful. Eruptions occurred and continued for some time. The swelling goes down while working, but returns at night.

Wentworth Co., Ont.

Ans.—It doubtless has strangled your horses had. One of the salivary glands on each side became wounded, and the escape is saliva, not gastric juice. This is very hard to treat, especially when the condition becomes chronic. If I am correct in my diagnosis, you will observe the escape of liquid much more plentiful when the animal is eating than at other times. If this be not the case, there is a fistula on each side, which can be cured by rolling about 5 grains corrosive sublimate in tissue paper and inserting with a probe into the pipe, being sure to force it all the length. After a few days you will be able to draw the deadened tissue out. This will include the walls of the pipe, and then the wounds will heal. If I am correct in my diagnosis, the duct of the gland will probably be obliterated by this time, and nothing can be done except destroy the gland by injecting into it a strong solution of corrosive sublimate. This is a serious operation, and can be done only by a veterinary surgeon. You might try filling the openings with iodoform and stitching them up. If the duct is pervious, this will effect a cure. For horse No. 2, feed 1 dram iodide of potassium three times daily and turn him out to grass as soon as possible.

CALF WITH SWOLLEN KNEES.

Calf, six weeks old, has been lame since he was three days old. His knees are swollen. He is fed nothing but new milk. Elgin Co., Ont. H. D.

Ans.—Your calf has arthritis (inflammation of the joints) of the knees, probably caused by cold or damp. Bathe well with warm water and rub well with camphorated liniment several times daily. You can get the liniment from any druggist. Allow him to run out to grass in the daytime and keep him in a dry, comfortable stable at night if the weather be cool.

J. H. REED, V. S.

RAT-TAIL.

Can you give me a remedy for a rat-tailed pony? She was foaled that way. Middlesex Co., Ont. T. H.

Ans.—Little can be done when this condition is congenital. The monthly application of tincture of cantharides may be followed by slight benefit. Where the hair follicles do not exist, nothing will produce them, and where those that do exist are congenitally weak, little can be done to stimulate them.

J. H. REED, V. S.

OBSTRUCTION IN MILK DUCT.

How can I cure a lump inside a cow's teat? It is almost impossible to get any milk. Renfrew Co., Ont. V. W. J.

Ans.—The lump is a little tumor, and it requires a very careful operation with a special instrument to effect a cure. None but an expert with said instrument can successfully operate; bungling operations in such cases cause acute inflammation of the udder. Unless you can employ skilled assistance, you had better allow the quarter to become inactive.

J. H. REED, V. S.

COLT WITH DEFORMITY.

I have a colt a week old. When foaled, his left nostril was slit up about an inch. When he respires it blows out and looks bad. Can anything be done? York Co., Ont. W. R.

Ans.—The skin can be carefully removed from the edges of the slit and the raw surfaces carefully and neatly stitched together with carbolyzed suture silk. If this be carefully done, the flaps will heal, but you must be careful to not stitch too much or you will constrict the nostril.

J. H. REED, V. S.

MAMMITS IN COW.

Cow, due to calve in September, has been milking well until lately. Now the milk is curdled and she does not yield so much. Peel Co., Ont. A. F. H.

Ans.—Your cow has inflammation of the udder and the heat causes the milk to curdle. The condition is caused in many ways, as irregularity in milking, injuries of different kinds, drafts, cold, etc., and it frequently occurs without well-marked cause. This is particularly the case with tubercular cows. I would advise you to have this cow tested with tuberculin, if you know of nothing to cause the trouble. Give her a purgative of 2 pounds Epsom salts dissolved in 2 quarts warm water; follow up by 2-dram doses nitrate of potash three times daily. Bathe the udder well and often with warm water and apply camphorated oil. Draw the fluid from the teats several times daily.

J. H. REED, V. S.

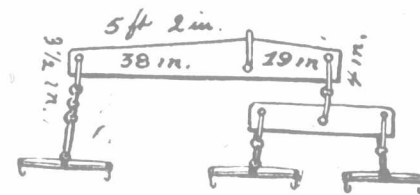
Miscellaneous.

LICE ON HOGS.

1. Will you kindly tell me what will destroy vermin on hogs, as some of mine have quite a few? They resemble sheep ticks. 2. Give description of three-horse whiffletree for plowing? Russell Co., Ont. JOS. LECUYNER.

Ans.—1. An application of a good sheep dip, some kerosene emulsion, a light sprinkling of coal oil, or crude carbolic acid diluted in water—any of these will kill lice on hogs.

2. The following diagram illustrates a simple form of three-horse whiffletree which has given good satisfaction:



HENS DYING.

I have had trouble with hens going black in comb and dying. I have the fowls in separate flocks and in fields. Plenty of grass and grit provided, fed mash in morning and grain at night. The cases have occurred with long intervals between, the fowls going black very suddenly, and on being caught and shut up, found rather thin, and one or two discharge whitish or greenish excrement. No thirst in particular. I cannot understand the trouble, as the fowls are not heavily fed, have free run, are pullets in every case and are only tolerably well-to-do in flesh, and laying magnificently. Vancouver, B. C. K. J. B.

Vancouver, B. C.

Ans.—I am not just sure as to what the name of the disease in this case is. Many of the symptoms would point to liver disease or indigestion, in which case more exercise, with less food, and probably a moderate dose of salts once a week, would be a good thing. However, I am inclined to believe that the trouble with the chickens is due to worms in the intestines. My belief in this is strengthened by the fact that I saw a chicken cut up yesterday morning which had died of similar symptoms to those described by your correspondent in B. C., and this chicken's intestines were filled with small round worms, not much larger than a hair and varying in length from one-half to two or three inches in length. The worms were principally found in the main intestines, but one or two were to be seen in the gizzard. I will quote from the Reliable Poultry Remedies a description and treatment of these worms: "The round worm is much more common than the tapeworm, and is familiar to an dresser of poultry. It is not a source of trouble except from the massing of large numbers. A few worms make but little impression on the health of the bird; but if they abound in large numbers, they will have a decided effect on the digestion of the fowl. The large numbers, matted and wriggling, may cause a stoppage. Their irritation causes diarrhea, and their appetites diminish the nutriment intended to support the fowl. These round worms are seldom passed in the discharges, but now and then a worm is passed and may be seen in the droppings. The round worm varies in size from one-third to five inches in length. Its color is white. The symptoms are those of indigestion with possibly slight diarrhea. If you suspect worms, try to remove them. Dissolve in the water to be used for mixing the mash, 2 grains santonin for each bird to be fed. Mix a small allowance of mash quite dry, and add castor oil, one half-teaspoonful for each bird. Feed this to suspected birds, watching for results of the worm treatment. All droppings should be collected often and put out of the reach of the birds." In consultation with our bacteriologist as to the cause or causes of this disease, he intimated that it might be caused through the drinking water, and that possibly there was some connection between these worms and those that are ordinarily found in fish. I would suggest to your correspondent that, if at all possible, it would be better to put the fowls on some other ground for a period of time at least. If he would be good enough to make a post-mortem examination of some of the chickens that he is losing, he would be able to inform us as to whether we have arrived at the right conclusions or not.

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

BREEDING AN AGED MARE.

I have a mare, ten years old, that has never been bred. Would it be safe to breed her now? Renfrew Co., Ont. A SUBSCRIBER.

Ans.—Dr. Reed answered a similar query to this in our March 15th issue, page 219. He said there may be slightly greater risk in the case of an aged mare that has never had a colt, but his experience has not taught him that age makes a noticeable difference. He bred his favorite mare for the first time at 17 years old. She produced her first foal without difficulty, bred regularly for several years, and is now hale and hearty at 26, as her picture in our April 1st issue shows.



PLOWING AND THRESHING IN MANITOBA ON THE C. P. R. LINE.

LONG-NOSED YORKSHIRES.

I ordered a pair of Yorkshire pigs from a firm advertising in the "Advocate." The pigs arrived in good order. The boar is a very good one, but the sow has a very long, sharp nose, and will not pass here as a Yorkshire. Two years ago I bought a boar and two sows from a different firm, and one of the sows had a very long, thin nose, similar to this one. I raised two litters of pigs and all were marked the same way, and I was unable to dispose of them as Yorkshires. I confess that I am not very well posted on the fine points of pigs, but I supposed that the short, turned-up nose was a special characteristic of Yorkshires, and if I am wrong would be glad to know it.

New Hampshire. P. S.
 Ans.—The short, dished face, turned-up nose and heavy jowls which characterized the Yorkshires a few years ago are not considered desirable now by breeders who aim to produce the bacon-type hog, but are rather considered objectionable features. Heads and cheeks are cheap meat, and it is considered more profitable to get the weight in more valuable parts of the animal. The short-necked, heavy-jowled hog is liable to produce an excess of fat and a smaller proportion of lean meat than one free from that formation. The packers favor a light head and neck and somewhat narrow, smooth shoulders, lengthy sides, well-sprung ribs, and a strong, fleshy back. This type is calculated to produce and provide for large litters, while the other has a tendency to grow thick, short-bodied and fat-backed, especially if exclusively or freely fed on corn, and to produce small litters. The model Yorkshire carries a head that may be described as the happy medium, not too long, and not too short, but broad between the ears and eyes, and having a bright and pleasing expression of countenance. The tendency to increasing appearance of a dished face comes with high condition and more mature age.

FEEDING SQUASH WITH MILK.

Would you kindly advise, through your valuable paper, as to the method of feeding squash with milk. I think a very appropriate piece for your paper would be, "How Bateese Came Home." It can be got from Drummond's Habitant (old edition).

King's Co., N. S.

Ans.—I have heard, a great many times, about wonderful results being obtained by feeding squash with milk, but have never yet met anyone who will own up to having done it himself; and, from all I can learn, there is no uniformity in the method in which the milk is supplied to the squash. Some say the vine is simply laid in a pan of milk and allowed to absorb it; others say that a quill or tube is inserted in the vine, and left with one end in the milk; others again say that a hole is made in the squash, and the milk poured in; all of which are really of no avail, as the squash vine has no power of taking nourishment in this way. The milk might better be fed to the calves, and the squash vines supplied with barnyard manure and wood ashes.

H. I. HUTT.

Ontario Agricultural College.

MAKING A CEMENT FLOOR.

Could you let me know how to make a cement floor for stables?
 CHAS. A. KRUEGER.
 Grey Co., Ont.

Ans.—First level the floor, then put on your lines to where you want your grade levels. Put a straight-edge board in front up to the line, also one at the back of bed of cattle, the board at back to be about 9 inches wide. Stake these boards about every 4 feet, so they won't spring. Brace the stakes with slanted braces about 18 inches long. Get this done, slant dirt on inside of bed for about 10 inches back on inside to bottom of 9-inch board; then you will have cement at the board 9 inches deep. This is to form the edge of 6-inch gutter. Lay in the bed of cattle about 3 inches deep of cement and gravel, 1 cement to 12 gravel. Have this mixture soft enough that the water will come to top. Fill in back against the board with strong 1 cement to 8 gravel. Trowel off until smooth enough; avoid being too smooth when you get bed done. Dig out gutter behind 16 inches wide to bottom of the 9-inch board. Then raise 3 inches, and slant back from that to wall, say 1-inch slant. This is enough to let all water run back into gutter, which will be 3 inches on one side and 6 on the other, which, I think, is about the right size for a gutter. Do not put in a cement floor without a gutter. In laying down cement, always lay it about 1/2 inch thicker than you want it, as it will pound down that much. Draw a straight-edge board across before you pound it. Don't tramp on it before it is pounded, as it makes it in lumps and is harder to get down level with the trowel. This has to be put down at one layer. There is no top coat on this. If I were putting in two layers I would put the bottom about 1 cement to 15 gravel; top, 1 of cement to 4 of sifted gravel. In all cases do not use fine sand. In horse stables use 1 cement to 7 of gravel, and put down the same as cattle stables; hog troughs, 1 of cement to 5 of fine gravel. In laying the floor of a barn, I would put it down from 2 to 4 inches thick. That is, alleys, 2 inches thick; cattle, 3 inches; horses, 4 inches. Some will ask, what kind of a bottom do you want under the cement? I have been putting in floors for seven years, and I find nothing better than a clay floor for bottom, well rammed down. Use good clean sharp gravel and you will have a good floor. One barrel of good Portland cement will lay 140 square feet of floor.

A. E. HODGERT.

[Note.—Will others who have had successful experience in laying cement floors describe their methods for the benefit of our readers?]

In addition to the points mentioned by Mr. Hodgert, many prefer the bottom of the manger to be a few inches higher than the stall floor, so that the cattle do not have to reach down so far in feeding; and also lay the feed-alley floor about six inches higher than the bottom of the manger, which facilitates the labor of putting the fodder before the animals. With regard to cements, thousands of excellent floors have been laid of

good rock cements, such as Thorold and Queens-ton, as well as the Portland brands. The latter are more costly, but they harden or "set" quicker, and in mixing the concrete, a less proportion of cement to gravel is used. About 1 part rock cement to 5 or 6 of gravel is what we have commonly seen used. An inch finishing coat of say 1 part cement to 2 or 3 of sharp sand is recommended by many, to be put on while the lower concrete is still soft.—Ed. F. A.]

WIREWORMS.

A subscriber writes asking information as to the best method of combating wireworms?

Ans.—In reply to your correspondent, I am sorry to say that almost all crops are liable to attack by wireworms. Their attacks are more often complained of, perhaps, in wheat and potatoes than anything else. It is claimed by some that rye and barley are much less attacked than other grain crops. Considerable injury is sometimes done to corn. As to soil, I believe that any rich soil suitable for crops is liable to contain wireworms. They are most abundant where land has been for a long time in pasture. The worst injuries which have come under my notice were on black muck and on a heavy loam. There is no satisfactory remedy known for wireworms. The best results have followed plowing infested land twice: the first time in August, when the insect is in the soft and delicate pupa state, and afterwards late in the fall, when the wireworms which are not full-grown have formed the cells in which they pass the winter. Disturbing them at that time has a fatal effect on many of them. It may be mentioned that no treatment of the seed before sowing is of any use. Very extensive experiments of this nature have been tried, but without any success whatever. Although the grubs of the skipjack beetles are all known by the name of wireworms, there are a great number of different kinds, probably nearly 600, and these differ considerably in their habits. J. FLETCHER.
 Central Experimental Farm.

DOGS AND SHEEP.

I have a lot of sheep I want to turn into a pasture beside a small woods where a dog kennel is kept. I feel somewhat doubtful as to the safety of my sheep, as the dogs are continually running through my field. What shall I do in the matter? I understood that I was privileged to shoot dogs I found among my sheep, but it is a thing I would not care to do unless compelled to.

J. A. H.

Ans.—In the event of any of your sheep being killed or injured by the dogs in question, or any of them, you would be entitled to recover the damage occasioned thereby from the owner or keeper of such dogs by an action for damages or by summary proceedings before a justice of the peace. You would not be warranted in shooting the dogs, as suggested, unless there were reasonable apprehension that if not killed they were likely to pursue, worry, wound or terrify the sheep or lambs.

SOWING RAPE IN CORN.

Could you give any information in regard to sowing rape seed in corn at the last cultivating? Would the corn shade it too much, and if the corn was not taken off in time to pasture rape, is not the rape a good fertilizer to plow under. H. C. Norfolk Co., Ont.

Ans.—Rape seed may be sown broadcast in corn after the last cultivating, at the rate of 4 or 5 lbs. an acre, and if sown while the land is loose, before a rain, will need no covering, and, as a rule, will produce a lot of pasture after the corn is harvested, if weather conditions are favorable. The earlier the corn is cut, the better the growth of rape may be expected, and any that is left when the land is plowed will be helpful as a fertilizer. If the land is not fall plowed, the rape will make good pasture up to the time it is covered with snow. Some have good results from this method, while others, owing to heavy crop of corn shading the ground so completely, have found the rape grow spindly and amount to little.

PURE-BRED, THOROUGH-BRED, AND STANDARD-BRED.

Will you kindly explain the difference between the terms, pure-bred, Thoroughbred, and Standard-bred?

2. What type of a horse can be raised by breeding a mare 15 hands high and weighing about 1,200 lbs. to a heavy draft horse such as a Shire or Clydesdale? YOUNG STOCKMAN. Welland Co., Ont.

Ans.—1. The term Thoroughbred is properly applied only to what is known as the English blood horse, entitled to registry as such. The term pure-bred applies to any class of stock entitled to registration in any of the acknowledged studbooks, herdbooks or other public records established for the breed to which the animal belongs. Standard-bred horses are those that are eligible to registration in the Record of the American Trotting Register Association under the rules of its Trotting Standard, which is given in answer to a similar enquiry in May 15th issue.

2. You would probably get a useful general-purpose or farm horse.

POINTS OF YORKSHIRES AND BERKSHIRES.

Kindly inform me, through your paper, the points of the Yorkshire and Berkshire breeds of swine? ENQUIRER. Miami, Man.

We are not aware that a scale of points has been published by the Canadian Breeders' Associations for these breeds. The best specimens of the improved types of the two breeds are very similar in conformation, now that the aim of breeders is to produce hogs of the approved bacon type as nearly as possible; that is, hogs having smooth shoulders, long and deep sides, strong and well-fleshed back (slightly arched), well-sprung ribs, and firm, thick hams. The scales of points adopted by the American Berkshire Association are divided into 25 and 18 sections, respectively, with comments on each, and are more lengthy than we can afford space to reproduce here, while in some particulars they would not be considered by advanced Canadian breeders up-to-date as a standard for judging these breeds. Prof. Shaw's book, "The Study of Breeds," which can be ordered from this office (price \$1.50), gives, in addition to the history of the breeds and much more useful information, the scale of points for judging in so far as such have been adopted or published.

BRUSH AND BROOM HANDLE FACTORY.

1. Could you tell me, through your paper, where there is a brush and broom handle factory? 2. I would like to know how much capital it would take to start one. I have taken the "Farmer's Advocate" for quite a long time and would hardly do without it now for twice the cost. A. L. E. Hastings Co., Ont.

Ans.—1. Columbia Handle Co., London, Ont.; Ashman Bros., Rebecca, Ont.; W. G. Barnes, Green River, Ont.; and Taylor & Lount, Markham, Ont.

2. The amount of capital required will depend on the extent of the establishment and the nature of the plant and machinery. Some of the persons mentioned above might give you more specific information on that point.

PORTABLE FENCE FOR SHEEP.

In February 15th "Farmer's Advocate" I saw an inquiry from a Bruce County subscriber about wire netting for portable sheep fence. If subscriber will write to the Page Wire Fence Co., Walkerville, Ont., they will either deal with him direct or send him the address of their nearest agent. ROBT. CLOSE. Huron Co., Ont.

PIGS GRITTING THEIR TEETH.

Could you tell me the cause of young pigs and shoats, apparently thrifty, gritting their teeth? Norfolk Co., Ont. H. C.

Ans.—It is probably an indication of digestive derangement, and if the pigs have not had access to gravel or earth, the sooner they have the better, as the effects of indigestion may soon become more apparent.

CASTRATING AGED BOAR—DOCKING SHEEP.

1. Would castration in the case of an aged boar be attended with more risk than in one about a year old?

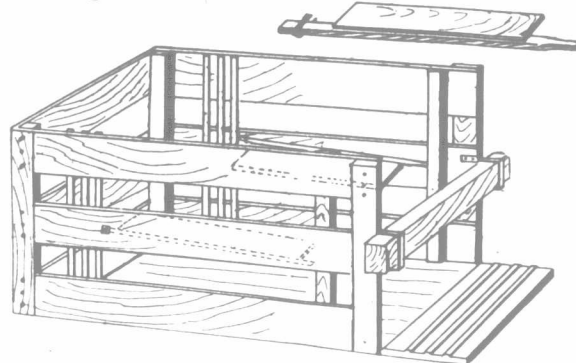
2. I have some ewes in my flock that have not been docked; would it be safe to do so now? If so, please give best method. A SUBSCRIBER. Carleton Co., N. B.

Ans.—1. There is very little risk in castrating an aged boar in the usual way. A little carbolic acid, say one part carbolic acid, to ten of oil, poured into the cavity, may be helpful and healing, but is not absolutely necessary. It is well to allow access to a creek or pond of water after the operation.

2. Sheep may be safely docked at any age if not excessively fat. Tying a soft cord moderately tight around the tail above the point at which it is to be severed will generally prevent excessive bleeding, but it is safer to sear with a hot iron also. A dressing of carbolic acid will heal and also prevent flyblow. It is not well to perform either operation in very hot weather.

BREEDING CRATE FOR HOGS.

Kindly publish in your next issue plans and description of a breeding crate for hogs. We have a very large Yorkshire boar, and being desirous of having a crate in which to breed small sows, we were at a loss for information, so we resolved to apply to your valuable paper. W. J. M. Hastings Co., Ont.



A breeding crate in which to place sows while being served is almost indispensable, and will be found to save time and trouble as well as to facilitate the service, especially of young or small sows, or, for that matter, sows of any age or size. A breeding crate is built the same as a shipping box, with the top left off, and open at the rear end. It should be four feet ten inches long, two feet wide, and two feet nine inches high. The corner posts had better be two by four, and the side boards six or eight inches wide. The front is closely boarded, and slats are nailed on the inside of the side boards, at intervals of say six inches, near the front end, into which a false front is slid down from the top to shorten the box for small sows. Two iron staples or keepers are nailed on the inside of the rear posts, extending an inch and a half behind the posts, through which staples a four-inch slat is run, to keep the sow from backing out. This should be about fourteen inches from the bottom. (The artist has shown this slat too thick.) A platform behind the crate, for the boar to stand upon, is essential in the use of a small boar to large sows, and, indeed, in most cases, irrespective of the size of the sow. This platform may be of two by four scantling, with boards across them, and inch slats on these to prevent slipping of the boar's feet. If it is required to be higher it can easily be raised by putting pieces under it. The foot rests for the front feet of the boar (shown above the box, and also by dotted lines), to sustain the weight to the relief of the sow, is one of the most important parts of the box. In its construction, a piece of strong, tough wood is used, two by two inches, and two feet eight inches long. Round it, at the rear end, to fit into holes in the rear posts; of the holes there should be three, at intervals of say four inches. The front end of the strip should be left square, and fitted into a square staple which goes through the middle side board at the distance of two feet eight inches from the rear post, and is secured by nuts on the outside of the board. On the top of the two by two strip you nail a six-inch board, say about four inches shorter than the strip, leaving the strip extending beyond the board at both ends. This board is the foot rest and also prevents the sow from moving sideways, if it is a small sow. If it is a large sow, and more room is needed, you turn down the side rests, which gives six inches more space. To do this, loosen the nuts on the front staples, pull out the rounded end of the strip, and then change the square of the front end so as to let the shelf fall down. Thumb nuts, such as are used on wagon rods, are handiest for this, since they need no wrench. This crate should stand in a corner of the pigpen, and a short hurdle is handy to guide the sow into the box.

WATER SUPPLY IN STABLES.

Could you give the address of a firm who manufacture a watering device for cow stables? Chilliwack, B. C. A. C. W.

Ans.—A. M. Rush, Harriston, Ont.; Ontario Wind Engine Co., Toronto.

APPEAL FROM MAGISTRATE.

A laid an information and complaint before a justice of the peace for an assault made by B upon A, and, in due course, B was convicted for said offence. B, thinking himself aggrieved, paid the penalty and costs imposed by the justice, under protest; also gave the justice notice that he intends to appeal. There was no question of law raised at the trial, and B made no objection until after the justice announced his decision.

1. Would B have to enter into a recognizance to prosecute his appeal, before the justice that tried the case or some other justice for the same county?

2. Would the recognizance have to be given over to the justice who tried the case?

3. Before whom, and how soon, would B have to enter into said recognizance?

4. How would he have to proceed in general?

5. State justice's duty in case of an appeal? Addington Co., Ont. SUBSCRIBER.

Ans.—1. Yes. He must give a recognizance before some justice, with two sufficient sureties, conditioned personally to appear at the court and try the appeal, and abide by the judgment on appeal, and pay such costs as may be awarded by the court. Or, instead of entering into such recognizance, he may deposit with the justice such sum as the justice considers sufficient to cover the penalty, costs of conviction and costs of appeal. 2. Not necessarily. 3. Before a justice of the peace forthwith. 4 and 5. It depends upon the nature of the appeal. We have not sufficient information in this connection to enable us to state either the appellant's course of procedure or the duties of the magistrate in respect of such appeal.

PLOWING CLOVER SOD FOR WHEAT.

I have a field which I intend to put fall wheat in this season. Two years ago it was well manured and had roots on. I seeded it down after the roots with almost pure red clover; a very little timothy. It is a very thick bottom. The land is a little light and gravelly. I took one crop of hay off it and I intend to cut it early this year. Would you advise me then to let the clover grow up and plow it only once when it is time to put the wheat in, or plow early enough to plow twice? If twice, when should it be plowed? Huron Co., Ont. W. L. F.

Ans.—By all means plow only once, and that in July, rolling and harrowing immediately after plowing. Harrow soon after each shower of rain to retain moisture and firm the land. If weeds or grass appear, give shallow surface cultivation and you will have a first-class preparation for wheat. If plowing is delayed till the aftermath grows up, the soil will be robbed of moisture, and the clover turned down will keep the bottom loose so that the wheat roots will not secure a strong hold of the ground, and the lack of moisture, especially if the fall season should be dry, will prevent a strong and vigorous growth of the wheat. By plowing early you secure the decomposition of the roots more thoroughly than if plowed later, and you secure the nitrogen stored in the nodules of the roots as completely as if plowed later, while the better mechanical condition of the firm and moisture-laden land will more than offset any fertility which the heavier top of clover would give.

ADVANTAGES OF CANADA—PLUM SPRAYING.

I am a subscriber to your paper and like it very much. I am very interested in the Northwest (Canadian). 1. Kindly give me the most of the best points of advantage to settlers that Canada has over the United States? 2. Also give me a mixture for spraying plum trees? EDGAR DETWEILER. Waterloo Co., Ont.

Ans.—1. There is not sufficient space in this department of the "Farmer's Advocate" to enumerate all the advantages of Canada. It would take a whole paper to do that with any degree of justice. The Immigration number of the Manitoba and Northwest edition of the "Farmer's Advocate" (Winnipeg, Man.), recently issued, contains the most complete and valuable description of that country we have seen, particularly in the practical advice given to prospective settlers.

2. Bordeaux mixture for fungous diseases and black-knot; kerosene emulsion for plum scale. After blossoms have fallen, add Paris green for curculio and jar the trees. In your March 15th "Farmer's Advocate," page 216, you will find spray calendar and full directions.

SERVICE FEES.

If A and B each have a bull held for service, and C takes his cow first to A's bull, which serves her; then to B's bull, which also serves her, and when C's cow calves she has twins, one marked somewhat like A's bull and the other like B's: 1. Can A and B each collect service fee, or can B alone, as it was his bull that served C's cow last? 2. C refuses to pay A. Can he lawfully compel him to? Simcoe Co., Ont. A. T.

Ans.—1. Each of them is entitled to collect. 2. Yes.

WOOL PRODUCTION: VARIOUS BREEDS.

What is considered a good weight of fleece from sheep, when about two years of age, of the following breeds, viz.: Lincolns, Leicesters, Cotswolds and Dorsets, also Shropshires, Oxford Downs, Suffolks, Hampshires and Southdowns? In what order do the white-faced breeds stand as regards quality of fleece, also the Downs?
 Sherbrooke Co., Que. J. R.

Ans.—This is a delicate question, and probably no answer would be satisfactory to all breeders of the different varieties, as so much depends upon the feeding and other conditions that any comparative statement is liable to be varied. Prof. Shaw, in his book, "The Study of Breeds," gives the following as approximately the average production in pounds of unwashed wool: Lincoln, 12-14; Cotswold, 11-14; Leicester, 9-11; Dorset, 6-8; Shropshire, 9-10; Oxford, 10-12; Suffolk, 7-9; Hampshire, 7-10; Southdown, 5-7. As to quality, much, also, depends upon the feeding and condition, and on whether by quality is meant simply fineness of fiber, or whether strength, luster, etc., which are important features, are taken into account. As to fineness, we should say, in a general way, the order would be about as follows: Long-wools—Leicester, Lincoln, Cotswold; Downs—Southdown, Hampshire, Suffolk, Shropshire, Oxford.

BREEDING A MUSTANG.

I have a mare (a mustang), about 13½ hands high and about 6 or 7 years old, which I would like to breed to some good stallion, if worth while. Some of my neighbors, professing to know more about such matters than I do, say I would probably get a foal of better quality and size than herself, while others are equally positive that the product would not be any improvement on the mare. If the latter opinion be correct, I would not care to waste either money or time making the attempt. Kindly advise me?
 York Co., Ont. A. E. C.

Ans.—It is very doubtful whether you would get a colt that would sell at maturity for more than one half what it cost to raise it. It might be an improvement in size and form on its mother, but would probably be of no class that is salable at a price much higher than that of the mustang. In fact, there is no money in breeding any but the best, and you cannot reasonably expect that sort from a scrub mare.

REGISTERING HACKNEYS.

Can Hackney horses be registered with four crosses the same as Clydesdales?
 Grey Co., Ont. J. W. B.

Ans.—The standard for Hackneys is altogether different to that of Clydesdales. In the first place, to commence to breed Hackneys, you choose a mare fairly well bred, who has some high-stepping proclivities. This mare is chosen and inspected, and is what we call an "inspected mare" or foundation stock. A filly from this mare and a recorded Hackney stallion is what we call "half-registered," and a filly from this half-registered one is what we call a full registered filly. The colts from this second mare, then, can be recorded, but a colt from a half-registered mare cannot be recorded.

HENRY WADE, Secretary.
 Toronto, May 23rd, 1902.

TRAINING CALF'S HORNS.

I have a very fine calf and his horns are growing back. I understand that scraping the horns on one side will make them grow forward. Please let me know, through the columns of your paper, which side grows faster, the side scraped or the opposite side?
 A SUBSCRIBER.
 Maine, U. S.

Ans.—You need not be anxious about the calf's horns growing back the first six months; they will probably come forward all right as it grows older. Should they not after that time, scrape them on the inside, and keep oiled. The opposite side will grow faster and the points will incline inward.

STONE SILOS.

Would you advise me to build a stone silo? If the walls inside were smoothly plastered with cement, would the ensilage keep? If you do not think it advisable to build a stone silo, please advise me as to the best kind to build.
 J. T. L.
 Peel Co., Ont.

Ans.—No. We do not know of a stone silo that is wholly satisfactory. Smoothly plastering with cement would probably help its keeping quality, but we have not seen it tried and would not risk it, nor would we recommend any but a round or octagon cement-concrete silo for permanency and efficiency combined. Read the editorial and letters on cement silos in the April 15th and May 15th numbers of the "Advocate."

BOOK ON HORSE TRAINING.

Can I secure Gleason's book on horse training, through your office? What price?
 J. W. B.
 Grey Co., Ont.

Ans.—Yes. 50 cents.

ENSILAGE AND TUBERCULOSIS.

I have heard several times that ensilage causes tuberculosis in cattle. Will you kindly inform me if that is the case, as I was thinking of building a silo this summer, but if it causes disease in cattle, I will give it up?
 W. H. B.
 Wellington Co.

Ans.—This unfounded tale has been on its rounds for so many years that it really ought to be superannuated. We believe the testimony of thousands of good men who have been feeding ensilage for at least ten years would unite in showing that their cattle have been healthier and more productive since they began its use than they were before.



A THRIFTY BEGINNING.
 At Red Deer Hill, Saskatchewan.

RAILWAY FENCING—NOXIOUS WEEDS.

1. What is the address of the proper person to correspond with regarding Canadian Pacific R'y fences? 2. Can I force a railway company to remove a bed of couch grass which is allowed to seed and spread onto my farm? 3. If so, what steps should be taken?
 J. T. T.
 Wellington Co., Ont.

Ans.—1. H. P. Timmerman, Esq., General Supt. Ontario Division, C. P. R., Toronto. 2. Yes. 3. Have the reeve of your municipality notify the company to attend to the matter.

HAY ON SWAMP LAND.

I have about four acres of swamp land, a black loam, lays low, and the frosts kill nearly everything that I put on it. What would you advise me to sow on it for a hay crop?
 T. C.
 Oxford Co., Ont.

Ans.—Probably millet sown in June would give the best crop of hay this year. Timothy sown in the fall, after the millet is harvested, the land being first well harrowed, might give a fair crop of hay next year, but, of course, is liable to damage from late spring frosts.

WOODEN HOOPED SILOS.

Could you give me any information with regard to building the new kind of round silos, with elm hoops, boarded inside with 1 or 1½ inch pine, weather boarding outside, or any other better plan you could suggest?
 CHATEAUGUAY CO., P. Q. JOHN LOCKERBY.

Ans.—Will some reader, who has had experience with the sort of silos referred to, kindly

send us the facts as to their construction and durability. If Mr. Lockerby will refer to the April 15th and May 15th issues of the "Farmer's Advocate," he will notice that the permanent cement-concrete silo is rapidly coming into favor.

ROUND CEMENT SILOS.

Kindly inform me of some party who is building a round cement silo, or where I can see one under construction, and where I could see the iron curbs used? I expect to be in your city shortly.
 N. Y. State. DAVID O. PATTON.

Ans.—Probably a dozen or more round silos can be seen in one locality in Huron County, about one hour's run on the L. H. & B. division of the G. T. R., north of this city. New ones will doubtless be under construction ere long. By calling at the "Farmer's Advocate" office when you arrive, more specific directions will be gladly given you.

HAIRY VETCHES (VICIA VELLOSA).

1. What is the best way to grow hairy vetches? 2. Would it do to sow it on a piece of well-manured fallow land? 3. Does it make good pasture for milk cows? 4. Should it be cut and fed to them, or could they be allowed to eat it off the field? 5. If cut, can there be more than one crop got in a season?
 J. S. H.
 Peterborough Co., Ont.

Ans.—1. Hairy vetches can be sown alone, either by hand or with a grain drill, and at the rate of one bushel to one and one-half bushels of seed per acre. In Ontario, it is somewhat safer to sow in the spring than in the autumn. When the winter is favorable, the seed, which is sown in August, usually produces an earlier and a heavier crop than the seed which is sown in April or May.

2. The hairy vetches should do exceptionally well when sown on well-manured land which has been summer-fallowed.

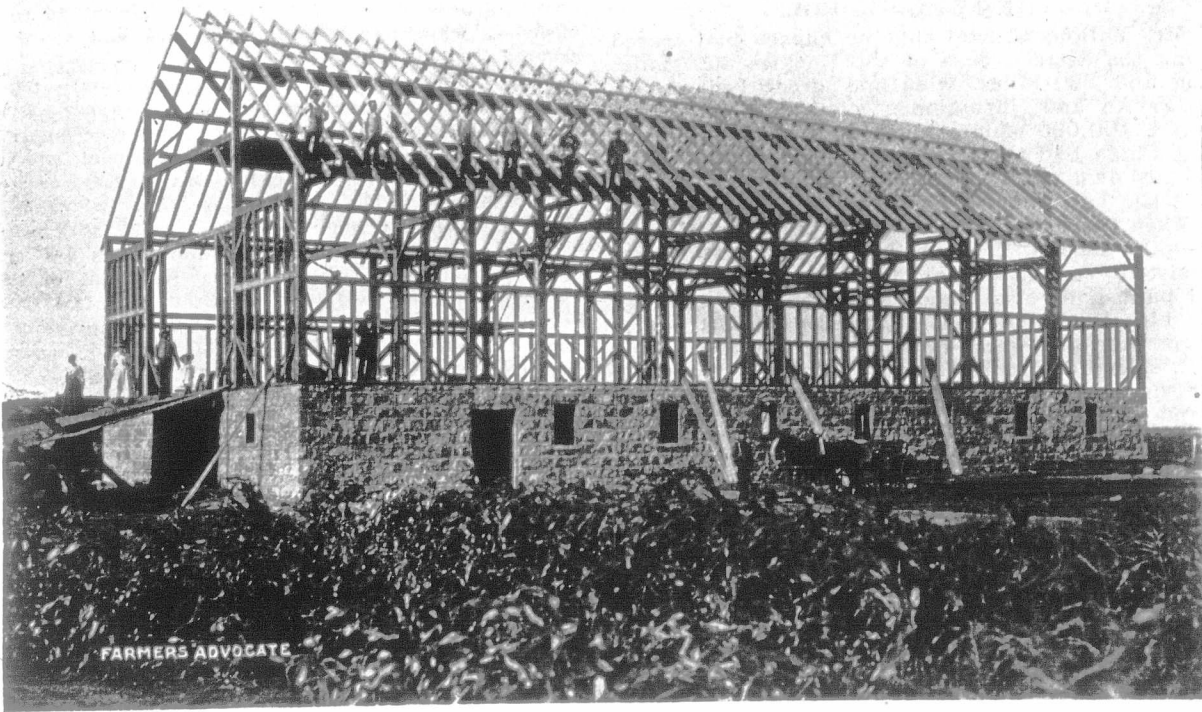
3. We have pastured the hairy vetches with young cattle, but not with cows giving milk. I have, however, read accounts of others who have pastured the hairy vetches with milch cows with good success.

4. The crop of hairy vetches can be used for pasture, for green fodder, for putting into the silo, or for converting into hay. We have had no experience, however, in using it as a crop for the silo.

5. The hairy vetch has a deep root, and continues to grow for a long season. It may be cut frequently, or allowed to remain uncut until the autumn. We cut the hairy vetches five times in 1900, and again five times in 1901, and at the time of the last cutting in each season the ground was completely covered with the green crop. In an experiment, conducted in 1901, with eighteen different varieties of leguminous crops, for green fodder, the hairy vetches produced 15 tons per acre, being a larger yield than that produced by any of the other seventeen varieties.

C. A. ZAVITZ, Experimentalist,
 Ontario Agricultural College.

Mr. G. F. Strawson, of England, whose experience in treating wild mustard by spraying it with a 3-per-cent. (15 lbs. to 50 gallons of water) solution of copper sulphate has been recorded in the "Farmer's Advocate," says that the best time to kill the weed is when the plant is young and in soft fiber, after it has put out a few rough leaves.



AN EVIDENCE OF PERMANENCY.
 Mr. A. Dobson's barn frame, at Heaslip, Manitoba.

MISCELLANEOUS.

100,000,000 Acres of Wheat Land.

The Rev. John McDougall, Superintendent of Indian Missions in the Northwest Territories and Manitoba for the Methodist Church, who has had an experience extending over forty years on the plains and in the forests of the West, addressed a large audience in Toronto, lately, advocating the importance of liberality toward the maintenance of mission work in the West. He showed that, apart from the importance of supplying the new and scattered settlements with the gospel, the development of the country would prove the most profitable investment for Canada. Referring to the marvellous possibilities and resources of this country, Mr. McDougall is reported in the Toronto Globe as follows:

THE IMMENSE WHEAT AREA.

He took as an illustration of the greatness of that country a block of land 1,000 miles square (640,000,000 acres), abutting the 49th parallel, and lying between the Rockies and the western boundary of Ontario. This great stretch of territory contained, in his estimation, more acres capable of agriculture and of responding to the thrift and mechanical operation of industrious men than any other stretch of like dimensions on the face of the globe. He called it the very acme of God's work in this respect. Of this great block of land he took 100,000,000 acres, less than one-sixth of it, and placed a conservative estimate of a yield, when cultivated, of fifteen bushels an acre. Then he took the bulk estimate, and asked what it would mean to move it to the markets of the world. Looking at it as Mr. McDougall presented it, the haulage necessary seems enormous. He took a train of 40 cars leaving Winnipeg for the east. Each car would carry 1,000 bushels, making an aggregate cargo of 40,000 bushels. Then he asked how many trains of that kind it would take to move the conservative estimate of fifteen bushels an acre of one-sixth of his selected block. He had found that it would take 37,500 trains of 40 cars, or a little more than 102 trains a day for every day of the year. Figuring more finely still, he had found that it would keep one of such trains moving out of Winnipeg every fifteen minutes, day and night, for 365 days to move the wheat crop of but one-sixth of that stretch of country.

MILLIONS OF CATTLE, SHEEP AND HOGS.

But Mr. McDougall did not confine his estimates to wheat alone. He supposed that in time live stock would be raised in that part of the country. He had waited 23 years for a railway, and had come to know the virtue of patience. The country was rich in pasture land and grasses of rich butter- and cheese-producing qualities, so that it promised great possibilities. Mr. McDougall allowed one fat bullock a year for shipping purposes to every 40 acres of one-sixth of the block 1,000 miles square. That meant 16,000,000 head of cattle a year. At 20 head to a car it meant 40,000 trains of 20 cars each, or a little more than 100 train-loads of cattle moving out of Winnipeg every day for a year. To every ten acres he allowed one fat sheep and one marketable hog. That meant 64,000,000 of each, which, loaded 200 to a car, would show 32,000 trains of twenty cars each moving out of Winnipeg, one about every fifteen minutes, day and night, for a year. Butter and cheese were not overlooked, but of wheat and live stock alone, at this very conservative estimate, it was shown that 109,500 trains of twenty cars each would pass out of Winnipeg every year, or one train every five minutes, to the markets of the world.

THE FUEL SUPPLY.

Mr. McDougall said that he himself had traced along the eastern base of the Rockies 500 miles long and 200 miles wide one great bed of rich anthracite and bituminous coal, or, in other words, 100,000 square miles of it. He had heard that China had the largest coal-beds in the world, but his own observations had led him to believe that she had not 1-5 as much as this one block.

Then there were great water powers. Mr. McDougall, in his travels, had found strong and persistent currents. He and a companion in an old punt had once gone with the current down the big Saskatchewan 160 miles in 28 hours. There were also great natural reservoirs of water, with splendid tumbling power. The country along the valley of the North Saskatchewan was compared with England. It looked to Mr. McDougall as if some great race had lived there centuries ago, so splendid were the terraced forests and natural beauties.

The preacher called upon his hearers to go in and possess this great country, to evangelize it in keeping with the progress that is being made there. In 1868 the first missionary of the Methodist Church had gone in, and now a great many stations were becoming self-sustaining. But the supply was still very inadequate. Edmonton alone was calling for eight new men. Mr. McDougall advised Methodists to invest in that great land, promising that the investments would bring back rich returns.

MARKETS.

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

FARM GOSSIP.

A Model Farm for Sale.

It is safe to say that in no single section of the fair Dominion of Canada are farmers more generally prosperous and well provided with the comforts and luxuries of life than in Oxford County, in the Province of Ontario. Blessed with a rich and well-wearing soil to begin with, they were happily the pioneers in the adoption of the co-operative cheese-factory system in Canada, which was destined to bring great wealth to the country and to save the farmers who participated in it from the fate of those who, in many other districts, too long blindly followed the system of selling the bulk of their grain crops and hay instead of feeding it on the farm, the result being that in Old Oxford, even in times of general depression elsewhere, the farmers here had a steady market for their main product, and the price of land never slumped as it did in other sections, when, some years ago, the cry of hard times so commonly prevailed. The pork-packing industry naturally found its favorite field in this dairy district, and as dairying and hog-feeding fit together so well, it is here we find the most successful packing houses and a ready market for hogs as well as milk, and the farmers here have lived on Easy Street while less progressive ones have been digging in the dirt for what these men have found on the surface of the soil in their rich pastures and on their corn fields top-dressed with homemade manure full of the finest fertilizing elements.

Such is the nature and character of the fine farm of 150 acres advertised for sale in this paper by Mr. George Sebben, of Ingersoll, on the Grand Trunk and Canadian Pacific Railways, and situated within half a mile of the corporation of that prosperous town of between 5,000 and 6,000 of a population, within two miles of three successful cheese factories, within one mile of the principal pork-packing houses in the Dominion, and of by far the largest milk-condensing factory in Canada, and which will very soon be the largest in America, furnishing a steady market for any quantity of milk, at a profitable price. This farm, recently visited by a representative of the "Farmer's Advocate," is in the highest state of cultivation and fertility, producing uniformly heavy crops of grain, grass, roots and corn; is beautifully located and gently undulating, commanding a charming view of the surrounding country and of the town; is well fenced, has abundance of water and shade trees of natural growth, and a plantation of evergreens (Norway spruce) on two sides of the farm, at a distance of three rods apart, which are growing rapidly. There is on the farm 20 acres of maple sugar bush, in which 600 trees may be tapped. A public road runs on three sides of it, and the newly-constructed railway from Ingersoll to Tilsonburg bounds the fourth side, a road which is to be operated by the C. P. R., and is intended to be extended northward to Georgian Bay. As evidence of the productive capacity of the farm, which is extensively underdrained, it may be stated that last year, from a ten-acre field, Mr. Sebben harvested in July a crop of clover that averaged three tons per acre, which at the reasonable price of \$8 a ton, would have realized \$24 an acre, and a second crop of clover producing five bushels an acre of seed, which sold for \$6 a bushel, making in one season \$54 an acre, or \$540 from ten acres. The yields of grain on the farm, which of course have varied with the character of the seasons, have been: of wheat, from 24 to 42 bushels per acre; of oats, 60 to 80 bushels; of barley, 40 to 50 bushels; while immense crops of corn and roots are assured in the average of years.

The buildings, which are illustrated from a photograph on another page in this issue, are new, extensive, up-to-date, and delightfully situated. The dwelling is of brick, 54 by 28 feet, with slate roof, and full size basement, is heated by hot-air furnaces, and elegantly finished. The main stock barn (which is T-shaped) is 76 feet long by 43 feet wide, with a side extension 52 by 35 feet, with 20-foot posts and truss roof, with basement stables the full size of these buildings, having stalls for 35 head of cattle and 7 horses, besides boxes for young stock, ample storage room for roots, a large and satisfactory silo, and wide feed passages. Water is supplied to the stables by windmill power from a well containing 100 feet of water, and machinery for cutting, grinding and pulping feed is also run by the windmill.

Apart from the barn is a model modern piggery, 100 by 35 feet, built of brick and floored with cement concrete, with driveway to a roomy second story, where implements are stored, as well as feed, which is conveyed to the piggery by chutes, while a tank on the same floor supplies water for mixing feed and for flushing the pens.

An ice house, milk house, and water-tank house, from which water may be conveyed to all the barns, completes the outfit of buildings.

There are on the farm three orchards of choice fruit, including apples, plums, pears, peaches and cherries, besides abundance of small fruits.

The soil is an easy-working clay loam, which, under the judicious management of the owner, has paid for the farm, although the bulk of the land was bought at \$90 an acre 20 years ago, when the buildings on it were old and inferior, and has paid for the new and elegant buildings and made lots of money besides, and the only reason for offering it for sale now is that Mr. Sebben desires to retire from business and take time to see more of the world, as he has no sons that have chosen farming as an occupation. To any man wanting a first-class farm, with first-class buildings and in a first-class neighborhood and location, this is an exceptionally favorable opening, and such persons will do well to visit the farm and see for themselves that in this brief description nothing has been overstated or exaggerated.

Kent Co., Ont.

We are having an unusually late spring. The weather, although excellent for the rapid advance of farm work, remains cool. The rains we have had were cold, consequently vegetation advanced but slowly and cattle have been turned out later than for some years past. The fall wheat is fair to good. It is a better average crop than last year, as we hear of none plowing it up. Spring grain is doing as well as can be expected. Quite a number are prepared to plant corn, but consider the weather too cold to do so. A large number of farmers are going into the sugar-beet production—some for the factory directly, others for the Sugar Beet Syndicate. This syndicate, composed of ten prominent and wealthy citizens of Chatham and surrounding country, rent the land, paying \$8 per acre for it, and give the owner the option of working it for them, paying 25 cents per acre for rolling, harrowing, etc. They have hired an experienced manager to conduct their business, and they have already nearly 200 men under their control. The outcome will be watched with interest.

With the exception of wheat, which remains at about the same old figure, the prices of farm products continue to soar upward, the greatest advances being in the meat line. Owing to the scarcity of beef cattle, the local butchers have advanced the price of steak to 15 cents per pound. The price of other meat is rising in sympathy with the above, and even eggs are now 12½c. per dozen. Live hogs are now \$6.25 per cwt. Prices on the local market are as follows: Butter, 16c. to 20c. per lb.; eggs, 12½c. per dozen; chickens, 35c. and 40c. each; apples, 40c. per peck. Potatoes, \$1.25 per bag for late ones and early sorts are almost unobtainable. Beans are up again to nearly \$1 per bushel; corn, 60c. per bushel; other grains about same as last quotations. Should we escape frost, the indications are that we will have an unlimited supply of fruit, as every tree and bush is laden with bloom.

W. A. McGEACHY.

Grey Co., Ont.

Fine weather came early in March, and was rather unseasonable, consequently late frosts and backward growth seem sure to follow; but the mild rains and warm weather of the last two weeks have revived growth, and nature once more puts on its garb of green, mingled with the bloom of the early fruits. But at present the mind of man is turned from this aspect to discuss political questions of the day. Politicians are on the move, with their oily speeches, and one attending their meetings for information would come away puzzled, as one side declares black is white and the other white is black. As education and civilization advances, it is to be hoped the rising generation will view the country's needs in a more independent spirit and partly be relegated to the background. Spring grain is coming along nicely, and the pasture with those who were not short of feed and kept their stock stabled is good, but with those who were forced to turn their cattle out in the cold, the pasture is short and it will take it all its time to get started enough before the hot weather sets in. There is a lot of corn being sown for silage purposes. Some are going to make it take the place of roots, which I think is a mistake, as my experience teaches that ensilage is all right in its place, as it is a sure crop and you will get more food to the acre than of any other crop grown, but if I were forced to do without either I would take the roots ahead of corn; it is very seldom you cannot get a crop of both if the soil is properly prepared. The prospect for fruit at present is excellent, and if nothing happens, Georgian Bay District will have a large fruit crop. If proper attention is paid to spraying and the packing and labelling of the fruit in its respective grade, the dealer will be able to hold the confidence of the consumer, and consequently the producer will be benefited.

V. G. B.

May 24th.

Hog Cholera in Oxford.

Some 300 hogs belonging to Mr. John King, of Hickson, Oxford Co., Ont., either died or were destroyed by direction of the Government Inspectors, recently, in consequence of an outbreak of hog cholera. The disease is understood to have been brought in with an importation of store hogs purchased in Kent County. Inspector Moore, V. S., of Ottawa, and J. H. Tennent, V. S., of London, have dealt with the outbreak, which is reported to have been successfully confined to Mr. King's premises. At Otterville, in another part of the county, however, an isolated case, in which only a few arrivals were affected, occurred.

Oxford County, Ont.

Generally speaking, we have had a good seeding season. The seed grain was got into the ground in good time and in good shape, and with the exception of some barley, is looking very well. On a field on which we had fall wheat last season, we sowed barley pretty early. The fall wheat last season on this field was very much destroyed by the Hessian fly and was not half a crop. There appears to be some pest working in the barley, for it looks very much singed-like in spots. I thought at first it was from the frost, but now I begin to fear that it is the fly that is doing the damage. I sowed salt a short time ago, and think it looks a little better since then. In spots not affected the plants look very bright and luxuriant, and this perhaps makes the affected parts look worse.

Last season we sowed our mangolds too early, and had much extra work in the weeds choking the young plants, as the seed did not germinate for some time after sowing. This year we have got the ground in better shape and waited until the ground was warm, and think we will have less trouble in thinning. It is almost impossible to give the ground intended for roots and corn too much working, so long as it is done when in proper season and not too wet.

Pasture is doing well; the grass is growing and the milk is flowing, and the price of cheese is high, so that the farmer smiles as he milks the cows. Cheese is nearly 11 cents. Live hogs are bringing 7 cents this week, but I was sorry to read in our local paper, last night, that what appears to be hog cholera has shown itself in our county. We trust that it will not spread. Farmers should crowd on those pigs that are fit to be fattened, and get them out of the way. Keep the pens as clean as possible, and sprinkle a little fresh slacked lime or plaster of Paris around the pens after cleaning out, which should be done three times a week. Keep the pigs out a portion of each day. Feed charcoal. Farmers have not had to kill calves this year, as there have been men around picking them up at \$1 each. I understand that they are sent to Toronto to be manufactured into "canned chicken." Well, I suppose it may be "just as good."

Wheat has taken a rise again, and was bringing 80 cents in our local market.

The fall wheat generally is looking well and of a very bright, luxuriant green, although, owing to late sowing, it is not as far advanced as usual at this season.

There is still being a considerable business done in the horse trade. Large numbers of the lighter horses are being offered for sale to go to South Africa, and some parties are buying heavy horses to go to Manitoba. Good blocky young horses are not easy to get. A great many mares are being bred this season. We think farmers who have suitable mares should go more into raising heavy horses, as there seems to be any number of lighter horses in the country for sale. If it had not been for this South African trade, it is not easy to see what could have been done with so many of that class.

New Branch Bank in London.

The rapid and substantial improvement noted in the growth and commercial importance of the City of London, and the undoubted prosperity of the great farming district surrounding it, has attracted the attention of the directors of the Dominion Bank, who have leased the premises at the north-east corner of Dundas and Talbot streets and will open a branch bank here in a few weeks, which will be a great convenience to farmers attending the market. The Dominion, it is needless to say, is one of the leading Canadian banks, having a capital of \$2,500,000 and a rest account of \$2,700,000. For years the late Sir Frank Smith was president, and all the present directors are men eminent in financial and business circles. They are: E. B. Osler (M. P.), president; W. D. Matthews, vice-president; W. R. Brock (M. P.), J. J. Poy (K. C., M. P. P.), A. W. Austin, Wm. Ince, and Timothy Eaton. Mr. T. G. Brough is general manager, and Mr. H. J. Bethune, inspector.

Manure Cellars.

To the Editor "Farmer's Advocate":
I notice in your May 1st number, the question asked, if a manure cellar under a cow stable is in any way injurious to the cattle or building? I have had a stone manure cellar for seven years, and I never found it injurious either to the cattle or building. The manure is dumped down and let lie there until the cellar is full. It never fire-fangs and there is never enough odor from it to be noticed in the cow stable. There are six farmers within a radius of three miles from here who have manure cellars under their cow stables, and they are all well pleased with them.
Huntingdon Co., Que. S. CHURCHFIELD.

Prize Competitions.

The Massey-Harris Company are offering a handsome series of prizes, amounting in all to \$1,000 in cash, at the Ottawa, Toronto and London Fairs, for competitions in judging dairy and beef cattle, sheep and swine; for collections of weeds and flowering plants (350 and 200, respectively), injurious insects, photography, eggs and poultry, bareback riding, house and barn plans, and collections of grain. Applications and entries must be made to the secretaries of the three fairs: E. McMahon, Ottawa; H. J. Hill, Toronto; and J. A. Nelles, London. Prize-winners at one fair are not eligible to enter at another.

Perth County, Ont.

Since last report, the wheat crop has picked up nicely and prospects are very much better. We have also excellent prospects for fruit, although the changeable weather may lessen fertilization, as the bees are prevented from working very steadily on the blossoms. The frost of two weeks ago did little if any damage here, as the bloom was not far enough advanced. The frequent showers lately have stimulated the pasture, and the milk flow is on the increase. This will doubtless be a banner year for the creamery, although there is still a strong tendency in favor of investing in hand separators, on account of getting sweeter milk for the calves. The prospects for all kinds of crops are so far very good, particularly hay and clover. I think there is a larger acreage of oats sown this year, taking the place of peas, of which few but the grass or bugless variety are worth growing. There seems to have been less manure taken out of the yards the past winter than usual, but I do not apprehend it is due to the practice losing favor. Many of the cattle turned out are not looking quite up to the usual standard this spring, probably on account of scarcity of food. The mangels are sown and many have their potatoes in also. Following are local prices for some of our products: Wheat, 75c. to 77c.; barley, 50c.; oats, 40c.; peas, 70c.; hay, \$7 to \$8.50 per ton; chop, \$20 per ton; butter, 14c. to 15c.; eggs, 11c. to 12c.; potatoes, 55c. to 60c.; wool, 12c. to 13c.; hides, per 100 lbs., \$5 to \$5.50; tallow, 4c. to 5c.; live hogs, \$7 per 100 lbs.; bran, \$20 per ton; shorts, \$22 per ton. J. H. B. May 23rd.

Lime as a Fertilizer.

Mr. W. L. Scott, of York Co., Ont., writes the "Farmer's Advocate" respecting the use of lime as a fertilizer. He says: "I had the pleasure of meeting Mr. Simmons, of Colborne, last fall, who showed me over a few of his farms. He uses lime in large quantities for his farm crops. He pointed out two barns, one holding 100 tons of hay, the other 75 tons. 'I filled them both,' said he; 'had two crops same season that yielded six tons to the acre. Only for using lime I know I would not have had more than 75 tons all told.' He also pointed out two fields on which he harvested wheat last year. He gave both fields the same cultivation, only in addition on one field he used lime. On the unlimed field he harvested 26 bushels to the acre; on the limed field, 46 bushels to the acre. He has continuously used lime for many years, and it never fails. He claims it will revolutionize farming, but, strange to say, his neighbors don't follow his example."

Mustard Spraying Experiment.

Mr. M. W. Doherty, associate professor in biology at the O. A. C., is this season conducting a series of trials at Woodstock, London, Parkhill, Stratford, Shelburne, Orangeville, and Weston, for the purpose of determining the efficacy of spraying in order to kill wild mustard. The application will be made about June 15th, or when the yellow blossom begins to appear.

Prof. Shaw's Successor.

Prof. Andrew Boss, who up to this time has held a subordinate position in the Minnesota School of Agriculture, of which he is a graduate, has been appointed Associate Professor of Agriculture and successor to Prof. Thos. Shaw in the Live-stock Husbandry Department. Prof. Shaw, as our readers are aware, has re-entered the larger sphere of agricultural journalism, in connection with The Farmer, of St. Paul, Minn.

Canada's Exhibit in Japan.

Owing to the postponement of the St. Louis Exhibition until 1904, Mr. Wm. Hutchinson, ex-M. P., will have charge of the Canadian exhibit at the Osaka Exhibition, at Japan, next year.

Prison Twine.

We understand that the Central Prison, Toronto, Ont., will turn out binder twine this season, the price being based on the average cost of hemp for the year ending May 31st.

Montreal Markets.

Montreal, May 29.—About 300 butchers' cattle, 1,000 calves and 400 sheep and lambs offered. Prime heaves were scarce and not of very choice quality, but some of them brought 6c. per lb., a slight advance on Monday's prices, quality considered. Pretty good cattle sold at from 4½c. to over 5½c., and the common stock at from 3½c. for lean, old cows, up to 4½c. per lb. for rough, half-fatted beasts. Calves from \$2 to \$8 each. Shippers paid 4c. per lb. for good large sheep, and the butchers paid from 3½c. to 3¾c. per lb. for the others. Yearlings sold at from 4c. to 4½c. per lb. Lambs sold at from \$2.50 to \$4.50 each. Mr. Girard bought a lot of 21 good lambs at \$4 each, plus \$1 over.

C. P. R. Dressed Meat Enterprise.

The Canadian Pacific Railway has secured control of the stock of the Union Abattoir Company, of Montreal, and intend establishing at Hochelaga an abattoir and connecting buildings modeled on the plan of the large establishments at Chicago, with more up-to-date methods for the object of controlling the British and foreign market in dead and live meat.

Toronto Markets.

In our last report the largest run of cattle in the history of the market was recorded. Again we have a larger run by one thousand: Cattle, 5,099; sheep, 771; hogs, 3,237.

Export Cattle.—Choice loads of export cattle, \$6 to \$6.40 per cwt. Medium export are quoted at \$5.60 to \$5.90. Messrs. Brown & Snell bought three loads of exporters at \$6.25 per cwt.

Butchers' Cattle.—As foretold in our last issue, prices for butchers' cattle have a downward tendency. Prices on all butchers' cattle dropped ten cents per cwt. Choice picked lots, average weight 1,150 lbs., \$5.40 to \$5.65. Picked lots of heifers and steers, \$5 to \$5.40. Good butchers' cattle, \$5.25 to \$5.40. Common grades, \$4.10 to \$4.75. Mr. I. H. Devlin, Ottawa, bought two loads of butchers' cattle at \$4.50 to \$5. Mr. Alex Levack bought two loads of best butchers' cattle at from \$4.90 to \$5.50. Mr. J. B. Shields bought one load of butchers' cattle at \$5.75. The Harris Abattoir Co. bought from Mr. Smeasley, of Markham Township, two loads of best export cattle, 1,200 lbs. average, at \$6.40.

Bulls.—Choice heavy bulls sold at \$4.75 to \$5.15; light, \$4.25 to \$4.35.

Feeders.—Choice heavy well-bred steers, weighing from 900 to 1,000 lbs., in demand, at \$4.25 to \$5.

Stockers.—Choice stockers meet ready sale; average 400 to 600 lbs. wanted, at from \$3.50 to \$3.75; choice heavy stockers, average 800 to 850 lbs., from \$4 to \$4.40; poor, ill-conditioned mixed colors, about \$2.75 per cwt.

Calves.—Calves in good demand; not many on offer, at from \$2 to \$10 per head, or from \$4 to \$6 per cwt.

Sheep.—Were steady, at recent quotations, from \$4 to \$4.50 for ewes, and for bucks from \$3 to \$3.75 per cwt.

Lambs.—Yearling lambs sold at \$5 to \$5.50 per cwt. Spring lambs are worth from \$2.50 to \$5 per head.

Milk Cows.—Demand good; not many choice cows on offer. One choice Jersey sold for \$55, but the price ranges from \$35 to \$45 per head.

Hogs.—Best selected bacon hogs, singers, not less than 160 lbs., not above 200 lbs., off car, not fed or watered, are quoted at \$7. Since my last report hogs touched \$7.25 per cwt., but only for two days; but since they have steadily declined, and we do not think that they have touched bottom yet. At present the market is steady at the decline. Light and thick fat are quoted at \$6.75 per cwt; sows, \$5 per cwt.; stags, at \$3 per cwt.

PRODUCE AND GRAIN.

Receipts at the St. Lawrence market are plentiful; flowers and garden truck serve to make a busy place.

Wheat.—Two hundred bushels of white wheat sold at from 75c. to 78c. per bushel; good demand, and prices easier.

Oats.—Two hundred bushels sold at 47½c. per bush.

Rye.—One hundred bushels of rye sold at 59½c. per bushel.

Barley.—Is dull, at 53c. per bushel.

Hay.—Ten to fifteen loads of hay offered each market day. Prices vary, from \$12 to \$15 per ton for timothy, and at from \$8 to \$10 per ton for clover.

Straw.—Four loads sold at from \$8 to \$9 per ton.

Dressed Beef.—There is an increased demand for dressed beef from Toronto, and various points to which regular supplies are now forwarded are Owen Sound, Collingwood, Orillia, Port Hope, Hamilton, Guelph. Beef, fore quarters, per cwt., \$7; beef, hind quarters, per cwt., \$10; mutton, per lb., 8c.; veal, per lb., 9c.; lambs, yearlings, per lb., 11c.; lambs, spring, each, \$5; dressed hogs lower, per cwt., \$8.

Chicago Markets.

Chicago, May 29.—Cattle—Good to prime steers, \$6.90 to \$7.40; poor to medium, \$4.75 to \$6.60; stockers and feeders, \$2.50 to \$5; bulls, \$2.50 to \$6; Texas-fed steers, \$5 to \$6.30. Hogs—Mixed and butchers', \$6.90 to \$7.25; good to choice heavy, \$7.20 to \$7.40; rough heavy, \$6.95 to \$7.15; light, \$6.70 to \$7; bulk of sales, \$7 to \$7.25. Sheep—Good to choice wethers, \$5.40 to \$6.25; western sheep, \$5.25 to \$6.25; native lambs, \$5 to \$7; western lambs, \$5.25 to \$7; top spring lambs, \$7.50.

Beefsteak Cuts.

If that Denver man who has invented a self-heating branding iron will sit up a few nights and perfect a steer containing nothing but porterhouse and sirloin cuts he can be elevated to any height in the public desire he sees fit to specify.—Chicago Live Stock World.

So far as the "Farmer's Advocate" can learn, the local town butcher has already perfected the art of getting choice steaks out of any part of the carcass from neck to heels.

British Cattle Markets.

London, May 26.—American cattle, 7½d.; Canadian, 7½d.
Liverpool, May 26.—Canadian cattle, 7d. Trade fair.



"Oh! What is so rare as a day in June?
Then, if ever, come perfect days;
Then Heaven tries the earth if it be in tune,
And over it softly her warm ear lays."

Ingle Nook Chats.

My dear Guests,—

"This is the state of man: To-day he puts forth
The tender leaves of hopes, to-morrow blossoms,
And bears his blushing honors thick upon him:
The third day comes a frost, a killing frost,
And,—when he thinks, good easy man, full sure,
His greatness is a ripening,—nips his root,
And then he falls, as I do."

The above verses from Shakespeare's Henry VIII. were brought very forcibly to my mind one bright May morning, when I found that the weather had taken a backward somersault and sent us a taste of the March product by way of variety. Alack and alas for my garden! Bleeding-heart (almost in bloom), hollyhocks, phlox, rudbeckia, daisies, a young peony I had watched with pride (it would have had several blooms), chrysanthemums and feverfew newly set out, all presented a truly pitiful appearance after Master Jack's surreptitious visit, and I must admit I felt rather blue.

"Oh Jack Frost! it troubles us to see,
How very, very impolite a boy like you can be."

The pansies, saucy little darlings, were about the only things that survived his caress, but they looked up as hopefully as ever, as much as to say, "Don't feel so bad; all is not lost; we are here still." Although, at the moment, I was on the verge of the Slough of Despond, so far as gardening was concerned, their cheery message consoled me somewhat, and I decided to make the best of it. I had been grumbling that circumstances had prevented my having my flowers in early, but I find my supposed misfortune a blessing in disguise, for were my seedlings as far advanced as usual at this season, I should have lost them all; now I may hope for a fair, if somewhat late, yield of blossoms. So you see there is always something for which to be thankful.

Winsome May still lingers as I write, but ere this chat appears, joyous June will have arrived. Fair June, which is, as one of my guests says, "A bright mixture of roses and sunshine, singing birds and merry streams gliding through fields and valleys of emerald velvet."

It is strange, "Yolebbe," is it not, how differently things appeal to different natures? You say glad some things never inspire you to write, while I feel exactly the opposite way. We are not very far apart just now—perhaps we may meet some day. Do you expect to remain long in the city? I, too, prefer country quiet to city bustle, but life on the farm at this busy season can scarcely be considered quiet. "Maie" and Isabella are welcome to the Nook, also Marie U. and Flossie. "Housenother" and Mrs. T. "Marie" are guests of honor, as we like to have some motherly eyes to look after us, and I like, too, to see the elder members take an active interest in these contests.

Indeed, "Marie," I am really glad to see you on the lists again, especially as you have had ill success before, because it shows that you have a hopeful nature and a will not easily daunted, and these are things worth striving for. If these contests serve in any degree to strengthen those characteristics in our competitors they will have served a noble end. Yes, there must be literary ability in the family, for sure. I enjoyed your letter very much, and will be pleased to hear from you again.

"Margareta," that trip did not materialize yet, and I do not know when it will. Best wishes to "G. S." and "Puss."

OUR COMPETITIONS.

In Contest XIX. I have not received as many papers as I hoped for, but there still remain several days before it closes. I expect the Wild Flower Contest will be largely taken part in, as every country boy and girl is acquainted with a great many varieties, and it is only a trifling labor to write a little sketch of their appearance, place and habits of growth, etc. Let us see which Province will make the best showing. The Prairie Province has a wonderful name for flowers, so we shall be glad to hear about them. Write on one side only of paper, and address all work to

THE HOSTESS.

Ingle Nook Chats, Pakenham, Ont.

From Some Old-time Records of the Northwest of Long Ago.

ACROSS THE PRAIRIES IN 1856.

The following is a brief record of a journey across the prairies from the Red River Settlement, the Winnipeg of to-day. At that time there was not even the first primitive little steamboat, which, when it afterwards arrived upon the scene, nearly startled the inhabitants into fits at the sound of its whistle; nor had the stage wagon or mail cart been put upon the route, and only for about one year had there been more than a half-yearly delivery of letters. In fact, not only the settlement itself, but almost the whole of the present well-settled Northwest was a veritable terra incognita to Canadians. The writer was a young girl who, in early teens, had accompanied her mother and sister to the big lone land by the only sea route then possible—across the Atlantic, through Hudson's Bay to York Fort, and from thence by boats, chiefly manned by half-breeds or Indians, through rivers and lakes to the Red River Settlement. The little record from which our extracts are taken was written at the request of Mr. John Lowe, who later on became the Deputy Minister of Agriculture, but who was then the editor of the Montreal Gazette. Mr. Lowe was a fellow passenger on board the old SS. Canadian, and was interested in everything which was connected with the Northwest Territory. He had with singular foresight realized the possibilities of that isolated region if only something could be done to develop it. In the columns of the Montreal Gazette appeared for months most interesting correspondence upon the subject, and therefore to Mr. Lowe and the writer of those letters, Mr. A. R. Roche, under the signature of "Assiniboia," must be ascribed much of the honor due to the persevering pioneers who helped to bring about an epoch in Canada's wonderful history. Mr. Lowe still lives to rejoice over the success which crowned their efforts.

The young writer prefaced her notes by saying: "A residence of some years in any place, however remote, must awaken some kindly feelings, and cannot have been without some happy hours; consequently, the joy of a return to our native country was considerably chastened by a feeling of sadness at leaving many friends who had helped to cheer a five years' exile, which might otherwise in its isolation have appeared almost insupportable." She then plunges into her subject and tells us that: "It was on a bright summer's day in 1856 that our homeward journey began. Our party was not large, consisting only of a brigade of seven carts and ten riding horses, some being driven over to St. Paul's, where they would fetch a higher price than Red River pockets could afford. Our guides were the best in the whole country, known and trusted everywhere, and certainly a finer set of men could hardly be found. They were not really half-breeds, for the whole settlement has but few of these left now, their Indian ancestry being far more remote. Their fathers, mothers or grandmothers could claim the name of half-breed, and had transmitted to them many of their qualities as well as their darkness of complexion. Our captain and his two lieutenants, as one may call them, were three brothers, and under them were two men and a boy. One was an old Indian "nitche," who frequently afforded us much amusement. Our conveyances were high-wheeled carts. Three, for the accommodation of ladies, were tilted and painted a pretty blue; the others were quite plain, designed more for use than elegance, anything ornamental being quickly destroyed by the rough usage to which an uncultivated tract of country, wading through swamps, crossing rivers and scrambling through belts of wood and scrub, would be sure to subject them. A life in Red River prepares one a little for the troubles of getting out of it, yet the wild freedom of a vagrant life, which travellers across the prairies must lead for a couple of weeks, is, with a few exceptions, remarkably pleasant. The ladies seemed to enjoy it thoroughly after overcoming the astonishment they at first naturally felt on coming to a few of the rivers and discovering that they had to go down perpendicular banks and through rather dangerous rapids, either in the carts themselves or perched, monkey fashion, on the shoulders of their guide, whose strength certainly amounted to the marvellous. And this is how they did it: The river bank reached, the wheels would be held back by four men and the shafts supported by two of the others, while the unfortunate horse had to scramble down in the middle. Then, the river crossed, woe to the poor creature if his strength or courage failed him on the opposite side! All hands to the cart, to help him with his load, the whip cracked in his ears, cheers and shouts following each successful step; but, alas! too often, like Penelope's web, each step forward would be followed by two backward, the mire reaching above his knees, when, half falling, he would find himself again at the bottom, lying panting in the mud. If able to get him up with-

out taking him out of harness, the men would call louder, shout more vociferously, push harder themselves, and with efforts more vigorous than before, the difficulty would be surmounted, and the cart at last landed in safety. The poor men, with the perspiration rolling down their faces and wet to the skin from wading through the river, would cheerfully cross again, with the merry laugh and ever-ready jibe, and go through the same labor with each cart in turn, sometimes three or four times a day. For elasticity of limb and exquisite shape, the Red River men are unmatched; they are truly a manly set! What they undertake is so thoroughly performed, and if from their ignorance of arts and sciences, having had none of those privileges the mechanics of a civilized land can always have, they are in many details behind them, yet in bodily power and in the full development of their natural faculties they rise superior to almost every other nation. Red River hunters or voyageurs are never at a loss. Necessity is their teacher. Difficulties undaunt them, and every accident can be remedied by some ingenious little contrivance of their own; their horsemanship is perfection, their freedom of limb standing them in good stead there; their very dress, which is most picturesque, consisting of a red shirt, cloth capote, the Indian moccasins and scarlet belt, showing their fine, lithe figures off to advantage."

H. A. B.

(To be continued.)

Bread on the Waters.

One of the closest friends of Baron Rothschild, of Paris, was Carolus Duran, an artist. During the entire course of a certain large dinner party, the great financier noted that the painter kept looking at him with a most intent and peculiar expression. After the coffee and cigars, the Baron drew his friend aside, and said: "My dear fellow, pray tell me why you have stared at me so peculiarly this evening?"

"I'll tell you with pleasure," answered Duran; "I am painting a beggar for the salon, and have looked all over Paris for a suitable head to draw from. I've finally found it. Yours is the ideal."

Rothschild laughed heartily, and promised to sit for his friend in suitable attire on the following day.

During the progress of the sitting a young artist, one of Duran's pupils, came into the room. Naturally he had not been in a position to meet people of Baron Rothschild's importance, and so did not know him; but the beggar's miserable rags, wan face and wistful expression appealed deeply to the young man's sympathies. Waiting until his master was busy mixing colors, the pupil took a franc from his vest pocket and held it out behind his back to the model, who seized it with feigned avidity.

When the sitting was over, Rothschild made enquiries of Duran concerning the philanthropist, and was informed that he was a student of great promise and attainments, but among the poorest of the inhabitants of the Latin Quarter.

Some six months after this occurrence, the young man received a note which ran about as follows:

"Dear Sir,—The franc that you gave in charity to a beggar in the studio of Mr. Duran has been invested by us, and we take pleasure in forwarding to you our check for two thousand francs, the principal and increment of the same.

"Yours, etc.,
"ROTHSCHILD & CIE."

Scientific and Useful.

When the hands have become soft and shrunken by using soda and hot water, rub them with common salt and it will help to make them smooth again.

When cutting or paring your toe-nails, cut a notch in the middle of the nail. The disposition to close the notch draws the nail up from the sides. Keeping the foot in hot water for a few minutes will soften the nail for cutting.

A watch should be cleaned every two years or so. Anyone having the misfortune to drop his watch into water, etc., should take it at once to a watchmaker to have it taken to pieces and cleaned, for a delay of even an hour might spoil the watch for ever.

A very easy way to keep lemons is to place them on a flat surface and turn a glass tumbler over them. The tumblers must not be moved till the lemons are needed for use, or the air getting to them will make them rot. Another way is to hang them in a net in an airy place.

Many people are troubled by the wax in the ear becoming hard, and so causing temporary deafness and difficulty of hearing. Cold often produces this minor ailment, while sometimes it is constitutional. In slight cases one can cure oneself. Drop a little warm salad oil into the ear, lying on one side to let it soak in. Repeat this two or three nights, and then syringe the ear with lukewarm water in which a little soap has been dissolved. After the syringing be careful to put a piece of cotton wool in the ear, especially when you go outside, as the syringing makes the ear sensitive and liable to fresh cold just at first.

"Divided Attentions."

This picture, by J. Skramlik, has apparently a double meaning, not merely that which at first sight seems to be the most self-evident, the barmaid of the little hostelry, with arms akimbo, enjoying with undisguised and equal satisfaction the broad jokes and open lovemaking of the two cavaliers upon whom she has been waiting, the whole scene being a reversed rendering of the old couplet, "How happy would I be with either, were t'other dear charmer away." The cask of beer or malmsey (which is it?), the full and empty wine flagons, equally portray "divided attentions," although one needs to know little of the old "cavalier" element of human nature to be fully aware that the wherewithal to fill the wine cup would more than compensate her admirers for the disappearance of the buxom maiden.

H. A. B.

Why Not?

I never destroy or sell to a peddler an article of clothing that can be used in any way. There are dozens of children in every village and city, and in many country districts, who are suffering for clothing, and many who are not in destitute circumstances would be glad of articles of clothing if the gift were made in the right way. It is a shame to put a good skirt or children's clothing that is simply outgrown in the rag-bag or carpet rags when children in your own town are needy. Few mothers with three or four little ones to sew for will refuse little garments—that are not too badly worn to be decent—when they are given by a friendly neighbor who says, "My child has outgrown these things and I hate to cut them up." If you have no neighbor who would use them, ask your friends if they know of any one who would use them.

If you can have a new hat every season, or one to match every suit, remember that every woman cannot, and carefully save your trimmings, which you will find some one glad to use. A hat, by a tasteful change of trimming, will often delight a poorer woman, and no

Travelling Notes.

Villa Bellandiere,
Grasse, France, April 26th, 1902.

It is beautiful weather here now, roses and all other flowers out in all their glory. The English people who came south for the winter have nearly all gone home, for, of course, it gets nice in England in April and May. Grasse is up in the hills and cooler than it is at Nice or Cannes, and some people come up here to harden themselves before returning to England. To me, so far, this country is looking more beautiful every week; later on it gets too hot and often does not rain for three months. Still, the fruits and flowers never fail. In every small town of any importance, where the English and Americans come to spend the winter, you will find a nice, though by no means large, English or American Protestant church. Here in Grasse there is a dear little English church containing some lovely stained windows; one was given by Queen Victoria when she stayed here eleven years ago. After coming here one winter, she spent some of the winter months at Nice for six years in succession. There are several Protestant churches at Nice, built and sustained by the floating winter residents. One quite forgets that one is in a foreign country when one hears the same service as at home. The author of that beautiful hymn, "Abide with Me," is buried in the English churchyard at Nice (his name was Light, I believe), and he came south for his health, but died of consumption at the age of forty years. Many people pay tribute to his memory by placing some flowers on his grave. It is interesting to drive through the old villages and towns of this sun-kissed land, built in among the hills, resting in some little valley almost hidden from view, or else perched on the top of the highest peak, all both picturesque and quaint. The peasants are very industrious. The women carry everything on their heads, from a pail of milk to a bushel of olives or a load of fagots or brushwood. However they can balance such heavy loads and carry them for miles is wonderful. When they meet you they give you a pleasant "bon jour" or "bon soir," although, on the whole, they act very independently, and certainly do not "toady" to the foreigners. Board can be had at various prices, at luxurious, palatial hotels, or at simple "pensions." Many rent furnished houses, and cater for themselves, but rents are high. If any of my readers contemplate taking a trip to any part where I have gone, and if they will write to that effect to the "Farmer's Advocate," I shall be pleased to give them such information as I can obtain for their assistance. I am already making a collection of addresses of respectable and reasonable "pensions," or boarding houses. One can get board very comfortably on the Riviera for six to ten francs a day (a franc is worth 20 cents). I hear that some place near this is where Napoleon lunched, on his flight from the Island of Elba, from which, as history tells us, he made his escape, raised another army, but was again captured and next time banished to the Island of Saint Helena, etc. Nearly every place hereabouts speaks of the past and makes, in comparison, our dear Canada appear but as an infant as yet. But oh! what a fine infant, and how its every power, mental and physical, is fast developing.

I am leaving Villa Bellandiere in two days, from this date, after having spent eight weeks very pleasantly with so many of my own people. A friend, from London, England, is coming to join us. We first spend a week in Nice, then Monte Carlo and Mentone, and perhaps run down to Bordighera, just to say I have been into Italy, then back for a few days at Cannes before going on to Switzerland, and probably spending a day or so en route at Marseilles, Avignon, Dijon, and Lyons. I am a grand traveller now, and can manage to do all this sort of thing without spending a heap of money, and with very little luggage, for I have learnt to speak ahead for a moderate-priced room, etc. I will promise to give more details as I go on, and, as I have already said, will do my utmost to reply to any enquiries which may be forwarded to me from the "Advocate" office.

My next notes may probably tell something of Monte Carlo. MOLLIE.



"DIVIDED ATTENTIONS."

J. Skramlik.

Make Use of the Minutes.

In the room of a girl friend the other day we noticed something which especially interested us. To the pin cushion, which occupied the central position on her dresser, was pinned a short poem, evidently clipped from some newspaper. And the poem happened to be the "Recessional," which everybody knows about, but comparatively few people know.

Now, a pin cushion is not the place where one expects to find a poem, however grand or beautiful, and we looked to our friend for an explanation.

"I always have something I especially want to know pinned to my cushion," she said, smiling, "and when I'm brushing my hair or adjusting a collar button, I just glance over the lines. Before I know it I have the whole committed to memory, and then I remove it and place something else in its stead."

one but you two will ever know that it is not new.

What town has not plenty of boys who are in need of the cute little pants and coats that could be made from the old suits hanging in the closets in that town? What warm little undershirts for tiny children are put in the rag-bag in the shape of old outing flannel and woolen shirts; and good little undervests and drawers can be made from cast-off flannels.

An old skirt will make a child's dress, and a little friendly interest in the family of a poor drunkard may encourage him to try again, put a little hope in his wife's heart and add a little joy to the children's hearts. That little girl might do better if she were dressed like other children, and it will not lower you in the eyes of people worth knowing if you help her.—The Lady's World.

Gazzam—I see that a lighthouse on the shore of Lake Michigan has been blown away by a gale.

Mrs. Gazzam—Well, I think the Government ought to stop building light houses and build heavier ones.

Fairly Caught.

Listeners, it is said, hear no good of themselves, and there is another form of eavesdropping to which a similar remark might apply.

A young man who had been sent by a newspaper to report the proceedings of a political meeting in a neighboring town was occupying his time while on the journey by writing a letter in shorthand to a brother reporter at home. Having finished the body of the letter, he proceeded to add a postscript as follows:

"P. S.—A rather pretty young woman, by the way, is sitting on the seat directly behind me. She seems considerably interested in what I am doing, and I believe she is a stenographer herself, and has read every word I have written—"

"Sir!" exclaimed the young woman, interrupting him indignantly. Then she turned a fiery red and looked the other way.

THE QUIET HOUR.

Seeing Things Invisible.

"They say that God lives very high,
But if you look above the pines
You cannot see our God, and why?
And if you dig down in the mines,
You never see him in the gold,
Though from Him all that glory shines.
God is so good, He wears a fold
Of heaven and earth across His face,
Like secrets kept, for love untold.
But still I feel that His embrace
Slides down by thrills through all things made,
Through sight and sound of every place,
As if my tender mother laid
On my shut lids her tender pressure,
Half waking me at night, and said,
'Who kissed you in the dark, dear gaeßer?'"

Faith is often spoken of as the eye of the soul, for it is by faith we can see things invisible—it is "the evidence of things not seen." Without that spiritual sense of sight we become materialists, and miss all the beauty of the spiritual world within us and around us. Faith and superstition are not really alike, although some people may confuse the two. Faith opens the door into a real world, full of beauty and joy, while superstition tries to drag a credulous soul into an imaginary region, peopled with shadowy shapes and terrors. A man who walks by faith can go tranquilly on his way, sure that God and His good angels are beside him for help and guidance. The promise is fulfilled to him: "Thou shalt not be afraid for any terror by night," for he can see God just as well in the dark as in the daylight. No difficulties or dangers alarm him—unless he forgets to look at life with the eye of faith—for he knows that all things are working for his real good. The servants of God may well be strong and of a good courage, for they have a sure promise that no weapon formed against them shall prosper.

But superstition begets cowardice, as faith makes a man fearless. One who thinks that misfortunes will follow the breaking of a mirror, the spilling of salt, or the numberless other occurrences which are supposed to bring bad luck, is dishonoring God, for he evidently thinks God has no power to control His own world. There is a good deal of heathenism lingering still in Christian countries; many people still cherish pet superstitions, and the belief in charms is by no means extinct. I have heard a person say that she didn't believe in the superstition about sitting down thirteen at a table, but she "thought it best to be on the safe side." I thought such a remark expressed a considerable amount of belief in it. The world belongs to God, and we are safe in His hands. No blind goddess of fortune can control our fate. It is not only foolish, it is positively wrong to trust to charms, instead of putting our faith in the living God who rules in heaven and earth. Neither is faith afraid of the revelations of Science. God made the universe, and the more we can find out about it, the more we shall know of Him. One who refuses to examine scientific discoveries, for fear they might contradict revealed truths, shows very little faith in the truths. He is evidently afraid to test them. Truth is not afraid of standing in the light of any age, to be examined and tested. Only, in talking about science, it is well to be cautious; for theories are often put forward as facts, only to be flatly contradicted by scientists of future years. One who is looking for God will find Him everywhere. Some clever people make the great mistake of imagining they can discern the invisible God with their bodily senses. When they fail in that, they make another mistake and fancy that He is not there, not having grasped the truth that God is a Spirit, and therefore to be spiritually discerned. As Joaquin Miller says:

"A thousand miles of mighty road
Where thunderstorms stride fire and flood,
A thousand plants at every foot,
A stately tree at every rood,
Ten thousand leaves to every tree,
And each a miracle to me—
Yet there be men who doubt of God!"

We all have need to pray that our eyes may be opened to see more and more of things invisible. When Elisha was surrounded by a hostile host of horses and chariots, he was also guarded by a real, although invisible, army. How often are our eyes hidden so that we do not recognize Christ when He is walking with us by the way. As Mac-coll asks: "Where were the heavens into which St. Stephen gazed when he saw the Son of Man standing on the right hand of God? Were his bodily eyes miraculously endowed with a telescopic power of traversing in a moment the planetary spaces and looking into a world of super-sensuous glories behind them? Or were his eyes opened to see the spiritual world close to him?"

Life and power are always invisible to our human eyes. No dissecting knife, no "X-rays," ever yet gave a glimpse of the spirit, or even of the natural life. Without life the body is helpless

and dead. We can see the effect, but not the cause. Electricity, which does so much for us nowadays, is invisible. So is gravitation, which is so far-reaching in its influence, holding the planets in space and controlling every raindrop, every falling leaf. The wind, which is compared to the Holy Spirit by our Lord Himself, is invisible, although we can plainly see its effects. Even material things are often invisible to our eyes. We are surrounded by innumerable germs, invisible enemies of a material kind, as well as by the spiritual foes we think so little about. There are colors which we cannot see, although they may be visible enough to some eyes. I have read that the sensation of violet is caused by 700 billions of vibrations of light every second. Waves of light above this limit are invisible to the human eye, although Sir John Lubbock has shown by experiments that ants see distinctly these ultra-violet rays. It is the same with sounds exceeding 38,000 vibrations per second. So you see that even in this physical world there are sights and sounds to which we are blind and deaf, and we are at the same time living in a spiritual world which may or may not be closed to our spiritual senses. Let us pray most earnestly that our eyes may be opened more and more to the invisible things of God.

"Seldom do we think upon them, seldom we believe them nigh,

Like the child who deems in sunshine that the stars have left the sky;

So, by this world's pleasures dazzled, scarce we feel their presence true;

In foolishness and tickness, are we not children too? God's angels still are near us, with their words of hope and cheer,

When the foe of our salvation and his armed hosts draw near;

But a greater One is with us, and we shrink not from the strife,

While the Lord of angels leads us on the battlefield of life."

HOPE.

The Old Trunk in the Garret.

Once more it is with us—the season of the budding of the balm-of-Gilead tree, the bleating of lambs on the hillside, and the beating of carpets on the clothes-line. It is the season of cobwebs—limitless, cobwebby effects of twig and tender-tinted blossom and leaflet; dewy, silver-gray meadows lying close over all the morning meadows like baby angels' wings tip to tip; and, up in the garret, black, wrinkling things, curtaining dark corners, trailing from board and rafter, and huddling thick in the narrow recess between the wall and the old trunk. They make one think of the different types of humanity—after the broom and the dust-pan, that is.

In most houses the garret is a sort of museum in a modified form, and at the time of the spring cleaning is a capital resort for naturalists and lovers of the antique, with its six-months' collection of many-limbed little creatures, and its six, or sixteen, or it may even be sixty, years' collection of things animal, vegetable, and mineral. And the old trunk—where there is an old trunk—is one of the greatest curios itself.

There is something almost pathetic about that antiquated piece of furniture. It has a history. It suggests mediævalism. It brings to mind ancient castles and donjon keeps, and a thrilling mediæval romance, where the fair heroine concealed her hunted lover beneath the lid of that same old trunk. It is battered and dingy now, and the hinges are loose, and the lock declines to work, and it is used to hold faded shirt-waists and mutilated vases, and out-of-season "shiny" clubs and tennis sets, but long ago, perhaps, my lady folded away in its sweet-scented interior her short-sleeved silken gowns, her delicate shawls, and stored her ear-rings and embroidery frame. Or perhaps the salt spray trickled down its sides, and for many years thereafter it held an honored place in some old colonial house, and grandmother or great-grandmother spun her blankets and her linen and packed them close in the old trunk along with the family china and silverware and the sermon books. Or it may be that it was fashioned out of rough boards, nailed together by pioneer hands, and jolted about in a prairie schooner, or on a springless cart behind a team of oxen, and finally set down in the "ben" of the new log house to play its part in the evolution of the trunk. Whatever the triumph or tribulations of its career, it has come at last to the days of monotony and oblivion. It is like the once mighty record-breaking locomotive used now for drawing a milk train, or the weather-beaten vessel moored always in the stillest part of the harbor. But what of that? It has had its day and even yet it is useful. It seems to believe in activity in old age, as did Ulysses when he said:

"My purpose holds
To sail beyond the sunset and the baths
Of all the western stars, until I die."

It must be a littered-up as well as a lonesome garret where there is no old trunk. What becomes of half-rolls of wall paper waiting to be used for patching, and old hats and garments

waiting for the proverbial seventh year, and old books and magazines waiting to be read by the next generation, and the hundred-and-one other odds and ends of non-immediate utility that are always accumulating? The old trunk is an excellent receptacle for such articles, and keeps them in much better preservation than if they were left dangling from the ceiling or moulding in corners.

A frequent use to which the old trunk is put is that of holding keepsakes. Perhaps you don't believe in such things. Some people don't. But usually there is one person in the household who does, and she it is who loves the old trunk, not only for its associations, but also for the little treasures within it. She takes them out once or twice a year and wipes off the imaginary dust, and feels that the absent ones are there by her side just as they used to be. There is the little boat that her boy, Jack, made before he had formed any definite ideas about going to sea. Jack was always making boats, and he used to sail them down the creek when his father sent him to herd the cows, and then, of course, the cows got in the "corn," and afterwards, when his father went out, it was she who went up to his room and gave him a "twisty," and gently stroked his sore shoulders. It is years now since she filled the pockets of his tarpaulin jacket with "twisties," and he bent down and kissed her, and then rolled off to join the "jolly tars" again. She hasn't seen him since, nor heard from him, and she wishes he was her little Jack once more, commanding fleets on the creek. And there is the antimacassar that Eliza crocheted for her and brought to her at Christmas, the first time she was away from home for longer than a week. Eliza was very homesick during those months. It had been a gay antimacassar at that time, but the greens and yellows and blues have grown softer and more conciliatory since then. Eliza lives in the great metropolis now. Her husband is a senior partner. She doesn't get homesick the way she used to, and she doesn't crochet antimacassars for her mother. But she sends her costly dresses which the mother hopes she may wear some day, and rare ornaments which she hopes she may find a use for, but she doesn't value any of them as she values the antimacassar. And that is Tom's first football suit, and also his first piece of tobacco! That was before he became champion of the college team and added those extra letters to his name. And the tobacco—that was when he was known as Tommy. He didn't smoke much of it, but she remembers how sick he was that night, and he remembers it too. A package of old photographs is lying in this corner, and a pair of brass candlesticks with snuff-ers, and the "pirns" and distaff of a spinning wheel.

Slightly apart from these is a pair of little boots. The uppers are of faded purple kid and some of the buttons are missing. The heels are worn over on one side, and the dried, hardened earth is there on the instep just where it was when they pulled them off her feet for the last time. Her doll lies beside them, its eyebrows scraped off and the wax bitten off its chin; and the china dog without any ears, and her A B C book with its bright pictures. The little white dress she wore that last day has grown yellow, but the mother remembers how white it was then, like the whiteness of her baby's face when they carried her in and laid her in the crib with her curls tumbling over the pillow. "He shall gather the lambs in His arms and carry them in His bosom," she says softly. There is no bitterness in her heart now. The years have brought to her the perfect peace and assurance of a strong, loving faith.

But there! Close the lid. It's those sobwebs. Somehow, they have got into my eyes.

CHRYSOLITE.

Origin of the Months' Names.

October, November and December Misnomers for 10th, 11th and 12th Months.

"January was named after the Roman god, Janus: the deity with two faces, one looking into the past and the other gazing forward to the future," writes Clifford Howard, in the June Ladies' Home Journal. "February comes from the Latin word februo, to purify. It was customary for the Romans to observe festivals of purification during that month. March owes its name to the old God of War. Among the Saxons this month was known as Lenct, meaning spring; and this is the origin of our word Lent. April was named from the Latin aperio, to open, in signification of the opening of flowers. The Saxons called the month Eastre, in honor of their Goddess of Spring, from which comes our word Easter. May was named after the Roman goddess Maia, and June was so-called in honor of Juno. July was named in honor of Julius Caesar, and August gets its name from Augustus Caesar. September is from the Latin septem, seven, this being the seventh month according to the old Roman calendar. October, November and December also retain the names by which they were known under the old calendar, when there were but ten months in the year—octo, novem and decem meaning eight, nine and ten."

THE CHILDREN'S CORNER.

Between Ourselves.

When a fellow knows every bird's nest
In the fields for miles around,
Where squirrels play in the sunshine,
Where prettiest flowers are found;
When he knows of a pair of robins
That will fly to his hands for crumbs,
He hates to be penned in a schoolroom,
And he's glad when Saturday comes.

There's a bee tree up on the hillside,
But I'll not tell anyone where;
There's a school of trout in the millstream
And I want to go fishing there.
I know where an oriole's building,
And a log where a partridge drums;
And I am going to the woods to see them
As soon as Saturday comes.

They shouldn't keep school in springtime,
When the world is so fresh and bright,
When you want to be fishing and climbing,
And playing from morning till night.
It's a shame to be kept in a schoolroom
Writing and working out sums—
All week it's like being in prison;
But I'm glad when Saturday comes.

The boy who expressed his sentiments in the verses given above, was evidently fond of studying natural history in the only place where it can be properly studied—out of doors. I have a great deal of sympathy with him, not having forgotten the days when I, too, was glad when Saturday came. However, some kinds of living things are not very pleasant to handle, and perhaps we can learn more about them from books than if we got the creatures into our own hands. I have been reading lately some facts about wasps, and find that they are very interesting insects—at a distance. One kind of wasp fills her store-room with caterpillars, for her babies to eat. Being more practical than kind-hearted, she begins by stinging the caterpillar all down the body from the head to the tail—if caterpillars have tails. When the worm is completely paralyzed, she lays an egg in the middle of it, so the baby wasp will have plenty of food as soon as it is hatched. Another kind of wasp seems to be more affectionate, but she carries her affection rather too far—I speak, of course, from the caterpillar's point of view. She hugs the poor thing round the neck until he is choked, and then packs him away in her pantry. She makes this pantry underground, boring a hole an inch deep and then making a larger room at the bottom. When this room is filled with caterpillars and eggs, the hole above is carefully stuffed up with stones and earth. One of these wasps was seen to cover up her nest and then pick up a pebble with her jaws. This she used as a hammer, pounding down the earth with it until it was hard and firm.

Some wasps fill their nests with spiders, and often they take the trouble to cut off the legs of the spider first, so that they won't take up so much room. Evidently, the young wasps are not as fond of "drumsticks" as most children are.

Wasps seem quite able to take care of themselves, but the domestic animals—cows, sheep, etc.—are sometimes rather helpless. Probably it is partly because men have taken care of them so long. I have seen horses wearing hats to protect them from the sun, but it must look even more queer to see cows wearing spectacles. In some parts of Russia the snow is dazzlingly white for six months every year, and the cattle pick a living from the tufts of grass which peep out here and there. The glare of sunlight on the snow caused them to suffer from snow blindness, so a clever man thought it would be a good idea to dress them up in smoke-colored glasses. The experiment was a great success, and now many thousands of spectacled cows may be seen on the steppes of Russia.

Another queer custom is practiced in Bohemia. We are not surprised when people put shoes on horses, but it is a little unusual to shoe geese, isn't it? The geese sometimes have to walk long distances to market, and their feet might get very sore if they were not shod. Of course, they don't have iron shoes nailed to their feet, neither do they wear leather boots as you do. They are made to walk several times over patches of tar mixed with sand. This soon hardens and protects the feet splendidly.

After all this talk about animals, I hardly need say to you that you should never be cruel to any of the creatures God has made.

"If you see a little boy (or a little girl, perhaps),
Who torments and teases cats, and dogs, and birds,
You may set it down as so, that this ugly trait will
grow.
Till it shows itself in cruel acts and words.
For a child who kicks a helpless dog will soon be
tired of that.
He will bully weaker playmates when he can;
And when grown to man's estate, with an evil soul
of hate,
He will injure and torment his fellow-man.

And, just as on a signboard the letters plain are writ,
So upon such childish faces we can see,
'Here is a girl or boy who finds others' pain a joy,
And will turn out cruel, mean, and cowardly.'
COUSIN DOROTHY.

"Perfect Bliss."

As our last picture competition was such a success, we are going to have another one. Write a short story, describing this picture of "Perfect Bliss," and send in your contributions before the end of July. Anyone who is under sixteen can compete. Write on one side of the paper only, put your name, age and address on the back, and address as usual to "Cousin Dorothy," Box 92, Newcastle, Ont. C. D.

Caring for Young Babies

The majority of children are healthy when they are born, and may be kept healthy if they receive the care and attention which all mothers should give. A babe loves warmth and he needs plenty of good nourishing food. During the first few months of his life, he will sleep all night and about one-third of the day. Allow him to enjoy his nap undisturbed, and if one is careful to establish the habit of going to sleep at the same time every day, there will be little trouble to get him to sleep when that time arrives.

A watchful mother can soon decide whether a child cries because he is spoiled or because he is in pain. If he is suffering from an attack of colic, take off all his clothes except his band, which should not be loosened if he is crying very hard. Wrap him in a soft woollen shawl, and rub his little limbs, stomach and bowels with the hands. A drink of water as warm as he will take it, often proves beneficial. When he is thoroughly warm he will usually stop crying, and nestle down for a comfortable sleep. Warm the blanket and pillow in his little crib, fold the shawl closely around him and place the crib in a corner where a draught will not strike him. When he wakes he will be as bright and fresh as ever.

After the baby has his bath, which should be given as regularly every day as his meals, wash his tongue, gums and the roof of his mouth with a soft piece of old linen dipped in cool water, in which a pinch of boracic acid has been dissolved. If this be done regularly, the baby will not be troubled with sore mouth or thrush, which is a common and often dangerous disease of babyhood. If his mouth has been neglected until it is sore, prepare a lotion, using one-half dram tincture of myrrh, one fluid dram glycerine and twenty grains of borax. Add water enough to make one fluid ounce. Apply with a camel's-hair brush all over the tongue and gums where the small white patches occur.

Do not forget that a baby needs water as well as food, for the little mouth gets very dry and hot, and a drink of cool water will often quiet him when nothing else will.

For Mothers.

Oh, mothers! it is worth a great deal to cultivate that "excellent thing in a woman," a low, sweet voice. If you are ever so much tried by the mischievous or wilful pranks of the little ones, speak low. It will be a great help to you even to try to be patient and cheerful, if you cannot wholly succeed. Anger makes you wretched, and your children also. Impatient, angry tones never did the heart good, but plenty of evil. Read what Solomon says of them, and remember he wrote with an inspired pen. You cannot have the excuse for them that they lighten your burdens at all—they make them only ten times heavier. For your own as well as your children's sake, learn to speak low. They will remember that tone when your head is under the willows. So, too, would they remember a harsh word and angry voice. Which legacy will you leave for your children?—The Housewife.

"I always believe in putting something by for a rainy day," remarked the absent-minded man, as he appropriated his neighbor's umbrella.

Dishonesty Recompensed.

The late Duke of Buccleuch, in one of his walks, purchased a cow in the neighborhood of Dalkeith, which was to be sent to his palace on the following morning. The Duke, in his morning dress, espied a boy ineffectually attempting to drive the animal forward to its destination. The boy, not knowing the Duke, bawled out to him: "He, mun, come here an' gie's a han' wi' this beast."

The Duke walked on slowly, the boy still craving his assistance, and at last, in a tone of distress, exclaimed:

"Come here, mun, an' help us, an' I'll gie' you half I get."

The Duke went and lent the helping hand.

"And now," said the Duke, as they trudged along, "how much do you think you'll get for this job?"

"Oh, I dinna ken," said the boy, "but I'm sure o' something, for the folk up at the big house are gude to a' bodies."

As they approached the house the Duke disappeared from the boy and entered by a different way. Calling a servant, he put a sovereign in his hand, saying:



"PERFECT BLISS."

"Give that to the boy who brought the cow." The Duke, having returned to the avenue, was soon rejoined by the boy.

"Well, how much did you get?" said the Duke.

"A shilling," said the boy, "an' there's half o' it t'ye."

"But you surely got more than a shilling?" said the Duke.

"No," said the boy, "that's a' I got—and d'ye no think it's plenty?"

"I do not," said the Duke; "there must be some mistake, and, as I am acquainted with the Duke, if you return I think I'll get you more."

They went back, the Duke rang the bell and ordered all the servants to be assembled.

"Now," said the Duke to the boy, "point me out the person that gave you the shilling."

"It was that chap there," pointing to the butler. The butler confessed and attempted an apology, but the Duke indignantly ordered him to give the boy the sovereign. "You have lost," said the Duke, "your money, your situation and your character by your covetousness; learn henceforth that 'honesty is the best policy.'" The boy by this time recognized his assistant in the person of the Duke, and the Duke was so delighted with the sterling worth and honesty of the boy that he ordered him to be sent to school at his expense.

GOSSIP.

The neatly-printed catalogue of the small but choicely-bred Glen Park herd of Scotch and Scotch-topped Shorthorns, belonging to Mr. W. Doherty, Clinton, Ont., has been received at this office. It comprises representatives of the Cruickshank Matchless and Meadow Sweet families, and the get of such noted sires as Imp. Royal Don 17105; Beau Ideal 22545, by Imp. Sittyton Stamp 18963; Vice Consul 8061, by the Nonpareil bull, Neptune 2724; Rialto, by British Flag, by Barmpton Hero; Star of Morning 31879, whose dam was by Barmpton Hero; and Imp. Baron's Heir 28854, by Prince of Fashion 2nd, whose sire was by Scottish Archer (59898).

Sauble River Stock Farm is situated 1 1/4 miles from Ailsa Craig station, on the main line of the G. T. R., between Toronto and Sarnia. The owner, Mr. Geo. Hindmarsh, is extensively known on account of the large and well-selected flock of Shropshire sheep kept on this farm. All told, the flock now numbers 150 head, mainly of Williams strain, and a more typical flock of big, well-balanced, perfectly-covered Shropshires would be hard to find. The flock was originally founded on sheep imported from the well-known flocks of Williams, Tanner and Minton, on which have been used, almost exclusively, Williams-bred rams. The sheep are just now in splendid condition, having come through the winter in A 1 shape. The shearlings on hand were sired by Imp. Prince George, bred by Williams. This season's crop of lambs, of which there are some 80 odd, were sired by Lord Roberts 3rd, bred by John Campbell, of Woodville. This ram won first prize for American-bred rams and second prize in the open class at the Pan-American; also, a part of the lambs are sired by Paragon's Star; he, too, was bred by Campbell, and sired by The Paragon, he by the Chicago sweepstakes winner, Newton Lord. Mr. Hindmarsh reports sales for the last year as in every way satisfactory, 43 head going to Stewart & Rogers, of London, Michigan; a pair of choice ewe lambs to Joseph Ballard, Vermont; and small lots to different parts of Ontario. There are still on hand, for sale, two yearling rams, ten yearling ewes, and a number of older ewes, all choice animals, and graced with perfect covering.

Mr. George Dickie, Hyde Park, Ont., a station on the G. T. R., five miles from the City of London, announces, in our advertising columns that on June 25th he will hold a dispersion sale of his entire herd of Shorthorn and high-grade cattle, etc. The herd, numbering 27 head, was founded on standard families, tracing to imported dams, while high-class Scotch-bred bulls have been continuously used for many years, so that all are Scotch-topped and of the low-set, thick-fleshed type and in good condition, those not having calves at foot having been bred to the choice young bull, Wood Home Lad, by Royal standard, bred by J. & W. Watt, sired by the champion Judge, by Imp. Royal Sailor, and out of a Marr Missie dam by Sittyton Chief, a Cruickshank Brawith Bud bull by Hospodar. Among the bulls used in the herd in the last few years was Imp. Scottish Victor (50422), bred by Amos Cruickshank and used in the herd of Mr. Duthie, a son of Roan Gauntlet and out of Victoria 58th, the dam of the noted Imp. Indian Chief. Another was Imp. Warrior (55173), by the Sittyton Victoria bull, Vermont, and out of Maid of Promise, of the favorite Miss Ramsden family. Later was used Clinton Victor 21132, by New Year, a Watt-bred bull, by Village Hero, and out of an English Lady dam by the noted Barmpton Hero. Clinton Victor won first at the Western Fair, London, as a yearling, and second as a two-year-old, and his dam also won first prize at London. Later still was used the red bull, Rugby 29307, by the Wimple bull, Auditor 24280, by Imp. Baron Camperdown. The infusion of the blood of such richly-bred bulls could not but have an excellent influence in fixing the type of the herd, and must tell in their offspring and descendants for all time to come. This sale comes the day following that of Mr. Richard Gibson, of Delaware, which is only 12 miles from London, and parties can readily attend both sales on the one trip. The catalogue will be ready in a few days and will be mailed on application to Mr. Dickie, as per advertisement.

THE CHICAGO SHORTHORN SALE.

The catalogue is to hand of the important offering of high-class Scotch-bred Shorthorns advertised in our columns, comprising selections from the well-known herds of Messrs. W. C. Edwards & Co., Hon. John Dryden, Hon. M. H. Cochrane, and Geo. Harding & Son, to be sold at Chicago on June 13th and 14th. Rarely, if ever, has an offering of like number so rich in breeding been placed at the disposal of the breeders of America, and those who know the character of the herds from which they come and of the men making the offering will have full confidence in expecting to see a rare good lot of cattle, and to receive the most honorable treatment in their dealings. Mr. Edwards contributes from his extensive herd the largest number of animals, his quota totalling 48 head—39 females, 27 of which are imported, representing many of the most popular families in leading Scottish herds, and 9 bulls, of which five are imported, while the home-bred individuals are of similar breeding, and the females of breeding age have been bred to such noted imported bulls as the magnificent Marr-bred Marquis of Zenda, at the head of the Pine Grove herd, a full brother to the imported cow, Missie 153rd, for which Mr. Edwards paid \$6,000 at the Chicago sale last December, and to Imp. Village Champion, bred by Mr. Duthie and sired by Scottish Champion, out of Village Maid 17th, by Master of the Ceremonies. Among the bulls are two imported sons of Lovat Champion, now in the herd of Mr. Duthie, and proving one of his most successful sires, and a high-class Miss Ramsden bull by Clan McKay.

Mr. Dryden's offering is made up mostly of young animals, the get of his excellent imported stock bull, Collynie Archer, bred by Mr. Duthie, sired by Scottish Archer, while his dam, the Marr-bred Missie 135th, was by the noted William of Orange; and of his equally excellent and well-bred Cruickshank Duchess of Gloster bull, Prince of Gloster. Mr. Dryden can probably claim to have in his herd more straight-bred Cruickshank cattle than can be found in any other in America, and his contribution to this sale includes representatives of such popular Sittyton families as the Victoria, Brawith Bud, Clipper and Lavender tribes, besides members of some of the Kinellar sorts similarly bred, and other excellent families which have bred some of the best show cattle in America.

Mr. Cochrane's offering comprises a dozen imported Scotch-bred females from leading herds, sired by noted bulls, representing several favorite families and having calves at foot or carrying calves by his grand imported stock bulls, the Duthie-bred Joy of Morning, by Pride of Morning, dam by Scottish Archer, and the Marr-bred Scottish Hero, by Scottish Archer, out of Missie 134th, by William of Orange; while several grand young bulls and heifers sired by these great bulls are also included in the sale. The Hillhurst bulls would appear to be especially attractive, judging from the portrait given on another page of the yearling, Good Morning, by Joy of Morning, and out of Mr. Duthie's Vain Belle 2nd, by Scottish Archer, grandam by William of Orange. His breeding and individuality should satisfy the most exacting of buyers. The imported yearling, Golden Mist, bred by Duthie and sired by Golden Sun, of Deane Willis' breeding, and out of the Marr Missie cow, Missie 136th, by William of Orange, should also prove a very desirable number, as his personal excellencies, judging from inspection, seem to be equal to his pedigree.

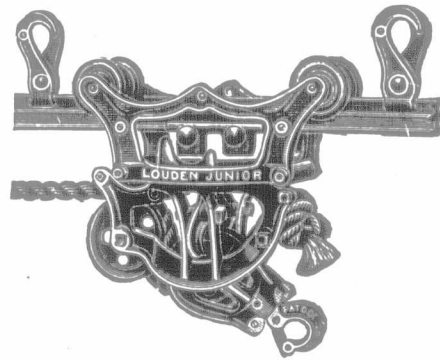
The contribution of Messrs. Harding & Son shows a rich variety of popular Scotch-bred families, and includes the magnificent imported Duthie-bred cow, Collynie Wimple, by Nonpareil Victor, and representatives of the Upper Mill Missies, Claras, English Ladys and Stamfords; Cruickshank Village Blossoms, Butterflies and Lavenders, and Kinellar Clarets and Miss Ramsdens, besides others, imported and home-bred, of favorite sorts, many of which have been bred to the grand stock bull in use in the Anoka herd, Best of Archers, by the noted Scottish Archer. Judging from what the catalogue reveals and from what is known of the herds represented, it may safely be said that it is

CANADA — UNITED STATES		
SALE OF		
100 HEAD	Scotch Shorthorns	100 HEAD
UNION STOCK YARDS, CHICAGO, ILL., JUNE 13 and 14.		
W. C. Edwards & Co., Rockland, Ont.		
47 Head—A number of them Missies; liberal number of rep- resentatives of Marquis of Zenda. A valuable consignment.		
Hon. John Dryden, Brooklin, Ont.	Hon. M. H. Cochrane Hillhurst, Que.	
19 Head—Lavenders, Victorias, etc. Cruickshank breeding. A GRAND LOT OF HEIFERS.	19 Head—Imp. Mary Ann 6th, Imp. Jenny Lind 11th, Imp. Rosemary 128 and Rosemary 132 are some of the best any- where. The yearling bull, Good Morning, is extra choice.	
Geo. Harding & Son, Waukesha, Wis.		
16 Head—1 Missie, 2 Claras, 1 Lavender, 1 Claret, 1 Rosemary, 1 Village Blossom, 1 Miss Rams- den, etc. The average quality of our consignment compares with the best we ever made.		
<p>OUR aim is that the character and breeding of the animals in this sale shall not be secondary to any consignment of this number of Shorthorns that has been made in recent years. There is valuable foundation material and breeders' cattle of most approved blood lines throughout the entire offering. Apply for illustrated catalogue to</p> <p style="text-align: center;">JOHN DRYDEN, TORONTO, ONT.</p>		

LOUDEN'S GOODS ARE GOOD GOODS.

A prominent dealer writes: "I have never sold any other goods that have given such satisfaction as your Hay Carriers, and I have made more money out of them this year than I have out of binders."

Another says: "I have handled all makes, but Louden's are the BEST."



We make twelve different styles of Hay Carriers, all up-to-date. Our Double-Tread Barn-Door Hangers are "the best on earth." Dealers who want "A Good Thing"—something that will sell and give satisfaction—should write at once for the agency. Catalogue and prices free on application.

LOUDEN MACHINERY COMPANY, WINDSOR, ONTARIO.

one of the finest opportunities offered in recent years to secure desirable foundation stock or show-yard material.

Spring Brook Stock Farm, the property of Mr. Amos Smith, Trowbridge P. O., is situated in the County of Huron, about six miles from Listowel station. For a number of years Mr. Smith has devoted a greater share of his time to the care and development of his splendid herd of Scotch-bred Shorthorn cattle, at present headed by his beautifully-moulded stock bull, Golden Conqueror (imp. in dam), bred by Mr. Duthie, sired by the great Barmpton Conqueror 73981; dam Golden Strawberry, by Croupier 70214. In females, Clara F. 5th, bred by S. Campbell, Kinellar, sired by Waterloo 75861, dam Claret 3rd, by Cock-a-Bendie 68381, is a beautiful roan, of perfect mould; Veronica 16103, by Prince Albert 3669, dam Venetia 2nd, by Earl of Marr (imp.), has for grandam Vain Maid (imp.); Betty Aberdeen 24534, by Earl of Aberdeen 12430, dam Camilla 16097 by Prince Albert, is of the Collynie Countess tribe. Mr. Smith reports sales as being unprecedented, the major part going to the States. There are still on hand, for sale, four Beauty-bred heifers that are good ones.

IN WRITING
PLEASE MENTION FARMER'S ADVOCATE

Mr. E. S. Kelly's Shorthorn sale, at Yellow Springs, Ohio, May 20th, was quite successful. The highest price, \$1,625, was paid for the imported cow, Missie 158, bred by W. S. Marr, and bought by W. I. Wood, Williamsport, Ohio. The second highest price, \$1,300, was paid for Imp. Dalmeny Nonpareil 5th, bred by Lord Roseberry, and bought by W. D. Flatt, Hamilton, Ont. The highest-priced bull (\$470) was Nonpareil Champion, a roan yearling, by Lord Banff, purchased by Hubbard & Son, Flint, Mich. The average for females was \$685. The bulls sold low.

THE LOUDEN MACHINERY CO., of Windsor, Ont., advertise in this issue their hay carriers, barn-door hangers and other hardware specialties. Those of our readers requiring anything in this line will do well to send to the Company for their free catalogue giving full information.

THE FROST & WOOD COMPANY'S haying and harvesting machinery ranks with the best in the market, combining strength with lightness of draft, and the best of material is used in their construction. The testimony of farmers who have used the machines made by this Company is invariably favorable. The Tiger horse rake and No. 3 open-rear binder should be inspected and compared with others, and will favorably impress with their efficiency. See their advertisement and write for prices, etc.

FARM FOR SALE IN PILKINGTON

THREE hundred acres in the Township of Pilkington, Lots 3, 4 and 5, Concession 3. This is one of the best farms either for stock or grain in Ontario. There are two sets of buildings, and it is suitable to be farmed as one, two or three farms. For particulars apply to the undersigned on the premises, or by letter to JAMES HUNTER, ALMA P. O., ONT.

BRITISH COLUMBIA FARMS.

IF you are thinking of going out to the Pacific Coast, try British Columbia. A delightful climate; no extremes of temperature; fertile land; ample rainfall; heavy crops; rapid growth, and splendid markets for everything you raise, at good prices. The celebrated valley of the Lower Fraser River is the garden of the Province. Write for farm pamphlet telling you all about it, and containing a descriptive list of farms for sale.

THE SETTLERS' ASSOCIATION OF B. C. BOX 540, VANCOUVER, B. C.

Teas at Wholesale Prices

FOR FARMERS.

We are after more mail-order business. Send us your address, and we will mail you our latest WHOLESALE price list.

- 25 cent teas at 17 cents.
40 cent teas at 25 cents.
25 cent coffee at 18 cents.
40 cent coffee at 25 cents.
Etc., etc., etc.

You pay the same prices as the storekeepers, and get better goods. Terms, cash on delivery.

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SPECIAL OFFER IN BARCLAY'S PATENT ATTACHMENT

FOR THE CONTROL AND CURE OF BALKING AND KICKING HORSES.



We will send our Attachment, charges paid one way, to any part of Canada, C.O.D., and subject to examination and approval of method. When satisfied it will do all we claim for it, pay the express agent

our price, \$5.00. If not, the return freight will cost only a few cents. Our article will control any vice known to a horse, and is giving splendid satisfaction wherever used. Full illustrations and directions are enclosed. A boy can adjust it, and it can be used with any harness, vehicle or implement. If you have a troublesome horse, or a colt you wish to break in, write at once to

The Barclay Mfg. Co., Brougham, Ontario.

GOSSIP.

All owners of swine should send for the valuable little pamphlet entitled, "Swine Ailments," published by F. S. Burch & Company, 178 Michigan St., Chicago. This little work deals exhaustively with the various troubles of swine, and as a copy is free for the asking, no breeder should omit to send for a copy.

From Thos. F. Hunt, Dean and Professor of Agriculture at the College of Agriculture and Domestic Science, Ohio University, Columbus, we have received a copy of the latest catalogue, which is certainly the most complete and handsome ever issued by that institution. The Board of Agriculture in each county in the State issues a free scholarship, which can now not only be used in the two-year courses, but in any two years of the four-year courses. The list of alumni and ex-students given indicates that about 80 per cent. of the men are engaged in some kind of agricultural work.

Mr. John Lahmer, Vine, Ont., in ordering a change in his advertisement of Large English Berkshires, writes: "My ad. in the 'Advocate' has brought me considerable enquiry from Western Ontario, and a few from Quebec, which has resulted in quite a few sales. The enquiry has been mostly for boars, and I regret I had so few of any age for sale. The sows offered are good ones, and will make big strong brood sows."

Maple Leaf Stock Farm is situated about five miles from Elmville, Ont., which is on the Penetang branch of the G. T. R., and is the property of Rowat Bros., breeders of Shropshire sheep. Their flock now numbers something over 50 head, bred from Mansell foundation. They are a typical lot, showing size, covering, and an average amount of quality. Among them are eight two-shear rams that are a useful lot, sired by a Miller-bred ram, that are worth looking after. This season's crop of lambs are showing up well for a lot of youngsters. A part of them are sired by imp. Mansell's 4, and a part by a son of his. Parties wishing to purchase a few or many Shropshires, would do well to write the Rowat Bros., as they are not unacquainted men, and can offer straight-bred, useful animals.

GOSSIP.

It is seldom that at one sale of Short-horns, leading specimens of Bates, Booth and Scotch are offered, but at Delaware, Ont., on the 24th of June, such a treat may be enjoyed in the offering advertised in this issue by Mr. Richard Gibson.

Those who believe in taking their Scotch straight will have an opportunity of doing so, while those preferring it hot, with an addition of sugar and spice, may enjoy themselves to the full extent of their fancy and finances.

It is unnecessary to mention each animal separately, but they are a very evenly-fleshed lot, with lots of quality. A few words as to the bulls used in building up the herd may be allowed. The first to bring notoriety was 22nd Duke of Airdrie, sold in London, June 6th, 1877, for \$4,900, and he left an impress upon three herds seldom equalled, viz., the Belvoir, that of Col. Cannon, Vt., and of Rigdon Huston, Ill. He was sire of four sweepstakes bulls at leading shows the best in one year.

Of a later date, may be mentioned Scottish Victor. Though he was not owned in the herd, many of the cattle offered are descended directly from him. He was bred by Mr. Cruichshanks, got by Roun Gauntlet, dam Victoria 58th, by Pride of the Isles, g.-d. Victoria 43, by Champion of England. If you don't know that is hot Scotch, ask Arthur Johnston. No bull of better breeding ever left Aberdeen, and none with the opportunities he had did better service.

Scottish Archer, the present stock bull, is bred in the purple. His sire was the Missie bull, Scottish Pride, bred by Mr. Duthie, by Pride of Morning, dam Missie 142nd, of same family as Missie 153, sold at Chicago, Dec. 5th last, for \$6,000. Pride of Morning was a great show bull, winning first in his class and the Duke of York's medal at Highland Society's Show, 1893; championship at same show, 1894; also first and Short-horn Society's prize of \$100 at Royal Northern; etc.

Knight of Warlabby 2nd was of the Killenby Mantalini family. He did good service at Belvoir, and was then sold to Hon. M. H. Cochrane, Compton, who showed him successfully. He was by The Baronet, a bull bred by John Garne and imported by the late John Hope, for the Bow Park herd; while his dam was Rose of Pilkington, by Sir Ingram, a son of the noted Sir Arthur Ingram, the most successful prizewinner of modern times. He won at the English Royal five years in succession; three times at the Highland Society's Show in Scotland, besides scores of others at leading shows of the United Kingdom.

On the day following this, Mr. Geo. Dickie, Hyde Park, will sell 27 head of Shorthorns.

THE SUMMERHILL YORKSHIRES. A representative of the "Advocate" had the pleasure of visiting, on Victoria Day, the Summerhill Stock Farm of Messrs. D. C. Platt & Son, at Millgrove, Ont., six miles out from the City of Hamilton, and was delighted with the appearance of the well-kept farm, with its magnificent modern buildings, splendid crops of wheat and clover, the fine prospect for corn and mangels, and the great herd of Improved Yorkshire swine, the herd now numbering over 300 head, including the new importation recently received of 90 head, besides several litters of youngsters farrowed at sea and in quarantine, making the largest single importation of this class of stock ever made to America by one man or firm. And it is not in numbers only that this consignment is notable, the selection having evidently been made with great care and discrimination, as a more uniformly good lot, individually and collectively, we have never seen together in one herd, either in this or the Old Country, and this is not surprising, since the aim and determination of the firm is to own only the best, and the importation was selected regardless of expense, from a half dozen of the leading herds of Great Britain, and with a view to meeting the requirements of the trade in Canada and the United States. For truthness to the approved bacon type, for length and strength, for smoothness, for quality of flesh and bone and hair, and for strong and well-placed feet and legs, we have never seen their equal. From the unequalled record made by Messrs. Platt in prizewinning with selections from their herd at national and international exhibitions last year, a new importation may seem to have been superfluous, but we are assured that the unprecedented demand from all the Provinces and many of the States for stock from this noted herd has made it necessary to increase the producing capacity, and the only way in which this could be satisfactorily accomplished was to go to the fountain-head and secure the best that could be got, and now, with 75 breeding sows besides the young ones growing up, and a choice selection of sires, it is hoped they will be in a position to keep pace with the demands of the trade and to produce as good stock as they have imported, which their past record has shown they can do, for they are pardonably proud of the fact that their best success in the showing has been scored with animals of their own breeding, and so jealous are they of their reputation in this regard, that they request the correction of the misstatement recently made in some of the English papers, and copied in Canadian journals, that "Summerhill Victor" appears on another page, the champion boar of the Pan-American and International Exhibitions, and sold by them for \$700 (the highest price ever paid for a hog in Canada), was bred in Britain, whereas he is, in fact, a Canadian product, bred by Messrs. Platt, which speaks volumes for Canada and for Summerhill as a breeding-ground for superior stock.

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Defy Detractors
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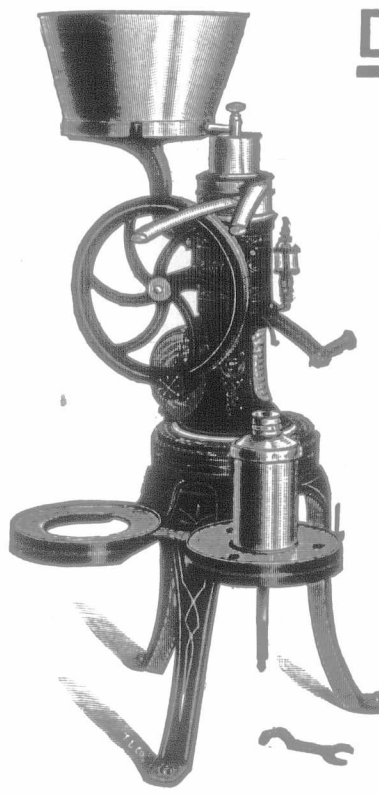
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BUY A SEPARATOR UNTIL YOU HAVE SEEN THE

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EXAMINE

The simplicity of the design. All wheels and bearings protected, being perfectly safe in the hands of a child.

It has anti-friction ball bearings. Few parts to wash—only two pieces inside the bowl.

The National is made by The Raymond Mfg. Co. of Guelph, whose success with the celebrated Raymond Sewing Machine is sufficient guarantee of the high finish and workmanship.

In 1901 five machines a day were manufactured. For 1902 the capacity is increased to 25 machines per day, showing the satisfaction given by the National in the past two years.

The 1902 National contains all the strong points found in other separators, and is placed on the market with the guarantee of being the best and most up-to-date machine in every particular offered to the Western farmers to-day.

The National will well repay investigation by intending purchasers. National No. 1, capacity 330 to 350 lbs. per hour. National No. 1 A, capacity 450 to 500 lbs. per hour.

AGENTS WANTED IN UNREPRESENTED DISTRICTS.

The Raymond Mfg. Co. of Guelph, LIMITED. GUELPH, ONT.

WE ALSO MAKE GOOD SEWING MACHINES.

NOTICE.

THE CANADIAN PORTLAND CEMENT CO.—We have much pleasure in calling attention to the advertisement of the Canadian Portland Cement Company in this issue of the "Farmer's Advocate." This company is said to operate the pioneer Canadian Portland cement factory, claiming a capacity of 1,200 barrels cement per day. Two or three years ago it would have been almost impossible for a Canadian company to have disposed of this quantity of cement in Canada. But the consumption in this period of time has almost

doubled, largely due to the public recognizing more clearly the durability and economy of utilizing Portland cement for concrete walks; also to the use of cement concrete bridges, piers, and foundations, in place of the more expensive and less durable stone and brick structures. Farmers are considering whether it is not very much to their advantage to erect cement concrete silos, which will be permanent structures, in place of the unsatisfactory wooden ones. Cement concrete stables and barn floors last a lifetime, and are always easily kept clean and sweet, in place of the old plank floor, which quickly rots and gets in a dilapidated condition.

GOSSIP.

Lake View Stock Farm, situated about two miles from Oshawa station on the G. T. R., is the property of Messrs. Thos. Allen & Bros., who for the last 19 years have been more or less extensively engaged in the breeding of Shorthorn cattle. The herd was originally founded on some Cruickshank Duchess of Gloster cows, on which have been used such grandly-bred Scotch bulls as Lord Abbot (imp.) 51536, Duke of Lavender (imp.) 51134, Topshills (imp.) 11113, and Grand Sweep (imp.) 64121. The present stock bull is Quarantine King 32086 (imp. in dam), a rich roan, sired by Wrestler 66582, a Wimple-bred bull, by the great William of Orange. Quarantine King's dam is King's Magic 4th, by Lord Harry 65819, he by the noted Scottish Archer. It will thus be seen that this bull combines to a very marked degree the best and most fashionable blood of Scotland, and individually he is a grand specimen of the up-to-date Shorthorn. In color he is a rich roan. The bulk of the cows in the herd are straight-bred Duchess of Glosters, but one other that deserves special mention is Imp. Strawberry, bred by Mr. A. Innes, Cushnie, Aberdeenshire, Scotland. She is sired by Roscommon 71406, dam Matilda, by Locksley. This cow belongs to the well-known Miss Ramsden family. There are two heifers out of this cow, one a year off, sired by Grand Sweep, the other six months off, sired by the stock bull. They are both considerably ahead of the ordinary in symmetry of form. There are also three young bulls, one coming two years old, by Grand Sweep, out of Duchess of Gloster 18th, by Imp. Knight of the Garter, one coming two years old, by Grand Sweep, out of Duchess of Gloster 24th, by Duke of Lavender (imp.); one two years old, a full brother of the last one described, and another half-brother, three months old, sired by the stock bull. These bulls are reds and roans, and are an exceptionally evenly-built lot, on the shortest kind of legs, and are fit to head any herd, as their breeding is in the purple and their form the kind that is in demand. These bulls are for sale at a price that should soon sell them; also, a few heifers could be spared.

THE TERRITORIAL SHOW AND SALE.

This annual event, under the auspices of the Territorial Cattle and Horse Breeders' Ass'n, came off at Calgary, Alberta, May 14th to 16th, and was a decided success. Robert Miller, Stouffville, Ont., judged all classes of horses, and Prof. Day, of Guelph, all the cattle. Eight Clyde stallions were shown in the aged class, the first award going to the 13-year-old Balgrogan Hero (8146), imported by D. & G. Sorby, Guelph, and exhibited by R. G. Robinson, Calgary; second was McClinker's Heir 2nd, shown by Harold Banister, Davisburg; and third, Prince Lyndock, owned by John Clark, Crowfoot. J. A. Turner, Calgary, won first in three-year-olds with British, and second went to Donald McQueen. In the Shire class, first place was given to Bahallion, shown by A. J. McArthur, De Winton. The sweepstakes for best heavy-draft horse was won by J. A. Turner's Activity, who was not shown in the aged class of Clydesdales, as five of the horses out of the eight entered were imported into Alberta by Mr. Turner. In the aged Hackney stallion section, the order of awards was: First, Black Foot, by Robin Adair 2nd, shown by J. R. Thomson, Calgary; second, Pioneer, by False Heir, shown by John Clark, Crowfoot; third, Woodland Agility, bred by Sorby, and sired by Woodland's Performer.

There were a dozen Shorthorn bulls three years and over, first honors going to Statesman's Chief, shown by C. Shattuck, Davisburg; second to Capt. Blucher, shown by Geo. Geary, Innisfail; third to Baron Birchwood, bred in Alberta and exhibited by Jno. McFarlane, Lacombe. In a class of ten two-year-olds, Baron Bruce, by George Bruce, bred by the Talbots, of Everton, Ont., and shown by the Talbots, of Lacombe, was first. He is a light roan, low-set, thick, smooth and level, and was later found worthy of the sweepstakes award over all ages. Henry Talbot won second with Red Ranger, and Talbot & Son third with Sir Donald. There were sixteen yearling bulls, first prize going to Gladstone's Choice, bred and shown by Mead Bros., Pincher Creek; second to Thos. Talbot's Golden Drop, and third to P. Talbot & Sons' Belted Prince.

The females shown were without preparation and made no creditable display. Twelve head of Aberdeen-Angus were shown by H. A. Day, Lacombe, and 15 Herefords by Mossom Royd Co., Bobcaygeon, and bred at Prince Albert. The sale of cattle was a very successful one, 220 head being disposed of in short order, at good prices, considering that the sale was open only to animals owned by members of the Association bona-fide residents of the N.-W. T. An entrance fee of one dollar was charged, and another fee of \$2 was deducted from the price of each to provide for free delivery to buyer at his nearest R. R. station. Bulls in good condition were most keenly competed for. The highest price of the sale, \$290, was paid by Robt. Page, Lacombe, for the red-roan four-year-old Trout Creek Hero 28132, purchased from W. D. Platt, sired by Duncan Stanley, and owned by John Ramsay, Pridis, Alta., in whose hands he won first and sweepstakes at Calgary last year. Six other bulls brought from \$210 to \$265, and fifteen sold for \$150 and upwards. One hundred and fifty-two Shorthorn bulls averaged \$104; fourteen Herefords, \$97; two Aberdeen-Angus, \$72.50; and the 220 head, all breeds, male and female, averaged \$90.

GOSSIP.

Glen Gow Stock Farm, situated six miles north of Oshawa, on the main line of the G. T. R. and four miles from Brooklin, on the Whitby and Port Perry branch, is the home of Mr. Wm. Smith, of Columbus, Ont., importer and breeder of Clydesdale horses and Shorthorn cattle. Among the many Clydesdales on the farm, exclusive of the stallions in which Mr. Smith is interested, are three mares: Glengow Jennie 3rd, by Imp. Pride of Perth 2336, dam Glengow Jennie 2nd, out of Imp. Glengow Jennie, is a big, well-developed black mare; Glengow Jennie 4th, sired by Granite 1913 (by Imp. Granite City, dam Imp. Brooklin Metal), out of Glengow Jennie 3rd, is a big bay mare, showing plenty of size and quality. A full sister of hers is Glengow Jennie 5th, also a big slashing mare. The Shorthorns now number 25 head, and are nearly all of the smooth, short-legged, thick-fleshed Wedding Gift family, which traces directly to the cow, Wedding Gift (imp.) 5354, bred by Lord Polwarth, St. Boswell, Scotland, and sired by Regal Crown 43889. Mr. Smith's cattle, old and young, are a splendid lot and in prime condition. The many heifers in the herd, of various ages, are an ideal lot, showing symmetrical conformation coupled with rich breeding, and are the kind now eagerly sought after. The herd is headed by that grand Scotch-bred sire, Royal Bruce 26018, by Imp. Royal Member 17107, dam Imp. Rosalind 21208. This bull is a massive, evenly-built animal, weighing close to 2,500 lbs., and as a sire of fleshy, well-proportioned calves has few equals. There are three young bulls, from 3 to 9 months old, that are as nice a modelled lot as it has been our privilege to look over in many a day, and if present indications count for the future there are prizewinners among them sure. They are all sired by the stock bull and out of Wedding Gift dams. These youngsters, together with a few heifers, are for sale.

Springfield Stock Farm, situated four miles from Wyvale station, on the Penetang branch of the G. T. R., is the home of Mr. Charles Rankin, importer and breeder of Shorthorn cattle, Oxford Down sheep, and Berkshire pigs. The Shorthorns now number 60 head of imported and home-bred Scotch Shorthorns, represented by Jilt, Marr Beauty, Fanny, Countess and Sonsie families, and among them are seven imported cows, all of which are now breeding, and include Rothnick Rose 8187, by Alan Gwynne 66609, a big, well-moulded roan cow of Jilt-bred; Bloomer 8215, by Merry Mason, a Marr Beauty bred cow; Duchess 8188, by Alan Gwynne, also a roan, of the Jilt family; Gladys 16th, by Sigmond 2nd 69583, a splendid cow, of the Fanny family; Duchess of Aberdeen, by Scottish Prince 73593, a Jilt-bred cow. Among the Canadian-bred ones is Mable, by Crimson Chief 18991, dam My Queen 14226, of the Sime Sonsie family. A number of animals in the herd are sired by Crimson Chief 18991, a son of the noted Indian Chief (imp.), dam Crimson Bud, a straight-bred Crimson Flower cow. The younger ones up to 17 months old are all sired by the stock bull, Imp. Gladiator, by Pride of Fashion 73239, imported Gladys, by Sigmond 2nd 69583. He is a big, broad, evenly-built animal, showing great length and depth, with abundance of quality and a particularly good skin. He has proven a sire of more than ordinary worth, and is now for sale and can be bought worth the money. In the young stuff, there are four two-year-old and three one-year-old heifers, among which are some extra good ones; in fact, Mr. Rankin's stock will make a fair showing against any in the country, and they are in the pink of condition. Any animal in the herd will be priced, as Mr. Rankin intends to make another importation this fall. His Oxford Down sheep are an ideal lot, and are in prime condition; also the Berkshires, which are bred from Snell foundation. They are a lengthy, even lot, and show grand bacon conformation.

Unadilla Stock Farm, situated about five miles from Claremont station, on the C. P. R., and the same distance from Pickering on the G. T. R., is the property of Mr. E. J. Green, breeder of choice St. Lambert Jerseys and Improved Yorkshire hogs. The Jersey herd numbers 60 head of high-class specimens of these favorite dairy cattle, all in the pink of condition, their shapely forms, well-developed udders and sleek, glossy skins making a sight well worth a visit to see. This is the herd that produced the cow, Queen May of Greenwood, that made the great record of 17 lbs. 122 ozs. of butter in seven days, and showed to such splendid advantage in the Pan-American model dairy last year. Among the lot is an extra nice yearling bull out of this cow and sired by St. Lambert of Unadilla, that is for sale, and from his perfect form and rich breeding, will make a very desirable head for a herd. There are also a number of other cows in the herd, that have made 14 lbs. of butter and upwards in a week. The many heifers of different ages to be seen in the herd are an ideal lot and show the type and form that produces record-breakers. There are a large number of these youngsters for sale. The herd is now headed by that grand old stock bull, Count of Pine Ridge, who is the sire of so many good ones. He is a straight-bred St. Lambert, and his form is faultless. The Yorkshires now number 100 head, which for length, depth, smoothness and typical bacon conformation cannot be improved on. They are all descended from Brethour & Saunders importations, which are so well and favorably known. At present there are both sexes and all ages for sale, and no fancy prices are asked.

First-Class Farm for Sale

MAGNIFICENT farm for sale, in the highest state of cultivation, containing 150 acres, being lot 21, concession 2, West Oxford, Oxford County, Province of Ontario, one-half mile from town of Ingersoll, on G.T.R. and C. P. R. Modern buildings, two-story brick house (54 x 28 feet) with slate roof, and heated with hot-air furnace. Basement barn, 76 x 42; and stable, 52 x 35 feet, with 20-foot posts. Brick piggery, 100 x 30 feet, two stories. Splendid water supply; two orchards; soil rich clay loam, all underdrained, well fenced; 18 acres hard maple bush. No waste land. Within two miles of successful pork-packing house, three cheese factories, and the largest milk-condensing factory in Canada. For full particulars come and see, or write to the proprietor on the premises.

GEORGE SEBBEN,
INGERSOLL, ONTARIO.

London Fence Machines

HIGH QUALITY, LOW COST.

TWO THINGS SELDOM COMBINED ARE
THE FEATURES OF FENCE BUILT WITH
THE LONDON FENCE MACHINE. IT COM-
BINES

QUALITY AND CHEAPNESS.

NO FENCE CAN BE BUILT BETTER,
CHEAPER OR FASTER THAN WITH
THE LONDON. BUILD YOUR FENCE
ON THE GROUND; IT'S THE ONLY
WAY TO GET THE HIGHEST QUALITY;
AND THE LONDON IS THE BEST
MACHINE IN THE WORLD FOR BUILD-
ING IT. FORTY TO SIXTY RODS IS
AN EASY DAY'S WORK.

WRITE FOR PRICES AND CATA-
LOGUES SHOWING COST OF MATERIAL
IN TWELVE STYLES OF FENCE.

SEE OUR ADS. IN APRIL 15TH AND
MAY 1ST ISSUES OF THE ADVOCATE.

London Fence
Machine
Company
London, Canada.
(Limited).

TEN

Choice Registered Fillies

That I am now breeding to that noted stock horse,
Lord Lynedoch (imp.) (4530), also 4 young stallions
under 2 years, and The Royal Arch (3171), rising 4
years old, sired by Erskine's Pride (imp.) (332), and
a grandson of that prizewinning mare, Daisy (imp.)
977.

JOHN BRIGHT, MYRTLE, ONTARIO.

Dalgety Bros., London, Ont.,
and DUNDRE, SCOTLAND,

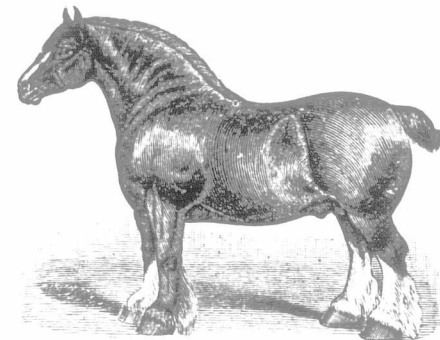
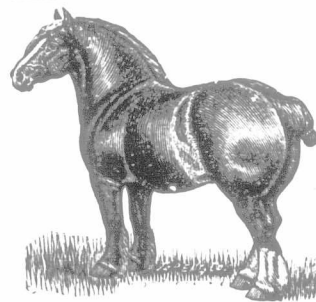
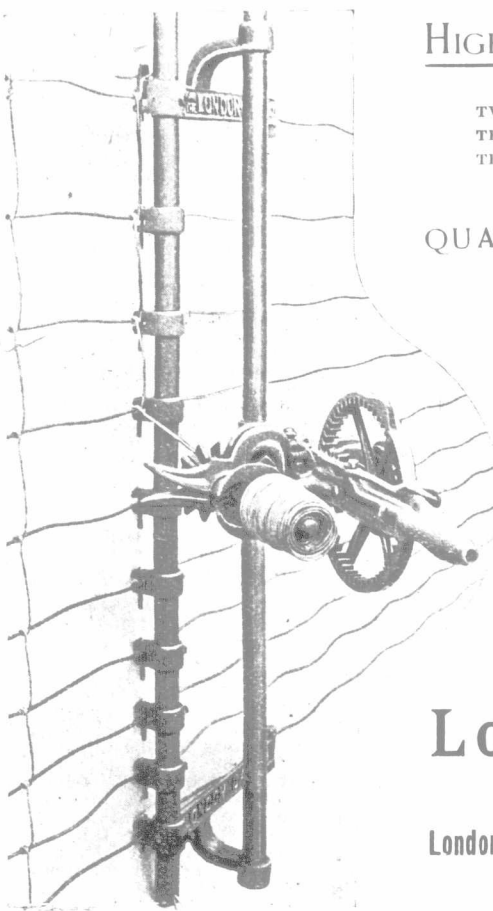
The Largest Importers and Exporters of
Horses in Canada.

Having sold out our last consignment of stallions, we are again making preparations to bring out a large consignment in September, which will include many valuable horses, combining size, quality, breeding and action. Great care will be taken in the selection of this consignment. We have imported a great many winners at the principal shows, which goes to prove that we bring out the right kind of horses. We are in an excellent position to offer buyers the best quality at most reasonable prices, having our representative in the Clydesdale home. Intending purchasers desiring to place their orders with us for either stallions or mares, please write or call upon
JAMES DALGETY, LONDON, ONTARIO.

GOSSIP.

Through the kind invitation of Messrs. B. H. Bull & Son, Brampton, the Canadian Jersey Cattle Club will hold their semi-annual meeting at Hawthorn Villa, Brampton, Ont., the beautiful home of Messrs. Bull, on Friday, June 20th. All owners of Jersey cattle and those interested in them are cordially invited to be

present. As the gathering will be more of a social than a business nature, an excellent opportunity will be given to lovers of the "dairy queen" to inspect one of the famous herds of this country, and especially the lately-imported members of the herd. If you purpose attending, please drop a card to Messrs. Bull, R. J. Fleming, president, R. Reid, secretary.

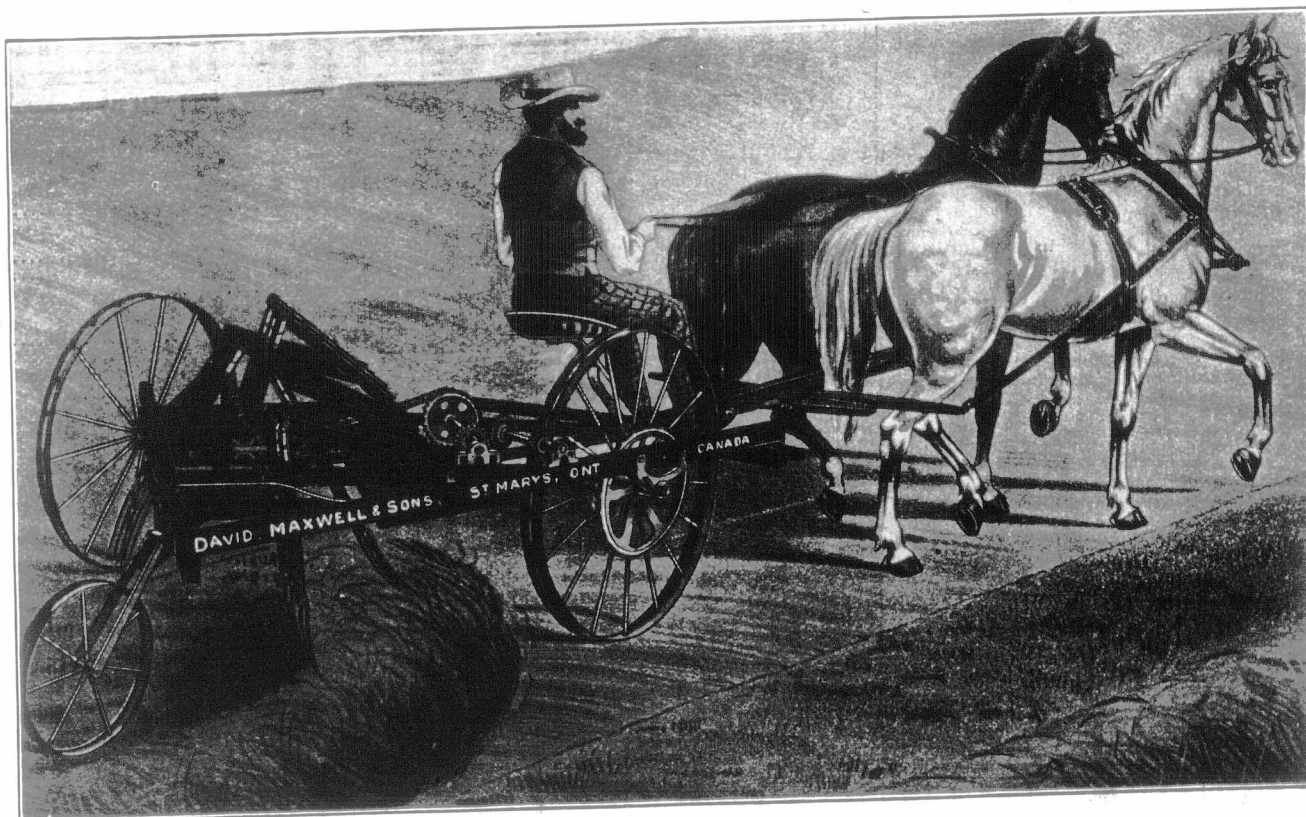
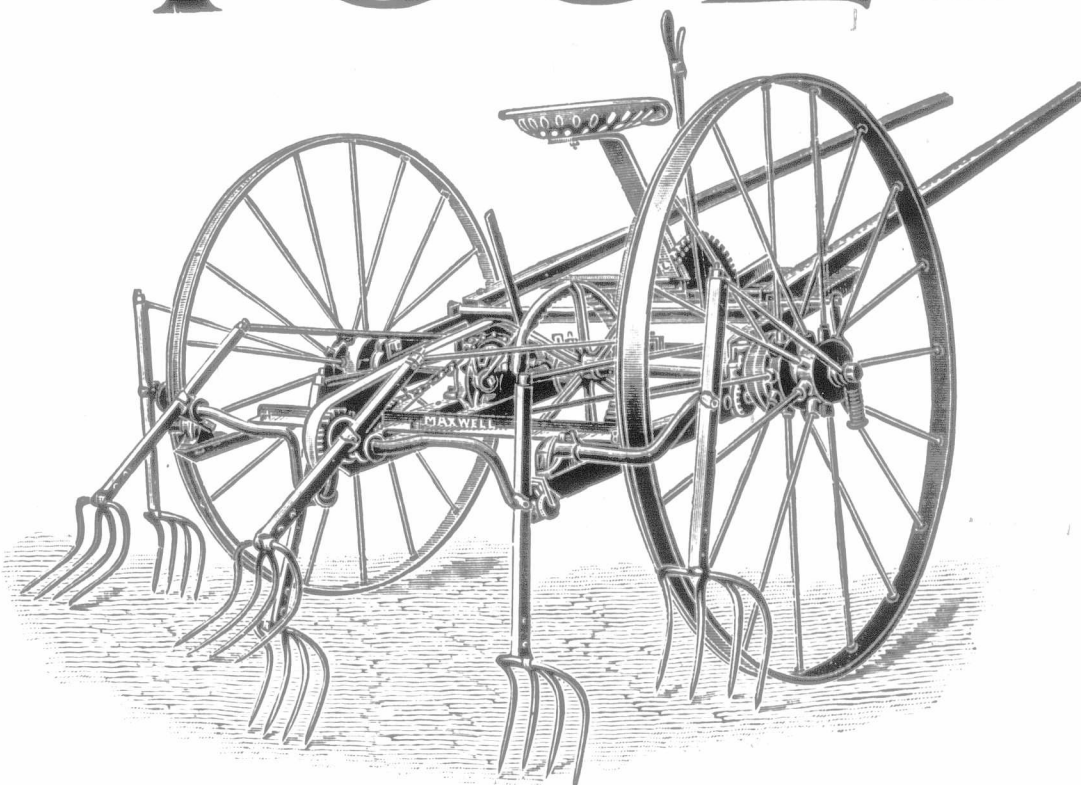


HAY TOOLS

The Maxwell Hay Tedder

(ALL STEEL).

The growing demand for a reliable, well-made Hay Tedder, which can be sold at reasonable figures, led to the developing and perfecting of this machine.



Improved
"SIDE DELIVERY"
Hay Rake

SPECIALLY ADAPTED
FOR HAY LOADERS.

NOTHING LIKE IT FOR
GOOD WORK.

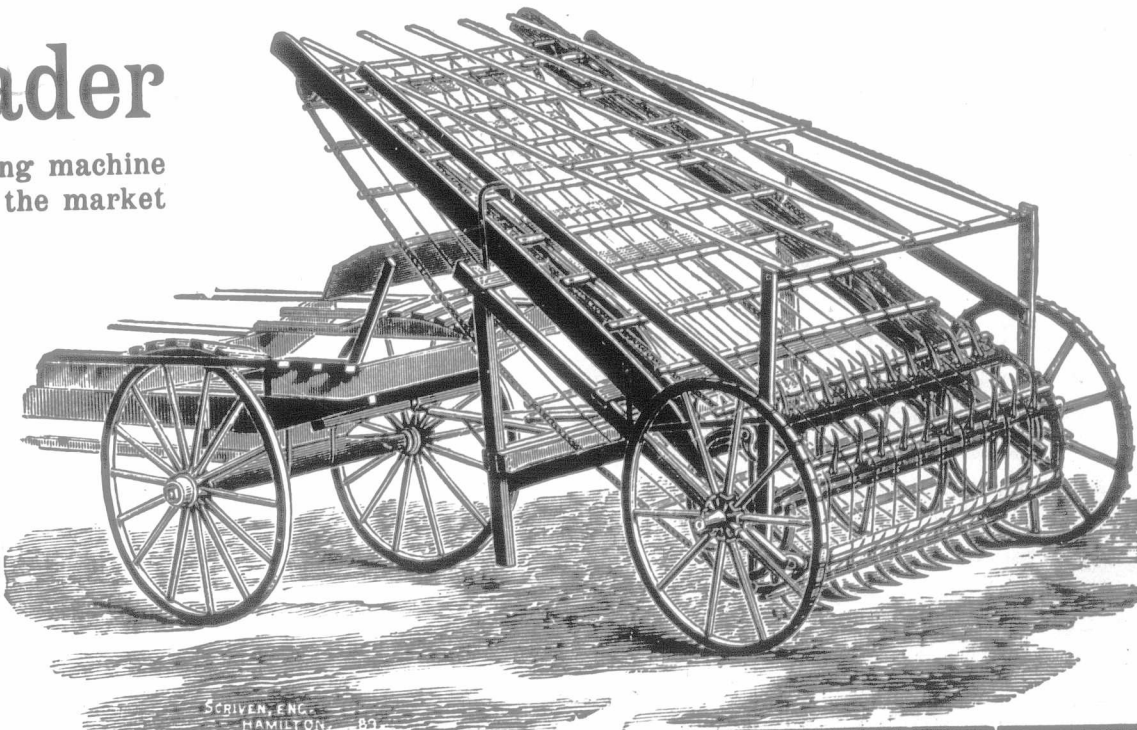
MOST COMPLETE OUTFIT
OFFERED THE TRADE.

Maxwell Hay Loader

It is no experiment, but is the leading machine of its class in Canada; has been on the market for years, and is fully guaranteed.

DO YOU WANT THE BEST?
THEN ASK US FOR PARTICULARS.

David Maxwell
& SONS,
ST. MARY'S, ONT.



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R. Reid,

CLYDESDALE STALLION

Kinellar Stamp (3044). One-year old bay.

WM. BRASH, ASHBURN, ONTARIO.

WM. SMITH, COLUMBUS, ONT.,

IMPORTER AND BREEDER OF

Clydesdale Horses & Shorthorn Cattle

4 Imp. Clydesdale Stallions 4

Amphion, Vol. 24, 2 years old, bay; Bucepholus, Vol. 24, 2 years old, black; Voyageur, Vol. 24, 2 years old, brown; Lord Garty, Vol. 23, 4 years old, brown. Representing the blood of Golden Sovereign, Sir Christopher, Montrave Matchless, and Royal Garty.

GEO. G. STEWART,

ROSEBANK FARM,

P. O. and Station, Howick, Quebec.

IMP. CLYDESDALES AND AYRSHIRE.

The three imp. stallions, Copyright, Baron Frederick and Baron Laing, and the Canadian-bred stallion, Laurentin. Ayreshires all ages; and poultry, utility breeds. Eggs for sale.

ROBT. NESS & SONS, Howick, Que., P.O. & Sta.

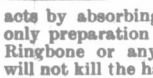
Shires, Shorthorns, and Leicesters.

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

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

DR. PAGE'S ENGLISH SPAVIN CURE

For the cure of Spavins, Ringbone, Curbs, Splints, Windgalls, Capped Hock, Strains or Bruises, Thick Neck from Distemper, Ringworm on Cattle, and to remove all unnatural enlargements. This preparation (unlike others) acts by absorbing rather than blister. This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin, or money refunded, and will not kill the hair. Manufactured by DR. FREDRICK A. PAGE & SON, 7 and 9 YORKSHIRE ROAD, LONDON, E. C. Mailed to any address upon receipt of price, \$1.00. Canadian agents: J. A. JOHNSTON & CO., DRUGGISTS, 171 KING STREET, EAST, TORONTO, ONT.



Spring Brook Holsteins and Tamworths.

A few choice 2-year-old heifers, 1 yearling and 2 calves, all sired by my imported prize-winning bull, Judge Akkrum De Kol 3rd, and out of rich-bred cows. Stock strictly choice. A few Tamworths to offer.

A. C. HALLMAN, Waterloo Co., Ont. Breslau, Bx 26. (Formerly New Dundee)



Bicycles Below Cost

5000 Bicycles, overstock. For 30 days only we will sacrifice at less than actual cost. New 1902 Models. "Bellie," complete \$8.75. "Ossack," guaranteed High Grade \$8.75. "Siberian," a Beauty \$10.75. "Neudorf," Road Racer, \$11.75. No finer bicycle at any price. Choice of M. & W. or Record tires and best equipment on all our bicycles. Strongest guarantee. We SHIP ON APPROVAL C.O.D. to anyone without a cent deposit & allow 10 DAYS FREE TRIAL before purchase is binding. 500 good 2nd-hand wheels \$3 to \$8. Do not buy a bicycle until you have written for our free catalogue with photographic engravings and full descriptions.

MEAD OYOLE CO., Dept. 360 R Chicago.

CLYDE AND SHIRE HORSES

SHORTHORN CATTLE, LEICESTER SHEEP. One extra good Shorthorn bull, 16 months old, red, by Imp. Prime Minister, g. sire Imp. Warfare. My motto: "The best is none too good."

ROSEDALE STOCK FARM, HIGHFIELD P. O. ONT. MALTON, G. T. R.; WESTON, C. P. R. 2 1/2 Rosedale is fifteen miles west of Toronto.

JOSEPH STRATFORD AT BRANTFORD.

Has for immediate disposal three carloads and sacks of Scotia Brand

Thomas' Phosphate, \$16.50 a Ton, delivered any point in Ontario, providing unsold on receipt of reply. This is considered the best of all the Phosphates, and the most largely used in Scotland and Denmark.

High-class Herefords

We have for sale the following choice young stock, which have been bred from imported and American sires. Intending buyers will do well to inspect the following: 18 young bulls, 2 aged bulls, 20 young heifers. Correspondence invited.

A. S. HUNTER, DURHAM, ONT.

The Sunny Side Herefords.

Imp. Sunny Side Tom 1st at head, Lord Walton, 2nd at head, Grove 3rd, 4th at head, and Anxiety 1st and 2nd at head. For sale: 5 bulls from 9 to 12 months, and 20 choice young cows and heifers. Inspection and correspondence solicited. O'NEIL BROS., Southgate, Ont. Lucan station, G. T. R. Elderton station, L., H. & B.



GOSSIP.

Mr. Abram Ruddell, breeder of Shropshire sheep, Hespeler, Ont., writes: "I wish to state that my flock of nearly 100 Shrops. have gone on the grass in the best of condition, so I will be able to supply a good number of customers this season. I would invite buyers to give me a call, or write for particulars as regards price and quality of stock, which we will be pleased to give any time. The farm is situated only one mile from G. T. R. and C. P. R. stations, so that parties can call and inspect the flock and return in a very short time. I have on hand now some of all kinds: yearling rams, two-year-old rams, ram lambs, breeding ewes, yearling ewes, ewe lambs; so that I will be able to supply anyone who will require stock of this kind. Parties who will leave me to select for them will be careful to describe the style and quality of animal they desire, and we will do our best to please." Notice the advertisement in another column.

At the Oxfordshire Show, May 13th and 14th, in a strong class of Shire stallions, the championship went to the first-prize yearling colt, Desford Stone-wall II, shown by Messrs. W. & J. Thompson. He was sired by Stonewall, and out of Bonny, by Duncan III. He is said to be well-shaped, good in quality of hair and bone, and with perhaps as good a set of legs and feet as a colt could stand on, his hind legs being especially correct. The reserve number for the championship was Lord Langatlock, first-prize two-year-old colt, Hendre Royal Albert, by Hendre Baronet. The second-prize yearling colt, and a good one, was Mr. Henderson's Buscot Plutus, by Buscot Harold, and from a Laughing stock mare. He is capital all round alike in build, limbs and quality.

Burnside herd of St. Lambert Jerseys, property of Mr. J. A. Lawson, Crumlin, Ont., five miles from the City of London, advertised in this issue, is headed by the handsome two-year-old bull, Champion of Burnside, winner of first-prize at the Western Fair, London, last year. He has fine dairy form and breed character, and comes of richly-bred and high-performing stock, his dam having tested 43 lbs. milk daily and 18 lbs. butter in seven days. His sire, John Bull of Grovesend, a handsome and extraordinary character, was by the champion Nell's John Bull, pure St. Lambert, whose dam made the remarkable record of 26 lbs. 12 ozs. butter in seven days. A nice young bull, just a year old, this month sold fawn, sired by Champion of Burnside, dam Hazelton Jewell, is also for sale. The dam is a beautiful cow, with a well-shaped udder and is richly bred and from deep-milking stock, her granddam having made a record of 24 lbs. 5 ozs. The females of the herd are a handsome and useful lot, producing profitably and making money for their owner. The yearling heifers are a charming collection and worthy of their breeding.

Clydesdale breeders will regret the death of the noted Scotch-bred stallion, Royal Carrick (10279), which gained the Glasgow premium three years ago, and stood second at the H. & A. S. Show at Inverness last year. To take his place, his owner, Mr. Dunlop, Dunure Mains, Ayr, has purchased from Mr. Matthew Marshall a three-year-old horse, bred by Mr. Hunter, Garthland, and got by Hiawatha (10067), out of Rose Leaf of Garthland (12510). This mare is exceptionally well bred, her sire being the noted horse, Rosewood (7207), for which a very long price was paid when a yearling. He was got by the H. & A. S. first-prize horse, Macfarlane (2988), out of the dam of the champion Moss Rose. The granddam of Mr. Dunlop's new colt was the 220-gs. mare, Queen of Ernock, and her dam again was the 300-gs. Auchendennie mare purchased in 1884. This young horse is of a big size, and few horses have as notable a pedigree. He ought to make a worthy successor to even as notable a horse as Royal Carrick—Scottish Farmer.

Messrs. J. G. Vull & Sons report the following recent sales from their herd of Ayreshires: Bull calf, Charnier Meadowside 13714, to Walter Wilson, Sersfield, Ont. This calf took third at Ottawa last fall, 15 competing, and first at Almonte for bull calf, Woodie Meadowside, to Wm. McCoy, Morewood, Ont. Bull calf, Luxey Meadowside 13718, to Augustin Parout, Sturgeon Falls, Ont. This calf took first at Ottawa in 1901, for bull calf under six months, 13 competing. Bull calf, Iroquis Meadowside, to Pembina McIntosh, Dundela, Ontario. Cow, Lady Hay 1998, to Samuel Duncan, Johnston's Corners, Ont. This cow took second prize at the World's Fair at Chicago in 1893, as two-year-old heifer. Dosey Meadowside 13716, to P. McMahon, Rugby, Ont. This calf took first for bull calf under six months at Ottawa, and the same at Almonte in 1901. Two-year-old heifer, Mary Meadowside 11905, to Miss Laura Bell, Qu'Appella, Assa. Bull calf, Norrie Meadowside 14506, to W. J. Steele, Newington, Ont. Heifer calf, Milkmaid Meadowside 14631, to W. J. Steele, Newington, Ont. Heifer calf, Queen Cobden Meadowside 14634, to R. A. Graham, Coiden, Ont. Bull calf, Rennie, to John T. Sutherland, Eganville, Ont. Cow, Helena Meadowside, to D. McPherson, Carleton Place, Ont. Cow, Katie, to David McPherson, Carleton Place, Ont. Berkshire boar, to Edward M. Pool, Merrickville, Ont. Sows to W. J. Cochrane, Muldoon, Ontario. Pig to Ben Hilliard, Carleton Place, and sow to Duncan McNeil, Ardenmore, Ont.

I PURPOSE SELLING BY AUCTION

35 HEAD OF SHORTHORNS

TUESDAY, JUNE 24, AT DELAWARE.

THE OFFERING WILL CONSIST OF

- Bates, Booths, Barringtons, Charmers, Fames, Duchesses, Roses, Scotch Minas, Waterloos, Wimples.

All are by Scotch-bred bulls, and all old enough are in calf to bulls of similar breeding. The cattle are worthy the attention of intending purchasers, being well bred and in good condition. Several are prizewinners, and are worthy of strong competitors. Without doubt great material will be offered upon which to continue the use of Scotch blood. A number of very superior Yorkshire swine will be sold. The Shropshire flock may be inspected, and purchases made by private treaty. Catalogues in due time, for which apply to

Richard Gibson, Delaware, Ont.

IMPORTANT AUCTION SALE

OF FIRST-CLASS 200-ACRE FARM.

27 Registered Shorthorn and 10 High-grade Cattle,

ROAD AND DRAFT HORSES,

Wednesday, June 25th, 1902.

THIS herd is largely of Scotch breeding, and combine quality and substance in very even proportions, being sired by such noted bulls as Scottish Victor (imp.) (50422), Warrior (imp.) (53173), Clinton Victor = 21123 = (whose dam was first-prize cow at London), and Rugby = 2337 =. Females not having calved are safe in calf to Wood Home Lad, by Royal Standard. The farm is one of the finest stock farms in Canada, situated five miles west from the City of London. Visitors will be taken to and from the sale, meeting all trains at Hyde Park station up to 2 p.m. Lunch at 12 noon. Sale commence at 2 p.m. Send for catalogue. For information and terms of farm apply to

JOHN GILLSON, Auctioneer. GEORGE DICKIE, Proprietor, Hyde Park. Mr. Richard Gibson, Delaware, Ont., 12 miles from London, will hold a sale of Shorthorns and Yorkshires on June 24th.

THE SHEEP OF THE CENTURY.

PRINCIPAL AWARDS GAINED BY SUFFOLKS AND SUFFOLK CROSSES IN OPEN COMPETITION AGAINST ALL BREEDS, 1898 TO 1901.

Table with columns for show names (e.g., SCOTTISH NATIONAL FAT STOCK SHOW, SMITHFIELD CLUB SHOW) and years (1898, 1899, 1900, 1901) showing awards won.

AN UNEQUALLED RECORD.

Pamphlet, with full description of the breed, show-yard honors, live and dead weights of rams, ewes and lambs, can be obtained on application to

ERNEST PRENTICE, Secretary Suffolk Sheep Society, IPSWICH, ENGLAND.

ARTHUR JOHNSTON

BREEDER AND IMPORTER OF

SHORTHORNS ONLY.

FOR SALE: Imported bulls and bull calves. Home-bred bulls and bull calves, from imported cows and by imported bulls. Home-bred bull calves. A large and excellent lot of young cows and heifers of various ages.

RAILWAY STATIONS: PICKERING, G. T. R., 22 MILES EAST OF TORONTO. CLAREMONT, C. P. R., 28 MILES EAST OF TORONTO.

Scotch Shorthorns

BREEDING FEMALES ALL IMPORTED.

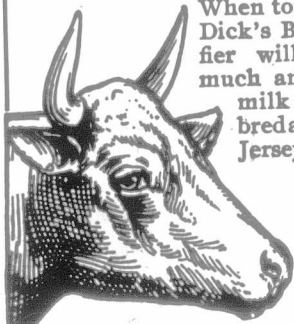
Imp. Golden Drop Victor our present stock bull, Eleven young bulls and some young cows for sale at reasonable prices.

H. CARGILL & SON,

Cargill Station, G. T. R. CATALOGUE FREE. om Cargill, Ontario.

At the Oxfordshire Show, held at other sections: Shourling rams (21 entries), May 13th and 14th, the exhibition of Oxford Down sheep, which is 3. Albert Brassey, M. P.; Ram lambs (11 entries); 1. Albert Brassey, M. P.; 2. have been better than usual, which is J. T. Hobbs; 3. A. H. Wilsdon. Shear-saying a good deal. The special prize for the best shearing ram went to Mr. J. T. Hobbs for best ram lamb Ewe lambs (9 entries); 1. A. Brassey, and best pen of ewes, to Mr. Albert M. P.; 2. J. T. Hobbs; 3. George Brassey, M. P. Following is the list in Adams.

A Common Bred Cow



When toned up by Dick's Blood Purifier will give as much and as rich milk as a highly bred aristocratic Jersey cow gives upon ordinary feed, and a Jersey cow when given.

DICK'S BLOOD PURIFIER

will wonderfully increase her yield of milk. It saves feed too, because a smaller amount of well digested food satisfies the demands of the system and every particle of nourishment sticks.

50 cents a package.
Leeming, Milles & Co., Agents,
MONTREAL.
Write for Book on Cattle and Horses free.

INGLESIDE HEREFORDS.



A few choice heifers and young bulls by **Mark Hanna**, sweepstakes bull at Pan-American.

Shropshire Sheep and Tamworth Swine.
H. D. SMITH,
Compton, Quebec, Ont.

HIGH PARK STOCK FARM.

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

SHORTHORNS, SHROPSHIRE, COTS WOLDS.

We are now offering a number of heifers and heifer calves; a few bull calves; a number of cows; all bred in the purple and as good as the best. Also Shropshire and Cotswold sheep.—om
JOSEPH BELL ESTATE, Bradford P. O. & Sta.

JOHN DRYDEN,

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

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

SHORTHORNS.

Fashionably bred, of both sexes and all ages. Nothing reserved.
H. PARKER, Durham P. O. and Station.

LAKE VIEW STOCK FARM.

SCOTCH SHORTHORNS, both sexes, all ages. As good as the best.
Meaford Station, G. T. R. North. —om
JAMES BOWES,
Strathairn P. O.

JAMES A. CRERAE, Shakespear, Ont.

BREEDER AND IMPORTER OF
HIGH-BRED SCOTCH SHORTHORNS

Bonnie Burn Stock Farm. 40 rods north of Stouffville Station, Ont., offers Shorthorn bulls and heifers with calf. Shropshire ewes with lamb, and Berkshire pigs. All at farmers' prices. Inspection invited. —om
D. H. RUSSELL, Stouffville, Ontario.

ROSEVALE SHORTHORNS

Are of the up-to-date sort. We have for sale a number of young bulls and heifers of all ages. Marengo Heydon Duke (imp.) heads the herd. —om
W. J. SHEAN & CO.
Owen Sound, Ont.

Scotch Shorthorns

Of both sexes, of the following noted families: Golden Drops, Rosebuds, Claras, Matchlesses, Strathallans, Vain Duchesses, Marr Beauties, Mayflowers, Crimson Flowers, and others; 56 head to select from. Herd headed by the imported Bracelet bull, Red Duke = 36084 = (77585).

DAVID MILNE & SON, ETHEL P. O.,
Huron Co., Ont.
Ethel Station, G.T.R., half mile from farm. —om

PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

Messrs. I. Devitt & Son, Freeman, Ont., write: "Have sold to Mr. Slater, of British Columbia, the big draft mare, Aggie Macpherson; Messrs. Lyons Bros., Dundas, the fine young Clydesdale mare, Edna; McKenzie Bros., Scotch Block, the Clydesdale colt, Lord Nelson. The last two named are by Grandeur 2nd (2246), and out of Jess Macpherson (3153). Ida Macpherson has a fine filly foal by Nickel Steel. Stock all doing nicely."

Mr. Arthur Johnston, of Greenwood, Ont., reports a good season in Shorthorns, especially the very superior classes. "The shipments to the States from this locality have far exceeded the trade in any former year, perhaps doubled that of last year, which, up to then, was a record year. Calves are now coming in considerable numbers and of excellent colors. I count imp. Merryman fully the equal of Indian Chief as a sire. I think his bull calves are the equal of Indian Chief's bull calves, and I know his heifer calves are superior to the heifer calves by Indian Chief. The two-year (past) roan imported bull, Lord Kinmore, is now looking magnificent—big, thick, smooth, and handsome. The other imported bulls in the herd are doing excellently. There are still in the herd a number of first-class home-bred bulls fit for service. We are offering all our bulls for sale, excepting imported Merryman. We are offering a very fine lot of home-bred heifers for sale—two-year-olds and yearlings."

Lovers of typical Shropshire sheep will be amply repaid by a visit to Holwell Manor Stock Farm, the home of Mr. D. G. Ganton, importer and breeder of Shropshire sheep, breeder of Shorthorn cattle, Yorkshire hogs, collie dogs, and B. P. Rock poultry, at Elmvale, Ont., on the Penelung branch of the G. T. R., where is found a flock of 85 head of imported and Canadian-bred Shropshire sheep that for short legs, deep, broad bodies, perfect covering and breed character are hard to duplicate. Among this lot are to be seen animals that are fit to enter any show-ring. The imported ewes are all of Harding breeding, while the stock rams, of which there are two (both imported), are of Mansell breeding. Mansell 4717 is the sire of all the yearlings. He is a ram showing an abundance of size and quality, while his covering is perfect from his feet to his head. The other, Mansell 62027, is a ram of more than ordinary merit. A full brother of his sold for the highest price ever paid for a Shropshire ram, 400 guineas. This season's crop of lambs are sired by these two rams, and are already showing a form and covering that make the prizewinners. The eminently satisfactory trade which Mr. Ganton already enjoys testifies to the quality of sheep he keeps, and to the straight manner in which he deals with his many customers. The Shorthorn cattle are not as yet very numerous, there being only eight head on the farm at present, but what they lack in numbers is more than made up in breeding. All of them are straight-bred Nonpareils from away back. A yearling heifer among them is just a perfect beauty, and a man might look a long way to find her equal. Just now none of these cattle are for sale. The Yorkshires are all of Brethour and Saunders breeding, and are a true type of the bacon Yorkshires that have made this firm so famous. There are a number of young ones for sale, both sexes. The collie dogs are typical specimens of the breed; the main breeding bitch is Hazel Kirke, by handsome Kriss, he by Dan B. by Harry, dam Auchairnia Flirt, by Auchairnia Boy. A number at present for sale are sired by Mountain Rover, by Ruford Assary, dam Mountaineer Florrie. In poultry nothing but B. P. R. are kept, and no expense is spared to keep them among the best. We forgot to say that in Shropshires there are at present for sale 25 shearing rams and 10 shearing ewes, a part of which are sired by Miller's 3402, Association No. 111876.

SPRINGBANK FARM.

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

High-Class Shorthorns

and **YORKSHIRE PIGS.**

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

JAS. McARTHUR, Goble's, Ontario.

Shorthorns for Sale.

6 heifers (all in calf), from Imp. British Statesman; also two young bulls, 18 months old. Write for prices.
LOUIS ELLARD, Loretto P. O., Beeton Sta.

Maple Lodge Stock Farm.

ESTABLISHED 1854.

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

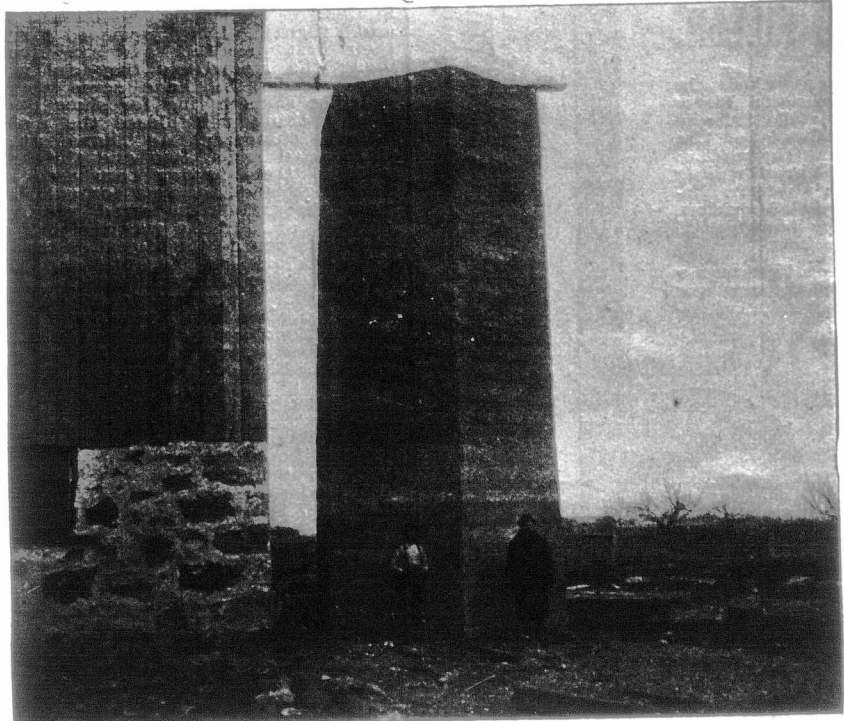
A. W. SMITH,
Ailsa Craig Station, G.T.R., 3 1/2 miles. —om
Maple Lodge P. O., Ont.

PLEASE MENTION FARMER'S ADVOCATE

READ THE FOLLOWING LETTER BY MR. HODGERT,

In the "Farmer's Advocate" of Feb. 1, 1900, entitled

How I would Build a Cement Silo



CEMENT SILO BUILT ON THE FARM OF JOHN LOUVE, HARPLEY, ONT.
It is hexagonal (that is, six corners) and is ten feet across each way, inside measurement, and is thirty feet high.

HOW I WOULD BUILD A CEMENT SILO.

As I have been working in the cement trade for four years, and travelling agent and instructor for Battle's Thorold Cement Works, I take pleasure in giving to my fellow farmers some of my ideas why they should build a cement concrete silo in preference to a wooden one, and how to build it.

Take one instance—the wooden silo at the Guelph Agricultural College, with its great blue oak plank for studding, only lasted five years, when they had to fix it over and put a new inside into it, and five years from that they tore it all down and built a concrete silo, and Mr. Rennie told us a wooden silo was too expensive to build for the time it lasted. Now, a concrete silo, if it is rightly built, will last as long as man is on the face of the earth.

I will now describe how to build a concrete silo, say 12 feet in diameter inside by 30 feet high. It all means build a silo with six corners, as you can build a lighter wall than if you were building a square silo. First dig a trench 20 inches wide and about 20 inches deep; fill this up with concrete and large stone; pound the cement wall in around the stone; then put up your scantling or long poles fastened on one side; stake them firmly at the bottom, three at each corner—two on the outside and one on the inside; tack small strips across from one to the other to keep them in their places; go around each corner in this way; then tack a piece of lumber from corner to corner, and then they are ready for cutting your plank to fit. Take a plank, say 9 inches wide, two cut it in two; say long enough to go from corner to corner; keep them together. Go edges together and nail a piece across the corner from corner to corner, and then around the silo with these planks, inside and outside. Make wall of silo 14 inches at bottom and 8 inches at the top; make the batter on the outside; inches at bottom and 8 inches at the top; make the batter on the outside; so that it will give the ensilage a chance to settle without pressing too much on the walls of silo. In setting up your uprights at corners make them 6 inches wider than you are going to have your wall, so you can have your plank and room for an inch wedge at back. Set up plank, cut small piece of board 14 inches long; put between planks; put in your inch wedge between planks and uprights. Then take gravel and cement (one of cement and five of clean, sharp gravel), mix well together, then wet it enough so it will stay in a ball when you take and squeeze it in your hand; now take it and put it in between the plank; take an old axe or a small stone hammer and pound it well down, the same time laying in all the stone that you can, as long as you go around it once, knock out your wedges, take your plank back from part of wall first built, back say 2 inches from the edges on either side. After you go around it once, knock out your wedges, take your plank back from part of wall first built, and lift up about 16 inches; knock in your wedges again and then start to fill the next round; keep lifting your plank as you go around. I also build iron bands around the silo every 4 feet. Any old buggy tire will do by cutting them long enough to go from corner to corner and hooking them at the end; then you can lay them in as you go around. These iron bands are to keep it from spreading. Three common wires twisted together with this silo will make a door, 2 x 3 feet, out of plank, and nail a 2 x 4 scantling at the back in the centre of the frame to make this air-tight; set this in the wall about 2 feet from the bottom. Then build to the top of door; then build about two feet all around; then put in another door. Go on in this way until you get to the top, and you will have a silo that will keep your ensilage sweet, and you will never have any fear of air getting in and spoiling your corn.

As to cost of silo, I will give you as near as I can. It will take 50 barrels of cement; two men 14 days to build; also 4 men one day to raise uprights; also 35 yards of gravel and 5 yards of stone. There is no rot about it. Now you have a silo that will last, for there is no rot about it.
A. E. HODGERT, Hay P. O., Ont.

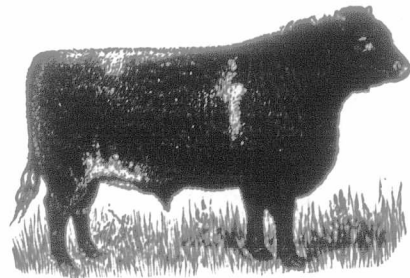
ESTATE OF JOHN BATTLE, THOROLD, ONTARIO.

MANUFACTURERS OF THOROLD CEMENT.

"We do not place our cement to be sold on commission."

Spring Grove Stock Farm.

Shorthorn Cattle
AND
Lincoln Sheep.



HERD prize and sweep-stake at Toronto Industrial Exhibition, 1897 and 1898. Herd headed by the Mar Missle bull, Imp. Wanderer's Last, last of the

get of the great sire, Wanderer, of the Cruickshank Brawith Bud tribe. High-class Short-horns of all ages for sale. Also prizewinning Lincolns. Apply —om

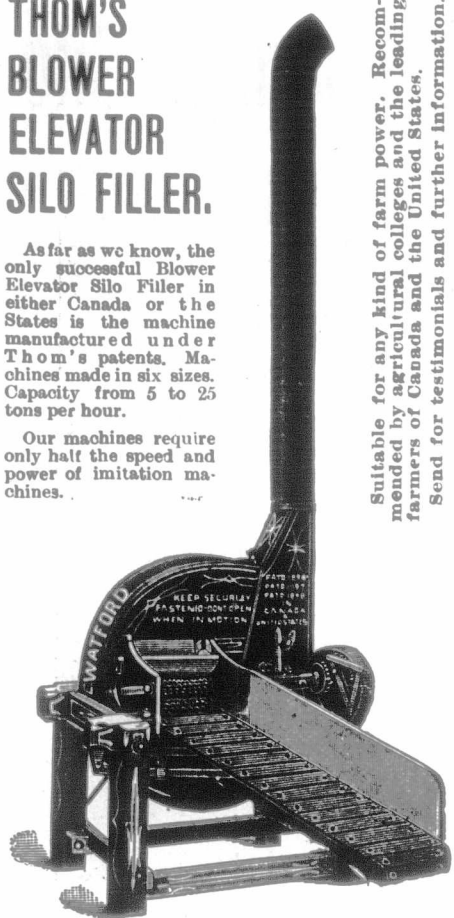
T. E. Robson,
ILDERTON, ONT.

The Originator and the Original

THOM'S
BLOWER
ELEVATOR
SILO FILLER.

As far as we know, the only successful Blower Elevator Silo Filler in either Canada or the States is the machine manufactured under Thom's patents. Machines made in six sizes. Capacity from 5 to 25 tons per hour.

Our machines require only half the speed and power of imitation machines.



Suitable for any kind of farm power. Recommended by agricultural colleges and the leading farmers of Canada and the United States. Send for testimonials and further information.

THOM'S IMPLEMENT WORKS.
WATFORD, ONT.
D. THOM, PATENTER.

CANADIAN PACIFIC RY

WILL RUN
Home-Seekers' 60-Day Excursions
TO THE CANADIAN NORTHWEST AT RETURN FARES.

Winnipeg	Regina	\$30
Waskada	Moose Jaw	\$30
Estevan	Yorkton	\$30
Elgin	Pr. Albert	\$35
Aroola	Macleod	\$35
Moosomin	Calgary	\$35
Wawanesa	Red Deer	\$40
Binscarth	Strathcona	\$40
Minota		
Grand View		
Swan River		

Going JUNE 3rd, returning until AUGUST 4th (all rail or S.S. Alberta). Going JUNE 24th, returning until AUGUST 25th (all rail or S.S. Alberta). Going JULY 15th, returning until SEPTEMBER 16th (all rail or S.S. Alberta). Tickets are not good on "Imperial Limited." For tickets and pamphlets giving full particulars, apply to your nearest Canadian Pacific Agent, or to
W. FULTON, City Pass. Agent,
161 Dundas St., cor. Richmond, London, Ont.
A. H. NOTMAN, Asst. Genl. Pass. Agent,
1 King St., East, Toronto.

SHORTHORNS FOR SALE.
Two good young bulls fit for service. Also females all ages. Herd headed by (imp.) Spicy Marquis.
JAMES GIBB, Brooksdale, Ont.

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.

SHORTHORNS AND LINCOLNS.
A. D. MCGUGAN, RODNEY, ONT.
Herd headed by the great sire and sweepstakes bull, Abbotsford. Grand crop of calves from imported and home-bred cows. Bulls one year and under for sale—reds and dark roans. Ram and ewe lambs for sale at reasonable prices.

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.

"ORCHARD HILL" SHORTHORNS.
Herd comprises representatives of best Scotch-bred families, with Lord Lavender at head. Young animals of both sexes for sale.
om ARTHUR JOHNSTON, Vandeleur, Ont.

GOSSIP.

In the milking contest at Ayr Show, Scotland, last month, Mr. W. Winter's cow yielded 60.5 lbs. of milk per day. Not a bad yield for an Ayrshire!—or any other kind of "cow." The highest percentage of butter-fat was 5.92 per cent. in a yield of 29.75 lbs. of milk.

Mr. R. J. Hine, breeder and importer of Oxford Down sheep, Dutton, Ont., writes: "Like the majority of sheep breeders this year, we have had a fine lambing season. The lambs are strong and thrifty. They seem to carry out their first promise, and are likely to break the record, as they are growing like weeds. We have some very nice yearling rams fitting for show purposes, that I think will please the most fastidious customer. We have also five extra aged rams, two and three shears, some of them having been used in our own flock and are now for sale, among them the grand imported ram, Reading's 10 of '99. He was the pick of the first-prize pen at the Royal of that year, and also first at Toronto and London and wherever shown. He is a great stock ram. We expect to be on deck at the large shows this year, and hope to be able to show to old friends and new as good a bunch of Oxfords as can be found in Canada."

The two-year-old Clydesdale stallion, Kinellar Stamp 3044, advertised for sale by Mr. Wm. Brash, of Ashburn, Ont., is a young horse of great substance, weighing now, in his two-year-old form and in very moderate condition, 1,400 lbs. He is a bay, with white strip in face, and shows an extra strong back and loin, with well-sprung ribs, very even and compactly built at both ends, broad, intelligent head, heavy flat bone and well-muscled leg and the best of feet. Looking him all over, he shows a size and form that when fully developed will weigh a ton. This, coupled with his smoothness, will make him a very desirable horse. He is sired by Prince of Kinellar (imp.) 2475; dam Doll Monkbarne 3259, by Monkbarne (imp.); 2nd dam Jen, by Glancer (imp.). This horse can be bought well worth the money, and anyone wanting a horse of this kind would do well to write Mr. Brash for particulars.

A few days ago a representative of the "Farmer's Advocate" called on the Barclay Manufacturing Company, of Brantford, Ont., and saw their appliance for the control of kicking and balking horses in operation on a mare that had not done a day's work for years. The mare in question was one of the worst-tempered balkers the writer ever saw. Although less than four hours before she was an uncontrollable, useless animal, she was then plowing beside another, going perfectly tractable and from appearance it was hard to believe she was such a disreputable animal, and we are reliably informed that the kicking apparatus works equally as well. The apparatus is very simple in construction, and easily understood by anyone of ordinary intelligence. Mr. Barclay has hosts of testimonials from parties who have used their appliance, and all speak in the highest terms of the results they have had from its use; and the cost, which is only a nominal one, places it within the reach of all, while a single animal cured of a vicious habit will repay the purchaser manyfold. See Mr. Barclay's advertisement in another column, and write him for terms.

Thorn Villa Stock Farm might well be described as a model farm, with its many acres of rich pasture and grain lands, its beautiful sloping frontage, the spacious stone dwelling surrounded by thorn hedges and evergreens extending out to the extensive orchards of choice varieties of fruit trees; the large, new, up-to-date bank barns, under which are commodious, well-regulated stables, built on sanitary lines, admitting an abundance of fresh air and sunlight; the stalls filled with as fine a lot of broad-backed, thick-fleshed Shorthorns as are to be found together in any one man's stables in the country. This is the home of Mr. Wm. Howden, who, we regret to say, has so far withstood the charms of the gentler sex and remained in the cold embrace of bachelorhood, as, unaccountably, many noted stockmen do. This farm lies about three miles south of Myrtle station on the C. P. R. The Shorthorns now number 25 head, and are represented by the Fashion, Lavinia and Flattery families; the bulk of them, however, belong to the well-known Fashion family, on which the herd was founded, the original being the grand old cow, Fashion (imp.) 177. This family has been kept intact on this farm for 20 years, and have been topped by such noted Scotch bulls as Duke of Lavender (imp.), Lord Roseberry (imp.), Lavender King, by imp. Sittyton Stamp, and Golden Robe, by imp. Knight of St. John, dam Golden Bud (imp.). The present stock bull is imp. Meadow Lord 36067, sired by Sergus (77839), dam Craibstone Beauty 3rd, by Craibstone 66885. He is a rich roan, two years old, of more than ordinary quality, exceptionally evenly built, and one that will be hard to beat in the show-ring. In the herd are a number of two and three year old heifers, sired by Lavender King, that are beauties and not many stables can duplicate them. The yearlings and calves, are sired by Golden Robe. The animals of this herd are all in prime condition, and at present are showing to fine advantage, among them being an eight-months-old bull calf that is an extra good one. He is sired by Golden Robe, and out of the Lavender-bred cow, Columbus Girl 35811, by Gallant Lad 16078; dam Miss Leo, Vol. 16, by Brawith King. This young bull is for sale, also a few heifers from one to three years old. Parties interested should note the advertisement and write Mr. Howden to Columbus P. O., Ont.

Shorthorn Bulls.

Good ones. Chocily bred. Moderate prices. Send for bull catalogue. Also Scotch-bred cows and heifers.

H. SMITH, HAY, ONTARIO.
Exeter station on London and Wingham branch of the G. T. R. adjoins the farm.

Hillhurst Shorthorns
AND HAMPSHIRE DOWN SHEEP.

THERE are few herds on the continent that can boast of three as good stud bulls as Joy of Morning 153003, Scottish Hero 145553, and Scottish Beau 145552. These are all imported bulls, of the richest breeding, and right well do they reflect the possibilities of the future character of the Shorthorns being bred at Hillhurst. * * * * * The breeding cows at Hillhurst are of Scotch and English breeding, and are especially noticeable for their size.—*Live Stock Indicator*, May 15, 1902.

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

TROUT CREEK HERD
OF
Shorthorns

Won first prize for herd and the championship for best bull and best female, any age, at Toronto Industrial and Pan-American Exhibitions, 1901. We keep constantly in our herd a choice lot of imported and Canadian-bred cattle of both sexes. Personal inspection invited. Parties desiring to see the herd will be met on days of trains if notice is given. Visitors always welcome. Address:

JAMES SMITH, W. D. FLATT,
Manager, 378 HESS ST., SOUTH,
MILLGROVE, ONT. Hamilton, Ontario.

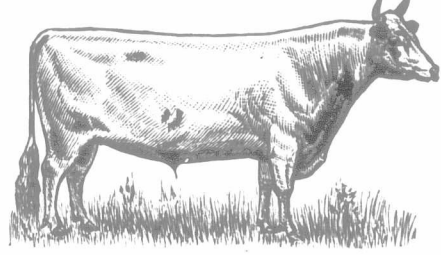
Queenston Cement.

No better cement for durability and economy in building concrete houses, barn foundations and floors, silos, cisterns, etc. Estimates and all other information cheerfully given. Low prices. Write to this office, or see my agents before giving your order.

Isaac Usher,
QUEENSTON, ONT.

Rapids Farm Ayrshires.

REINFORCED BY RECENT IMPORTATIONS of 2 bulls and 20 cows, selected from noted Scotch herds, and including the male and female champions at leading Scottish shows last year. Imported Douglasdale of Dam of Aber, champion at the Pan-American, heads the herd, representatives of this herd won the first herd prize at the exhibitions at—



Toronto, London and Ottawa in 1900, and at the Pan-American in 1901.

Come and see or write for prices.

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

Robert Hunter, Manager
for W. Watson Ogilvie, Lachine Rapids, Quebec.

PLEASE MENTION THE FARMER'S ADVOCATE.

SHORTHORNS (IMP.)



Cows and heifers, imp. and home-bred. Bulls, imp. and home-bred—all ages. Representing the fashionable blood of Scotland.

EDWARD ROBINSON, MARKHAM P. O. & STN.

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

HIGH-CLASS SCOTCH SHORTHORNS

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

ROBERT MILLER, Stouffville, Ont.

SHORTHORNS.

THORNHILL HERD. ESTABLISHED 27 YEARS.

Imp. Royal Member and Sailor Champion now at head of herd, which are all bred on straight Scotch lines, and are of the up-to-date kind. Present offering: some choice young bulls.

REDMOND BROS., Millbrook Sta. and P. O.

Advertisement for 'Mark Your Stock Dip Your Stock Cure Your Stock Shear Your Stock' with illustrations of sheep and a dog.

SHORTHORN BULLS FOR SALE: A choice lot of Shorthorn bulls from 10 to 16 months old, sired by Imp. British Statesman (53729) = 20833 =; and cows of the Mara family. They must be sold at once. Prices away down to suit customers. FITZGERALD BROS., Elmvalle Station, G.T.R. Mount St. Louis P. O.

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

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

Our herd contains such families as Matchless, English Ladies, Mildreds, Village Buds, Missies, Stamford, Yantias, Claret, and Marthas. The imported bull, Scottish Peer and Coming Star (a prizewinner at Chicago in 1901), now head the herd.

Farms 2 miles from Elora Stn., G.T.R. and C.P.R., 12 miles north of Guelph.

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

ISRAEL GROFF, ALMA, ONTARIO.

SCOTCH SHORTHORNS.

We are now offering a few young bulls, from 6 to 11 months; also a few heifers, from 6 months to 2 years; all showing No. 1 quality.

W. G. HOWDEN, COLUMBUS P. O.



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

Shorthorns & Clydesdales 100 SHORTHORNS TO SELECT FROM. Herd bulls (imp.) Diamond Jubilee = 28861 = and Double Gold = 37852 =. May offering: Six grand young bulls, and cows and heifers of all ages. Clydesdales: One 3-year-old stallion, and one 4-year-old mare (in foal). Farm one mile north of town.

FOR SALE: 5 Scotch Shorthorn Durhams (bulls), 5 to 16 months; 5 young cows and heifers. Berkshire pigs, both sexes. Prices reasonable. "Camden View Farm," A. J. C. SHAW & SON, Thamesville P. O.

SPRUCE HEDGE SHORTHORNS

We are offering females of all ages. Among them are prizewinners and youngsters that are sure to win.

JOHN MCKENZIE, Chatsworth P. O. and Stn.

WE HAVE FOR SALE 10 SHORTHORN BULLS

From 6 to 18 months old. Nearly all from imp. dams, and sired by the imp. Golden Drop bull, Royal Prince. Catalogue upon application.

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

Mercer's Shorthorns

Are represented by Missies, Stamford, Floras, Claret Princesses, Red Roses, Fashions, Crimson Flowers, and Matchless families. Headed by Village Squire 24983, a son of Abbottsford. Stock of both sexes and all ages for sale.

T. MERCER, MARKDALE P. O. & STN.

W. C. PETTIT & SONS

FREEMAN P. O., ONT., IMPORTERS AND BREEDERS OF

Scotch Shorthorns and Shropshire Sheep,

Make a Special Offering for May and June:

One of our imp. stock bulls, 3 years old, red; one imp. bull, 2 years, roan; two bulls imp. in dam, 15 months; four bull calves from imp. cows, 12 and 14 months; four home-bred bulls by imp. bulls, 15 to 18 months; seventy-five imp. and home-bred cows and heifers, all ages. Catalogues on application.

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

SHORTHORNS FOR SALE: 6 yearling

and heifers, all ages. Cows and heifers in calf to Sir James, deep milkers.

H. E. HIND, Hagersville P. O. and Station, G. T. R. and, M. C. R.

GEO. ISAAC, BOMANTON, ONT.,

BREEDER AND IMPORTER OF

Scotch Shorthorn & Clydesdale

CATTLE HORSES.

Forty-one head of Shorthorns arrived from quarantine 20th March. One Clydesdale stallion for sale.

COBOURG STATION, G. T. R. ONT.

HAWTHORN HERD

of deep-milking Shorthorns for sale. Six young bulls of first-class quality and breeding and from A1 dairy cows.

WM. GRAINGER & SON, Lonsdaleboro, Ont.

For Sale: Very heavy, massive cows of Bates

and Cruickshank breed. Two-year-old heifers in calf. Stock bull, Imperial 2nd, No. 28883. Bull calf, 11 months (Cancopper Boy 2nd = 39878 =), dam Flora = 32974 =; also dark red heifer calves. John McFarlane, Dutton, Ont.

Shorthorns and Berkshires

Four young bulls, 6 to 12 months old. Pigs, 2 to 6 months old. Pairs supplied not akin.

MAC CAMPBELL, NORTHWOOD, ONT.

SHORTHORNS FOR SALE

Sired by Scottish Chief and Abbottsford, and from prizewinning dams. Also cows, heifers, and Berkshire pigs.

ALEX. LOVE, EAGLE P. O. BISMARCK STATION ON M. C. R.

MAPLE GROVE SHORTHORNS.

I am now offering 5 bulls from 10 months to 2 years old; imp. and home-bred; of the low, fleshy sort. Write for prices.

W. B. CAMPBELL, Campbellcroft P.O. Garden Hill Station.

SHORTHORNS.

One bull, 1 year old; 2 bulls, 7 months old; a few heifers of choice breeding and superior quality.

AMOS SMITH, Trowbridge P. O. Ont.

SHORTHORNS

Scotch and Scotch-topped. War Eagle = 27609 = at head of herd. Young bulls, cows and heifers for sale.

Ry. station: Coldwater, Midland branch, G. T. R. Write for prices. om S. DUNLAP, Eady P. O., Ont.

CHARLES RANKIN, WYEBRIDGE, ONT.

Importer and breeder of

Shorthorns, Oxford Downs and Berkshire Pigs

Young stock always on hand.

GEO. RAIKES, BARRIE, ONT.,

BREEDER OF

SHORTHORNS & SHROPSHIRE.

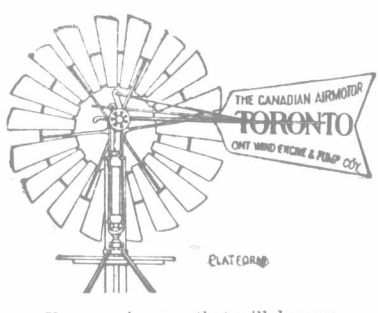
YOUNG STOCK FOR SALE.

CHOICE SHORTHORNS.

4 bulls, from 5 to 17 months old, sired by Ashburn Duke; also a few heifers, sired by Indian Duke; for sale.

J. R. HARVIE, Orillia P. O. and Station.

WINDMILLS



You require one that will do your work satisfactorily. The

Canadian AIRMOTOR

IS A TERROR TO WORK.

CAST-IRON CONSTITUTION. MECHANISM SO SIMPLE. MATERIAL THE BEST.

ONT. WIND ENGINE & PUMP CO. LIMITED. TORONTO, 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.

W. J. WALKER, EADY P. O., ONTARIO, BREEDER OF

Scotch and Scotch-topped Shorthorns, Barred Plymouth Rock fowls, and Bronze turkeys.

R. R. station: Coldwater. G.T.R. Write for prices.

ASHTON FRONT VIEW STOCK FARM.

Six Shorthorn Bulls for sale, from 8 to 15 months old; all of choice breeding. Also Cotswolds of all ages for sale at all times. Visitors welcome.

A. J. WATSON, Castlederg, Ont. C. P. R. Station and Telegraph Office, Bolton; or G. T. R., Falgrave.

SHORTHORNS FOR SALE.

Two young bulls, 7 and 10 months; two heifers, 3 years old, with calves at foot; one heifer 1 year old.

JAS. RIDDEL, BEETON P. O. and STN.

SHORTHORNS (imported)

Two choice young imported bulls—one roan and one red. Write:

THOS. RUSSELL, EXETER, ONT.

GREEN GROVE SHORTHORNS:

I am now offering a few heifers, Clarets, Floras, and one Missie; also a choice year-old bull, by Aberdeen of Markham.

W. G. MILSON, GORING P. O. and MARKDALE STATION.

Shorthorn Cattle, Lincoln Sheep

Imp. Prime Minister at head of herd. Imp. Clippers, Miss Ramsdens, and other Scotch families. Lincolns won more than half the money and first for flock at the Pan-American; International, Chicago, 1901 and 1902.

J. T. GIBSON, ON DENFIELD, ONT.

R. Mitchell & Son, Nelson, Ontario.

Scotch Shorthorns.

Twenty-five (imp.) bulls and heifers of following families: Jilt, Roan Lady, Augusta, Rosebud, Mayflower, Rosemary, Beauty, Victoria, Orange Blossom and Princess Royal. Also home-bred heifers in calf to imp. bulls and choice bull calves.

Burlington Jct. Station and Tele. Office.

QUEENSTON HEIGHTS SHORTHORNS

SCOTCH AND SCOTCH TOPPED

In service: Derby (imp.) = 32057 =; Lord Montalis, by Collynie Archer (imp.) = 28860 =. Some choice heifers and young cows with calf at foot or in calf to imported bull at moderate prices.

HUDSON USHER,

QUEENSTON, ONT. om

FARM 3 MILES NORTH NIAGARA FALLS

PLEASE MENTION FARMER'S ADVOCATE.

Hillside Shorthorns and Shropshires.

Bulls, from 8 to 18 months old; heifers, various ages, of true type and fashionable breeding; also 25 ram lambs and 15 ewe lambs, from imp. sire. Will quote prices right for quick sales.

L. Burnett, Greenbank P. O., Ont.; Uzbridge Stn., G. T. R.

HOLWELL MANOR FARM

SHORTHORNS, SHROPSHIRE, YORKSHIRE, SCOTCH COLLIES.

D. G. GANTON, ELMVALE, ONT.

GEORGE W. FLETCHER,

BINKHAM, ONTARIO, Breeder of Shorthorn Cattle, Yorkshire Swine, and Single-comb White Leghorn Fowl.

This herd contains such families as Mysies, Nonpareils, Crimson Flowers, Languishes, Butterflies and others, and is headed by my famous stock bull, Spicy Robin = 28259 =. Young stock for sale. Also eggs for hatching, \$1 per 15. Erin shipping station, C.P.R.

Shorthorns & Yorkshires

We are offering two Shorthorn bulls, 13 and 18 months, bred close to imported stock, at \$80 each. Two-month Yorkshire pigs, sired by our Toronto winner, at \$7. Embden geese eggs, 25c. each. Barred Rock eggs, five settings for \$2.

W. R. BOWMAN, MT. FOREST, ONT.

BELLEVUE SHORTHORNS.

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

EDWIN BATTYE,

GORE BAY P. O. AND PORT. MANTOULIN ISLAND.

WANTED.

One bull, two cows (with calf at feet preferred); none older than six; registered Red Polls. Write, stating ages, prices, etc., to GUS. LANGELIER, 14 DeSalisbury St., Quebec.

HOLSTEIN BULLS.

Two excellent bulls, 15 and 18 months old, of De Kol breeding, for sale at a bargain if taken at once. For particulars address

H. BOLLERT, Cassel, Ont.

Brookbank Holsteins

16 to 25 lbs. of butter in 7 days' official test are the records of this herd of Holstein cows. Heifers of equivalent records. Bulls for sale whose sires and dams are in the Advanced Registry, with large official butter records.

GEO. RICE, Currie's Crossing, Ontario. OXFORD COUNTY.

RARE YOUNG BULLS

of serviceable age for sale; also females of all ages. Roans and reds. Prices right.

E. & C. Parkinson, Thornbury P. O. & Stn., G.T.R.

For Sale: TWO CHOICE SHORTHORN

BULLS, registered; sires, British Hope (30946) and Royal Charlie (30118). Also Yorkshires and Berkshires, both sexes. Write: C. & J. CARRUTHERS, Cobourg, Ont.

4 HOLSTEIN BULLS

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

Riverside Holsteins.

Victor De Kola Pietertje heads the herd, assisted by Johanna Rue 4th Lad, whose five nearest dams, including the record of his dam made at 25 months old, average ("official") 82.6 lbs. milk per day and 21.86 lbs. butter in one week.

MATT. RICHARDSON & SON, HALDIMAND CO. CALEDONIA, ONT.

CHOICE JERSEYS.

Am offering 1 cow 5 years old, due to calve Feb. 6, very choice; bull calf 11 months old, registered, and cheap. WM. N. HASKETT, Avon Manor, Markdale, Ont.

We have now on hand young females sired by

Nero of Glen Rouge 50241, and cows and heifers bred to him.

E. B. HINMAN & SON, GRAFTON, ONT.

Ridgedale Farm Holstein-Friesians for Sale.

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

BURNSIDE JERSEYS.

For Sale: Two-year-old bull, Champion of Burnside; 1st prize Western Fair, London, last year; sire John Bull of Grovesend; dam tested 43 lbs. milk daily, 18 lbs. butter in a week. Yearling bull by Champion. Also young cows, heifers and calves. Five miles from London.

J. A. LAWSON, Crumlin, Ont. om

LAWNRIDGE STOCK FARM.

JERSEYS FOR SALE: Yearling bull, and bull 8 mos. old. Several fine registered and grade cows coming in every week. A few choice young heifers. Five Berkshire sows in pig. Finest strains. -o

J. L. CLARK,
Norval station: G. T. R. Norval P.O.

FOR SALE: A SPLENDID LOT OF Jersey Cattle.

41 HEAD TO CHOOSE FROM.

Close descendants of my most noted prizewinners, and closely related to many animals I have sold that have won easily in the Northwest and all over Canada. My shipments last summer ranged from Manitoba to State of Delaware, U. S. -om

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

72 Head of High-class Jerseys 72

IN THE BRAMPTON JERSEY HERD NOW FOR SALE. Two yearling bulls of first-class dairy breeding and sure prizewinners. Seven bull calves, the best we ever had. Also a large number of cows and heifers. We have what you want. Come and see, or address stating what you want. -om

E. H. BULL & SON, BRAMPTON, ONT.
C. P. R. and G. T. R. stations within 2 miles of farm.

JERSEYS FOR SALE

A few choice Jersey bulls and bull calves for sale at very low prices. Choice breeding; good colors. Write for prices.

W. W. EVERITT
CHATHAM, ONT.,
"Dun Edin Park Farm," Box 555. -om

Wm. Willis, Newmarket, Ont.

Breeder of A. J. C. C. Jerseys and registered Cotswold sheep. Have yet two fine young bulls from Count, fit for service; also Yorkshire swine. -om

SPECIAL OFFER FOR THIS MONTH.

4 Guernsey bull calves of the right sort, out of such cows as Rosland and Princess May, imported and sired by imported bull, "Masher." Ages—6, 9, 12 mos. 1 Ayrshire calf (a beauty), out of Nora of F. M. (7 mos.), by imported sire, and one sired by Matchless (2 yrs.). Write at once for particulars. -o

Isaleigh Grange Farm, Danville, Que.

F. L. GREEN,

BREEDER OF
Jersey Cattle and Yorkshire Pigs.
Choice stock of each sex for sale. -om

PICKERING STATION, G. T. R.
CLAMBERT STATION, C. P. R. GREENWOOD P. O.

Show Ayrshires FOR SALE.—I offer 2 choice show heifer calves; also 3 August (1901) bulls, and 4 very fine March (1902) bulls by imp. sire, om W. W. BALLANTYNE, Stratford, Ont.
"Neidpath Farm" adjoins city. Main line G. T. R.

LIVE STOCK EAR LABELS REDUCED

Send for a circular and order early, before the rush. Large and small lots and odd numbers supplied. -o
R. W. James, Bowmanville, Ont.

W. F. STEPHEN, Trout River, Que., breeder of Ayrshire Cattle. A few choice bull calves for sale at reasonable prices; sired by Klondike of St. Anne's 8897, and from deep milkers with good udder and teats. Carr's Crossing, 1 mile, G. T. R.; Huntingdon, 5 miles, S. L. & A. R. -o

FOR SALE:
Three grandly-bred Ayrshire bull calves, 12 to 15 mos. old. Also young calves, by Napoleon of Auchenbrain (imp.), whose dam has a record of 72 lbs. of milk per day. A few choice young Berkshire and Yorkshire sows could be served before shipping. Collie pups, from Perfection Queen. Address—
T. D. McCALLUM,
Nether Lea, -om Danville, Que.

FOR SALE: IMPORTED AND HOME-BRED Ayrshires,

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

WM. WYLIE, - HOWICK, QUEBEC.

SPRINGHILL FARM.

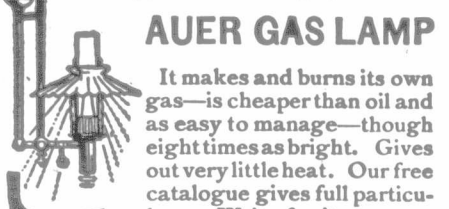
Importers and breeders of choice, deep-milking

Ayrshires

Males and females for sale. -o
ROBERT HUNTER & SONS, Maxville, Ont.

A FLOOD OF LIGHT.

equal to 100 candle lights and comparable only to the light of noon day sun, yet soft and restful to the eye and read by, such is the light of the



Auer Light Co., 1682 Notre Dame, Montreal. -om

HORSEMEN!—THE ONLY GENUINE IS

GOMBAULT'S CAUSTIC BALSAM.

Get genuine without the signature of The Lawrence-Williams Co. Sole Importers & Proprietors for the U.S. & CANADA, CLEVELAND, O.

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

Free Treatment

DR HOPE'S
TINY TABLET TREATMENT
You can't get well without it.

For LIVER KIDNEY and NERVE Troubles.

The three most prevailing causes of death in the present century. The Dr. Hope Medicine Co., Limited are so positive of the efficacy of their Treatment that they send Free Samples and their large treatise entitled "How to Live Long" on receipt of name and address. Write at once to

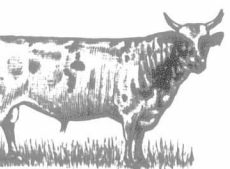
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Finest Summer Resort in America.

The "Highlands of Ontario," Canada, are considered the most charming place for summer tourists on the continent. A thousand feet above sea level, purest of air, no fumes or mosquitoes, picturesque surroundings, no modern hotels, good rail and steamboat service. Perfect immunity from hay fever assured. Health and pleasure to all who go there. Full information and handsome descriptive literature, giving list of hotels, rates and all particulars, will be had free on application to M. C. Dickson, District Passenger Agent, Union Station, Toronto.

Ayrshires and Yorkshires

SPECIAL OFFERINGS: February, March and April calves, good colors, from heavy milkers, and sired by our imported bull. Very desirable calves. January litters: very promising. Moderate prices. Can supply you with anything you need. Write us.
ALEX. HUME, MENIE, ONTARIO.
TELEPHONE: HOARD'S, G. T. R. -om



J. YUILL & SONS
Meadowside Farm,
Carleton Place, Ontario,
Breeders of Ayrshire
cattle, Shropshire
sheep, Berkshire
swine, and Barred
Plymouth Rocks. A
fine lot of the long Large English Berkshires for sale,
ready to ship. -om

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, Scotland. -om

GOSSIP.

At the Belfast Show, April 1st, the Musgrave challenge cup for the best Shorthorn bull, any age, went to Viceroy, the first-prize senior yearling, a roan, sired by Royal Star, bred by Lord Lovat, and shown by Mr. M. Marshall, Straunraer. The Galloway champion bull was Bondsman 7306, bred by Mr. L. F. Dudgeon, Kirkcubright, and got by Cedric of Naworth. The Aberdeen-Angus champion was Norman Baron, by Baron Inca, exhibited by Mr. C. Dunbar-Buller, Woburn.

For a long time past a record has been kept of the sheep dips used upon clips of Australian wool fetching the highest prices for the year on the London Wool Exchange, and this record brings out the fact that the Cooper Sheep Dip has carried off the honors uninterruptedly for many years. In Australia, where there is no scab, Cooper Dip is chiefly used for improving the condition and commercial value of the clip.

Marshal Field, the American millionaire manufacturer and dry goods raiser, of Chicago, has taken to live-stock raising as a side issue and has a 10,000-acre farm in Nebraska stocked with registered Hereford breeding cattle, the herd now numbering 600 head, besides 2,500 grade cattle, 1,000 sheep and 1,500 hogs feeding for the meat market; 2,000 acres are in alfalfa, and 3,000 acres are devoted to corn, oats and other crops that are used in feeding. The farm buildings and yards cover 50 acres and cost \$100,000. Although begun for pleasure and pastime, it is said to have developed into a profitable undertaking.

Mr. George Shepherd, Shethin, Tarves, Scotland, died on April 26th, in his 62nd year. He was a noted breeder of Shorthorn cattle in Aberdeenshire. His grandfather, Mr. Wm. Hay, Shethin, founded the herd, which was carried on by Mr. Shepherd's father, and latterly by himself. From the Shethin herd sprang such noted families as the Coras, Lovelies, Mysies, Princess Royals, Claras, and Waterloos.

We hope our readers are not overlooking the little advertisement of the Swiss cow bell, advertised in another column. Bevin Bros. Manufacturing Company, of East Hampton, Conn., the makers, are the oldest bell-makers in this country. There is nothing sweeter in tone or more musical than this Swiss cow bell of their manufacture. When taken in sets of three, five or eight, in which manner the company makes a point of selling them, they are tuned to accord, giving almost the musical effect of distant chimes in the hills and wooded country. If you have but a single cow or only a few, a single bell will be sold you if desired. Write to the company for circulars, which describe and price not only Swiss cow bells, but sheep and turkey bells as well.

PROMISING COLT FOR CRAGIE MAINS.

Mr. James Kilpatrick, Craigie Mains, Kilmarnock, has purchased from Mr. James Stewart, Corscapple, Dunblane, a very promising colt, rising two years, by the celebrated Prince Alexander (8899), and out of the typical breeding mare, Lady Grace Rowan (12337). The present position of Prince Alexander is well known to all who take an interest in Clydesdale breeding, and the dam of this colt is one of the best mares left by that grand Top Gallant horse, Knight Errant (4483). Naturally, this combination of the best Prince of Wales and Barney blood is some guarantee of the excellent quality of the stock, and in this colt expectations seem in a fair way to be realized. First exhibited in 1900, as a foal, at Doune Show (where his dam was the winner of the Earl of Moray's special prize for the best brood mare), he gained first prize, and at Dunblane Show, shortly afterwards, he occupied the same position. As a yearling, in 1901, he was again first at Dunblane, and at the Perthshire Society's Show. Mr. Kilpatrick fancied him as a foal at Doune, and believing him to be a young hopeful of exceptional promise, wished then to secure him. And it is interesting to find that he has now become his owner. The colt is up to a good size, has the best of feet and ankles, with very clean, flash bones, and a formation of body as shapely and stylish as could be desired. He possesses many of the best characteristics of Prince Alexander's stock, and is likely to give a creditable account of himself in the future.

Tredinnock Ayrshires.

Imported bulls at head of herd: Glencairn 3rd, Napoleon of Auchenbrain, and Lord Dudley. Forty imported females, selected from leading Scotch herds, and their produce from above-named bulls. Size combined with quality and style, well-formed udders, good-sized teats, and capacity for large milk production. Bull calves for sale; also a few young cows and heifers. For prices and particulars address JAMES BODEN, Mgr., St. Anne de Bellevue, Quebec. Farm close to St. Anne Station, G.T.R. & C.P.R., 20 miles west of Montreal. -om

DAVID A. McFARLANE,

Breeder of high-class KESLO, P. Q. Ayrshires.
Young stock for sale from imported and home-bred foundation. Prices reasonable. -o

AYRSHIRES FOR SALE. 2 two-year-old bulls, 2 yearling bulls, and a number of spring calves, both sexes, from deep-milking dams. Prices reasonable. -o

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

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.

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. -o

DAVID BENNING & SON,
Williamstown, Ont.

THE ONTARIO VETERINARY COLLEGE

(LIMITED),
TEMPERANCE ST., TORONTO, CANADA.

Affiliated with the University of Toronto.

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SUCCESSOR TO
JOHN HALLAM,
83 & 85
Front St. E.,
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PEDIGREE AYRSHIRES.

Cows and heifers, all bred from prizewinning stock at the leading shows. -om
Robert Wilson, Mansurac, Bridge of Weir, Renfrewshire, Scotland.

English Shorthorns.

Booth and Bates Shorthorns, topped with Crulok-shank bulls. Young cows, bulls and heifers always on hand for sale. Eligible for the American herdbook. Royal and Highland prizewinners included for the last two years. Close on £400 won in prizes last year and this. -om

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

Robert W. Hobbs,

Kelmecott, Lechlade, England.
One of the largest flocks in Oxford Down Flockbook. Numerous prizes obtained for ram lambs at principal shows. Rams and ewes always on sale. -o

REGISTERED
Southdown Sheep, Suffolk Sheep
and Berkshire Pigs.

THE Cheveley flocks and herds, the property of Col. H. L. B. McCalmont, C.B., 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 and 1901 at the leading English shows; in the latter year, besides winning the champion prize, gold medal and breed cup at Smithfield Show, two medals for best Southdown, six firsts, three seconds and numerous minor awards were won at Royal, Birmingham, Royal Counties shows, etc. 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.

HAMPSHIRE DOWN
SHEEP.

"RESERVE" FOR CHAMPION IN THE SHORT-
WOOL CLASSES, SMITHFIELD,
LONDON, 1901.

Splendid Mutton, Good Wool,
Great Weight.

This highly valuable ENGLISH BREED OF SHEEP is unrivalled in its wonderfully early maturity and hardness of constitution, adapted to all climates, whilst in the quality of mutton and large proportion of lean meat it is unsurpassed; and for crossing purposes with any other breed, unequalled. Full information of

JAMES E. RAWLENCE,

SECRETARY HAMPSHIRE DOWN SHEEP
BREEDERS' ASSOCIATION,
SALISBURY, ENGLAND.

Shorthorn Cattle

and Lincoln Longwool Sheep.

HENRY DUDDING

Riby Grove, Great Grimsby, Lincolnshire,

Has always for inspection and sale the largest flock of pure Lincoln sheep and Shorthorn herd in the country, and many prizewinners. The sheep are famous for their great size, fine, lustrous wool, and 150 years' good breeding, and at the home sales have made the highest prices on record. The Shorthorns comprise the best Bates, Booth, and Scotch blood, including the best prize strains of Duthie, Marr, Willis, and Harrison. During the last year 86 prizes have been taken by the Riby Shorthorns and Lincoln sheep at the leading shows in England.

Cables: Dudding, Keelby, England.

JOHN BRYAN & SON, Southleigh, Witney, Oxon.—One of the oldest registered flocks of pure-bred Oxford Downs. Annual sale of rams. Oxford ram fair. Rams and ewes for sale at home. Inspection invited.

J. E. CASSWELL'S LINCOLNS. Laughton, Folkingham, Lincolnshire, England.

Breeder of Lincoln Long-wooled sheep. Flock No. 46. At the Palermo Show, 1900, 25 rams bred by J. E. Casswell averaged \$54 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: Billingsboro, G. N. R.

WALTON HERD

PEDIGREE PIGS,

The property of Sir Gilbert Greenall, Bart., Walton Hall, Warrington, England.

This herd is unrivalled for its true type, large size and strong constitutional vigor. It is the premier herd in England at the present day. Its show-yard career is unique, the champion prize for the best Large White pig at the R. A. S. E. having been won by pigs bred in the herd in 1896, '97, '98 and 1901, besides leading prizes too numerous to mention at all the principal agricultural shows in England.

A choice selection of boars and sows for sale. Inspection invited. All purchases carefully shipped. For particulars, apply to the Manager, **MRS. J. HALLAS, Higher Walton, Warrington, England.** Railway stations:—Warrington (Bank Quay) per L. & N. W. Ry.; (Central) per Midland, G. N. or G. O. Ry. Telegrams, "HALLAS Higher-Walton."

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.**

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.



To Farmers, Stock Dealers and Wool Growers: For Sheep, Cattle, and Horses.

Leicestershire Tick and Vermin Destroyer

It effectually destroys Ticks, Lice, Worms or Grub, to which sheep, horses and cattle are subject, and enables the animals to thrive. It will be found far superior to other preparations used for the similar purpose. The proprietors will guarantee perfect success when used according to directions, as will be found on each box. It prevents scurf and scab, and renders the wool bright and clear. It is put up in tin boxes, price 30 cents each. One box is sufficient for twenty ordinary-sized sheep. It only requires to be tried to prove itself all that is claimed for it. Sold by druggists and grocers. Manufactured by **G. C. BRIGGS & SON, 31 King Street West, Hamilton, Ont.**

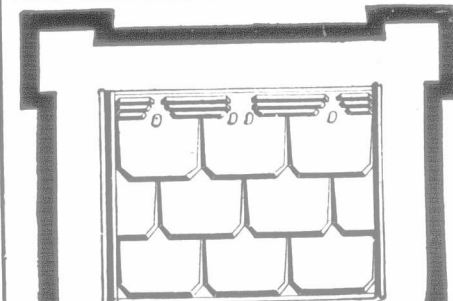


Small crops, unsalable vegetables, result from want of

Potash.

Vegetables are especially fond of Potash. Write for our free pamphlets.

GERMAN KALI WORKS, 93 Nassau St., New York.



Eastlake Steel Shingles

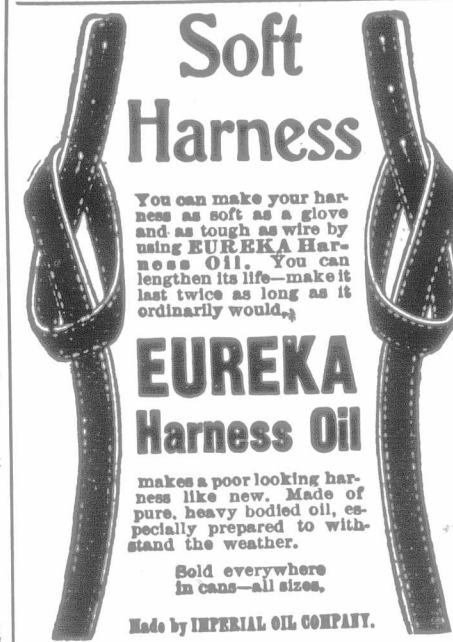
either Galvanized or Painted

Are Always Reliable They are more economically durable and quicker to apply than any others, fitting accurately—and therefore most easily laid.

They have been thoroughly tested in all kinds of climates, invariably proving **Fire, Lightning, Rust and Weather Proof.**

If you're building, make sure of satisfaction by ordering **EASTLAKES** the roof—fullest information if you write.

Metallic Roofing Co., Limited, WHOLESALE MFRS., TORONTO, CANADA.



Soft Harness

You can make your harness as soft as a glove and as tough as wire by using **EUREKA Harness Oil.** You can lengthen its life—make it last twice as long as it ordinarily would.

EUREKA Harness Oil

makes a poor looking harness like new. Made of pure, heavy bodied oil, especially prepared to withstand the weather.

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

A Chance to Make Money.

I have berries, grapes and peaches a year old, fresh as when picked. I used the California Cold Process. Do not heat or seal the fruit, just put it up cold, keeps perfectly fresh, and costs almost nothing; can put up a bushel in ten minutes. Last year I sold directions to over 120 families in one week; anyone will pay a dollar for directions when they see the beautiful samples of fruit. As there are many people poor like myself, I consider it my duty to give my experience to such and feel confident anyone can make one or two hundred dollars round home in a few days. I will mail sample of fruit and full directions to any of your readers for nineteen (19) two-cent stamps, which is only the actual cost of the samples, postage, etc. **Francis Casey, St. Louis, Mo.** Advt.

IN WRITING PLEASE MENTION FARMER'S ADVOCATE

GOSSIP.

The seventeenth annual meeting of the Holstein-Friesian Association of America will be held at the Yates Hotel, Syracuse, New York, on Wednesday, June 4, 1902, at 10 o'clock a. m. for the election of officers and the transaction of any other business which may legally come before it.

Prof. C. S. Plumb, Director of the Indiana Agricultural Experiment Station, has issued, in attractive pamphlet form, the able address which he delivered before the Kansas State Board of Agriculture, some time ago, on "Breeding Farm Animals," in the course of which a great deal of sound advice was given American stockmen, or, for that matter, stockmen anywhere.

The attention of our readers is especially directed to the poultry advertisement of Mr. John B. Pettit, of Fruitland, Ont., in this issue. Mr. Pettit is a very practical and successful poultry breeder, and has in his pens several of the leading breeds. Persons desirous of improving their flocks or to consult him in securing fresh stock.

For seventy-one years the farmers of the world have been familiar with the name McCormick, which has always been identified with the world's best harvesting machines. The favor with which McCormick machines meet is nothing more or less than the deserved recognition of their double excellence. They are doubly superior, and give the best satisfaction wherever they are sold. The makers confidently claim that they last much longer than ordinary machines, and will do fifty per cent. more work, and do the work fifty per cent. better. These machines are fully illustrated and described in the "World-Centre" and "King Corn" books, which will be mailed, free, upon application to the nearest McCormick agent or to the Company's home office at Chicago. See their advertisement.

The International Stock Food Company, Minneapolis, Minn., write, under date of May 17: "We have just been compelled to add factory No. 3. This gives us another building containing four floors 50 by 100 feet each. In our three buildings we now occupy 62,000 feet space, which will give some idea of the magnitude of our business, which increased at an extraordinary rate in 1901, and the increase so far this year has exceeded the increase of last year. When we say that it requires 107 people to attend to our office work alone, you can imagine that we are doing a very large business. At the present rate of increase we will be compelled to build an immense factory next year, and we are now planning for this important event in our history. We will have to build at least twice as large as the three buildings we now occupy. Of course, we are gratified in being able to make such a report, as it is absolute proof of the superior merits of our goods. Our largest growth is in States where farmers and stockmen have been using our goods for the longest time. People will not continue to use anything year after year unless it gives satisfaction."

JAMES TOLTON & SON'S SHORT-HORNS AND OXFORDS.

Spring Bank Stock Farm is situated in the County of Bruce, about five miles from the town of Walkerton, and is the property of Messrs. James Tolton & Son, breeders of Shorthorn cattle and Oxford Down sheep. In the herd of Shorthorns, which now numbers 35 head of imported and home-bred animals, are representatives of the following families: Sittlyton Secrets, Miss Howies, Fancys, Floridas, Nellies, and Vacunas. Prominent among the good ones is the imported Scotch-bred cow, **Sybella 5th**, by Prince of Pluive 71246; dam **Sarcasm**, by Cumberland. There is a splendid ten-month-old heifer out of her, sired by the stock bull, **Heir of Hope**, by imp. **Blue Ribbon**, out of imp. **Cleopatra 1st** by Gravesend. Miss **Howie 6th** (imp.), a Miss **Ramsden**, sired by **Abbottford 2nd** 69838, bred by Mr. Cairngorm, by the Cruickshank **Lavender** bull, **Lochgorm**, is another of good Scotch pattern. **Fancy Girl 2nd**, by **Clementina's Chief** 17641, by **Nonpareil Chief**, dam **Fancy Lady**, by **Mountain Hero** Florida 31st, by **Laurier 26118**, dam **Florida 28th**, by **Earl Warwick**; **Nellie 18th**, by **Earl Warwick**, dam **Etta**, by **Clementina's Chief**; **Ideal 2nd**, by **Earl of Moray** 16188, dam **Ideal**, by **Lord Elcho**, are all excellent representatives of the breed. Among the many heifers, which are a good even lot, is a yearling out of the last named cow and by the stock bull. There is also a yearling heifer out of imp. **Miss Howie**, and sired by **Clan McKay** (imp.). All of the younger ones up to two years old are sired by the stock bull, **Heir of Hope 32637**, a massive, even, well-muscled animal, full of quality, and a sure and successful sire. A number of the older ones are sired by **Earl of Warwick** 22886, by **Earl of Moray** 16188, dam **Melody** 21792, by **Mr. President**. There are also several young bulls up to one year old, by the stock bull and out of splendid cows, that are hard to beat. The **Oxfords** number 51, and are all bred from imp. stock, large, well-built animals, perfectly covered. This season's crop of lambs, about 31, are sired by a Reading-bred ram, imp. **Reading's 28th** 20470. Lately Mr. Tolton has sold 20 yearling rams for the Northwest. There are yet on hand ten yearling ewes. Mr. Tolton reports sales as extra good, yet there are on hand Shorthorns of both sexes, for sale.

American Leicester Breeders' ASSOCIATION.

A. W. Smith, Pres., Maple Lodge, Ont.

Pedigrees now being received for Vol. 4. For information, blanks, etc., address:

A. J. TEMPLE, Sec., CAMERON, ILL., U. S. A.

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.

JOSEPH FERGUSON, UXBRIDGE, ONT., BREEDER OF

Pure-bred Cotswolds—choice quality. Uxbridge P. O. and Station.

IMPORTED COTSWOLDS

We are now offering some choice shearlings of both sexes; also this season's crop of lambs, sired by Imp. Swanwick.

BROOKS & LANGMAID, COURTICE P. O.

SIX MILES FROM OSHAWA STATION, G. T. R.

PRIZEWINNING COTSWOLDS.

Imported and home-bred stock, prizewinners at all the leading fairs. **ELGIN F. PARK, ONT.** Box 21, Burgessville, Ontario, Canada.

CHAS. GROAT, BROOKLIN, ONT., OFFERS FOR SALE

Cotswold Ewes and Ewe Lambs

of good quality and breeding. Also a registered stallion, 1 year old, and one filly foal. Good ones. A Duchess of Gloster bull, 15 months old, for sale. Write for price and particulars.

SUMMERHILL OXFORDS.

Present offering: A choice lot of ram lambs and ewe lambs. Also 50 extra nice yearling ewes. **PETER ARKELL & SONS, Teeswater P. O. and Station.**

BROAD LEA OXFORDS.

Can sell a few choice ewes of different ages, bred to our imported rams, **May King 1st** and **Earl of Fairfield 2nd**; also 75 good ewe and ram lambs, and an imported two-shear ram. Come and see our flock, or write us for prices, etc.

HENRY ARKELL & SON, TEESWATER, ONT. Mildmay, G. T. R.; Teeswater, C. P. R.

LINDEN OXFORDS

A choice lot of ram lambs (yearlings) and a few two and three shear rams fit for show and to head pure-bred flocks; imp. and home-bred, well covered, good quality. **—om E. J. HINE, Dutton, Ont.**

"FARNHAM FARM" Oxford Down Sheep

An offering 40 choice yearling rams to head flocks, 50 superior yearling ewes, 70 ranch rams, 100 ram and ewe lambs of 1902. From imported sires, and a number from imported dams. All registered. Barred Rock eggs, 75 cents per setting.

HENRY ARKELL, ARKELL, ONT.

FAIRFIELD LINCOLNS

Imported ewes and lambs. Can supply show flocks. **—om**

J. H. PATRICK, ILBERTON, ONT., CAN.

OXFORD DOWNS

Imported and home-bred, for sale. This flock has won more first prizes for Canadian-bred pens than any flock in Canada. **SMITH EVANS, Gourock (near Guelph), Ont.**



COOPER SHEEP DIP

STANDARD OF THE WORLD for 60 years. Used on 250 millions annually. If local druggist cannot supply, send \$1.75 for \$3 (100 gal. pkt.) to **W. M. COOPER & NEPHEWS, CHICAGO.**

AGAIN STOP! AND LISTEN!! FAIRVIEW SHROPSHIRE

Have this season produced a Great crop of high-class lambs. Do you want a flock header? If so, let us tell you that we Have excellent imported and Home-bred rams of different ages To sell at good values to purchasers. They are of the best breeding. Are of good size, and extra quality.

JOHN CAMPBELL, Woodville, Ont., Can.

SHROPSHIRE

We are now offering a number of two-shear rams and ram lambs—Mansell strain; good ones and well covered. Price right. **ROWAT BROS., Hillisdale P. O., Elmvale Sta**

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, Hespele P.O., Ont.**
C. P. R. and G. T. R.

W. S. CARPENTER,
"MODEL FARM," SIMCOE, ONT.,
IMPORTER AND BREEDER OF
Shropshire Sheep.

Ram and ewe lambs for sale. Well covered.
Station One-half Mile from Farm,
Wabash and G. T. R., -om

Shropshires...

At present I offer for sale: Shearing rams, shearing ewes, ram and ewe lambs. Also a few aged ewes. Prices reasonable.
GEORGE HINDMARSH,
-o
AILSA CRAIG, ONT.

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. -om

ZANZIBAR PAINTS.

Just ask your dealer for
Zanzibar Barn Paint,
and give it a trial.

Low-priced, but good strong colors, and very durable
You can make your barns, roofs, silos, fences and all outbuildings waterproof and look clean and bright for a small outlay of money.
THEN, TOO: Protect and brighten up your implements and wagons with

Zanzibar Agricultural Red, Green, and Black.

Made from the very best pigments. -om
BRILLIANT GLOSS, DURABLE COLORS, WEATHER AND RUST PROOF.

The Zanzibar Paint Co., Ltd., Toronto.
Write us if your dealer does not handle the goods.

Our improved Chester White Pigs are choice and even this spring, with pedigree, \$5 each. We have also, among others, a seven months' Ayrshire bull, among the best in Canada. -o
J. F. Parsons & Sons, Barnston, Quebec.

WILLOW LODGE BERKSHIRES FOR SALE

Two boars 11 mos. old; 3 boars 6 mos. old; 3 boars 5 mos. old; 4 boars 3 mos. old; also a number of sows from 3 to 5 mos. old. Now is the time to order spring pigs, which are arriving daily, sired by Longfellow 10th of H. F. No. 8633, Willow Lodge Prince (9789) and Milton Lad (9660). Pairs supplied not akin. -om
WM. WILSON, SNELGROVE, ONTARIO.

LARGE ENGLISH FOR SALE.

YOUNG boars and sows carrying the blood of Baron Lee 4th, Bow Park (imp.), Enterprise and Highclere, on Bow Park, Teasdale and 3rd females, with Allandale Boy 5876 and Royal Lad 3rd 4307 heading the herd. -o
S. DYMENT, BARRIE, ONT.

Imported Chester Swine.

Our present offering is both sexes, not akin, as good as the country produces. Also eggs from B. P. Rocks, B. B. and C. I. Games, S. G. Dorkings, G. Sebright Bants, Mammoth Pekin ducks - all prize winners - \$1.50 per 13. Six extra B. B. Game cockerels or pairs for sale. -om
GEO. BENNETT,
CHARING CROSS P. O. AND STATION.

English Berkshires.

For sale: Choice pigs from April and May litters. Pairs supplied not akin. Barred Rocks. Eggs for hatching. -o
JOHN RACEY, JR.
LENOXVILLE, - - QUEBEC.

SNELGROVE BERKSHIRES

We have for sale boars and sows 2 to 4 months old, and sows large enough to be bred. Now is the time to send orders for young pigs to be farrowed in March and April. Sired by the prize-winning boars: Colonel Brant - 5950 - , Crown Prince - 5888 - , and Norval Hero - 5952 - . Prices reasonable. -o
SNELL & LYONS, SNELGROVE, ONT.

LARGE ENGLISH YORKSHIRES.

Sows due to farrow in May and June, boars fit for service, sows ready to breed, boars and sows 8 weeks old. Over 100 to choose from. All lengthy, deep, smooth type. Prices reasonable. Write: -o
Jas. A. Russell, Precious Corners, Ont.

Imported Poland-China Hogs. We are offering choice, of both sexes, any age (pairs not akin), from imported stock, and of the true type. Easy feeders, rapid growers. **ROBT. L. SMYTH & SONS,**
Fargo P. O. and Station, M. C. R.

YORKSHIRES.

A number of choice young pigs for sale, from 6 weeks to 6 mos. old, bred from D. C. Flatt's imported stock, and of the true type. -o
Fred C. Smith, New Hamburg, Ontario.

FOR SALE: Yorkshires and Holsteins

Best type and quality. Young stock constantly on hand. Prices right. **E. HONEY,**
Bricley P. O., instead of Newark.

YORKSHIRES.

TWO good 7-months-old, pure-bred Yorkshire sows, bred to a pure-bred Chester hog. For sale reasonable. -om
K. H. HARDING, Thorndale, Ontario.

YORKSHIRES.

A number of good young sows in pig, boars ready for service and young pigs from 2 to 3 months old, direct from imported stock. Pairs and trios supplied not akin. -om
H. J. DAVIS,
Box 290, Woodstock, Ontario.
Importer and breeder of Shorthorns and Yorkshires.

YORKSHIRES & POULTRY

Ready to ship. Yorkshires that will make winners for fall fairs. Correct type; easy feeders. Eggs reduced to \$1 per setting, from extra choice matings. W. Wyandottes, B. P. Rocks, W. and Brown Leghorns. Also pedigree Collie pups for sale. -o
A. B. ARMSTRONG, Codrington, Ontario.

YORKSHIRES FOR SALE.

Boars fit for service, sows in farrow and ready to breed, and young stock on hand. Prices reasonable. -om
WM. HOWE,
BRUCE CO. NORTH BRUCE, ONT.

Yorkshires

For the next 3 months I can supply either sex, that for ideal bacon type, smooth, even finish, are unsurpassed. Prices reasonable. **WM. TEASDALE,**
Thornhill Sta., and electric cars. DALLER P. O.

NEWCASTLE HERD OF TAMWORTHS

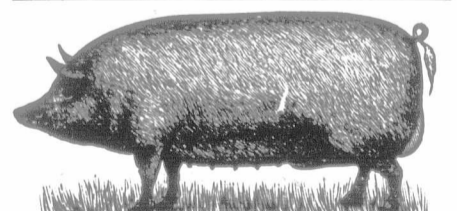
We are now offering a dozen boars fit to wean about 1st to the 10th May. A few young sows 3 months old, from Toronto Industrial winners. Prices right for quick sale. -o
COLWILL BROS., NEWCASTLE, ONT.

Tamworths and Berkshires.

A choice litter of young Tamworths, farrowed March 1st, \$6 each, registered. Berkshire sows four months old. Mammoth Bronze turkey eggs in season, \$3 per setting, large stock; order now. Safe arrival guaranteed. -o
D. J. GIBSON,
BOX 38, BOWMANVILLE, ONT.
HAZEL DELL STOCK FARM.

Agents Wanted

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



One fine Tamworth and Improved Chester White Spring Pigs of a true bacon type, our herd having won the best prizes offered at the leading exhibitions throughout Ontario and Quebec for the past ten years. Express for exhibition purposes a specialty. We pay stock charges between stations, and guarantee safe arrival of all stock shipped. Pairs furnished not akin. Write for prices. -o
H. GEORGE & SONS, Crampton P.O., Ont.

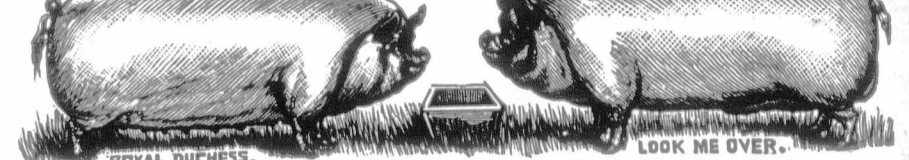
TAMWORTHS.

Young pigs for sale, from medal-winning sows, O. A. C. 110, and other good ones, sired by Imp. Starlight, Pan-American First, and Bold Boy, Toronto winner. **JOHN HORD & SON,**
om
Parkhill P. O. and Station.

ADVERTISE IN THE FARMER'S ADVOCATE.

SUMMERHILL HERD OF Large English Yorkshires.

HEADQUARTERS FOR THE IDEAL BACON HOG.



Our winnings at the large shows, for 1901, are as follows: At Toronto every possible first prize and five seconds, two silver medals, and first for pen of pure-bred bacon hogs, also sweepstakes on bacon hogs over all breeds; at London every possible first but two; while at the Pan-American, where our herd was divided, half going to Toronto, we won six out of ten possible firsts, also sweepstakes on boar any age. At the Pan-American (Buffalo), Toronto and London there were thirty-six first premiums and medals given; all the medals and every first prize but six won by the Summer Hill Yorkshires. When in need of the best write **D. C. FLATT & SON, MILLGROVE, ONT.** Telephone: Millgrove, Ont.

Hillcrest Herd of Large English Berkshires

Consists of imported and show sows; the sires are big, long fellows, of the bacon type. For Sale: a few grand young sows from 3 to 6 months old. **J. N. LAHMER, Vine, Ont.** Blue Station, G. T. R. -om

FACTORY PRICES.

OUR prices on all kinds of carriages and harness are actual factory prices. The dealers and jobbers have been eliminated in our system of selling direct from factory to customer. We are saving money for thousands of carriage buyers all over the country—we can save you for you.

Write for our catalogue, descriptive of buggies, phaetons, surreys, etc. It gives full particulars of our system, and shows the carriages. It also gives wonderfully low prices on harness, etc. The largest assortment to select from—and the broadest guarantee goes with each purchase. Catalogue Free.

International Carriage Co., BRIGHTON, ONT.

No. 10. Price \$52.50.

BINDER TWINE Eggs for Hatching

From a pen of choice Barred Rock hens, selected as persistent layers of large eggs, and mated with two large, strong, vigorous cockerels. Price, \$1 per setting, or three settings for \$2. **W. C. SHEARER,**
BRIGHT, ONTARIO. -o

Eggs

from heavy-laying, prizewinning strains of B. C. Brown Leghorns, S. C. Black Minorcas, and Barred Plymouth Rocks. See "Gossip" column, ADVOCATE, April 1st. Write for circular before purchasing elsewhere. **JOHN B. PETTIT,**
FRUITLAND, ONTARIO.

R. C. Buff Orpingtons.

Only rose-combed flock known in Canada. \$2.50 per setting. One trio for sale, \$10.00. Also Rhode Island Reds, \$1.50 per setting. -o
CHAS. R. BRYAN, DURHAM, Nova Scotia.

EGGS FOR HATCHING

Barred Rocks (exclusively). From two pens headed by two imported cockerels bred from a \$75 trio of A. C. Hawkin's Royal Blue strain; \$1.00 per setting of 13. **A. E. SHERINGTON,**
Box 100, Walkerton. -o

EGGS FOR HATCHING

From all the leading varieties of Dorkings, Houdans, Minorcas, Leghorns, Hamburgs, Polandas, Ducks and M. B. Turkeys. Our fowls win at all the best shows in Canada, also Boston and New York. For particulars write **W. STEWART & SON,**
Menie, Ont. -o

EGGS FOR HATCHING, Turkey eggs \$4

others \$1 per setting. Mammoth Bronze turkeys, Barred Rocks and W. Rocks, and Red Cops. Chester White swine. Good bacon type. Write for prices. -o
W. E. WRIGHT, GLANWORTH, ONT.

IT'S THE MAN WITH Canadian Incubators

THAT DOES THE WORK. **CANADIAN INCUBATOR & BROODER CO.,**
GET CATALOGUE -om TORONTO, CAN.

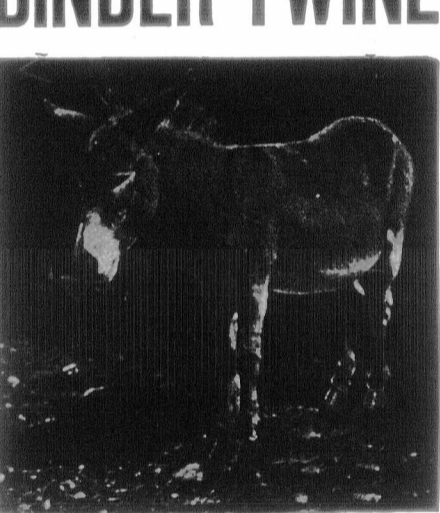
ANCHOR WIRE FENCE

Is made throughout of No. 9 wire, all cross wires securely fastened with Anchor Clamps. -o
All kinds of fence wire in stock. Write for prices. Agents Wanted.

ESPLEN, FRAME & CO., MANUFACTURERS, - STRATFORD.

PLEASE MENTION FARMER'S ADVOCATE.

BINDER TWINE



Farmers' Co-operative Binder Twine Co.

(LIMITED),

BRANTFORD, - ONTARIO.

Have set their prices on Twine for the harvest of 1902.

This co-operative movement, consisting as it does of nearly eight thousand farmer stockholders, has for ten years been a marvel of success, for the reason that the farmers, with determined loyalty and patronage, have said it shall be so. The Canadian agriculturist who buys a single ball of binder twine until he is positively sure that this Company's output is entirely exhausted acts suicidal to the interests of himself and his home, while by such acts he encourages the possibility of combine and monopoly, that the country is rampant with at the moment, and is little better than the animal represented in the picture of this advertisement.

A PROUD RECORD.

For ten years we have not sold a single pound of twine representing to ourselves a greater profit than three-quarters of a cent a pound on its actual cost of production; while in 1898 we delivered to our patrons 1,500 tons—the mill's entire output—at 74c. while for the same grade our opponents secured 14c. We divided all earnings and profits with our myriads of shareholders instead of passing it into the pockets of American millionaires.

JOSEPH STRATFORD, General Manager.

COLLIE PUPPIES

Pure-bred. Also Bronze turkey and Pekin duck Eggs. London express. -om

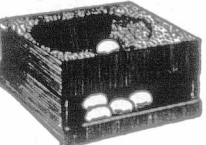
A. ELLIOT, POND M'LLS, ONT.

Choice White Wyandotte Eggs for Hatching:

\$1 per 15 or \$1.50 per 26. Satisfaction guaranteed. The Natural Hen Incubator is the greatest labor-saver and surest hatcher ever invented. Write for circular. o Agent, W. J. Chisholm, Dunkeld, Ont.

"VIGILANT" NEST

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



WOODSTOCK

STEEL WINDMILLS

Galvanized or Painted.

For Power or Pumping.

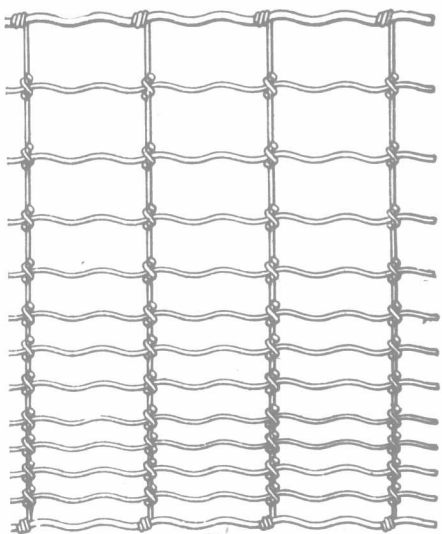
DANDY Windmill

with Graphite Bearings, runs easy and controls itself in the storm.

GRINDERS, PUMPS, WATER TANKS, DRINKING BASINS AND SAW BENCHES.

WOODSTOCK WIND-MOTOR CO., WOODSTOCK, ONT. (Ltd.)

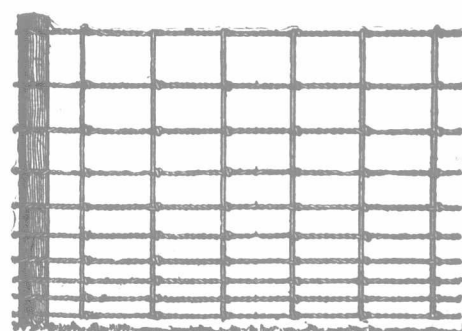
LAMB FENCE



THE best is none too good. Lamb fence is made of the best high carbon wire, and has a continuation of spring throughout its entire length, automatically adjusting itself to the heat and cold.

H. R. LAMB, LONDON, ONT.

FENCING and GATES



Buy your fencing and gates direct from the manufacturer. The Oshawa Wire Fence Co., Limited, are the largest manufacturers of different styles of fencing and gates in Canada. Send for catalogue and prices.

OSHAWA WIRE FENCE CO., Ltd., OSHAWA, ONT.

PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

Messrs. B. H. Bull & Son, Jersey breeders, of Brampton, Ont., when ordering a change of advertisement, state that their sales have been exceptionally good and their stock have wintered well. During this season they have sent stock over a wide territory, from British Columbia to Newfoundland, and several shipments to Manitoba. The Jerseys selected on the Island of Jersey by Mr. F. S. Peer for the Brampton herd are now at New York, and will be home the first week in June. Mr. Peer writes that there are some sure winners among them. The bull calf is out of Blue Bell, a cow which Mr. Rockefeller's manager says was, in his opinion, the best cow he left on the island, and he tried very hard to buy her. This calf is sired by the famous Flying Fox, and should be a valuable addition to this herd. Further particulars will be given later.

Mr. H. J. Davis, Woodstock, Ont., importer and breeder of Shorthorns and Yorkshires, reports the following recent sales: To Mr. E. V. Norton, Coaticook, Que., six head of fine heifers, four of them in calf to Bapton Chancellor (imp.), also two imported Yorkshire sows and a boar from a sow bred by the Earl of Roseberry. Ten head of good Scotch cattle to Robert Miller, Stouffville, Ont., in the lot being three fine Gloster heifers, three Buckinghams, a fine two-year-old Buchan Lassie heifer and calf, and a well-bred Mina heifer and calf, of the famous Bessie tribe, her sire being British Prince, to Mr. W. H. Elliott, of Guelph, in whose herd, with the good care always bestowed upon his cattle, she will be heard from in the future. Mr. Davis adds: "I expect to sail for Great Britain about June 1st, for a fresh importation of Shorthorns and Yorkshires." His address for the next two months will be care of Mr. Alfred Mansell, Shrewsbury, England.

Messrs. Matt. Richardson & Son, Caledonia, Ont., write: "Our stock of Holstein-Friesian cattle at Riverside Farm have come through the winter well. Holsteins of good quality are in demand. Recent sales are as follows: To C. P. Davis, Etobicoke, Que., a young bull, Hulda Wayne's Victor De Kol. This youngster should make a good dairy sire. His dam, Hulda Wayne's Aaggie, as a three-year-old entered the six-months test at the Pan-American Model Dairy, Buffalo. She stood second in the Holstein herd for the largest quantity of milk, butter and total solids produced, also second in net profits. In the entire stable of 50 cows, all breeds, she stood second in milk production, giving 8,040 lbs.; second in total solids and seventh in largest quantity of butter. Her six-months' butter product was valued at \$76.00; total solids, \$88.00. To William Armstrong, Locust Hill, Ont., the promising young bull, Inka Mercedes Victor De Kol; dam Inka Mercedes De Kol. She also entered the Model Dairy as a three-year-old. She stood third in the entire stable in milk, producing 8,028 lbs., and ranked fourth place in total solids, value \$83.00; butter, \$72.00, in the six months. To J. A. Jackson, Stratfordville, Ont., the young bull, Aaggie's De Kol of Riverside. He is from the same dam as Aaggie Iras of Erie, official three-year-old record; butter 18 lbs. 1.8 ozs., milk 479 lbs. She stood second place in official authenticated test in America in her class. To P. Smith, Jr., Sebringville, Ont., Inka's Victor De Kol of Riverside, a promising young bull; dam Inka Mercedes De Kol 2nd, at 1 year and eleven months official record 9 lbs. butter in 7 days; 2nd dam's official 7-days record at three-years old: 398 lbs. 11 ozs. milk, 17.587 lbs. butter. To Howard Lawrey, Belmore, Ont., who is establishing a pure-bred Holstein herd, five young females of individual merit: Totilla Echo De Kol 3rd, dam Totilla Echo De Kol, official 7-days record at four years old, 29.21 lbs. butter, 511 lbs. 4 ozs. milk, best day's milk 77 lbs. 4 ozs. Sadie Wayne of Riverside, from the promising young cow, Flora Wayne of Riverside, official test at three years old 17.28 lbs. of butter in seven days; Rideau Dellah's Lena De Kol, dam Rideau Dellah, official test 19.15 lbs. butter in seven days, average per cent. fat for week 4.13; also the young heifer, Sherwood Aaggie, and calf. She is sired by Stratford's Blackbird Aaggie, who has three daughters to date in the Advanced Record of Merit. To H. McNally, Ryckman's Corners, Ont., the bull, Sir Ruby Pietertje De Kol. To Samuel Kinsley, Gas Line, Ont., the young bull, Aaggie's De Kol 2nd of Riverside. To Isaac Hewitt, Plattsville, Ont., a promising heifer, Amasilla De Kol. To W. D. Dickson, Little Rideau, Ont., bull calf, Victor De Kol Wayne. All the above mentioned animals, with one exception, are from our imported stock bull, Victor De Kol Pietertje, whose two nearest dams are among the richest milk and heaviest butter and milk producers in the breed. His dam, Netherland Pietertje, made in official record, as a three-year-old, 18 lbs. 2 ozs. butter in seven days, average per cent. fat for the week 4.02. His sire's dam, De Kol 2nd, official 7-days test 26.57 lbs. of butter. She is unquestionably one of the greatest butter cows of the breed. She has transmitted her wonderful butter qualities to her offspring with great certainty, as the official record fully testifies."

Don't lose time when the grain is ripe. Get a Binder that you know will work through the season without a break-down

THE FROST & WOOD

NO. 3 OPEN-REAR BINDER

Is the machine you need.

It does not waste twine. It does not miss sheaves. The eccentric wheel equalizes and reduces strain. The Force Feed saves grain. It cuts close to the ground. It has roller and ball bearings. There are other good features peculiar to the Frost & Wood No. 3 Open Rear. Call on our agents and examine the machine yourself. You will like it.

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The Specialist is the man who succeeds above all others in this age. It should be so. When a man devotes all his time and energy to one single thing, he usually does succeed. We are specialists in making **Spramotors**. We have never made cheap machines, knowing that to be synonymous with poor machines. These things being true, is it surprising that the **Spramotor** is the very best spraying machine in the country? That is the testimony of all who have used the **Spramotor**. It was awarded First Place in competition with ten other machines in the Canadian Government Spraying Contest. It is unequalled for painting barns and other buildings, inside and outside with whitewash, oil and water paints. We will mail you free an 84 page copyrighted Treatise on the diseases affecting fruit trees, and their remedies, entitled, "A Gold Mine On Your Farm." Ask your dealer for the **Spramotor**, or write us direct.

SPRAMOTOR CO., Buffalo, N. Y. and London, Can.

Page Acme Poultry Netting is close meshed at bottom and does not require rail or board support at edges, having strong straight wire (No. 12 gauge) at top, bottom and in centre, cannot sag and is easy to erect. The "Page Acme" netting is of neat appearance, very durable and cheap. We also make farm and ornamental fence, gates, nails and staples. The name of Page is your guarantee of quality.

The Page Wire Fence Co., Limited, Walkerville, Ont.

DENTONIA PARK FARM

EGGS

S. C. Leghorns—White, Buff and Brown	\$1.50 per 13.
Andalusians, White Langshans,	1.50 per 13.
White Wyandottes,	1.50 per 13.
Pekin ducks (special matings),	1.50 per 11.
"	5.00 per 100.

S. C. White Leghorn breeding pens mated with cocks direct from Wychoff's stock, of Groton, N. Y. Stock for sale. Correspondence solicited.

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Latest and best devices for wire-fence building, including

GEM and McCLOSKEY weaving machines, also Coiled Spring and other fence wire at lowest prices.

Write to **McGregor, Banwell Fence Co., Limited, Box 23, Windsor, Ont.**

A MACHINE to weave your own fence of Coiled Hard Steel Spring Wire. 22 inches high, at **25 Cts. per Rod.** \$25 buys wire for 100 rods. Agents Wanted. Catalogue Free. **OARTEE Wire Fence Mach. Co. Box 4 Hildgetown, Ont.**

PLEASE MENTION FARMER'S ADVOCATE.

The Good Points

IN A

CEMENT SILO

MR. GEO. LEITHWAIT, of Goderich, explains their superiority over wood, and the cost of one he built.

GODERICH, HURON COUNTY, ONT., DEC. 1, 1901.

THE RATHBUN COMPANY,
310-312 FRONT ST. W., TORONTO, ONT.,
Sales Agents for THE CANADIAN PORTLAND CEMENT COMPANY, Limited.

Dear Sirs,—I take pleasure in writing you a few lines telling you how pleased I am with the round concrete cement silo built for me by G. O. Echlin. It has not a crack nor fault, and is as hard as stone. I hope that my experience will be of benefit to others who propose erecting silos, as I have spent much time and trouble looking into this question.

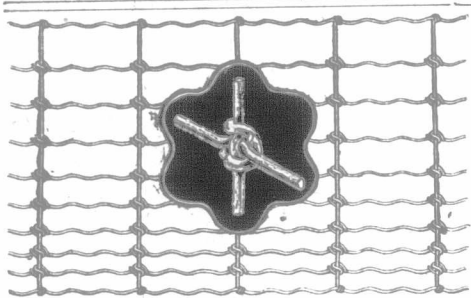
A short time ago I built a small wooden stave silo, but found that the ensilage around the outside, or about ten per cent., was spoiled. Now, when I opened the cement silo, on November 1st, and took three or four inches off the top, I could not see any difference between what was in the center and that against the walls.

This silo has a capacity of one hundred and fifteen tons, and cost me one hundred and sixty-four dollars, as follows: Thirty barrels of BEAVER PORTLAND CEMENT, \$90.00; forty-six yards of gravel, \$4.00; quarter-inch iron to build in walls, \$4.00; labor, four men eight and one-half days with mixing machine, \$66.00.

It is thirty feet high, fourteen feet in diameter, twelve inches thick at bottom and batter on outside reducing to 6 inches at top. The proportions of concrete were one of BEAVER PORTLAND CEMENT to twelve of good gravel.

I would recommend the use of your cement where good solid, satisfactory work is required.

Yours truly,
GEO. LEITHWAIT.



Ideal Woven Wire Fencing

Complete in the roll. A heavy, one-piece stay that will not buckle up and cannot slip. Note the lock. No. 9 hard spring wire throughout. A fence that WILL LAST.

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Coiled spring and other fence wires.

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With our HECLA or HILBORN furnaces is the most economical and efficient way of keeping the dwelling comfortable during the winter months.

Our method provides, at the same time, a thorough system of

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Write us for particulars.

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Absolute Protection. Profitable Investment. Agents wanted.

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Built to Last a Lifetime by the
Largest Makers of Pianos and Organs in Canada.

The Bell Organ & Piano Co., Ltd., GUELPH, ONT.

UNQUESTIONABLE PROOF
OF THE
EVERYDAY SUPERIORITY OF
The Improved U. S. Separator

"The Kind that gets all the Cream."

Prof. W. J. Spillman, of the Washington State Experiment Station at Pullman, in an article in the *Ranch and Range*, Seattle, Wash., of August 15, 1901, gives the record of the testing of five samples of milk from dairymen using U. S. Cream Separators.

The five tests were as follows:
OO, .00, .01, .01, .04.

An average of .012 of one per cent.

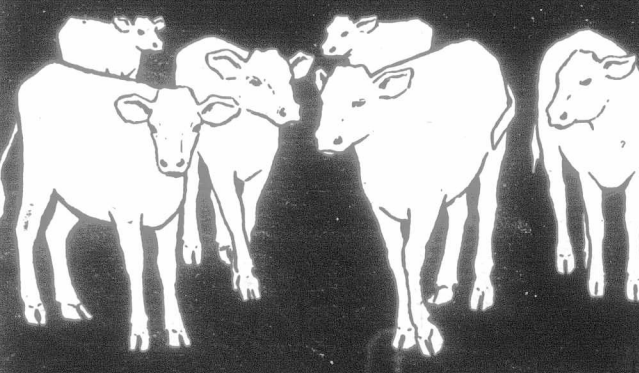
Please notice that in two of the samples the professor could find no fat, and in the poorest one only .04. (Probably this dairymen did not run his separator according to the directions.)

These records show that
The U. S. Separator is without a peer in thoroughness of separation

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PAN-AMERICAN EXPOSITION**

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THE QUICKEST CALF GROWER!

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GENTS:—I feed my cattle and calves "International Stock Food" summer, and also in the winter, when it brings them out in good shape, so they get the full advantage of early spring pasture, and none of them have ever had the scours, which is so common at that time. My milk cows are giving more milk, winter and summer, since I commenced feeding "International Stock Food," and the butter is of better quality. I tested "International Stock Food" on a steer that had made no growth for a year. After feeding "International Stock Food" one month he had made a net gain of 125 lbs. His rations were corn fodder and "International Stock Food." As a special test I fed and raised one calf on skim milk and "International Stock Food" during the winter and secured a weight of 450 lbs. in the spring. C. S. MITCHELL.

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