

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

PERSEVERE AND SUCCEED
FOUNDED 1866

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

J. H. Grisdale
Exp. Farm
June 15, 02

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Mr. Edward Van Alstyne, superintendent of the Model Dairy at the Pan-American, states, under date of November 1st: "I find, since the receipt of your letter, after carefully going over the figures of the seventy-one runs of their (the De Laval) machine, that I mis-called the figures, and the reading should be .0172 instead of .0161."

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Mr. Van Alstyne states in reference to the work done by the U. S. Separator in the Model Dairy at the Pan-American Exposition from September 29th to October 30th, inclusive, that in the fifty separate runs made by the separator during these days, with the milk of the ten different herds in the dairy test, the average per cent. of fat left in the skim milk was .0138.

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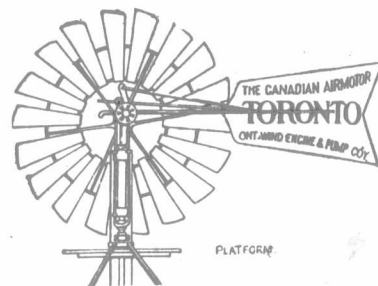
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VOL. XXXVI.

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

No. 539

EDITORIAL.

The Educational Winter Fairs.

The most important of all the live-stock exhibitions of the Dominion, from the farmers' standpoint, are the winter fairs advertised to be held in the present month: the Ontario Provincial, at Guelph, from the 10th to the 13th, and the Maritime Provinces initial show, at Amherst, Nova Scotia, from the 17th to the 19th.

The summer shows bring out representatives of the breeds in profusion as to numbers and of the best types, the handiwork of professional breeders, but the object of the winter fair is to bring together in competition the finished article for commercial purposes, fresh from the hands of the feeder, fitted for the butcher's block and for the best markets. This is the ultimate end of the breeding and feeding of most farm animals, and is a subject in which nearly every farmer is personally interested.

Economy of production is the principal consideration that faces the farmer in these times of close competition, costly labor, and high-priced feedstuffs. Upon the feeding of animals on the farm depends the fertility of the land, and on the breeding and type of the animals fed and the method and manner of the feeding depends largely, if not wholly, the profit or loss in the operation. At the Winter Fairs practical expert judges select the best type of animals suited to present-day markets, placing them in the order of merit comparatively, and expert breeders, buyers, butchers and purveyors, with the living animals and the dressed carcasses before them as object lessons, point out and explain to a comfortably-seated audience the desirable and undesirable points in each, and indicate the best methods of selecting, breeding, feeding and caring for such animals for the production of the desirable class of product.

The Winter Fair is distinctly educational in its aim and purpose from start to finish, and here farmers, young and old, free from the profusion and variety of the attractions and distractions of the summer shows, may quietly and calmly study the exhibits and learn lessons helpful to them in their own business, for in farming and the feeding and management of farm stock the oldest and most experienced are never too old to learn.

In Ontario, through liberality of the Provincial Government and the persistent and praiseworthy efforts of the Cattle, Sheep and Swine Breeders' Associations, the Winter Fair has become a permanent institution, and now that the Dairymen's and the Poultry Breeders' Associations have affiliated with the Winter Fair, we have an exhibition including, besides the meat-producing animals, a well-conducted milking trial, and probably the largest and best show of live and dressed poultry on the continent. The dairy and poultry interests of the Dominion are of immense and increasing value and importance, and these are given special prominence at the Winter Fair, lectures by experts and practical demonstrations of the most approved methods in breeding, feeding and preparation for market being given in each department.

The Maritime Provinces have made a good beginning, as is evidenced by the liberal prize list offered and the practical and energetic staff of officers and committeemen entrusted with the management of their first show, and while they

may not have all the conveniences of the older institution in Ontario, we must remember that the latter was started in a hotel stable, and that what has been accomplished in the one case may, by perseverance and good management, be attained in others.

Of this we are confident—there is no enterprise in the land more deserving of financial support from our Governments than these efforts to induce farmers more generally to devote their attention to the improvement of live stock, since it is by long odds the most important factor in the export trade of the country and the comfort and well-being of the people, and for this reason there need be no hesitation on the part of the promoters in demanding recognition and generous support by the authorities.

The granting by the railways of a single-fare privilege for the round trip to those attending the Winter Fairs should prove an inducement to more than ever of the farmers and their sons, their wives and daughters, to avail themselves of the opportunity to take in the advantages afforded by these fixtures.

The Contest of the Cows.

The result of the six-months dairy test at the Pan-American Exhibition may at first sight, and without proper consideration of the circumstances, seem to many disappointing. Compared with many of the records that have been published of the tests of individual cows, they may appear unsatisfactory, since we have authentic records of single cows giving up to 20,000 lbs. of milk and of others producing over 1,000 lbs. of butter within a year, while the highest record of milk by one cow at the Buffalo trial was 8,140 lbs. and the highest product of estimated butter 354 lbs. in the first six months of lactation. The impression will doubtless prevail with many that the best cows that could be found were selected and included in the Pan-American test, and that the result is a fair measure of the capabilities of the best cows of the breeds participating in the contest. A fair consideration of the circumstances will show that such is not a reasonable conclusion. It is well known that a large majority of the best cows in pure-bred herds are bred to produce their calves in the autumn, for the reasons that, if required for show purposes at the fairs, being fresh, they will be in the best condition for that purpose, that their calves will be well forward to show as under a year at the following year's shows, and will be long yearlings and two-year-olds in the shows of succeeding years, and the bull calves the best age for selling and for service at the end of the year. This fact, it will be admitted, largely limited the choice from among the best cows, and the selection was necessarily made from such as were available that had calved in the spring or were due to freshen about the time of the commencement of the trial. Then there are the additional facts that American cows of two of the principal dairy breeds were not represented, that Canadian cows were hurriedly selected in the last few weeks before the opening of the show, and that but few of them had even been tested to prove their capabilities.

The disadvantages the cows labored under in respect to feeding and surroundings must also be taken into consideration. They were taken away from their comfortable homes, their companionships and their familiar feeders at the end of

April, and fed by new feeders, kept all summer in stables with open doors, subject to the nervous irritation and excitement incident to the passing of a constant stream of visitors, and the attacks of myriad flies in a temperature which at times ran up to over 100 degrees, causing positive suffering and a distinct shrinkage in milk secretion.

It should also be remembered that the feeding was not conducted with the object of securing the largest possible quantity of milk or butter, but the greatest profit on the food consumed, and for this reason cheaper foods were used than would have been had the object been the greatest quantity, and doubtless time was lost in the effort to adapt the feed to the cows and the cows to the conditions to obtain the desired end. With all these disadvantages to contend against, it must be conceded that the cows did good work and demonstrated that milking cows can be fed at a profit even under adverse conditions, for while the price allowed for butter—25 cents per pound—was high, the price charged for feed was also higher than that of the average of years on the farm. In estimating the profits in the test, no account was taken of the skim milk, the buttermilk, or the manure, these being allowed to offset the cost of labor.

Taking the record of the herd standing third on the list for profit in butter-fat as an average of the best of the herds, we find that the five cows gave an average profit on the six months' feeding of \$41 each in round numbers. Granting that cows will milk ten months in the year, and allowing that the average production of the herd cited for the remaining four months would be \$25, we may figure an average profit for such cows of \$69 for ten months' work. While there is nothing in this showing that may not be equalled by good management by any intelligent and careful dairy farmer, it will bear discounting considerably and yet demonstrate that dairying is one of the most profitable branches of farming, if not decidedly the most profitable, that the average farmer can engage in.

The "Model Dairy" has served to teach some important lessons, among which is that for profit there is more in the individual cow than in the breed, that there are grand good cows in most if not all the breeds claiming to be either special dairy or dual purpose, that milk and butter can be produced at a good profit, and that it is unsafe to judge of a cow's capability for profitable work by any less reliable method than the use of the scales and the butter-fat test. Lessons may also be learned from a study of the feeding of the cows, which is another story and will bear discussion, but probably the most outstanding is that of the great value of corn ensilage as a cheap, palatable and profitable food for cows, not only for winter feeding, but for summer use as well.

We have frequently referred in these columns to the highly absorptive properties possessed by milk, and the danger of contamination when milk is so placed that injurious odors of any kind are allowed to come into contact with it. For this reason dairy farmers and cow owners generally should make arrangements for having milk removed from the stables as soon as possible after being drawn from the cows. This is specially important at this season of the year, when the animals are housed, and when, owing to a variety of obvious reasons, the risk of contamination is considerably greater than during the summer or autumn months.

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Individual Effort.

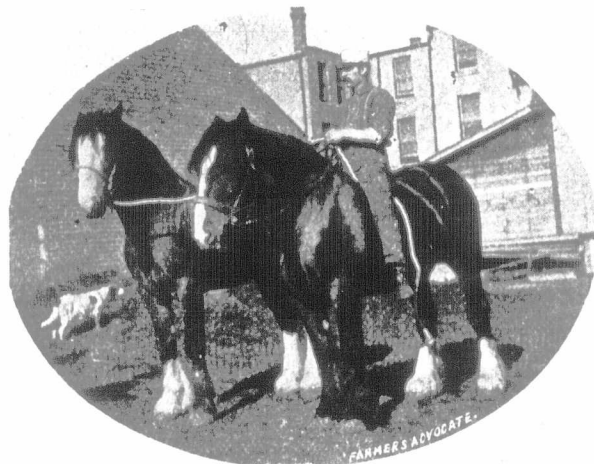
We appeal to the readers of the "Farmer's Advocate" in a matter of mutual concern. At this season of the year time is an important factor, but during the latter part of December, when the rush of renewal subscriptions is on and His Majesty's mails are overtaxed with the carriage of holiday literature and gifts, it becomes still more serious. During the year now nearly gone our first and constant aim has been to render our readers individually and the cause of agriculture in general the very best and most helpful service possible. The way in which the cordial appreciation of our readers has poured in by every mail has made our work a pleasure and has decided us to attempt still larger and better things for 1902, beginning with a magnificent Christmas number (to be issued on December 15th), which goes without any extra cost to all our subscribers. All new subscribers for 1902 are also entitled to a copy until the extra supply being printed is exhausted. We therefore confidently request the co-operation of all our old subscribers to facilitate our work at this busy season by promptly attending: 1st, to renewing. Do that without delay. RENEW NOW. Your subscription will be dated from the present date of expiry, so you cannot lose, and it will aid us and our staff wonderfully. 2nd, Along with your renewal, or by an early subsequent mail, can you not send us in one or more new subscribers, and in that way secure some of the valuable premiums we are offering? You may have some neighbors who would enjoy the reading of the "Farmer's Advocate" regularly, but who heretofore have not been subscribers. You may benefit yourself, them, and us by sending in their subscriptions for 1902.

THE WM. WELD CO., Ltd.,
London, Ont.

More About Horses.

A new feature of the "Farmer's Advocate"—which seemed needful to round out our bill of fare for the farmer and stockman—is the department, "Horses," running for several issues past, and which will be continued and still further improved, like the rest of the paper, in 1902. We are passing through a revival in horse-raising. The "horseless age" faddists have died a natural death, and the people love the horse now better than ever before. No ambitious modern city is now content without its annual horse show. It is gratifying to find that the new illustrated department in which horse subjects are classified and given special discussion has met with a most appreciative reception. Practical suggestions and letters are invited. In this issue a competent authority, "Whip," treats in a rational way the much-neglected subject of the winter feeding and watering of horses, and throughout future issues will deal with other topics of vital moment to every man who breeds, feeds or handles horses. In no other branch of stock-rearing in Canada to-day is there a greater need of an intelligent forward movement than in horse-raising, and we have a conviction that our new department is doing its share in that direction.

Amongst other good things in the address of President Frank H. Whitney, at the annual meeting of the Illinois State Swine Breeders' Association, was the following: "Get all the fancy points you can, but do not sacrifice size and quality to them. A strong back and loin, large heart-girth, and a good set of legs, are more to be desired than an ear that has just the proper proportion and shape, or a tail with the requisite number of white hairs."



CLYDESDALE STALLIONS EXERCISING.
PROPERTY OF ALEX. GALBRAITH, JANESVILLE, WISCONSIN.

The Gravenhurst Free Hospital for Consumptives.

To the Editor "Farmer's Advocate":
Sir,—The main building of the Gravenhurst Free Hospital for Consumptives is nearly completed, and only a small amount of money has been received for furnishings. By the rate appeals are coming in, we must increase the number of beds without delay. Certainly this free hospital is the country's most pressing need. Nearly every mail brings distressing requests for help from clergymen, mission workers, and from the consumptive poor. A poor widow wants to be cured for the sake of her little boy; a laborer's wife pleads for her young daughter, her boy and her two-year-old baby; a father with a large family of little children wants to be cured for his family's sake; a mechanic and his wife are today consumptives, and unless help comes soon six children will be orphans and homeless; a young, heroic girl, struggling to earn a living for her mother and herself, is now a consumptive and destitute; a young man giving his life to support an invalid mother and sister finds himself a victim of this terrible scourge. These are only a few of the heart-breaking appeals for help. We are dependent absolutely upon the generosity of benevolent people to provide for these sufferers. We ask the substantial assistance of your readers in this hour of need. Subscriptions, money orders, cheques, etc., for this urgent charity may be sent to The National Trust Company (Limited) Treasurer, 22 King St., East, Toronto; or to the undersigned.

Yours sincerely,

WALTER JAMES BROWN, Secretary,
National Sanitarium Association,
157 Bay St., Toronto.

HORSES.

Feeding and Watering Horses.

Many of the diseases of the digestive organs of the horse are caused by errors in feeding. Comparatively speaking, the horse's stomach is a very small organ, having an average capacity of but from three to three and a half gallons, and as a very important part of the process of digestion—viz., what is called chymification, or the conversion of the food into chyme—takes place here, it is necessary that intelligence be exercised in feeding in order to preserve health and comfort. Chymification is performed by the action of the gastric juice (a secretion of glands in the lining membrane) on the contents of the organ. This juice is slightly acid, and during digestion is secreted in large quantities. It acts upon the nitrogenous and saccharine portions of the food, rendering them fit for absorption, while the starchy matter and fat pass unchanged into the small intestine, to be there acted upon by the secretions of the liver and pancreas. In order that the food may be acted upon in a normal manner by these juices, it requires to remain in the stomach for considerable time, and if anything interferes with digestion either in the stomach or intestines, such as undue excitement, violent exercise soon after a meal, an over-distention of the walls of the organ by an overfeed, the forcing of the undigested material out of the stomach by a large quantity of water being introduced therein, etc., etc., the comfort and health of the animal must suffer.

Horses should be fed at regular hours. Regularity in feeding is more important than is generally thought. All food given should be of good quality. For horses not doing much work, the food need not be of an expensive sort; rough or coarse food answers very well in such cases, but the quality should be good; dusty or musty food of any sort should not be given. The quantity of grain given should in all cases be in proportion to the amount of labor the animal is required to perform. The somewhat popular opinion that a horse should be fed a given ration of grain, and that the same whether working or idle, is entirely wrong. The function of food is to supply nourishment to the tissues, and the amount of nourishment depends upon the waste taking place, and it goes without saying that the waste or consumption is less in an idle horse than in one that is working; hence the amount of food, especially grain, should be correspondingly less. Even to idle horses a sufficient quantity of coarse food, as hay, or its equivalent, should be given to prevent hunger. The quantity of hay required in 24 hours is said to be one pound for every hundred pounds of the animal's weight, but experience tells us that we cannot lay down any fixed rule in this matter, but each horse should be given according to his peculiarities. As a rule a horse will take rather more than this with safety. The appetite as well as the digestive powers of horses differ materially, especially in regard to coarse food. The common practice of keeping hay in the manger or rack before a horse all the time cannot be too highly condemned. An animal should not have placed before him at once more food of any kind than he will eat with a relish, say in an hour or at most an hour and a half. After the lapse of this time, unless the horse be taken out, any food remaining should be removed, and then he will have an appetite for his next meal; while if he be left standing with the hay before him, he will keep nibbling at it, tossing it out of the manger with his head, tramping on it, etc., thereby rendering it foul and unfit for himself or any other animal, and he will not have the necessary appetite for his next meal that is essential not only for enjoyment, but in order that he may receive the full benefit of the meal. The stomach requires rest as well as the muscles, and if more or less constant eating takes place, the organ is kept in a correspondingly active state, and hence will not perform its functions in a satisfactory manner. Not only is it better for the animal to receive a limited supply, but there is much less waste. I find that horses that are used for driving or riding purposes do better when fed hay only twice daily, receiving nothing but a grain ration at noon. For horses used for slow work, it is probably wise to feed hay three times daily. The quantity of grain to be given depends, as before stated, upon the amount of work performed. For a horse of 1,200 lbs. or thereabouts, doing ordinary work either on the road or in the field, a gallon of oats at a feed is considered about right; for smaller or larger animals the quantity should be less or more, according to size. I think it will be generally admitted that oats give better results than other grains. When expedient, I also think that better results are obtained from crushed or chopped oats than from whole. Still other grain, as barley, rye, corn, or even wheat, ground and mixed with the oats in fair proportions, give good results; but oats, where obtainable, should be the basis of the grain ration for working horses. Besides hay and grain, a horse should have at least one feed of bran, either dampened or dry, each week. Some feed

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a small quantity of bran regularly, mixed with the oats when they are fed whole. This is probably good practice, but I prefer giving the bran by itself. It makes a variety, and the horse relishes it, for he likes a change of food occasionally as well as other animals. In winter, or any time when a little grass or other green food cannot be obtained, it is good practice to feed a few roots, as a small turnip or a carrot or two, every day. In changing the food, as from hay to straw or from straw to hay, from one variety of grain to another, or in commencing to feed grain to a horse not accustomed to it—in fact, any change should be made gradually. Sudden or violent changes are very productive of digestive derangements. Many serious, and often fatal, cases of acute indigestion are caused by what may be called mistaken kindness on the part of the owner. For instance, it is not unusual for an owner, who contemplates making a long journey with a horse unaccustomed to driving, to give him a double ration of grain and then start on the journey. The extra quantity of grain in the stomach, combined with the extra exertion, causes an attack of acute indigestion, which, unless promptly and energetically treated, will probably prove fatal. In such cases it is better to feed the animal rather less grain than usual, and then, in order to compensate him for the extra tax upon the system, feed more liberally for a few days after the journey. It is dangerous to subject a horse to hard or fast work immediately after eating a full ration of grain. At least a few minutes, say half an hour, should be allowed for digestion. Neither is it good practice to give a horse a full ration of grain immediately after being subjected to severe exercise. Some horses will stand it all right, while others will not. The digestive powers of horses vary greatly, and unless a person knows his horse very well he should be very careful on these points, and even though we know our horse, it is dangerous, as the constitutional condition of the animal may be such as to render him at certain times more liable to digestive derangement than at others, and we are unable to tell just when such conditions exist.

As to watering horses, my opinion is that, with few exceptions, when a horse is thirsty he should have all the nice pure water he will drink; the principal exception being immediately after he has been subjected to excessive or severe exercise and is very warm and thirsty. In such cases he should be allowed to drink a limited quantity only, and after he has cooled off be allowed to quench his thirst. However, it is very seldom that a horse at ordinary work, either on the farm or on the roads, is too warm to be allowed water. In hot weather, of course, he will perspire freely, and I have often known horses to be brought in from the field in this state, and the driver, thinking him too warm to water, take him to the stall and feed him, and not give any water until he was brought out again to work after noon. This I consider is cruelty. The poor horse certainly cannot enjoy his meal while he is thirsty, and will not eat heartily; then he will probably drink large quantities after the meal, and this has a tendency to force the food into the intestine before it has been properly acted upon in the stomach. Horses should have all they want to drink before meals, and again after. In such cases they do not drink much after meals. Some horses will suffer from colic or indigestion if allowed water after meals, and of course such must be made an exception of. It certainly is good practice, where practicable, to allow water between meals, especially in hot weather. In regard to watering horses, if the driver considers what he likes himself, and treats his horse as he does himself, he will not go far wrong. Whenever he feels thirsty he wants a drink, and he is safe in assuming that the same principles apply to his horse, and, as before stated, there are few instances in which it will not be safe to allow his horse to gratify his appetite.

The King's Race Horses.

Diamond Jubilee, the four-year-old son of St. Simon and Perdita II., who carried the colors of his Royal owner to the front in the Two Thousand Guineas, the Derby, and the St. Leger, has been taken out of training and sent to the stud at Sandringham. The close of his racing career has not been what one might have wished, for, transferred to the Duke of Devonshire, like the rest of the King's racehorses at the death of Queen Victoria, he ran for the three £10,000 races this season, but could not do better than run second in one and fourth in the two others. In the course of the three years that he was in training he won five races worth about £31,000, including the sums which he received for running second. The King is now in the unique position of having three full brothers in his stud: Florizel II., whose first lot of three-year-olds has been of rare and singular merit; Persimmon, whose stock have not made so good a beginning; and Diamond Jubilee himself. Nor must it be forgotten that another brother, Sandringham, who had been very highly tried, but could not stand training, was sold for a large sum for the stud in America.

Horse Training and Education.

This is my favorite season of the year for harnessing the green colts.

As mentioned in a previous article, "When training a colt do not forget to study his disposition and always avoid quarreling with him." For instance, if he is a spirited fellow and wants to go, let him do so with all his might if no other gait will suit him. So many men try to teach a horse to go steady by holding him back. This is one of the things that is so hard to compel a colt to do in harness. Now, just try to force him to go steady, and see him balk and flounder and show all kinds of ugliness. He has been bred to go—then do not quarrel with him about that. To start a colt in harness is a very important event in his life. Then we must make a good preparation of harness and a strong two-wheeled rig; one that will not be easily upset. Any man that is able to do any kind of tinkering can get an axle and a pair of strong wheels. Put upon them a pair of poles 10 ft. 6 ins. long; set them wide apart on the axle, and place a strong crossbar back far enough so that an ordinary tug will reach it at full length; place a whiffletree upon this bar; now fasten a seat as low down as possible. What I want is to give an idea of measurements, etc., and leave the reader to imitate the common road cart to finish the rig out. In such a cart a man can sit behind the wildest horse, in a smooth field, and feel comparatively safe. This is one of the great secrets in training—fix your trappings in such a way that you feel safe, and then, and not until then, are we ready for any green colt. I nearly always use the cart.

In training saddle horses, we find many who are not expert enough in the business to mount

caps, using revolver, and at last the shotgun. Ride into the city: take after a street car, but be sure that there is not one chasing your horse too; chase the cars around for awhile, and then let him chase a steam engine for a change, and he will soon begin to think that he is "cock of the walk." You may recommend him to a customer when he has been educated in this way.

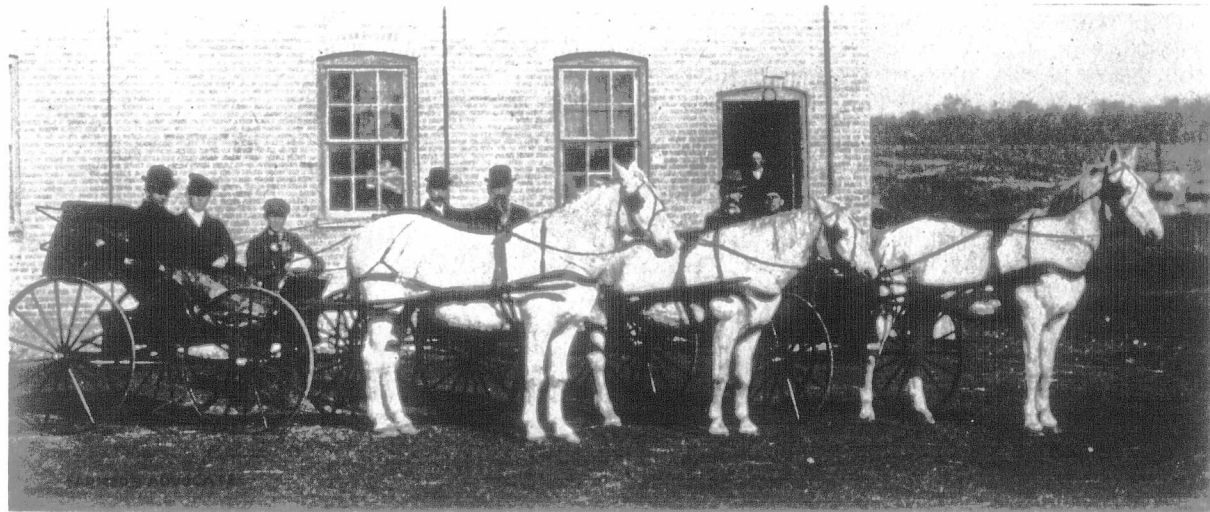
SANDY COLTS.

Kindly forward your renewal subscription to-day for the best and most attractive agricultural paper published—the "Farmer's Advocate."

Three Old Horses.

Referring to the old English horse portrayed in our November 1st issue, Mr. A. R. G. Smith, of Waterloo County, Ont., sends us a photograph of three old white horses in his possession, and writes as follows:

"These three horses are still alive and in better shape now than they have been for years. They are white; when they were young they were iron-gray in color. They are aged, respectively, twenty-eight, twenty-nine, and thirty years. They are the offspring of one mare. The two oldest are 'Argentiles,' a Lower Canadian horse, a descendant of 'St. Lawrence.' The youngest one is by 'Clydesdale Jock.' The oldest one, 'Polly,' took my father and mother from their wedding, on Jan. 31st, 1877. A few days ago I drove the youngest one to a place thirteen miles from here, and came back the same afternoon. She did not seem a bit the worse of the drive. These horses have been working constantly, doing the farm work and on the road until last year, when we decided to let the oldest pair ease off. We had a team of horses, each seven years old, that never worked until the previous year. We expected the old mares to die, but they never did. If we



A TRIO OF FARM MARES, AGED 28, 29 AND 30 YEARS.
OWNED BY A. R. G. SMITH, NEW HAMBURG, ONTARIO.

and stay with a wild horse. To such a one I would say, be cautious. Work around him for a while before you attempt to ride him. Substitute a dummy for a man at first—any person can make one. It is made like one end of a saw-horse—simply two sticks crossed and fastened together. Just make one, set it upon the colt as a man would sit; fasten a strap or rope to the feet as a belly band; use a crupper, running straps from the latter to the top of each stick or arm; then put on the reins and fasten to the bridle-bit and let him go in a training yard or shed. When he has been harnessed in this manner a while you may attach a long line and guide him for short spells, giving rest between. This treatment will prepare him for some outdoor exercises, after which he may be ridden by any ordinary horseman. Now all this schooling may not make him a first-class saddle horse. Saddle horses are born and not artificially made altogether, and tastes differ somewhat. One man likes a pacer, and another does not, and so on. Some people would not ride on a saddle, and would prefer walking. Generally speaking, the latter is a man who does not know a saddle horse when he sees one. A genuinely good saddle horse is a luxury. Green colts that would make good saddlers are not too plentiful in this country. When you find one you find a prize, but it takes lots of patience and skill to make him a top-notch even then; but when you get him there you may expect a good long price for him if you choose to part with him. He may be taught to lope by holding him firmly and touching his shoulder continually with the riding-whip. Practice him in a lane; place a pole upon the ground across the roadway, and ride him over it; have it raised up an inch or two, and repeat. By gradually raising the pole we teach and practice the horse to take a good hurdle. Get him accustomed to firearms by snapping gun

worked them they would work, but if they were idle for a day or two they had to be broken over again. The oldest one is shod all around; I use her to drive to the post office, four miles from here. She was a kicker, and was fed in the stable for twenty-four years. Of late years she has become less furious, and we let her out to pasture. She is still the "boss" horse, and nothing delights her more than to get at the watering-trough and keep the other horses away. The other horses are all afraid of her. The oldest ones were always driven together. They were a great team. My uncle, Mr. J. Cook, now governor of Berlin jail, told me recently that in the year 1883 he drove a man from Hamburg to our place to see them, and he offered father four hundred and fifty dollars for the team, but he wouldn't sell them. Mr. Ferguson, the undertaker, of London, Ontario, wanted to buy them, but as father positively refused to sell them, he made no offer. These mares were raised on our farm, and have been in our possession since they were foaled. The two oldest ones never had a colt, but the youngest one had four colts, one of which we sold as a two-year-old for one hundred and thirty-five dollars. To give you an example of what they still do, I may say that I was drawing cord-wood to-day with the team of which the youngest horse is one. Her mate is her own daughter, which is in its twentieth year.

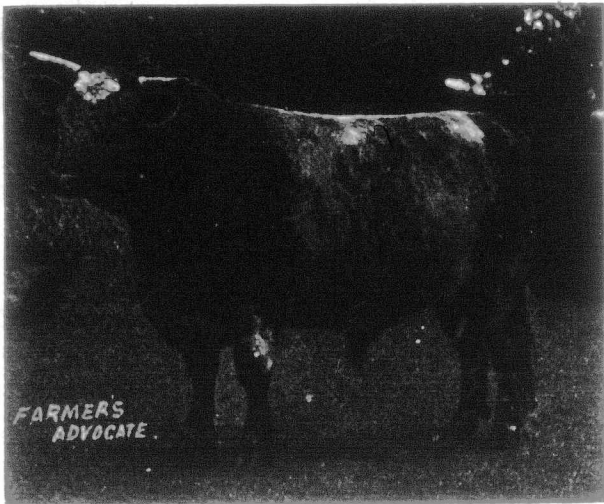
Correction.

Mr. D. Lawrence writes: "I notice one or two mistakes in the article in Nov. 15th issue re Crab fence. In the 4th line I am made to say a 'hand adz.' It should have been a 'hand axe.' Then, further on it reads that the '5-ft. stakes should be chamfered on the one side.' It should have read, '5-ft. stakes should be chamfered on the one side of the upper end.'"

Judging Horses.

To the Editor "Farmer's Advocate":

Sir,—I read an editorial in a late issue of the "Advocate" on "Judges and Judging at Fairs." As your columns are always open for honest discussion on subjects of interest, allow me, in the first place, to say that judges, as a rule, are a much-criticised and, in a majority of cases, not over-paid class of people, no matter how intelligently or honestly they perform their duties. I will try to show you some of the things on which a judge is liable to be sharply criticised. He may go into a ring of, say, Clydesdale stallions, beginning in a section of six or eight entries, a number of which may be of a true type of the most fashionable Clydesdale characteristics. The



BARON ABBOTSFORD 76087.

Two-year-old Shorthorn bull, winner of first prize, Royal Show, Cardiff, 1901. (See Gossip, page 797.)
PROPERTY OF MR. WM. BELL, ALNWICK, NORTHUMBERLAND.

others may be registered Clydesdales, but of another type—larger, coarser, and lacking in action. They may perhaps be as useful or more so for breeding export geldings, but are certainly far easier bought and much cheaper, in some cases probably at not much over one half the cost of the former, which are of finished quality and type. You have to leave out one or the other. Which is it to be? I say, under the present rules and their wording, a judge cannot overlook fancy and quality, thorough soundness in all cases being required. Then comes the other man's kick. You made your award to stuff that cannot begin to breed for export with my horse of coarser stamp. There is a certain amount of logic in that claim, and they also have some backing. Sharp criticism follows, and the poor judge has to take it. There is one suggestion as a remedy. They are all supposed to be Clydesdales, the same as Thoroughbreds are Thoroughbreds, and are judged as such. But I see that at Toronto and other leading fairs Thoroughbreds are judged from a Thoroughbred standpoint, and then they give special prizes to Thoroughbreds most likely to get a certain class of horses, say a large hunter. Why not apply the same rule to the Clydesdales, which would be an educator to the public.

A judge has generally an easier task in judging Shires, as they are generally of more uniform size. Then it is only a matter of picking soundness, quality and action. There is another very annoying class in which the poor judge often gets "fits"—that is the general-purpose class. I have frequently seen come into a ring say eight to twelve of what are entered as general-purpose horses, when there were perhaps only one or two that fitted the class as it is generally understood. The rest may be of more money value, but here again the judge gets censure if he picks those less valuable on the market and leaves the others, although frequently they are fairly suited for an agricultural class. But it seems hard to find a way out of this dilemma unless it can be done by the scales and standard, which would be easier for the judges, but perhaps not for exhibitors. The agricultural classes are about the easiest to judge, as they properly come in between general purpose and heavy draft. A judge has more sea room as regards weight to make his awards. With draft teams there is only one rule—that is to pick thoroughly sound animals, with wearing qualities for the one purpose of heavy work. There is still another grievance a judge has often to hear, which is this, "I will not exhibit if So-and-So is going to be judge," but I will say that such complaints generally come from shoddy horsemen, in some cases only passing through our country towards their home, and they squeal because they cannot bias or bulldoze a judge into giving less worthy stuff prizes. It is invariably the case that the better the exhibits placed before a judge the fewer complaints are heard. No judge is perfect, nor knows it all; therefore, if he gives an honest, intelligent decision, he should be accorded respect and a certain latitude and sympathy in matters of opinion.

Wishing your valuable paper success.

Wm. Bell, Oct.

A. INNES.

STOCK.

Improving the Ayrshire Breed.

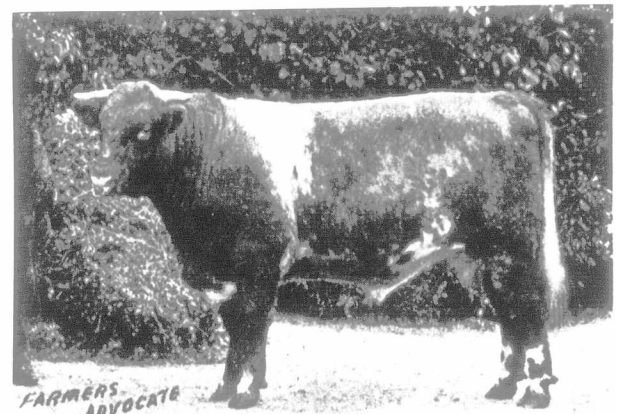
BY ARCHIBALD MACNEILAGE, EDITOR OF "THE SCOTTISH FARMER."

This is an all-important question for Canadian dairy farmers. They have invested largely in Ayrshire cattle, and so far with general advantage to themselves, but they have occasionally "had their fingers burned," and paid big money for animals that were very unlike the man's daughter who "was better than she was Bonnie." These particular animals would have been good enough had the Ayrshire not been wanted to yield milk. As ornamental pieces about a farmstead they might pass, but the man who took the risk of bringing them across the Atlantic had little for his pains. How these members of a dairy breed should to so large an extent have lost their dairying properties is a subject that will stand some debate, and it may be useful to ask whether there be anything in the early history of the breed to warrant the supposition that the Ayrshires should be deficient in milk yield? As an answer to this question it is well to remember that Ayrshires are of two kinds—the show type and the commercial type. Those who have been disappointed with their purchases have, as a rule, invested in the show animal: the failures have been amongst the high-priced animals which have been bought not because they had good records as milk-producers, but because they had won prizes. Had enquiry been made about milk-production, little accurate information could have been given, as very few Scotch dairy farmers keep records. In Wigtownshire, where the Ayrshire is seen to good advantage as a commercial animal, the existence of the creameries and purchase of milk by the creamery companies according to quality, has taught dairy farmers something about the butter-fat in the milk of an Ayrshire, but very few have any definite information to give concerning quantity. Another element in the case is the type of animal wanted. A comparison of photographs of the past and immediate present does not convince one that the show bull of the present is as robust and "framy" an animal as his predecessor. Whether he has been altered for the better or the worse during the past 50 or 60 years may legitimately form matter of debate.

The Ayrshire Agricultural Association has during its long career played a most important part in moulding the type of the Scottish dairy breed. There is before us a copy of its premium list for the year 1837, bearing the autograph of Mr. James Murray, Carston, and dated Ayr, 18th January, 1837. The Association is there styled the General Agricultural Association for Ayrshire, and the premiums offered include the prizes for live stock to be held "at the Great Show to take place at Maybole on the 1st day of June, 1837." The cattle classes are for the two breeds of Ayrshires and Galloways, both of which are described as "Dry Stock." In the class for bulls not under three years old, the first prize is eight sovereigns, the second five sovereigns, and the third three sovereigns. For the best two-year-old bull, the first prize is six sovereigns, the second three, and the third two. There are three classes for cows—aged, three-year-olds, and two-year-olds: from which we infer that there is not likely to have then been much encouragement for bringing forward stirks of both sexes in the fashion so familiar at the present time. In these circumstances the famous bulls whose names crop up in early records would not be forced like the youngsters of the present day. One of them, named "Geordie," whose portrait hangs in the Hall of the Highland and Agricultural Society, Edinburgh, appears to have been a more substantial animal than would find favor in show-yards now. He is said to have somewhat resembled the modern Hover-a-Blink in conformation, but was flecked (or red and white) in color. He was gay and masculine-like in appearance, but might have been deficient in depth of rib. He was a favorite breeding bull, in great request in North Ayrshire and the neighboring parishes in Renfrewshire, and gained first prize at the H. & A. S. Show at Inverness in 1839. It required no ordinary pluck to send a bull so far in those days. In 1840, Geordie was second at the Ayrshire show held at Girvan, and eventually passed into the island of Bute. In this part of Scotland some of the best Ayrshires may still be found. They have been kept singularly free from disease, and as a rule are of the larger-framed, good-milking strains. As an indication of the greater robustness and scale of these early bulls, reference may be made to a son of Geordie, known as the "Horny bull," which left a strong impression on the breed. He was used by all the leading breeders in the district of North Ayrshire, and amongst others by Mr. John Reid, Auchengown, Lochwinnoch, who patronized the best bulls the district could afford. The "Horny bull" was of the same color as the well-known Shorthorn champion, "Sign of Riches"—red, with a white mark on his back—and was a very big and heavy bull. Mr. Reid had a stout stirk by him which at six quarters old weighed 28 Ayr-

shire stones—672 lbs. beef. As his name indicates, he had a faulty horn, the fashion being in favor of the gay, upstanding horn, while his was inclined downward. He was a prizewinner locally, and bred good stock in every way, their vessels being correct and the frame and gaiety sufficient to carry them through in good company of any kind. Sons of his are known to have been used in various districts, and in particular one which was used successively in the herds of the Duke of Buccleuch in Dumfriesshire, who bought him from Mr. Bartholomew, Millbank, Lochwinnoch. After a time he came back to Ayrshire, and became the property of one of the great improvers of the breed, Mr. Parker, Broomlands, Irvine. This bull was in color dark red, with a white spot. He lived to a very old age, and bred big, roomy cows, with good vessels and teats, and good milkers. It was in connection with his stock that breeders began to pay great attention to the vessel and teats, and in the end the fancy for having the vessel tight and level and the teats perpendicular, and broad in the point, fostered the desire for small teats which as a rule were better planted. This fancy became a snare to breeders, as all the world knows.

One of the earliest fanciers of the breed—that is, one who made the show-yard a special feature in his breeding—was Mr. T. Paton, Swinlees, Dalry, in North Ayrshire. He liked an animal with great style about the head and horns, and to obtain this is usually credited with having introduced a cross of West Highland or Kyle blood. The Swinlees blood was largely used in the Broomlands herd, and along with the style of head and horn there came the distinctly Highland characteristic of the "clipped lug"—an ear about half as long as it ought to be, and shortened so that it seemed to have been clipped with a pair of scissors. These early sires were almost invariably red or brown in color, and some of them had dark-colored heads. "Tam of Daljig," a bull bought by Mr. Ivie Campbell, from Mr. Allan, Flackstone, Dalry, about the year 1840, was a dark-colored bull, with white markings, and the dark-colored or almost black head which characterized the descendants of the Swinlees bull got by the Ayrshire of the period out of the West Highland black cow. This Swinlees bull was the sire of Tam, which consequently resembled his sire. Tam was first at Dalry, and other shows in Ayrshire, and in his old age developed a bit of temper. His outstanding characteristic was his size. He had great, branching horns, and left a numerous progeny of both sexes. All the leading bulls of about the years 1840-50 had this style of head and the red color, with black or almost black heads. At the Dumfries show of the Highland and Agricultural Society, held in 1845, three bulls of more than local reputation tried conclusions. The first was owned by Mr. George Lorimer, Rigg, Sanguhar, and was bred by Lawrence Drew (the elder), Carmyle, Tolleross. The dam of this bull was a cow named Medal, which Mr. Drew gave in a present to Mr. Lorimer. She won 13 first prizes, and her son was first at Cumnock and third at Ayr. He was a thick, square bull, with good horns, but deficient about the thighs. The second was known far and wide as Algie's bull. He was black in color, and was owned by Lawrence Drew. In 1846 he was second at the Ayrshire show at



BUTTERCUP'S PRIDE.

Yearling Shorthorn bull.

PROPERTY OF MR. WM. BELL, ALNWICK, NORTHUMBERLAND.

Girvan, being beaten by McGregor's bull, which was brown in color, with white spots. Algie's bull came from Glendrishag, Ballantrae. His chief defect was in formation of head, and he was only moderately successful as a sire. The third good bull at this show was owned by Mr. Hugh Kirkwood, Langmuir, Kilmaurs. He was bred by Mr. Young, Mains, Kilmaurs, who had a superior dairy stock, to which all the show fanciers, including Mr. Parker, Broomlands, were indebted. The colors of these early bulls show clearly that the all-pervading white is a comparatively modern innovation, and is not at all an inherent characteristic of the breed. Prices also ruled high in the years from 1840-50, a

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sale of bull stirks held by Mr. Morton, Townhead of Drumley, in Kyle, making up to £15 and £20 apiece. All of these were got by a second-prize bull at Ayr in 1847, whose color was red, and his progeny continued to win for many a day, the females being good milkers, but not show cows. The first-prize bull at the H. & A. S. Show at Glasgow in 1850 was red and white in color, with horns rather low and outspreading, but he had grandly-sprung ribs, and was altogether of great substance.

At the show of the Ayrshire Association held in 1852, there were no fewer than 28 bulls shown in the class over three years old, and in 1854 the winner was "Major," one of the greatest bulls of the breed. He was bred and owned by Mr. Parker, was brindled in color, like his dam, and was thought to be rather feminine-like in character. His advent may be said to mark the beginning of a new era in the history of the breed. He was first at Glasgow, Ayr and Bart Kilbride in 1852-3, but sustained defeat in the following year at Glasgow. Major was possibly the first of the great Ayrshires which attracted universal attention to Mr. Parker's herd. The owner devoted his whole attention to his Ayrshire stirks. He was a typical farmer of the old school, and, no matter how employed, invariably wore a tall hat. Mr. Parker deserves to be remembered as one of the great stock-breeders of Great Britain. He left the impress of his genius on the Ayrshire breed, and had those who followed him been content to adhere to his ideals there would have been less complaint than was for long so common about the lack of commercial value and merit in the Ayrshire breed. Major was undoubtedly a famous sire. His first great son was Cardigan, a bull bred by Mr. Parker, and owned during his public career by Mr. Ivie Campbell. His epoch is clearly indicated by his name, borne in honor of the leader of the forlorn charge at Balaklava. Cardigan was first at Ayr as a stirk, a two-year-old, a three-year-old, and a four-year-old, and only once suffered defeat, being placed second at Glasgow when a stirk. In color he was very dark brown or nearly black; like his sire, he had long horns, which were scarcely wide enough, but his neck, shoulders and back were faultless. His female produce were not famous in the show-ring, being rather deficient in the formation of the milk vessel; in fact, it was said that he only left one good cow, which can be interpreted from the show-yard standpoint and easily understood. His produce were characterized by great bodies and plenty of style, and although faulty in their vessels, had good teats, and were of the type that would now be popular in an auction ring and be in demand with Canadian breeders who want cows that will fill the pail. No photograph of this bull exists; the only one that ever did exist was destroyed by fire. The merit of Cardigan is reflected in the enthusiasm with which men nearing the fourscore sound his praises. One hundred pounds was offered for him by Sir James Fergusson, Bart., who wanted to show him at the first Paris exhibition. The price was refused by his owner, Mr. Ivie Campbell, who was a horn sportsman and lover of high-class stock of every kind. Another bull of the same race was named Clarendon. He had the same breeder, owner and sire as Cardigan, and their dams were a pair of brindled cows. Clarendon's dam was the better cow of the two, and although Clarendon was not individually as good a bull as Cardigan, he is regarded with greater favor as a sire. His female progeny had the vessels and teats which were favored by "the fancy" at the time, and were show winners. A full sister of Clarendon, of the same color, was one of the greatest show cows of the breed. She had the vessel and teats of a right dairy cow, was of the same color as the rest of the progeny of Major, and her description shows that she was not one of the kind which brought the show Ayrshire into disfavor.

This scant survey of the Ayrshire leaders up to about the middle of the nineteenth century proves that whether improved or not, there is a great difference between the show animal of our time and the show animal of that day. The show bulls of to-day are not so masculine as those of half a century ago, but they had far more to do with developing the type of the breed than our present show animal. The modern show-yard Ayrshire, in fact, is very much a breed by itself, and exerts little influence on the purely dairy stock of the country. That points to a defect in our system of show-yard management, but it also suggests that for a time at least buyers in quest of commercial dairy cattle should not attach over-much importance to the show-yard type. These older bulls left their influence on the breed. They were in much request, and the type is still to be found in the great breeding districts by those who look for it. The breed has not been improved much in commercial qualifications if the show-yard is to be the only test, but if the experience of the great army of Scottish farmers who live by milk-selling and the manufacture of milk products is to be the test, then the Ayrshire of to-day is a worthy heir of the great animals which have been briefly described.

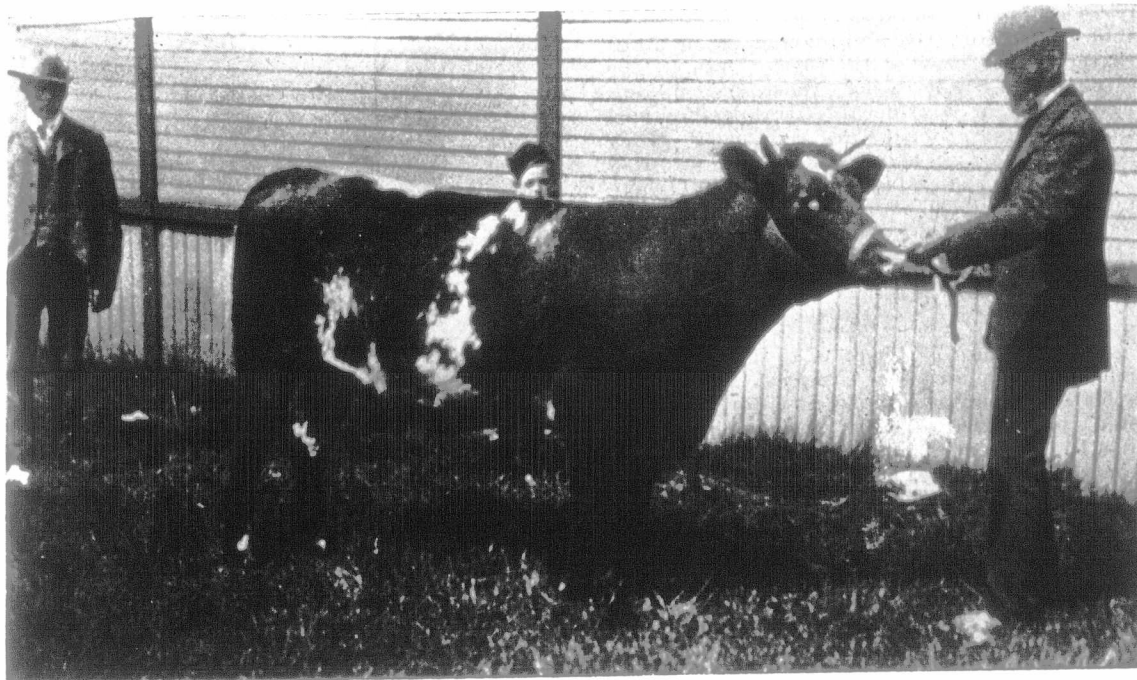
Sheep Breeding and Management.

A Nova Scotia subscriber asks for information on the breeding, feeding and winter management of sheep. To cover all this ground exhaustively would require a volume, but a few of the principal requirements may be briefly stated. If the intention is to start a pure-bred flock, we would advise the purchase of a few yearling or two-year-old ewes from a flock of known excellence, and a ram of the same breed, of strong character and constitution, with good bone and wool; mating these at the proper season to bring the lambs in the month required. If the intention is to handle grade sheep for the mutton and wool markets, start with a selection of thrifty young common or grade ewes, and mate them with a good strong pure-bred ram of the breed preferred, and continue to use a ram of the same breed, culling out each year the oldest and inferior ewes, and keeping the best of the ewe lambs to replenish the flock. But do not breed the ewe lambs the first year. They should not be bred till about 18 months old, and should produce their first lambs at about two years old, which gives them time to grow strong and lay the foundation of a good constitution. If it is desired to have early winter lambs to sell to the butcher at six to eight weeks old, the ewes will need to be in fresh, thriving condition in August or by the first of September, in order to bring them in season to breed in that month; and for this purpose nothing is better than a field of rape, which, if sown early in June, should be ready for feeding off by September 1st.

If early spring lambs are preferred, the ewes

sheep dips twice a year, viz., after shearing in spring, and again before going into winter quarters. For our own part, we would not think of commencing the winter with a flock of sheep without treating for ticks, whether any were visible or not. They are almost sure to develop before spring, and it is hardly practicable to safely treat a flock of ewes when forward with lamb. The expense will be repaid doubly or more by the healthy condition of the flock and the increased growth of wool. There is almost no risk in either dipping or pouring in the early winter, but we prefer pouring where the number is not great. Three men, or one man and two boys, can treat by pouring 60 to 75 sheep in a day. One man catches the sheep and turns it over, setting it upon its rump; he and his assistant open the wool at intervals of three or four inches, around the neck, belly, sides and thighs, while the third, from a coffee-pot, pours in the solution. The sheep is then let stand on its feet, the wool is parted the full length of the back and neck, and a good stream poured in, and the operation is completed. The solution should be kept warm, and frequently stirred, and the sheep kept from cold drafts till dry.

A sheep house need not be expensive. A plain, simple, wooden shed, without a loft, will answer the purpose, unless it is desired to store hay above for convenience in feeding. Where no loft is provided, the sheep house should join the barn or be close to it, so that fodder need not be carried far. The building should be on dry ground, with a slope away from it to carry off water. If such a site is not convenient, a little work with plow and scraper will put the ground in desirable shape. Provision should be made for a good-sized yard in connection, as sheep love the open air and a high and dry lair. The sheep house should face the south, should be enclosed on all



YEARLING SHORTHORN HEIFER, DIAMOND QUEEN.
PROPERTY OF JOHN MORGAN & SONS, KERRWOOD, ONT.

should be bred early in October, to bring the lambs along about the first of March, and as a rule breeders of pure-bred sheep prefer to have their lambs come in this month, finding that, generally speaking, the early lambs come strong, and if the ewes are well fed after lambing, the lambs go on well and are of good size in the coming fall to sell, the ram lambs for breeding purposes, and both ram and ewe lambs for show purposes if need be. With early lambs it is more expensive to winter the ewes, as they require a better class of feed in order to make milk for the lambs and keep up their own strength and condition, and to this end should have a moderate supply of roots for at least a month before lambing, and in addition, after lambing, a light feed of grain, preferably oats and bran, twice a day, together with a liberal supply of good hay—clover, of course, preferred, if it be available. The lambs when three weeks old should be provided with a low rack and trough in a separate enclosure, with a "creep" or opening through which they can go and the ewes cannot. There the little ones should have a regular supply of good-quality fodder and ground oats and bran, and sliced roots, in order to do their best and to relieve the drain on their dams. The ewe flock may be wintered most cheaply by having the lambs come along in April or May, as up to that time they may be carried through on pea straw and clover or other hay alone, though they will be better for a feed of roots every day, or, lacking these, a light feed of oats. Lambing at this season, they will require less care and labor than if the lambs come earlier.

An important matter to be attended to at the beginning of winter is to see that the flock is free from ticks or lice. The best flockmasters make it a rule to dip or pour with one of the standard

sides, and have wide double doors, which should be left open, as a rule, day and night, and closed only in stormy weather or at lambing time. If dogs are feared, better have high woven-wire fencing around the yards, a wise provision in any case. The ewes and the lambs coming a year old should be kept separate, and if ram lambs are wintered, they should, of course, be kept separate from the ewes and from the ewe lambs. The division for the ewe flock will require to be the largest, and it is well to have it large enough to admit of dividing it by means of movable hurdles at lambing time, in order that the ewes which have lambed may be kept separate from those which have not, and may be fed more liberally. Feed racks may divide the pens and the sheep feed from either side, but we prefer single stationary racks around sides of pen, with permanent troughs attached to catch leaves of hay, and in which to feed grain and roots. The lambs the first winter should have sliced roots and a light feed of grain daily. The ewes will scoop the roots if given to them whole, and will be better for the exercise. Water is not a necessity where free access to snow is given, but sheep will do better if water is regularly supplied. Salt should be constantly kept in a box in the pen, where the sheep may take it at their pleasure. A few light hurdles, 6 feet long by 2½ feet high, are very useful at lambing time for making temporary pens for confining for a few days ewes having weak or twin lambs, until they become acquainted. Docking and castration of lambs should be attended to when the lambs are two or three weeks old.

Robt. C. Brandon, Cannington, Ont.—"Your very practical paper now appears one of our necessities on the farm."

Sheep and Shepherds.

BY J. M'CAIG.

There are two principal causes or sets of circumstances that make differences in sheep. The first set of circumstances embrace conditions of soil, climate and elevation which, acting in combination, evolve and preserve classes of sheep differentiated from those of places with a different set of physical conditions. Great Britain has been peculiarly fruitful in the production of many differentiated and contrasted breeds. Classified on the basis of differences due to physical causes, British sheep are frequently designated as the plains, upland, and mountain breeds. This classification is almost equivalent to a classification on the basis of weight, for, generally speaking, there is a gradual decline in weight from the plains sheep that feeds on fat pastures to the mountain sheep that travels far over rough ground for a scanty bite. It is important to appreciate the differences that arise from physical circumstances. Heavy breeds of sheep are not naturally the best for a hilly, scant farm, and the man who introduces such a breed into such an environment will find his stock deteriorate. They will cease to be good types of the breed chosen.

The second set of circumstances operating to make differences in sheep are care and management. A wild animal carries a rather fixed and constant set of qualities and properties. It does not vary much from generation to generation, and having seen one specimen of a particular class of wild animal, you can readily recognize the species any time afterwards. If there are differences among the same species, these are due to physical causes alone. The task of transforming and improving a wild animal is slow and difficult at the beginning, but every change makes further change easier than the last one. The sheep is already a highly-improved animal. Compared with cattle, the only other meat animal of similar habits and physical organization, the elimination of offal has been greater in the case of the sheep than in the case of the cow. Sheep being, then, the embodiment and fruit of considerable art, their susceptibility and impressibility are very great. They have, so to speak, an acquired habit of easy change. This is a blessing to the skillful shepherd and a bane to the shiftless one. There will always be plenty of work and good pay for the former class of men in repairing the injuries and losses worked on our sheep stock by the latter class of shepherds.

To a great many men a sheep is but a sheep, and it is nothing more. There is little or no discrimination except in the broadest and most obvious features, such as those of color, size, and contrasted properties of fleece. But the differences due to differences in care and management are very striking even in the same breed. The matters that are under the control of the breeder are the choosing of sires, the culling and selection of ewes, and the character and quantity of both summer and winter feeding. It is by reason of the care in some cases and absence of care in others that we have such diversities in the character of the sheep flocks of the country. One man may be a first-class feeder, and know little about breeds. Such a shepherd will have a flock of strong sheep of mixed character and countenance: some of approximately correct long-wool type, Leicester or Cotswold, some bald and some with nice frontal lock. Others will be mixed Cotswold and Leicester, with something of Leicester face, but with a bunch of foretop added to it. Others will be mottled in countenance, the product of a South-down, Shrop, or Oxford ram on the long-wool ewes. And others, again, may show a couple of crosses of the dark-faces and be pretty nearly uniformly brown in face and be smaller and more densely coated than others of the flock.

Another shepherd may be strong on the breeding side and be a poor feeder (though this is not as common as being a good feeder and poor breeder). He may fancy the Cotswold, and have a well-fleeced lot of ewes of good blood and markings, but that are not kept up to the right weight. The wool parting on the back will be rather too evident by reason of the back not being covered with flesh. Want of generous feeding shows faster on the heavier breeds than it does on the middle-weight sheep. Many a man has become enamored of blood in both cattle and sheep, and has backed his faith by paying fancy prices for improved stock, but grows nothing but scrags and runts. It is always safer for a man to begin small and with stock of moderate cost, unless he excels in the matter of care and management. If a man has to learn both feeding and breeding at the same time, high-class stock is almost sure to deteriorate with him.

Besides the man who knows breeds, but not management, and the one who knows management and not breeds or breeding, there is a third class, who do not know either one or the other. This class of men is the class that hopes to get bread by some other way than the sweat of their brow, and who are looking to get something out of their sheep without putting anything in. Their sheep are usually a bunch of run-out, mixed grade long-wools, with long legs, light bodies, and

kempy, neglected coats. They are usually allowed to run on the road. The ram with them is oftener cross-bred than pure-bred, the lambs are neither docked nor castrated. How easy it is, after seeing sheep in all classes of environment and circumstances, such as the rape field, the ranges, the roadside, and the exhibitions, to exactly know the kind of man the shepherd is for care and management throughout the year. On the basis of a survey of a flock, shepherds might be divided into four classes:

1. The class that illustrate almost total neglect with respect to both breeding and feeding.
2. The kind that feed well, but have little knowledge of breeds, and so have not evolved an ideal or favorite sheep for themselves. Such men usually despise books and agricultural papers, and fail to recognize that facts are facts, whether they are recorded in books or gained from experience.
3. The kind that know something of breeds and breeding, and that talk a good deal, and leave the care of the flock to someone else. Professional shepherds are almost unknown in this country, apart from owners, and it very rarely happens that anyone can give the fullest satisfaction to the fastidious sheep-owner. The opportunities are larger for the workingman here, compared with what they are in the Old Land. On account of the larger available areas of free lands, it is easy for any man to become a proprietor on his own account.
4. The last class of shepherds is the lot who are at the top of their business in both breeding and feeding; who know their favorite breed in every detail, and who know other breeds pretty well besides, and recognize in them excellencies on a par with the excellencies in their own, but suited to different circumstances, uses and environment. They are always open for information from books, papers, their neighbors'

experience, and are, above all, awake to the excellencies, defects and peculiarities of their own breed and flock. It is to this last class that the higher task of selection and improvement of the general sheep stock of the country specially belongs. They are afraid to sell a bad sheep, and prize the patronage of old customers.

To which class do you belong?

The busiest season for the "Farmer's Advocate" staff is approaching, and you will confer a favor by prompt renewal.

A Good Udder.

It is generally conceded that the best type of udder met with among British breeds of cattle is that possessed by Ayrshire cows. Even the udder of the Ayrshire is not perfection, however, because too often it suffers from one of the worst shortcomings that a milch cow can possess, namely, small teats. The ideal udder is long, broad and deep; it is carried well up under the body, and its point of attachment with the quarters—or rather the space behind the quarters known as the escutcheon—is very high up. The ideal udder is rectangular in shape, and has a wide area of attachment to the body, so that under no circumstances, even when practically empty, does it dangle about between the legs, as is sometimes seen in the case of badly-formed udders. The size and position of the teats constitute one of the most important points in the formation of a good udder. These should be placed at almost equal distances apart, and they should be of good size. Very small teats, or teats so closely packed together that when the udder is fairly empty the points almost touch one another, are very objectionable, and should always be avoided.—(Exchange)

Shorthorns in the Model Dairy Test.

From the result of the very extensive test made in the Model Dairy at the Pan-American Exhibition, considerable satisfaction may be claimed for the breeders of Shorthorns, whose aim it is to produce that which is in so very great demand amongst those engaged in general farming and dairying—a cow that will produce stock of first-class quality for the export beef trade, and while in milk be very profitable as a dairy cow.

There is very great encouragement, also, to those dairy farmers who in increasing numbers are striving by the use of Shorthorn bulls from the best dairy strains available to retain the milking qualities of their herds while very largely increasing the value for beef of the stock they raise, the advisability of this course being more and more apparent as the already large demand for stockers of good class is increasing. It has been found that the increase in value of the young cattle sired by a Shorthorn bull, when sold, as in most cases they must be, on the dairy farm, because of lack of room on the farm, at about one year old, makes a handsome profit in addition to the milk products.

These farmers, then, have good reason to think they are on the right lines when they consider the showing the Shorthorn cows have made in the most extensive test made in America. Taking the showing of the Shorthorns, the only cows for which—in Canada—is made the claim of dual purpose, as compared with the average of the four dairy breeds we have largely in use in our country, we find the average per cow in the production of total solids, which we presume is most desirable in our great cheese industry, the



A GLIMPSE OF THE C. P. R. STOCK YARDS, WINNIPEG.

Shorthorns were only 57 cents less per head in total production for the whole period of six months, which if the gain in live weight, at three cents per pound, be added to each, then the Shorthorns lead with \$13.79 to their credit. If the cost of food be reckoned, the profit would be in favor of the other herds by 65 cents per cow for the same period.

If a difference of one half cent per pound for the increase in live weight be allowed the Shorthorn for superior quality of beef, which is reasonable, the result would again be in favor of the Shorthorns by 81 cents.

Without doubt, in America, for the production of butter-fat the dairy breeds have very large individual records, in excess of those made by the Shorthorns, yet it is with averages the farmer or dairyman has to deal, and it is encouraging that the Shorthorn has made so good a showing.

It was with difficulty cows in reasonable shape for going into a test could be picked up just at the last moment. But, to be sure, all the breeds would have this to contend with, less or more, and we will have to suppose each got a fair average.

Much more attention is each year being given to the development of dairy qualities in the Shorthorns in Canada, and we shall hope before long to see them in the place they have in the dairy shows in Great Britain—at the very top.

There is room enough for all breeds of value, and the farmer will change only when he sees more profit available, and the result of the Model Dairy test gives him a pointer.

The five Shorthorn cows were able to stand a good third, in competition with strictly dairy herds, for production of milk solids, and at the same time make a gain in weight of 802 pounds, showing they retain the beefing qualities while taking a good place at the pail.

Middlesex Co., Ont.

A. W. SMITH.

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Jerseys in the Pan-American Dairy Test.

In my opinion, the value of the test to the ordinary dairyman and farmer has been over-estimated, owing chiefly to the fact that no true test of a cow's capabilities can be made in a shorter term than one year.

The rule of 9c. a pound for total solids is not a just one, as the solids in milk containing 5 per cent. butter-fat are worth more than that in 3-per-cent. milk, thus discriminating against the richer milk.

This short-term test, however, has confirmed some well-known facts:

1. That there are two distinct classes of cows

**DAISY OF HIGHFIELD.**

Typical Leicester ewe. (See Gossip, page 800.)

BRED AND OWNED BY J. M. GARDHOUSE, HIGHFIELD, ONT.

—the beef producers and the butter producers—and you cannot profitably have the two qualities combined in the same animal.

2. There is a great difference in individual members of the same breed. Dairymen should keep an accurate account of the milk produced by each cow, making frequent Babcock tests.

Taking everything into consideration, Jersey breeders need not feel disappointed at the outcome of the test. The cows in the test are somewhat below the average, owing to the fact that wealthy Americans buy up all high-testing Canadian Jerseys as soon as they hear of them. I have orders now from several breeders on the other side for any large producers I can find. It was therefore a very difficult matter for Mr. Elderkin to secure high-class cows that came in just at the right time. They had no preparation whatever; two had been milking since March 1st, one of them being in calf when the test opened and another due to calve the second week of the test. This last-mentioned cow did not seriously get down to work until the last month. On the other hand, everything natural and artificial, even to the placing of the electric fan at a certain angle, combined to the best interests of the Guernseys.

The thanks of Canadian breeders are due Mr. Elderkin and his associates for their untiring efforts to further the best interest of our stock at the Pan-American. R. REID.
Waterloo Co., Ont.

Guernseys in the Model Dairy.

In comparing the results of the Model Dairy test, the Guernseys, no doubt, won laurels of no mean distinction, and that fact may give many the impression that Jerseys as dairy cattle are inferior. However, the question ought to be considered as to whether the two classes entered the test in the same condition.

Certainly the Guernseys deserve credit, and have richly repaid the efforts of their champions, who in the way of preparation "sowed seed in seed-time." Having been present at the Model Dairy barn the first day of the test, I was struck with the splendid appearance of the Guernseys, which looked as though months of careful work had been expended upon them. Three of their number freshened in April on the Pan-American grounds.

The Jersey breeders who exhibited had not the privilege of specially striving beforehand for honors in the test, as the matter of testing Jerseys was taken up and the cattle chosen but three weeks before the test opened. This, of course, gave them no preparation whatever, and their condition did not compare favorably with the Guernseys, as two of them had been milking since March 1st, one was in calf when the test opened, and another was due to calve the second week of the test.

The Guernseys were far superior to any in breed-type, and were models of dairy cows. The phenomenal work of that wonderful cow, Mary Marshall, easily won the day for her breed. But when one considers profit, there is a Jersey,

May Queen of Greenwood, which I think is worthy of special mention. This cow was served before she entered the test and is now nearly seven months in calf. She has a profit of \$47.46, and stands seventh in the list. The profit of the cow, Mary Marshall, is \$59.41, which gives her a margin of \$11.95 over May Queen of Greenwood. If one stops to consider the actual return of these two cows, he will be impressed with the meagerness of the margin to offset the value of the progeny.

I have no desire to have the inference drawn from the foregoing remarks that Guernsey cows have a low place in my estimation. On the contrary, I will say that although we have but eight Guernseys in milk, in our herd of 40 milking Jerseys or in our herd of 20 milking Ayrshires it would be difficult to pick eight better dairy cows. One of our Guernseys had only been home from quarantine three weeks when she gave 49 lbs. of milk per day, testing 4.7 per cent. butter-fat. J. B. KETCHEN, Supt.
Denton Park Farm.

Economic Records of Holstein-Friesian Cows.

FROM JULY 6 TO NOVEMBER 1, 1901.

This class of records are made in connection with official testing by experiment stations. Reports are made of four weeks' feeding, but to economize space we give only that of last week—the week of the official test. During this week the cow is fed not less than during the previous week, and for the last two days not less per day than during the earlier days of the week.

In the following list the kinds and total amounts of food and products are for seven consecutive days' work of a few of the highest producers of the different ages:

Topsy Barber 46955, age 3 years 7 months 8 days: Food consumed—114.25 lbs. grain mixture (3 parts gluten meal, 2 parts bran, 1 part cotton-seed meal) and 713 lbs. soilage. Products—Milk, 430 lbs., containing 16.858 lbs. fat.

Clothilde Lunde Artis 39867, age 6 years 2 months 5 days: Food consumed—40 lbs. soilage (oats and peas), 46 lbs. soilage (oats and clover), 43.82 lbs. bran, 43.82 lbs. pea meal, 11.97 lbs. oil meal, 40.32 lbs. oatmeal, and pasturage. Products—Milk, 474.3 lbs., containing 15.933 lbs. fat.

Lady Longfield 3rd 39945, age 6 years 1 month 24 days: Food consumed—186.9 lbs. ensilage, 391.3 lbs. soilage, 56 lbs. bran, 49 lbs. corn meal, 28 lbs. gluten meal, 10.5 lbs. oil meal, and 14 lbs. ground oats. Products—Milk, 487.4 lbs., containing 15.517 lbs. fat.

Netherland Hartog DeKol 50832, age 2 years 26 days: Food consumed—61.75 lbs. grain mixture (3 parts gluten meal, 2 parts bran, 1 part cotton-seed meal), 20 lbs. soilage, and pasturage. Products—Milk, 300.8 lbs., containing 12.702 lbs. fat.

May Welsrijp Hartog 51040, age 1 year 10 months 4 days: Food consumed—23.49 lbs. wheat bran, 35.25 lbs. gluten feed, 11.76 lbs. cotton-seed meal, 60 lbs. potatoes, and pasturage. Products—Milk, 307.4 lbs., containing 9.065 lbs. fat.

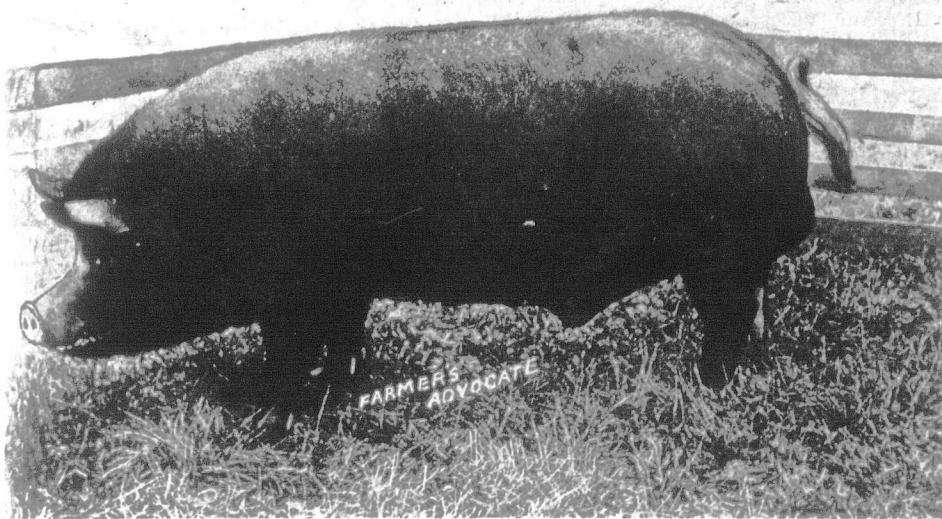
Maggie Beets Lady DeKol 52500, age 1 year 10 months 23 days: Food consumed—23.49 lbs. wheat bran, 35.25 lbs. gluten feed, 11.76 lbs. cotton-seed meal, 60 lbs. potatoes, and pasturage. Products—Milk, 278.3 lbs., containing 8.943 lbs. fat.

Suicide in Shorthorns.

Under the above appropriate caption, John Clay, Jr., of the live-stock commission firm of Clay, Robinson & Co., writes in the Live Stock Report:

"Within the last twelve months the directors of the Shorthorn Association passed a resolution to the effect that before it would record the pedigree of an imported Shorthorn, a fee of \$100 should be paid. This was done without the consent of the shareholders, and the great mass of breeders of this our premier race of cattle. If it came to a vote it is, of course, doubtful where we should land the question, but enough has transpired to demonstrate that the men of enterprise in the business are against the policy adopted by the Board.

"It is an attempt to shut out British cattle, to antagonize our English cousins, and to stop, as far as possible, the importation of fresh streams of blood which are so much wanted in our bovine world. As fancy runs, it is a blow at the Scottish Shorthorns, for it is from them that we draw at present. Great Britain is the mother-lode of the best bovine blood. It is the fountain-head of all that is good in this line. From this never-failing well of blood, rich in bone and beef, in mossy coats and hardy constitutions, our best breeders have drawn without stint. It has led to a grand era of reciprocity. The blood that the importing companies of early days brought to this country, intensified by the work of an Alexander, a Brown, a Cochrane—may I go further and include a Pickrell, and countless others—has flowed back through our pastures and cornfields to the hungry population of the Island Empire. England needed our beef and she gave us the material to make it, from a breeding point of view. What if the past generations had shut out the pure blood of Britain and we had been left to the tender mercies of the Texas steer? Further we go: What if the State of Texas put an embargo of \$100 on every bull that was imported into the State? What a hue and cry there would be; and yet these are parallel cases; only we could stand the latter better than the former, for in one case only a State would be affected, whereas under the extraordinary action of the Shorthorn Association the United States as a whole is made to suffer, or at least there is an attempt being made toward that end. Whether it will succeed or not remains to be seen. We do not think

**BARON DUKE 7779.**

Berkshire boar, winner of first prize as a yearling, and silver medal as best boar of the breed, any age, at Toronto Exhibition, 1901. (See Gossip, page 799.)

BRED AND EXHIBITED BY GEORGE GREEN, FAIRVIEW, ONT.

Hengerveld DeKol Maid 50827, age 2 years 1 month 17 days: Food consumed—3 lbs. grain mixture (3 parts gluten meal, 2 parts bran, 1 part cotton-seed meal), 24.5 lbs. grain mixture (56 parts corn meal, 62 parts oatmeal), and pasturage. Products—Milk, 287.9 lbs., containing 11.616 lbs. fat.

Paula Jewel 3rd 49162, age 2 years 8 months 5 days: Food consumed—321.5 lbs. soilage, 76.5 lbs. bran, 10.5 lbs. oil meal, and 4 lbs. ground oats. Products—Milk, 257.5 lbs., containing 10.535 lbs. fat.

it will. The best breeders will not stand it, and if the policy of the Board be persisted in, the Shorthorn Association, already a very unpopular institution, may be torn asunder. We have no desire to attack the directors individually, but as a Board they are narrow, and in this case their action is misguided.

"The American Shorthorn, after being buffeted about for nearly a quarter of a century on the ocean of uncertainty, was coming into port to a haven of rest. It had been through the storms of "pure Bates and no surrender"; of "red and

nothing but red," as preached and practiced in Kentucky; of the days of depression that lasted from 1886 to 1897; of the attacks made upon the supremacy of the breed by the Hereford and Aberdeen-Angus; and now when all these had been weathered, when the breeders had worked out their own salvation, mainly by the introduction of Cruickshank cattle, added to a steady effort by men of the Moberly type to improve our home productions, along come our Shorthorn savants, who are not big enough to keep an office in Chicago, the center of the world's cattle trade, but hide themselves in Springfield, Ill., and issue a dictum that unless the importer pays \$100 fine per animal he can get no certificate.

"The time has come to speak, and speak with no uncertain sound. Are we to close the avenues of improvement and trust to ourselves? If we could do so it would be all right, but experience teaches us that we must go to Great Britain for an infusion of fresh blood. The climatic conditions are against us. Our cattle decline in bone; they lose their mellow hides, and evidently the blood gets thinner. We miss the sappy animals of the English show-yards. Our best breeders are attracted to the Old Country. There they buy the best and gradually build up, directly and indirectly, our beef production. We do not look at this question in the mere light that a Flatt, a Clarke or a Miller is to be hampered in his enterprise, but we take the broad view that every man who is raising Shorthorn cattle, either as a breeder or feeder, is affected; we go further, and say that the consumer's interest is injured by such autocratic action as that of the Shorthorn Association."

If your renewal subscription to the "Farmer's Advocate"—the handsomest and most helpful paper published—has not been remitted, please do so at once.

Look Out for Influenza.

According to reports in the lay and professional press, the country to the south, especially the Eastern States, has suffered heavily from influenza. The fall months are dangerous times for horseflesh, as damp weather and raw, cold winds often are the prevailing conditions at that time. Colds and influenza are rarely dangerous if uncomplicated, especially if a system of careful nursing be carried out. The symptoms of the disease, often termed pink-eye, are partial or complete loss of appetite, fever, great nervous depression, partial loss of control of the limbs, constipation, slimy feces, discharges from eyes—the membranes of which are often highly colored (hence pink-eye), cough, sore throat, swelling of the limbs, sheath and along the belly, and sometimes a nasal discharge. Pregnant mares often abort. The disease takes from a week to ten days to run its course, and requires in the main, good nursing and a constant watch out for complications. Be careful to avoid drafts, but have the stables well ventilated and lighted. If attacked, at once lay off from work, and feed at the evening meal, or oftener if the bowels need it, hot mashes, in which may be placed half an ounce of nitrate or chlorate of potash and ginger. In case of signs of difficult breathing, blowing hard, etc., call your veterinarian without delay.

The Farmer's Pocketknife.

The suggestion has been frequently made that we should offer a superior pocketknife, suitable for farmers and farmers' boys, as a premium for obtaining new subscribers to the "Farmer's Advocate." Everybody on the farm wants a good strong knife every day of the week, but for a long time our difficulty has been to find just what suited us in size, quality and appearance, as well as the necessary strength. However, when in England during the past summer, the Manager of the "Farmer's Advocate" visited several of the leading cutlery manufacturers of Sheffield, and finally made an arrangement with Messrs. J. Beal & Sons to submit several samples, and out of these one was finally selected, an engraving of which (being an exact representation of the knife) appears on another page of this issue. A special order was given for their manufacture, and we are now in a position to offer the premium for which we look for sharp competition among our readers everywhere. The handle is beautifully made of the popular metal, nickel, highly polished and strongly riveted, and the blades are of the finest steel, every knife being fully warranted. A duplicate of this knife cannot be obtained in Canada or the U. S., and being nickel-plated, and the name "Farmer's Advocate" being stamped on the side of the handle, makes it conspicuous and easily identified. It is by all odds the handsomest and most valuable pocketknife ever offered in this way, and one may be secured by sending us the names of two new subscribers to the "Farmer's Advocate," accompanied by \$2. Send in the names and the cash at once, and the knife will be mailed you, securely boxed and postpaid.

FARM.

The Credit System.

There is something which keeps many farmers poor—something which is so strong a temptation that they have not the courage, or determination, to resist, but which keeps them year after year in trouble. I refer to the prevalent credit system. Business men often persuade the farmer to buy on time. He promises to pay in the fall. But, alas!

In the fall his spirits fall,
When the bills come flying home;
They at first were very small,
But how very large they've grown.
"Sure," he says, "there's some mistake—
(Then he reads the items o'er)—
Credit, it is all a fake:
I shall run in debt no more."

But good resolutions do not amount to much unless backed up by firmness and decision. The farmer says to his wife, "Well, Susan, I think I'll take a few loads of grain to town to raise money to pay those bills. Oats is low, but the bills must be paid." He starts for town in the morning with his grain. He has to sell cheap, for the market is glutted. He receives his money, and goes around to pay his bills. He calls on the dry-goods merchant first. The merchant is pleased to see him call to settle so promptly. The farmer pays him and gets a receipt. The merchant says: "Now, don't you want some goods to-day? Winter is coming, you know." "Well, sir," the farmer answers, to tell you the truth, I am short of money." "Never mind the money. Your credit is good. I'll give you until the fall—you'll have plenty of money then. Don't you want a nice warm overcoat, now?"

The farmer looks at his old overcoat and says,

who have shaken off this galling yoke by a mighty effort (and will not, under any circumstance, be tempted to put it on again), don't you feel a hundred times better? Don't you enjoy riding in your own carriage (even though it has no rubber tires) and wearing your own suit of clothes (although it may be homespun, instead of broadcloth)—I say your own, because it is paid for—don't you feel happy when you can proudly say, "I owe no man a dollar!" A farmer who can truthfully say this is on the road to fortune. This ruinous credit system should be abolished entirely.

Now, farmers, take a friend's advice: If you have been in the habit of running up bills, and paying them in the fall (keeping your heads under water, as it were, all the time), make a desperate effort this fall—pay up all your bills honestly, and take no more credit. Pay as you go. Debt is slavery! Set your children a good example, and in after years they will bless you for it. Keep clear of the three D's—Debt, Dishonor, and the Devil,—for they are all nearly related.

Pay as you go,
For don't you know,
That credit is the farmer's foe!

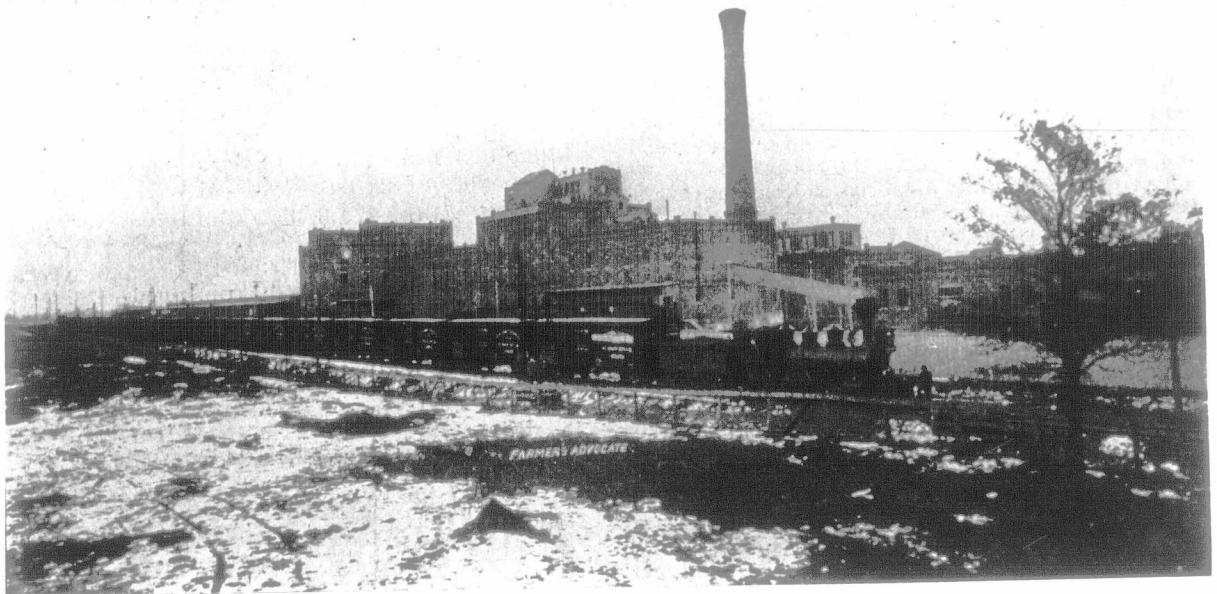
P. E. I.

A. R.

The Manufacture of Beet Sugar.

(Continued from page 740, Nov. 15th issue.)

Of late we have heard a good deal about beet-sugar factories, and the one thing more than any other which has struck the most of us has been the immense cost of the plant. From half a million to \$800,000 that it costs to build and equip a factory seems a vast sum to spend for the carrying out of a simple process. No one, however, who has seen one of these factories will wonder at their costliness. They are immense



BEET-SUGAR FACTORY, BAY CITY, MICHIGAN.

"Oh, I think this one will do me this winter all right." But after a little persuasion he tries on one of the overcoats. It fits him perfectly. He buys it. "Now," says the merchant, "don't you want a new dress for the wife?" "Oh, no, Susan didn't say a word about a new dress, and I know she hates running in debt. Perhaps she wouldn't be pleased if I bought her one." "Nonsense, man," says the merchant, "she certainly will not be pleased if you go home with a new overcoat for yourself and nothing for her. I never saw the woman yet who wasn't pleased when her husband brought her home a new dress. But buy her something good; women don't like cheap things. Here is a nice dark serge, only \$1.00 a yard."

"Well, cut off enough for a dress, and put in the fixings, too, all complete." "Now, is that all?" says the merchant. "Yes, that is all this time," positively the farmer says; but every time he or his wife comes to town a little more is added to the bill. It keeps growing, and when the fall comes a good deal of his crop has to be sold to pay it. Many of the things he buys could be done without very well, and would be if he was not tempted by this abominable credit system. In the fall he does it all over again, and never gets out of the mire of debt. He is continually kept poor, and unhappy. Credit is a temptation and a snare to those who lack firmness and decision.

It keeps people poor. Why?

In the first place, because one can buy much cheaper for cash. Secondly, because many buy things they do not really need, when they buy on credit. Thirdly, a conscientious man or woman cannot feel independent while in debt. Better, a thousand times better, to do without things until one has the money to pay for them than run in debt. Farmers, be candid, now. Those of you

structures of brick, with steel framework and cement floors, scarcely any wood being used in their construction. The costly vats and evaporating pans, diffusion cells, carriers, driers, etc., are all on a gigantic scale.

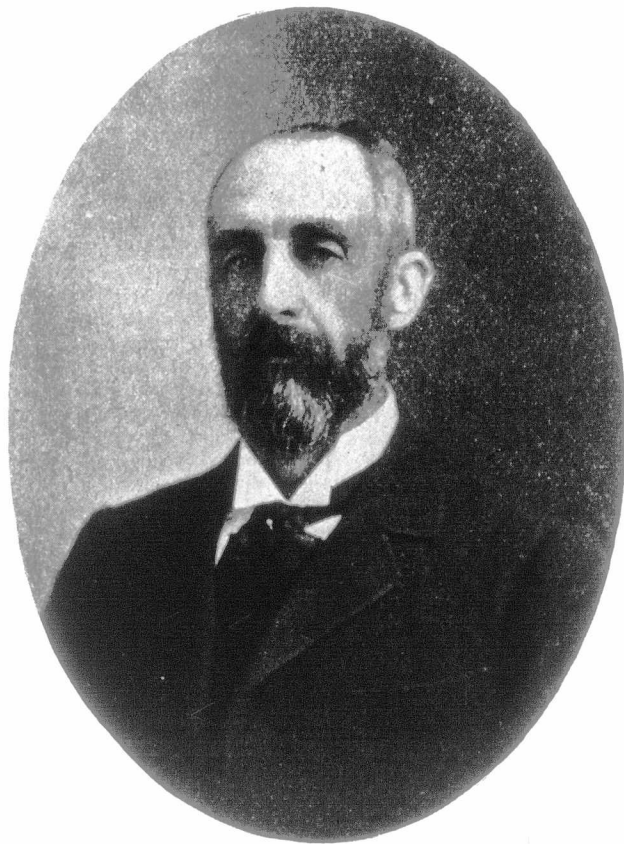
There are three main divisions in a sugar factory: the beet sheds, the factory proper, and the lime kiln. In some cases there is a fourth—a cooper shop, where the sugar barrels are made. Usually each of these divisions is in a separate building. A beet shed is a long, low building, with several driveways, on either side of which unloading can be done, besides one or two tracks for cars. When empty, 80 or more team-loads can be unloaded at once. Capacity, 10,000 tons and upwards. The beets are floated from the sheds to the factory by water running in narrow sluiceways. They are then washed in warm water by machinery, elevated to the top floor, automatically weighed and dumped into the shredder.

The shreds are about the size of a large straw. They are conveyed to the diffusion battery, a long row of steel cylinders, where 95 per cent. of the beet juice is washed out by the forcing of warm water through the shredded beets. The liquid is then mixed with lime, and carbonic acid gas passed through it. By this means the impurities present are rendered insoluble and are extracted by filtering. After being treated with sulphur fumes to further purify and bleach it, the liquid is boiled down. This is done in vacuum pans, the heat being applied by steam pipes passing through. Upon leaving the last vacuum pan, the mass, partially crystallized, is passed to the crystallizers, where the process is completed as far as possible. The sugar and molasses are separated in the centrifugals. These resemble immense cream separators, except that the walls of the bowl are of fine wire gauze hooped with perforated steel, through which the

molasses flies, leaving the sugar inside. The sugar is then dried and barreled. In 18 hours from the time the beets enter the factory the sugar drops.

The lime kiln needs no description. When asked why they did not buy lime already burned, the answer was that they not only wanted lime fresh, but it must be burned in a special way. At Bay City the limestone used is brought from a distance by train, as only limestone of a certain purity will answer.

A 1,000-ton beet-sugar factory requires each day over five million gallons of water, and in a season of 150 days, 22,000 tons of coal, 2,500



JOHN S. MILLER, MANITOU.

tons of coke, and 9,000 tons of limestone. The working season, called the campaign, begins about the middle of October, and except for two or three stops to clean up, or a break, continues night and day, Saturday and Sunday, for 100 to 150 days. The daily output is about 800 barrels of refined sugar. No other kind is sent out. In working over molasses, brown sugar results, which is again refined to the desired grade.

The waste products hitherto have been pulp and molasses. The pulp has been allowed to accumulate and rot; the molasses run into the river. This waste will not long continue, however. One factory-owner said that in a few years' time they expected to make enough out of their waste to run the factory. When asked why the farmers did not haul away the pulp for stock food, he said: "Because they're no good. That's why." A milkman near Bay City, who keeps 13 cows, uses it regularly. He gives to each cow about three bushels per day, and finds that it saves his hay, increases his milk yield, and has no bad results. The molasses, a certain remainder of which it has been found impossible to crystallize, is now being bought up by a firm which is building a large factory for the manufacture of alcohol from this by fermentation and distillation.

Four years ago the first beet-sugar factory in Michigan was built; now there are 13 in operation, four more contracted for, and several projected. The first factories had a capacity of 350 to 450 tons of beets per day, now there are none less than 600 and most of 800 tons capacity. There was considerable trouble and several months delay before the capital for the first factory—which was built in Bay City—was secured. Amounts of \$1,000 and even less were accepted. When the second factory—also in Bay City—was projected, capital \$500,000, a million dollars was offered in one evening.

There is no question of the popularity of the beet-sugar industry among the farmers and capitalists of Michigan. Whether it will meet with like favor in Ontario remains to be seen, and will be seen very soon. One important factor in the question is the price given for beets, which while present conditions continue must be lower here than in the States. Owing to tariff regulations, sugar is cheaper and coal dearer in this country. The Michigan farmer receives this season \$4.50 per ton for beets 12 per cent. standard. The price in Ontario in contracts already made is \$4.00. On the other hand, much more use would be made of the pulp here, and while our climatic conditions are similar to those of Michigan, the soil is, we believe, superior, and certainly as farmers our people are not willing to take a second place to anything on the continent.

Marvellous Yields on the Indian Head Experimental Farm.

With the unlimited possibilities of this great country, and the marvellous productiveness of the soil, it is little wonder that people grow enthusiastic. Is there another country under the sun where farming can be made as profitable with such a small investment of capital?

There is no exaggeration about the returns from our Experimental Farms. Every grain plot is measured and every bushel of grain weighed. The returns this year have been simply enormous, but can be thoroughly relied upon. Read them over carefully and then read them over again, commit them to memory, and then during the long winter evenings consider whether such yields are not possible on your farm.

These yields are not the result of chance nor luck, but a combination of thorough, skillful methods of cultivation and favorable weather. Superintendent McKay is to be congratulated upon the splendid results of his season's work.

WHEAT.

Uniform test-plots: 71 varieties; sown May 7th.

Highest yields.	Days to mature.	Yield per acre.
		Bush. Lbs.
1 Mason	104	67 44
2 Australian No. 13	109	66 40
3 Huron	108	66 40
4 Countess	103	65 20
5 Goose	114	63 40
6 Rideau	107	62 40

Red Fife, 34th on list; matured in 110 days; yield, 57 bush.
Lowest yield, Byron; matured in 103 days; yield, 43 bush. 40 lbs.

BARLEY (SIX-ROWED).

Thirty varieties; sown May 14th.

Highest yields.	Days to mature.	Yield per acre.
		Bush. Lbs.
1 Odessa	93	68 33
2 Mensury	92	67 4
3 Claude	89	66 12
4 Royal	90	63 16
5 Trooper	89	59 28
6 Petschora	88	59 8

Lowest yield, Excelsior; matured in 83 days; yield, 35 bush.

BARLEY (TWO-ROWED).

Twenty-two varieties; sown on May 14th.

Highest yields.	Days to mature.	Yield per acre.
		Bush. Lbs.
1 Standwell	101	67 44
2 Sidney	87	61 32
3 Bolton	92	59 28
4 Kirby	92	59 8
5 Leslie	88	58 36
6 Nepean	91	58 16

Lowest yield, Beaver; matured in 89 days; yield, 36 bush. 32 lbs.

OATS.

Sixty-three varieties; sown on May 9th.

Highest yields.	Days to mature.	Yield per acre.
		Bush. Lbs.
1 Abundance	101	147 2
2 Thousand Dollar	101	138 28
3 American Beauty	102	137 2
4 Improved American	101	135 30
5 Mennonite	102	134 4
6 Lincoln	99	130 20

Banner, 7th on list; yield, 129 bush. 14 lbs. per acre; days to mature, 104.
Lowest yield, Bonanza; days to mature, 95; yield, 72 bush. 32 lbs.

PEAS.

Fifty-seven varieties tested; sown May 15th.

Highest yields.	Days to mature.	Yield per acre.
		Bush. Lbs.
1 Oddfellow	113	66
2 Pride	115	60 20
3 German White	107	60
4 Paragon	118	59 40
5 Daniel O'Rourke	107	59
6 Gregory	113	58 40

Lowest yield, Grass pea; 36 bush. per acre.

FODDER CORN.

Thirty-four varieties tested; planted May 22nd; cut Sept. 2nd.

Highest yields.	Height in inches.	Yield per acre.
		Tons. Lbs.
1 Early Mastodon	138	26 1724
2 Pride of the North	101	26 800
3 Giant Prolific Ensilage	103	25 1480
4 Mammoth Cuban	117	24 388
5 Cloud's Early Yellow	107	24 388
6 Salzer's All Gold	127	24 180

Lowest yield, Salzer's Earliest Ripe; 12 tons 1,080 lbs.

MANGELS.

Twenty-five varieties tested; 1st seeding May 22nd; pulled Oct. 2nd.

Highest yields.	Yield per acre.
	Bush. Lbs.
1 Prize Mammoth Long Red	1023
2 Ward's Long Oval	979
3 Canadian Giant	965 48
4 Sutton's Prizewinner	920 8
5 Lion Yellow Intermediate	915 12
6 Half-long Sugar Rosy	913

Lowest yield in 1st seeding, Red-fleshed Tankard; 360 bush. 48 lbs.

TURNIPS.

Twenty-nine varieties tested; 1st seeding sown May 21st; pulled Oct. 11th.

Highest yields.	Yield per acre.
	Bush. Lbs.
1 Monarch	1368 24
2 Perfection Swede	1302 24
3 Webb's New Renown	1196 48
4 Selected Purple-top	1265
5 Sutton's Champion	1161 36
6 Shamrock Purple-top	1155

Lowest yield, New Arctic; 699 bush. 36 lbs.

CARROTS.

Twenty varieties tested; 1st seeding on May 21st; pulled May 29th.

Highest yields.	Yield per acre.
	Bush. Lbs.
1 Ontario Champion	429 48
2 New White Intermediate	426 48
3 Half-long White	422 24
4 Iverson's Champion	420 12
5 White Belgian	413 36
6 Half-long Chantenay	413 36

Lowest yield, Long Orange; 193 bush. 36 lbs.

SUGAR BEETS.

Seven varieties tested; 1st seeding sown May 22nd; pulled Oct. 2nd.

Highest yields.	Yield per acre.
	Bush. Lbs.
1 Royal Giant	994 24
2 Improved Imperial	924
3 Red-top Sugar	915 12
4 Danish Red-top Sugar	831 36
5 Danish Improved	629 24
6 Wanzleben	556 36
7 Vilmorin's Improved	543 24

POTATOES.

Eighty-nine varieties tested; planted May 20th; lifted Oct. 3rd.

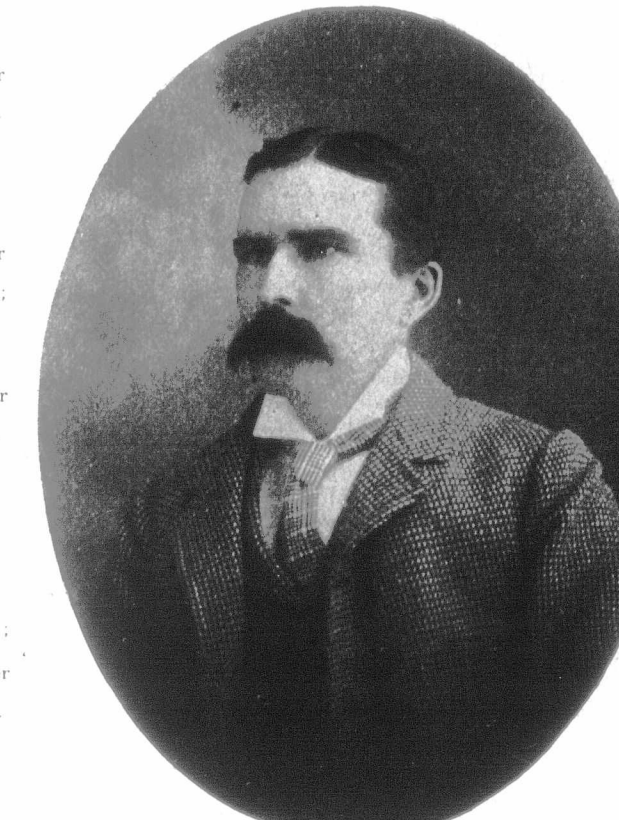
Highest yields.	Yield per acre.
	Bush. Lbs.
1 Carman No. 1	646 24
2 Green Mountain	635 44
3 Maggie Murphy	629 20
4 Carman No. 3	614 24
5 Rural Blush	604 20
6 General Gordon	591 20

Lowest yield, Early Puritan; 174 bush. 56 lbs.

Note.—The yields given above are of marketable potatoes.

Manitoba Agricultural College Commission.

The Manitoba Government has taken hold energetically of the problem of establishment of an agricultural college, and as a prudent preliminary step have appointed a commission to enquire into the whole subject, visit similar institutions and report to the Legislature at its next session. The members are Hon. Thos. Greenway, Crystal City; Mr. J. S. Miller, ex-M. P. P., Manitou, where he went from Napanee, Ont.; Harvie C. Simpson,



HARVIE C. SIMPSON, VIRDEN.

Virden, formerly of Carleton Place, Ont.; H. R. Irwin, Neepawa, a native of Cookstown, Ont., and Geo. H. Halse, Brandon, who was born in Toronto. Four of the commission are farmers, and Mr. Halse was a student at the Ontario Agricultural College before going to Manitoba.

With your renewal send one or two new subscribers to the "Farmer's Advocate," and earn a valuable premium.

DAIRY.

A New Zealand Dairy School.

We are in receipt of the first annual report issued by our old friend, Mr. J. A. Kinsella, now dairy commissioner of New Zealand. The report consists of some 60 pages, giving a very full review of the work of the Dairy Department in all its branches, contains some excellent illustrations and a number of plans of cheese and butter factories, suitable for various sites and conditions.

The total exports of butter and cheese from New Zealand for the year are given at over 14,600 tons, an increase over the previous year of 13 per cent. "Prices have been more than maintained," and the value of the exports amounted to \$5,195,000, an increase of over 15 per cent. The amount of personal work overtaken by the commissioner shows that he has done a deal of "hustling." Apart from the office work at headquarters, his work of organization, inspection, and general supervision of grading ports involved a large amount of travelling, "including six thousand miles of cycling."

Judging from the following extract from the report, much the same difficulties are experienced in New Zealand as in some other countries:

CARE AND AERATION OF MILK.

Perhaps one of the most serious dairying questions at the present time, and one to which the average factory manager is rapidly awakening, is that of better milk. When milk is filthy, impure, overripe, or gassy, no matter how it is manipulated, or how perfect and up-to-date the process of manufacture may be, it is difficult for the factory manager to make a choice article of butter or cheese.

In dealing with the causes of bad-flavored or defective milk, it may be premised that very rarely does the trouble arise from disease in the cows, and even when it does the factory manager is not, as a rule, in a position to assist remedially. Milk may be injured before being drawn from the cows, by allowing them to drink impure water, or have access to turnips, rape, onions, or any bad-flavored weeds. The main cause of the trouble, however, is dirt and uncleanness. In nearly all cases tainted milk supplied to dairy factories is infected during the milking process, or shortly afterwards. Dirty cows, dirty cow byres, dirty milkers, dirty pails, strainers and milk-cans all mean dirty milk. Where such a state of affairs exists there are generally to be found millions of bacteria, and with filth and bacteria combined we are certain to have undesirable flavors in the milk, both with butter- and cheese-making.

If we wish to insure pure-flavored milk, or what may be equally termed "clean" milk, it is essential that cleanliness be observed from beginning to end of the milking process. Every cow-byre should have a concrete or cement floor, and should be thoroughly cleaned after each milking. Plenty of light and good ventilation are also essential points. Liquid manure should not be allowed to collect in pools on defective floors, neither cobwebs or dust to collect on walls and ceilings. All byres should frequently receive a coating of lime-wash, which besides giving the place a brighter appearance also imparts a healthy odor for the cows, and prevents the growth of mould. The cows should be brushed, or at least all dried manure removed from the udder, and the udder and teats thoroughly cleansed with a damp cloth before milking begins. The milker himself should be clean. Unfortunately, with most milkers, the oldest and filthiest suit of clothing is used for milking. It is evident that if the clothing is dirty and full of dust, the hands dirty, and the fingers wetted by dipping into the pail, as is frequently the case, the milk is bound to be contaminated.

All milking-pails, utensils, etc., should be thoroughly rinsed with tepid water. Always use a brush for cleansing tinware; never use a cloth for washing or drying. After scrubbing, scald with boiling water and allow the utensils to drain. If possible, expose them to the sun, for it should be remembered that sunlight is a great destroyer of bacteria. A very serious and objectionable practice is carried out at a number of our cheese factories where the suppliers wash their cans at the factory. In many cases I found that cans were only whirled round a few times in a washing tank in tepid or practically cold water, and then steamed, thereby cooking the filth on the tin inside. This was the case more particularly where cone-necked cans were in use. In some instances a thick yellow coating, difficult to remove, was discovered formed on the inside seams of the necks of these cans. This slovenly method of can-washing is to my mind a grand medium for the growth of dangerous bacteria, and is sure to result in contamination and bad flavors both in butter and cheese.

Immediately the milk is drawn from the cows it should be removed to a suitable place, at a reasonable distance from the byre, and the milk

carefully strained and aerated. Aerators and strainers should be kept scrupulously clean. If strainers are not perfectly clean, and well sterilized or scalded, they very often act as a source of infection instead of purifying the milk. Aeration is a grand means of ridding the milk of bad odors, provided the operation takes place in a pure atmosphere. If, however, the aeration is performed in an impure atmosphere the milk is sure to become contaminated, and more harm than good results. It is customary in many places to aerate within a few yards of the filthy cow-byres, where strong odors are absorbed by the milk during the process. This practice is undoubtedly a source of great and frequent trouble with the milk of many suppliers.

If a suitable place for aerating cannot be found at least 50 yards from the cow byre, I should recommend removing the milk immediately from the byre, and placing it in cold water where the temperature could be lowered to 50 degrees or 55 degrees. Cooling is much preferable to aerating when the latter is carried out in an impure atmosphere. When milk is drawn from the cow it is at a favorable temperature for the growth and multiplication of bacteria, hence the importance of having it chilled down to a temperature at which such growth is materially checked. Some species of bacteria or bad-flavor-producing germs do not multiply at temperatures below 50 degrees or 55 degrees, while other harmful ones only grow slowly.

It is usually necessary to hold milk for some time before it is sent to the factory, and here again we very often find trouble. The cans should not be left near the cow byre, manure heap, or any bad-smelling substance. It should also be realized that milk will readily absorb the



HON. THOMAS GREENWAY, CRYSTAL CITY.

flavor of onions and other strong-smelling vegetables. As mentioned above, the cans should, if at all possible, be placed in a tank of cold water, or in a running stream.

In the course of my work of inspection during the past year, I regret to say that I found many whey and skim-milk tanks in a very filthy condition. Such dirty tanks are, I consider, responsible for a great deal of the tainted milk delivered to factories. Sour whey or skim milk is often carted back in the suppliers' cans, and allowed to remain in them to roast all day in the sun.

This issue of the "Farmer's Advocate" is a fair sample of the rich stores in reserve for subscribers. We will appreciate your renewal.

Essentials to Success in Buttermaking.

One of the great secrets to success in securing the best buttermaking results where the old-fashioned shallow-pan system of setting the milk is followed is that the milk should be set for creaming as soon after being drawn from the cows as possible. As is well known, cream rises most rapidly in a falling temperature, and experiments show that milk which is allowed to become cool before being set never yields so large a percentage of cream as that set directly after being drawn from the cow. The best quality of butter is always obtainable from the cream which first rises, as such cream consists of the larger butter-fat globules contained in the milk, and the larger the fat globules the better the quality of the butter.

The Ripening of Cream on the Farm.

There is more butter spoiled on the farm by having the cream improperly ripened than from any other cause, as the flavor of the butter is made before the cream goes into the churn. Cleanliness, of course, is also of great importance. As a rule, the farmers' wives keep their milk and cream clean enough; but that is not the only item of importance. The ripening of the cream is of equal if not of greater importance than the eternal vigilance that is needed to keep perfectly clean all vessels that come in contact with the product.

Some may think that I lay too much stress on this subject of ripening; but I do not think so, from what I have seen of the quality of butter made by housewives that are clean and careful to see that foreign substances or dirt does not get in. And then, not knowing anything about the varieties of bacteria their cream contains, they proceed, innocently enough, to help the bad ones on with their work of multiplying by making the conditions favorable for their growth. This is done by placing the cream crock or pail in a warm place, usually beside the kitchen stove, and keeping it there from the first or second skimming to the last, to let it sour or ferment enough, as I heard one woman say.

As a rule, there is nothing so very offensive about the butter made by these good women, while it is fresh; but it distinctly lacks that fine, delicate flavor that can so easily be obtained by using a good lactic-acid starter or culture. Any cream that has not been pasteurized contains both good and bad bacteria. These left to themselves will do the work for which they are adapted. The good ones, or lactic-acid bacteria, will do their work of souring or ripening the cream; but during this process the bad ones have not by any means been idle, and the result is a bad-flavored butter.

On the farm, of course, we cannot readily obtain a culture that is just right in all respects; but with a little care and good judgment we can easily secure one that answers the purpose very well. Some people make a practice of using buttermilk to ripen their cream, but I find that the flavor is not as good as it is when I use thickened skim milk which has a good clean acid flavor. It is worse than useless to use a culture that has not a good flavor, so be very careful what you put in your cream. Twenty-four hours before churning, I skim about one inch from the top of my culture (as that portion is very likely to contain undesirable germ life), and then break the remainder up as fine as possible before adding it to the cream, so that it will mix more readily.

Now, how much culture shall we use? This largely depends on our circumstances. I use about one pint of culture to a quantity of cream that produces from seven to eight pounds of butter, and raise the cream to 65 or 70 degrees by placing the can in a pan of hot water, stirring it constantly until the desired temperature is reached. If you wish to ripen your cream in less time, use more culture and raise your cream 5 or 10 degrees higher. On the other hand, if you wish to take more than twenty-four hours in which to ripen it, use less culture, and keep it at a lower temperature. By evening the cream should be slightly thickened, I then give it a thorough stirring, and place it where the temperature will fall to 50 degrees Fahr. or lower, to check the formation of more acid, as too much acid is injurious to the flavor of the butter.

In the morning your cream will have a thick, smooth, glossy appearance, and a pleasant acid taste. When you have cream in this condition, it is a very good plan to add a pint or two to the cream you are gathering for the next churning; keep it cool until you have sufficient gathered, and the day before you churn, warm and treat as described above. This method can be practiced from one churning to another very satisfactorily as long as the flavor keeps right; but if it shows any signs of going wrong, make a fresh start with a skim-milk culture.

By the way, how many readers of the "Farmer's Advocate" agree with the methods of handling butter described by "Farmer's Wife," in an article on "Home Buttermaking," in August 15th issue? I have watched these columns for some time, hoping to see some comment on the article referred to; but as none has appeared, I would like the privilege to make a few remarks.

What surprises me most of all is the many operations "Farmer's Wife" puts her butter through to remove the buttermilk. Now, if her butter is in the granular form, as it should be, when she puts the salty water on, gives the churn a few turns and draws the water off, repeating this operation until the water comes off clear, the buttermilk must be removed. But she goes on describing her method of dressing the buttermilk out; after this is completed, she proceeds to wash it. There are three things I would like to know:

First—Where does the buttermilk come from that she dresses out?

Second—If she dresses it out, what does she wash it for afterwards?

Third—How does she keep the butter from becoming greasy, when she puts it through all of those operations?

DAIRY MAID.

Superintendent Clemons on the Model Dairy Test.

I may say that, in my opinion, there are two lessons forcibly impressed on the student of the "Model Dairy" figures, viz.: That butter can be produced at a good profit under adverse circumstances when good judgment is used; and "that individual excellence counts for more than breed in cheap production."

I wish it to be remembered from the first, that the Guernseys were, I believe, fitted for eighteen months for this test, while the Canadian herds were selected the last three weeks, before the test commenced, which was a serious disadvantage to them. Taking the Canadian herds individually,



HARRY IRWIN, NEEPAWA.

the Jerseys were handicapped at starting, in that Rexina of Maple Grove did not calve until May 7th, losing a week's production, while her feed was charged against her for this period.

Primrose Park's Prude, the best cow in the herd, was very erratic at first, fed quite poorly, and seemed to be homesick. I think she had been used to a deal of "fussing and petting" when a family cow. The Ayrshires were a very even and typical herd, the best in the barn in this respect.

Kirsty Wallace of Auchenbrain seemed, in the first part of the test, to be lacking in vigor, due, I think, to excessive forcing.

The Shorthorns were a fairly good lot. Miss Molly, the best one of the herd, was very thin in flesh, and lost considerably in production on that account.

The French-Canadians, who were a surprise party, suffered somewhat from the presence of the miniature cow, La Bouchette, who, though due to calve about Dec. 15th, yet did very well.

Meg, of the Holstein herd, lost through sickness early in the test, and never regained this loss. Inka Mercedes De Kol, who was not four years old till July 26th, 1901, had her third calf in March, and just finished an official test of 14,06965 lbs. of butter-fat in a week, which was certainly a great strain on a cow before entering a food test. Prof. Robertson picked her as the best cow in the herd.

Hulda Wayne was only four years old on Aug. 20th, 1901; was shipped to the Pan the day after she calved, and yet stood second in the herd, and thirteenth in the grand total. I think this stamps her as a rare good three-year-old. Beauty of Norval, the best one of the herd, was like "Primrose," very erratic at the beginning, refusing to eat ensilage at all. Yet she proved her worth by standing second in total production, and her staying qualities by leading the barn the last month of the test.

The Holsteins and Jerseys were showing the best staying qualities, and had the test been for nine months, would have overhauled the Guernseys.

The Holsteins and Ayrshires plainly demonstrated their superiority for cheesemaking and for the milkman, and had skim milk been taken into consideration in connection with the production of butter, as it certainly should, they would prove themselves equally as serviceable as the Channel Islanders in the production of butter.

I have compiled a table showing the value of the four leading dairy breeds in the production of butter, taking the profit on butter-fat produced, and profit on skim milk at 15c. and 20c. per hundred. It certainly is worth 15c. and

many claim the latter figure is more nearly correct. I allow the manure and buttermilk for the labor. In compiling these tables I considered the Holstein and Ayrshire milk as showing 18 per cent. cream, and the Guernsey and Jersey as showing 22 per cent., which I think a fair average. I took the profit on fat, as this credits the cow with all she produces, leaving no losses to imperfect churning, accidents, etc. The churning at the dairy was largely experimental, sometimes almost farcical. It was shown that the cream from different breeds required very different treatment in order to thoroughly separate the butter.

The tables, taking skim milk into consideration, are as follows:

Guernseys—	21,159.32 lbs. skim milk, at 15c. = \$ 31 73, at 20c. = \$ 42 31	
Profit on butter-fat.....	230 10	230 10
Total	\$261 83	\$272 41
Jerseys—	21,049.93 lbs. skim milk, at 15c. = \$ 31 57, at 20c. = \$ 42 09	
Profit on butter-fat.....	225 44	225 44
Total	\$257 01	\$267 53
Ayrshires—	27,056.88 lbs. skim milk, at 15c. = \$ 40 58, at 20c. = \$ 54 11	
Profit on butter-fat.....	217 68	217 68
Total	\$258 26	\$271 79
Holsteins—	32,193.03 lbs. skim milk, at 15c. = \$ 48 28, at 20c. = \$ 64 38	
Profit on butter-fat.....	210 56	210 56
Total	\$258 84	\$274 94

Brant Co., Ont. G. W. CLEMONS.

October Butter and Cheese Scores at Pan-American.

We give herewith the scores made by the Canadian exhibits of butter and cheese in the October competition at the Pan-American Exposition at Buffalo:

(Canada Creamery Butter.)		Score.
Name of Exhibitor.	Sound.....	95
J. McQuaker, Owen Sound.....		97.50
S. R. Brill, Teeswater.....		97.25
W. H. Stewart, Frontier.....		97
J. Ireland & Son, Beechville.....		96.75
J. Ireland & Son, Beechville.....		95.25
J. Ireland & Son, Beechville.....		95.75
A. G. Calder, Dunkeld.....		95.75
W. H. Brubacher, Ferguson.....		96.75
A. Wenger, Ayton.....		95
A. Wenger, Ayton.....		95.75
E. E. Lister, Chatham.....		94.25
E. E. Lister, Chatham.....		94
Dolly Bennett, Russellton.....		93.75
Dolly Bennett, Russellton.....		96.75
W. H. Stewart, Frontier.....		95.75
(Canada Export Cheese.)		Score.
J. T. Morrison, Woodstock.....		98.25
Cornell Bros., Thamesford.....		97
Alex. McKay, Brookdale.....		98.25
S. R. Bayne, Warsaw.....		96.75
J. S. Isard, Paisley.....		95.50
Henry Minor, Canboro.....		95.25
McCluse Clum Co., Maynooth.....		98
Robert Cuddie, Woodstock.....		94.75
D. Sinclair, Arthur.....		97
R. R. Cranston, Lawrence.....		98
J. S. Isard, Wilisroft.....		97.50
Thos. F. Boyes, Lambeth.....		97.50
Andrew Clancy, Rockwood.....		98
S. P. Brown, Birnam.....		95.50
O. J. B. Yearsley, Little Britain.....		97.25
Hugh E. Wilson, Keyser.....		98.75
Hugh E. Wilson, Keyser.....		95.75
John E. Stanton, Cotswold.....		97.50
D. A. Demsey, Stratford.....		97.50
J. S. Johnson, Baum.....		96
W. T. Hollis, Hay Bay.....		96.25
Kennedy, Wolland.....		94.25
Benson Avery, Summerstown.....		98
Benson Avery, Summerstown.....		96.50
J. W. Clarridge, Glen Huron.....		97
J. W. Clarridge, Glen Huron.....		98
Jos. S. Ragsdale, Huntley.....		98
G. V. DeLong, Little Current.....		96.25
Robt. Groat, Georgetown.....		97
Alex. McGregor, Russell.....		98.50
F. E. Cline, Lakesfield.....		98.25
F. E. Cline, Lakesfield.....		97.75
J. E. Fester, Port Maitland.....		96.50
A. G. Darrock, Fordwich.....		97
E. M. Johnston, Innerkip.....		97
William Grar, S. Cayuga.....		94.25
C. A. Publow, Perth.....		97.75
Geo. Travis, Tilsonburg.....		98
John Connelly, Malcolm.....		98
Robert Johnston, Bright.....		98
Owen Griddle, Courtland.....		97
Frank Travis, Courtland.....		95.75
W. J. Douglas, Port Stewart.....		98
H. J. Scott, Culloden.....		95.50
J. H. Williams, Lyons.....		96.25
Robert Smith, Moncton.....		97.50
William Waddell, Kerwood.....		96.50
Mary Morrison, Newry.....		98.25
Geo. Cleall, Selby.....		95.50
E. G. Marshall, Guysboro.....		97.75
W. Afflick, Clayton.....		98.75
John Echlin, Carlton.....		98.50
Geo. E. Goodhand, Milverton.....		96.50
Geo. E. Goodhand, Milverton.....		94.25
M. Morristown, Harriston.....		97.25
M. Morristown, Harriston.....		95.50
Edward Bryce, Perth.....		98.75
T. B. Seltou, Laurel.....		98
D. M. Wilson, Rock Springs.....		97
L. H. Schneider, Moncton.....		97.50
C. McDonald, Lakefield.....		94
Jos. Burgess, Hazelbrook.....		96.75
B. Jenkins, Mt. Albion.....		96.50
John Smith, Pownall.....		95.25
Chas. Myers, Lakefield.....		97.50
P. E. Young, Watford.....		97.50
Connolly Bros., Thamesford.....		98.25
Connolly Bros., Thamesford.....		97.75
Connolly Bros., Thamesford.....		96.25
S. P. Brown, Birnam.....		98.50
O. J. B. Yearsley, Little Britain.....		97.50
H. H. Curtis, Hawkesbury.....		98.25
J. G. Corless, Burgessville.....		98
J. H. Williams, Lyons.....		98.50
Geo. Cleall, Selby.....		98.50
Connolly Bros., Thamesford.....		96.75
J. G. Corless, Burgessville.....		97.75

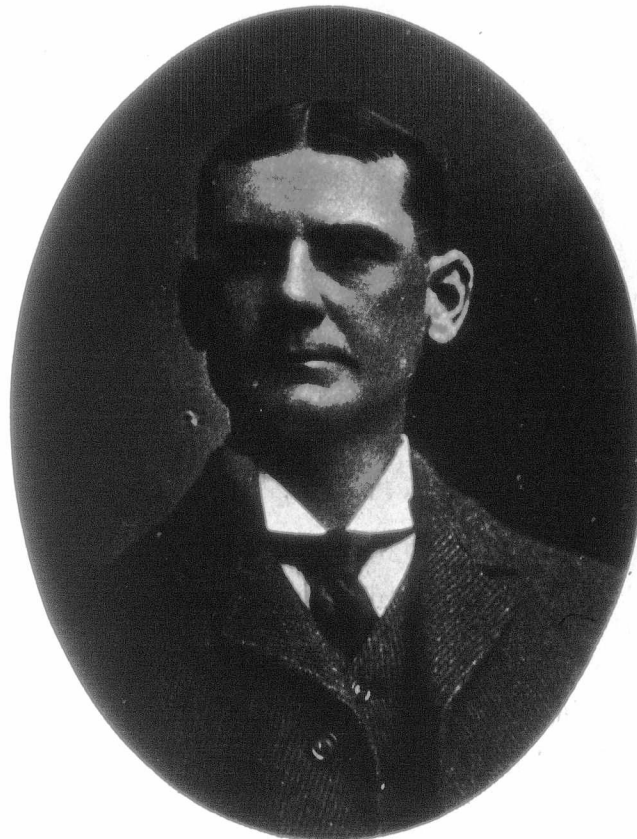
A Notable Milking Record.

There are few finer herds of dairy cattle in England than that kept at Tring Park, where a specialty is made of developing the milking properties of the stock and where careful records are kept from day to day of the performances of the animals comprised in the herd. The breeds kept comprise Red Polls, Jerseys, and Shorthorns, and during the year ending with the closing week in September the herd contained 43 Red Polls, 36 Shorthorns, and 31 Jerseys, all of which had been in the herd for the whole year. In addition to these, a number of cows and heifers were also purchased during the season; for the latter separate returns had been kept. The milk record of the herd for the past year has just been issued, and it shows that the 43 Red Polls kept produced an average of 680 gallons of milk, the 36 Shorthorns an average of 650 gallons, and the 31 Jerseys an average of 630 gallons during the twelve months.

The best average yield in the case of the Red Polls stood to the credit of an eleven-year-old cow which was on her eighth calf and which, during the 306 days over which her period of lactation extended, produced 1,080 gallons of milk, or an average of over 3½ gallons per day. Another, an eight-year-old cow, which had been in milk for 201 days, produced 699 gallons of milk, or an average of about 3½ gallons per day; while a third which had been in milk all through the year produced 1,180 gallons, or a daily average of about 3¼ gallons.

The best of the Shorthorns had to her credit the very fine yield of 1,160 gallons of milk in 320 days, or an average of over 3½ (32.26) gallons of milk per day. Several of the other cows of this breed produced on an average over three gallons of milk per day, but their net average fell slightly short of the fine performance of the Red Polls.

Quite a feature of this milking record is the good show made by the Jerseys. As a breed, Jerseys are noted more for the quality than for the quantity of the milk produced by them. An average yield of 630 gallons per year over a whole herd of 31 must, therefore, be considered very remarkable. One of the Jerseys in this herd gave the great yield of 1,050 gallons of milk in 324 days, or an average of about 3¼ gallons per day for a whole season.



GEORGE H. HALSE, BRANDON.

This is by far the best performance for a cow of this breed that we have come across for some time. The cow which gave this fine yield was calved in 1888 and has produced no fewer than 12 calves, so that she affords an admirable exemplification of the force of the old saying that the good breeder is usually a good milker.—Farmer's Gazette.

"I consider the 'Farmer's Advocate,' of London, the best farmers' paper printed in Canada, and would recommend it to everyone who wants a thoroughly up-to-date farmers' and stockmen's journal."—J. Henry Golden, Golden Grove Dairy Farm, Malden.

Advantages of Cream Separators.

A number of letters having been received at this office desiring information regarding the advantages to be derived from the use of the cream separator over the older-fashioned methods of creaming milk, we publish herewith the statements of a number of farmers and farmers' wives who have had experience with the separator, giving their opinion, and their reasons for the same.

FIVE YEARS' EXPERIENCE WITH SEPARATOR.

I have used a separator for over five years, and I would not part with it if I could not get another.

I think a farmer would be safe in getting a separator if he had from 7 to 10 cows, for which a hand separator would be sufficient with a capacity of 25 gallons per hour.

I consider the power separators the better. As for myself, I have been using the horse tread-power, which is a three-horse power. I only use one horse for running the milk, and the power can be used for cutting feed or grinding grain. I think if I were getting again, I would get a gasoline engine, which would run it steadier.

I consider that with the separator I get more of the cream off the milk, sweeter butter and

will be fully justified in investing in a separator. I have used a National hand separator for the 9 cows I milked this year with entire satisfaction and would not think of going back to the old system of creaming by gravitation. I have milked the 9 cows and separated the milk myself all within 2 hours. A hand separator is sufficient for handling the milk of 15 cows, and perhaps more. I have had no experience with power separators. Among the advantages of the separator over other methods of creaming milk are that it is cleaner and quicker, and that more cream can be gotten from the milk, as (especially in warm weather) it is hardly possible to get all the cream by setting it either in deep cans or shallow pans. Another advantage is that you have the milk sweet and warm for feeding to the calves, without the labor of carrying it to the house, heating it, and carrying it back again to the barn.

For best results I find that the separator should be run a little faster than the agents state is necessary. I use separator oil, adding a little coal oil if it gets thick or does not run freely. For cleaning, I take out the inside of bowl and clean thoroughly immediately after using each time, first washing with warm water, using a brush, and then scalding it with hot water and drying it. I have had no thick cream

heating, etc. Always run separator at as high speed as the printed instructions allow, being sure to have the milk at about the same temperature as it came from the cows, even if it be necessary to add a little hot water in very cold weather. It is a good plan to warm the bowl before starting with a little warm water. I have always used a rather light oil, applying just a little each time before using.

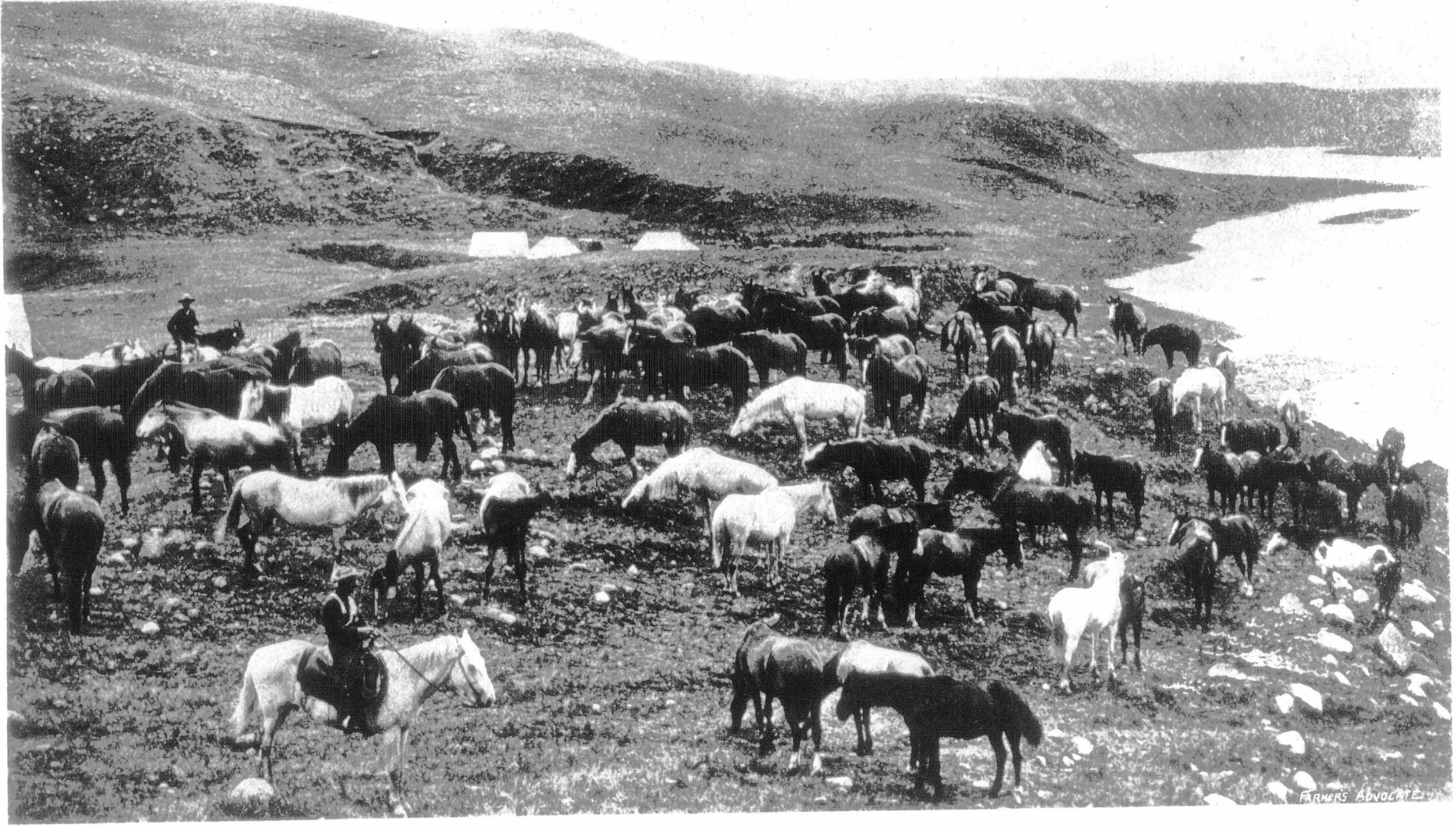
We have never had the skim milk tested for butter-fat, except to set it in creamers and put it in cold water, to find out if we were losing any quantity of cream. Sometimes there would not be any sign of cream; other times there would be. I suppose this could only be accounted for by the milk being run through at too cold a temperature or at too slow a speed, or perhaps both.

My practice of regulating the thickness of the cream has been to increase the inflow of milk for thin cream or decrease the inflow for thick cream.

I would like to say further, while I have never regretted getting a separator, yet there is work in connection with it that needs to be attended to regularly, and that by the male portion of the household. Persons who can wholesale their milk or send it to a good cheese and butter factory 9 or 10 months in each year, can perhaps make nearly as much money, considering their outlay and labor, as if they had a separator.

Middlesex Co., Ont.

R. H. Harding.



EXPANSE COULEE, BELLY RIVER, S. ALBERTA. HORSES OF LANE'S ROUND-UP CAMP, JUNE, 1901.

more of it, and it commands a better price in the market.

Unless it is run perfectly smoothly it will not do its work properly. We have never used any but the regular separator oil, and we have never had any trouble. I have put some on, more or less as needed, every time it is run. For cleaning the bowl, after the new milk, we run through about 1 quart of skim milk, then (in the winter time) about 2 quarts of boiling water, which is put in after the power is stopped and while it is vibrating. In the summer time we use cold water. Then, we have a regular brush for cleaning it with. For the tinware, they are first washed with cold water, then scalded.

We never had any testing done, but there is no cream rises on the skim milk when it is left standing.

We merely turn a screw in the bowl of the separator one way to thicken, the other way to thin it.

We have an Alexandra separator, number 7 $\frac{1}{2}$, which, I think, is the most durable, easiest handled and easiest cleaned of any which I have seen. Any boy is able to handle it.

Middlesex Co., Ont.

Robert H. Judd.

CLEANER AND QUICKER CREAMING.

I consider that any one having 8 to 10 cows

when cows are in flush of milk, I turn the screw down one turn, and I find that the butter comes quicker when the cream is thick. For thinner cream, when cows have been longer in lactation and giving less milk, open the bowl a little by turning the screw back. I think it is important that the cream gathered for a churning should be well mixed and then allowed to stand at least 5 or 6 hours before churning.

Middlesex Co., Ont., Mrs. Joseph Robson.

HAND SEPARATOR SUFFICIENT FOR 15 TO 20 COWS.

In my opinion, any farmer keeping five good cows and manufacturing their milk into butter the year 'round, cannot afford to be without a separator. A hand separator is sufficient for 15 to 20 cows if its capacity is 25 to 30 gallons per hour.

I have had no experience with power separators, but I always have considered that tread power would be much harder on a separator than hand power.

The principal advantage of a separator is skimming more cream out of the milk than by ordinary practice, but it is also a great advantage to be able to feed the milk to calves, etc., without any further trouble—carrying, skimming,

EXPERIENCE WITH TREAD-POWER SEPARATOR.

I consider that ten cows will warrant any farmer in using a separator. I think a hand separator may be used satisfactorily with 25 cows. A No. 2 Alpha will skim from 350 to 400 lbs. per hour.

For more than 35 cows I prefer a power separator. I have a tread power which has given good satisfaction. I run belt to a shaft and then to the separator to stop any jar that may be caused by the running of tread power.

One great benefit or advantage of the separator over other ways of skimming milk is that it takes far less time to take care of the cream than it does of the milk, and the skim milk is always sweet and warm for the calves, and 20 per cent. more butter will be made with a separator than without it, and the cream has a far better flavor. Care should be taken to not start the separator too quickly, to always allow it to stop of its own accord, and to maintain a regular speed during operation. I use separator oil with good satisfaction, oil always before starting and while running if necessary.

I run a little hot water through when I am finishing up, and find it removes the milk and cream and makes it much easier to clean. I wash the separator immediately after using and dry

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Middlesex

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every part thoroughly, and find no trouble, in keeping it clean. A little sal soda in the water helps to make it easier to wash.

The skim milk tests about one-twentieth of one per cent.

For skimming cream from 35 to 40 per cent., I set the screw one turn in past the flush of the bowl, and for cream 22 to 26 per cent., turn it one turn out of the bowl.

I have always used the Alpha separator and it has given me entire satisfaction. I use a No. 3 Alpha with a tread power for from 50 to 60 cows.

P. H. Lawson.

Middlesex Co., Ont.

A SEPARATOR FOR SIX COWS.

I think a separator would pay a person keeping six cows. A separator might be operated by hand for as many as ten cows, or say from 325 to 450 pounds per hour.

I prefer a hand separator for up to ten cows; a power for more, but cannot suggest what power to use. The advantages over pans are a more even cream is obtained, also a greater quantity; no heating of milk for calves, and it is always sweet. Over the creamer and ice: the increase in quantity is not so great, but it saves the heating of milk for feeding and the milk is fed at an even temperature.

Every separator has to be run at the speed required by that make of separator. The motion must be even and the milk must not be allowed to pass into the bowl till speed is up and must be kept as nearly at that speed as possible while separating.

Pure separator oil, with half coal oil, is applied to all the bearings every time it is used. Flush out once a week with coal oil, and wash the bowl in lukewarm water and brush with brushes for that purpose, and when thoroughly washed scald and wipe dry.

Have had samples of milk tested by Babcock test, but set a pan to see if any cream rises.

Every separator is supposed to be set to skim properly before leaving the factory, and if a thicker cream is desired turn the cream screw slightly to the left, and if thinner turn it to the right. I run a thicker cream than set at the factory (11 lbs. butter from 35 lbs. cream). Have animal heat out of cream before adding to what you have, and stir thoroughly when adding it. Cream must not be churned in less than 24 hours after the last has been added (I think it is better if left 36) and not till cream is well ripened, as quantity of butter is less.

Middlesex Co., Ont.

John Waugh.

SATISFACTORY EXPERIENCE WITH SEPARATOR.

A hand separator of 300 lbs. per hour capacity would be sufficient for 8 to 10 cows, and one with a capacity of 500 or 600 lbs. per hour for 20 cows and up.

We have used a power separator of 600 lbs. capacity for eight years; have run it with a tread power all that time, and both have given the best satisfaction. The advantages of the separator are saving of time between the cow and the churn, sweeter and cleaner cream, close skimming, a saving of at least 20 lbs. of butter per week on a herd of 20 cows. The operator should run the machine exactly the number of revolutions per minute required by directions. Oil all the running parts each time the machine is used with the best quality of separator oil, and clean the bowl with a brush made for the purpose.

We test skim milk occasionally, and find that 1-20 to 1-10 of 1 per cent. is very good, close work. We prefer to have the machine set to make moderately thin cream for buttermaking. Always fill the bowl full of clean warm water before starting to get up speed, then when the milk is turned on the water escapes into the skim-milk can.

W. C. Shearer.

THE SEPARATOR A LABOR SAVER.

Regarding the advantages of a cream separator, I would say that a good deal depends on the people as well as the number of cows. If they don't take much interest in the making of butter, and there is only one person as a usual thing to milk the cows, they are better without one, but if the farmer as well as his wife is willing to be on hand at milking time, or two of the family, then five or six cows would warrant them in getting a separator. One of the large hand ones will easily handle the milk of twenty cows. Have seen a 500-lb.-per-hour machine separate the milk of twenty-five cows. There are machines of that capacity which are quite easily run and which separate clean. Have not had any experience with a power, and for at least twenty cows would not be bothered with one. There are quite a few advantages over all other ways of skimming milk. First, I would mention the increased number of pounds of butter to be had. Our experience is that with an ordinary cow one pound a week more can be got. Another is the excellent condition of the milk for calves and pigs. Then, again, perfect control of the cream can be had if ice is used, and then a better quality of butter can be made. Perhaps at this point it would not

be out of place to mention that a great deal depends on the handling of the cream for the making of good butter and for getting all the butter out of it. The separator also saves a great deal of work.

Any one thinking of buying a machine should make a careful selection of the different makes, and not trust too much to what agents say, but have them tested at home and know what you are doing before buying.

The separator that we have skims very clean. With an ordinary milk tester one can hardly see a trace of butter-fat in it, so little that we can't estimate it. I have tested milk from machines that did not do so well by a great deal. In setting up the machine a good foundation is necessary. A solid block of wood set in the ground about two and one-half feet and the hole filled up with alternate layers of stone and gravel well pounded in, makes a good one. See that the machine is perfectly level and solid, so that it will not shake while working. Don't get a cheap oil, but get the best hand-separator oil to be had. Have found that the oil used in a large power separator is too heavy for a hand machine. It makes a great difference in the easy running of it. With each machine there are directions about the number of revolutions per minute, and it is best to stick to the rules about the speed and regularity pretty closely, as that makes a difference in the clean skimming of the milk and for getting a uniform thickness of cream. The right thickness will be found after ripening the cream. If too thin it will be thicker at top than at the bottom; if too thick you will not be able to stir it properly. Each machine has a set screw

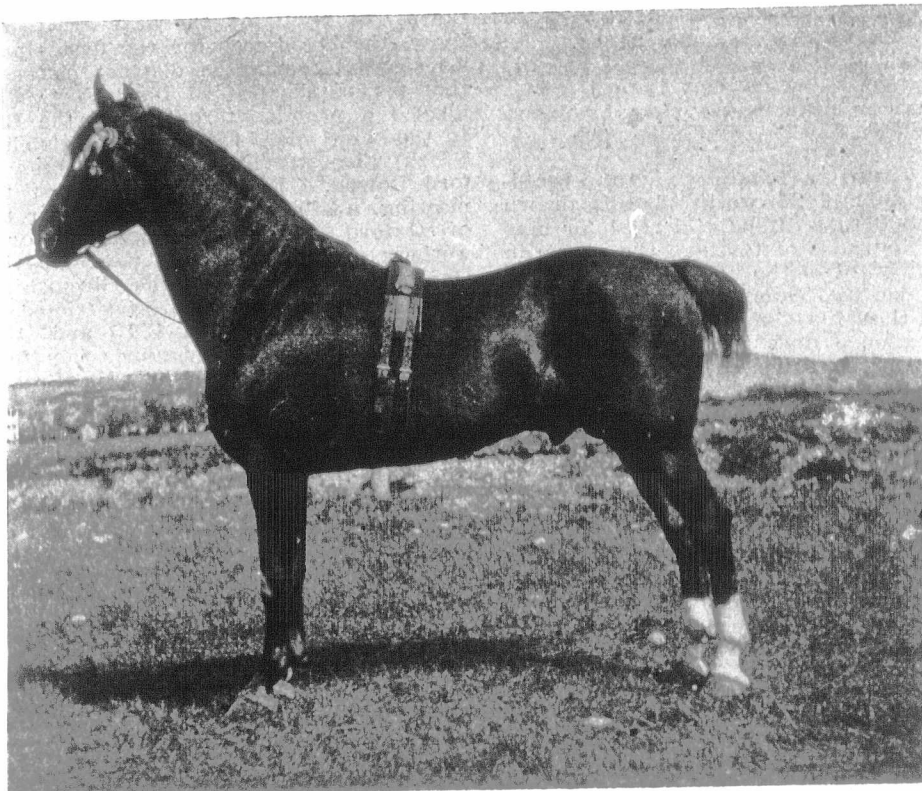
ported by Rawlinson Bros., Alberta, N.-W. T., as a yearling (at which age he was a prizewinner in England), and was used in their stud extensively. Mr. Beith, while making a tour of the Northwest last summer, saw him shown in lean condition at the Calgary show in July, where he won the championship, and recognizing superior merit in the horse, purchased him and a dozen of his progeny, which still further impressed him with the value of the horse as a sire. Though in his 11-year-old form, and never having been shown since a yearling except at the local show, and having had little training, he was taken to the Pan-American Exhibition, where he was given second place, but the "Farmer's Advocate," in the report of the show, predicted that with a little more training, if he appeared at the New York Show he would take a better place. Mr. Beith's cash prizes at this show, in addition to the cup, amount to \$475.

Other successful Canadian exhibitors at New York were: Mr. Geo. Pepper, Toronto, who with his saddle and jumping horses won close to \$1,000 in prize money; Crow & Murray, also of Toronto, with horses in similar classes, who won \$475; Mr. Adam Beck, London, who won \$395, and Mr. L. Meredith, London, who won \$200.

A Short History of the Oxford Downs.

BY HENRY ARKELL, BRUCE COUNTY, ONT.

Having been often of late asked the history and origin of the Oxford Down sheep, and being an Oxfordshire man and a breeder of this class of sheep and, in my boyhood days, personally acquainted with many of the originators of the



ROBIN ADAIR II.

Winner of the challenge cup as best Hackney stallion, any age, at the New York Horse Show, 1901. PROPERTY OF MR. ROBERT BEITH, BOWMANVILLE ONT. (See report on this page.)

to regulate the thickness of the cream. About the right thing is a little thicker than the deep-setting system.

We have not much trouble in washing the parts. Use stiff brushes for cleaning, occasionally using a little soda in the water. In conclusion, I would say, make a careful selection of machines and then go ahead, and don't be discouraged over a few failures, and you will never regret buying a hand separator.

Middlesex Co., Ont.

Arthur W. Baty.

MISCELLANEOUS.

Canadian Winnings at New York Horse Show.

At the New York Horse Show at Madison Square Gardens last week, in unusually strong competition, the few Canadian horses entered were successful in winning a number of very important awards, prominent among which was the record made by the Hackney stallion, Robin Adair II., owned and exhibited by Mr. Robert Beith, ex-M. P., Bowmanville, Ontario, who was given first place in a great class of aged horses, and later in the week captured the sweepstakes challenge cup, valued at \$1,000, for the best Hackney stallion of any age in the show, a magnificent achievement, considering the brilliant company in which he competed. Robin Adair II. is a chocolate-chestnut in color, with white hind feet; 16 hands high, and weighs 1,300 lbs. in working condition. He was sired by Rufus, and his dam, Fantail, was by Denmark. He was in-

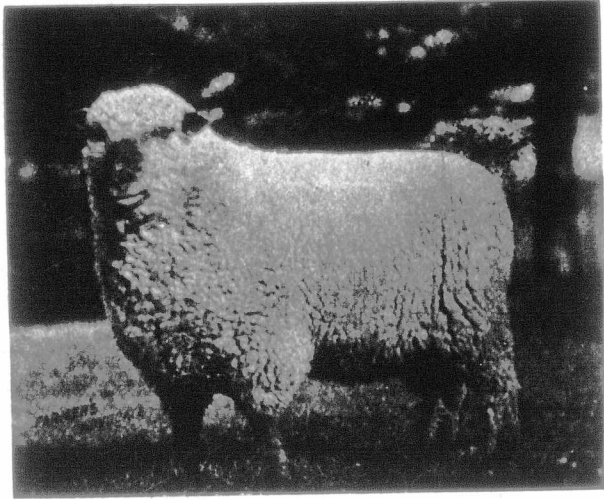
breed and having collected a few facts from some of the breeders in the "Old Land," I give you and your readers the benefit of my knowledge and inquiry.

The origin of the Oxford Down was the deliberate crossing of two distinct breeds and types of sheep. Mr. George Adams, of Pidnell Farm, Berkshire, England, in referring to this fact, says: "We do not claim it to be the only breed now in high favor which is founded on a cross, but it differs from almost all others inasmuch as this fact is its special pride and boast." In the year 1828, about the time of the founding of the Royal Agricultural Society of England, Mr. John Hitchman, of Little Milton, Oxfordshire, England, an extremely successful breeder, commenced to cross the Cotswold with the Hampshire Down. In fact, the idea seemed to occur almost simultaneously to several distinguished sheep-breeders to unite in one breed the diverse qualities of the long- and short-wooled sheep, combining the high mutton qualities with the weight of the long-wools. This ideal was in a large measure accomplished by the breeders of this (the Oxford Down) breed a little later on; and was more successfully carried out by those of the present day, as I will endeavor to show by a few facts and figures a little further on.

The names of the other gentlemen referred to are, first, Mr. Samuel Druce, of Fynsham, who commenced to cross in 1833; also Mr. John Gillett, of Brize Norton; Mr. Wm. Gillett, of South Leigh; Mr. Nathaniel Blake, of Stanton, Harcourt, and Mr. J. T. Tuynam, of Whitechurch Farm, Hampshire, a year or two later. These men, with the exception of the first and last named, all lived within a few miles of each other

in the neighborhood of the town of Witney, so celebrated for the manufacture of blankets. Forty years ago the writer visited this town weekly, attending the grain market held there, also enjoying the privilege of looking over the flocks and partaking of the hospitality of nearly all the gentlemen named. And well do I remember the expression of a leading butcher on examining some fat wethers exhibited for sale on the market in the town of Bampton, Oxfordshire: "These are the sheep for the butcher."

Mr. Tuynam, of Whitechurch Farm, Hampshire, took a prominent part in pressing the claims of this new breed of sheep upon the public. In the Farmer's Magazine



EARL OF FAIRFORD 2nd No. 21368.

Typical Oxford Down yearling ram, in breeding condition. Bred by J. T. Hobbs, Maisey Hampton, Fairford, Eng. NOW OWNED BY AND AT HEAD OF THE FLOCK OF MESSRS. HENRY ARKELL & SON, TRESWATER, ONT.

of 1840, he issued a challenge to breeders, offering to submit 25 wether lambs drawn from a flock of 300 to an impartial trial for nine months for the purpose of testing the value in both mutton and wool of the different breeds. He proposed to stake £25 sterling money on the issue, believing that his Oxfords would beat all comers. His challenge does not appear to have been accepted. In the same communication Mr. Tuynam stated that his breed of sheep, originating in the improved Cotswold ram and the fine-bred Hampshire Down ewe, had been established for nine years, which would place his earliest efforts in 1830 or 1831.

In the Journal of the Royal Agricultural Society for 1853, Mr. Samuel Druce, of Eynsham, writing in May of that year, said it was then nearly twenty years since he had begun crossing between the Southdown and the Cotswold, and he published a table showing the superiority both in mutton and wool value of the then new breed over Cotswolds, Leicesters, Hampshires, and he even adds Southdowns. His figures are endorsed by the high authority of Mr. Philip Pusey, a gentleman who spared neither money nor pains in agricultural experiments and pursuits, upon whose grounds the great world's trial of agricultural implements was held in 1851, and who afterwards became an ardent advocate and breeder of Oxford Downs. Mr. Pusey remarked that the great difference in favor of the Oxford Down arose from their superior quality and therefore higher price per pound of the mutton as compared with the long-wooled sheep and the greater weight of wool and mutton as compared with the short-wooled sheep. "The advantage of the breed both then and now," says one of the most prominent breeders in the Old Land to-day, "could scarcely be stated more concisely than as thus expressed by Mr. Pusey." A most successful Gloucestershire farmer of my intimate acquaintance, writing me in May last, says: "I purchased ram lambs from Mr. Tuynam in 1838 and 1840, and the breed is holding its own here (England) to-day. I may add my own testimony that they are not only holding their own here in my own neighborhood and Province of Ontario, but are steadily gaining ground wherever they have been intelligently handled. The great drawback in introducing and using this and all other established breeds is that men will use a grade sire after the first cross, which is a backward rather than a forward step; but when pure-bred sires are continually used, there is progress and success. Sheep-men in the West are beginning to realize this. The demand for the Oxford Down is steadily increasing, to be used as a cross with fine-wooled ewes for mutton purposes. A friend of mine writes me from Wyoming (U. S.) that he had gone out to the mountains to see some cross-bred Oxford lambs, the produce of some rams he had sold and sent out there a year ago. He says they are beauties, many of them weighing from 90 to 100 pounds each, while his neighbors who kept the fine-wools have lambs weighing from 40 to 60 pounds each. The cross-bred or grade Oxfords sold there (Wyoming) for \$1.40 each; the fine-wools had to be kept over until another year. For many years the new breed was known under various names; the first name in use for a time was Down Cots-

wolds. It was the year 1857, at a meeting of breeders held in the City of Oxford, that the title Oxfordshire Downs (now shortened to Oxford Downs) was adopted. It will be observed that in the two methods of crossing previously given, there was a slight difference: Mr. Druce using the Southdown and Cotswold, Mr. Tuynam the Hampshire and Cotswold. Mr. Druce used, no doubt, the coarser type of Southdown, and Mr. Tuynam the finer type of Hampshire. The Messrs. Gillett used, I believe, the Southdown, as did also Mr. Blake. The success of their labors may be gathered from a report of Mr. Clare Sewell Read, on "The Farming of Oxfordshire," published in the Royal Agricultural Society's journal in 1854. He refers to the Oxford Downs as "The glory of the country, the most profitable sheep to the producer, the butcher, and the consumer." He gives an interesting account of the breed and summarizes its chief recommendations in terms which hold as well now as they did thirty-five years ago. Such, at least, is the opinion of another prominent breeder, Mr. George Adams, of Pidnell Farm, England.

Some account of the history of the breed in the show-yards of the Royal Agricultural Society of England may be gathered from the list of prizewinners which appears in the present volume of that Society. It was not until 1853, at Gloucester, when a special prize was offered by the Hon. R. H. Clive for Shropshires or any gray- or black-faced short-wools that there was any favorable opening for Oxford Downs in the prize list. At that show the first prize for aged rams was won by an Oxford Down. Again at Warwick in 1859, in the class, "Short-wools not Southdowns," the first prize was won by an Oxford Down. In 1862, at the first great metropolitan show, the breed was for the first time placed on its rightful footing in distinct classes, and since that period the Oxford Down section has always formed a prominent feature of the Royal Show. In the same year, 1862, the Smithfield Club (Fat Stock) also provided separate prizes for the Oxford Downs. For twelve years, at their annual meeting, a silver cup was offered for the best pen of Oxford Downs, Shropshires or cross-bred wethers. This prize was won five times by the Oxford Downs, once by the Shropshires, and six times by cross-bred sheep of various descriptions. In 1872 and again in 1875 and 1887 Oxford Downs won the fifty-guinea cup for the best sheep in the show. In 1893, Mr. Brassey won the sweepstakes over all breeds at the Royal Show with a yearling ram.

Then we may follow their record in the showing both in the United States and Canada. At Detroit in 1892, Mr. Arkell, of Arkell, Ont., Canada, won the \$100 prize for the ten best mutton sheep with fifteen entries, all breeds competing. In the same year Mr. Arkell won the champion cup over all breeds with Minnie Mills at Detroit, and in 1893 the Cooper Cup at the Fat Stock Show held at Guelph, Ont., Canada. We might continue to give instances of how that in later years the Oxfords have won honors both in the show-ring and at the experiment station.



A FARM HOMESTEAD IN CARLETON CO., NEAR WOODSTOCK, NEW BRUNSWICK.

but the reputation and attention which they won wherever they have gone has made that task unnecessary. In the more carefully-nurtured flocks of the breeders of the east or upon the rough ranching lands of the West they have become as firmly established and as favorably known as any other breed.

A. H. Smith, Simcoe, Ont.: "The Farmer's Advocate" has been a constant visitor to our house for a great many years. We would not like to be without it."

GARDEN AND ORCHARD.

Successful Gardening.

BY EDGAR E. MACKINLAY, HALIFAX CO., N. S.

The readers of the "Farmer's Advocate" who were interested in the account I gave of my last year's gardening experience, in Feb. 1st issue, would probably like to hear something of my success this past summer, having grown the first and special prize collection and 14 other prize exhibits at the late N. S. Provincial Exhibition, and the experiments tried and their results.

You will remember that my plot of ground is situated in a very unfavorable locality for the growth of many vegetables and fruits which the Nova Scotia coast is considered to be poorly suited for, but by perseverance and close attention I have grown all the staple products and many novelties and curiosities, much to my own pleasure and the astonishment of the natives, as the saying is.

The four city lots, or about half an acre, in the suburbs of the City of Halifax, which compose my garden were dug up last spring with a four-pronged digging fork, and all the stones and rubbish raked off. I then laid it off in long, straight rows, a foot apart for root vegetables and correspondingly wider for cabbage, tomatoes, etc., manuring principally in the drill with old, well-rotted manure or compost, using a small quantity of phosphate or wood ashes, worked under the surface before sowing the seed.

As soon as the plants were well up, I broke the crust between the rows with a garden rake. This killed the weeds that were coming through, and helped to hold the moisture. After the plants were thinned and had grown quite stocky, I used the hoe or the "Crescent" hand cultivator whenever cultivation and weeding was needed. Of course, if I had plenty room, I would not have to crowd the plants as much as I do, but by the system of double cropping I save much time and space. For instance, lettuce, radishes, spinach, early turnips, peas, etc., I usually sow in ground that I intend to set late tomato, celery and cabbage plants in, and if the right sorts are planted early and well attended to, the crop will be out in plenty time for the one following. I raise all my plants, such as tomato, cabbage, and other tender vegetables in a hotbed or cold frame, the construction of which your readers are probably aware of. The earliest plants I find are those which are disturbed the least while growing. Tomatoes grown in the cold frame were as large plants when set out as those started much earlier in the hotbed and then transplanted into the cold frame before setting out, and matured their fruit earlier, but early cabbage were much benefited by the transplanting. Although only a small grower, it pays me much better to raise my plants than to buy them. This past spring, I had from a 3 x 6 hotbed, \$15 worth, at market prices, the labor and expense amounting to \$3. Besides, I knew what

I was getting, and was able to test a number of varieties side by side, taking far more interest than if the plants were a lot of nameless and spindly articles. When setting out the cabbage plants, I tried an experiment which I find to work well. I set out two early pointed cabbage plants and then one late flat kind in the row as far as it went. I started to use the early cabbage the middle of July, and now the late ones have taken up the room, and I have a good crop; whereas, if they had been all the one kind I would have likely lost a large percentage of them. The tomatoes I set out 25th of May, when about 8 in.

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high. I put them about 2 ft. apart for early and 3 ft. for late varieties, and contrary to previous practice gave them very little barn manure, the soil consisting of a black, rotted sod. I only used a small handful of phosphate or wood ashes to each plant. They started to ripen July 20th, which is early for this climate, and from 250 plants I picked up to date 1,500 lbs. They seemed to go all to fruit, and were a magnificent sight. The expense of seed, manure and time was \$2.50, and I sold \$20 worth from the piece. Cucumbers was another crop I had splendid success with. I planted the seed in rows, 4 ft. apart, with an early crop, as radishes or lettuce, between them. I started 100 plants in tin cans in the cold frame. In transplanting, the most of them died, but what survived were about two weeks earlier than the outdoor-sown, and as the price was treble that of later cucumbers, it paid for my trouble. The plants were thinned to six inches after they were well up, and a sprinkling of lime or soot, to keep off the fly, put around them. By watering them regularly through the dry weather, the vines kept bearing till frost came. From four rows 80 ft. long I picked 5,000 cucumbers, all counts, valued at \$12, the expense amounting to \$2. My reasons for planting in rows are: 1st. They can be weeded and cultivated easily. 2nd. They can be gathered easily without walking in among the vines and bruising them. 3rd. They do not dry out so quickly as in hills, and keep bearing longer, and the fruit ripens earlier and is of better quality.

Squash and pumpkins I plant in hills among the potatoes, which, after the early potatoes are gathered, take up the room and produce as well as if the space was entirely given up to them. Wherever there is a bare space in the garden, or where seeds have missed, I find it a good plan to set a few beet plants when thinning in those spots, which take off the empty look and always make good roots. I tried this summer a number of new and foreign vegetables, some of which I find to be of immense value, and would advise those interested to try some of them. Swiss chard or sea-kale beet is a variety of the beet plant which, instead of forming a root, sends up large, fleshy leaves very early, which are used as spinach, though more delicious. Later on, the stems and leaf-ribs become broad and wax-like in appearance, making a very handsome plant. These stems can be used like asparagus, or pickled. This vegetable attracted much curiosity at the late exhibition. Kale or borecole, a variety of cabbage, which forms an immense quantity of beautifully curled leaves, much esteemed in England and France, is a plant which should be more generally grown. After the frost has touched the leaves, it is far tenderer than most of cabbage, and it will thrive on land that will not produce cabbage. The preserving sorts of tomatoes, known as Plum, Pear and Cherry, are a beautiful novelty, at least they were to all who saw them on exhibition. They produce in clusters like grapes, and are of various colors. Preserved with slices of lemon they are excellent, and in districts where little fruit is grown ought to be appreciated. I have tried many varieties of the standard garden products this past season, of which I find the following to be of most value for home use and exhibition. Nothing in gardening seems to me more important than that suitable varieties grown from fresh, reliable seed give the best results. In beans, I find the earliest bush to be Valentine or Sixweeks Green and Wardwell's Kidney Wax. The Red-eye Improved is the best for dry beans, and a heavy yielder. For pole, Asparagus; Dutch Caseknife for green, and Indian Chief and Golden Cluster for wax. A variety called the White Runner produces immense shell beans, which we use as a substitute for the Limas, which cannot be grown in this locality except for curiosity. I have had the best success in beets with Eclipse and Crosby's Egyptian, but as I found last year, the old-fashioned, long, smooth Blood is still the best for winter. It stands closer in the row and runs deeper than the round beets, so is a heavier cropper. But care must be taken to sow good seed; much of the seed of this variety is worthless. The Wanzleben variety of sugar beet is a good vegetable. It is much sweeter than the red sorts and superior to many of them. Of the five sorts of cabbage tried this summer, I find Early Jersey Wakefield the best early, Danish Ball Head the best medium, and Autumn King for late, the last named making very large heads, though not so hard and heavy as the Ball Head. The American Savoy is the best of three kinds of Savoy cabbage. This class of cabbage ought to be grown more than they are at present on account of their beauty and excellent flavor.

Carrots have also done well with me this season, the Chantenay being the best all-round variety. It is also very early. The Oxheart is about as early, but not so long, and ought to do well in shallow soil. But the old Standard Long Orange gives the heaviest yield and is as good a keeper as any, with a splendid red color. I have grown a quantity of the red, white, and yellow varieties of celery, of which the White Plume has done the best so far. It takes less blanching

than the other kinds to whiten it, but it needs to be blanched thoroughly or the stalks become stringy and bitter. The red is the handsomest kind, and keeps longer than the yellow and white sorts. Corn has done very well this season. The earliest was the First of All or Red-cob Cory, followed by Minnesota and Black Mexican, the last named being a good table corn, besides a novelty. If planted with the others, it is fit to use when they become hard and tough, and the grains gradually turn color until they become a bluish black at maturity. I grew two sorts of Yellow Flint corn, which many prefer to the sugar varieties, of which the Longfellow gave the longest ears and Compton's Early the earliest and thickest. The grain of these sorts when ripe is very hard and heavy, but I think that it could be grown in this Province, where all the corn is now imported. Of five sorts of cucumbers, a variety called Express was the earliest and heaviest yielder, but very small and thick. The Improved Long Green produced the longest and largest cucumbers, some of them 15 inches and of splendid quality, but was not such a heavy bearer or as uniform as the White Spine. The Giant White is a splendid table cucumber, of beautiful color and immense size. The Chicago Pickling is an immense yielder of uniform pickling cucumbers and did the best of three kinds. Eggplants and peppers I have not had any success with, as the season is rather short for them and there is no demand for such products. In lettuce this year, the largest and rankest growth was the New York or Wonderful. It is of a dark green color, but excellent for home use. The Mignonette is a splendid russet lettuce, but hard to sell on account of its color. The Denver Market is the handsomest sort, and the Nonpareil follows close.

I tried a plot of leeks for the first time this season, with good success. I started the seed in the cold frame and set the plants three inches apart and quite deep. They can be used much

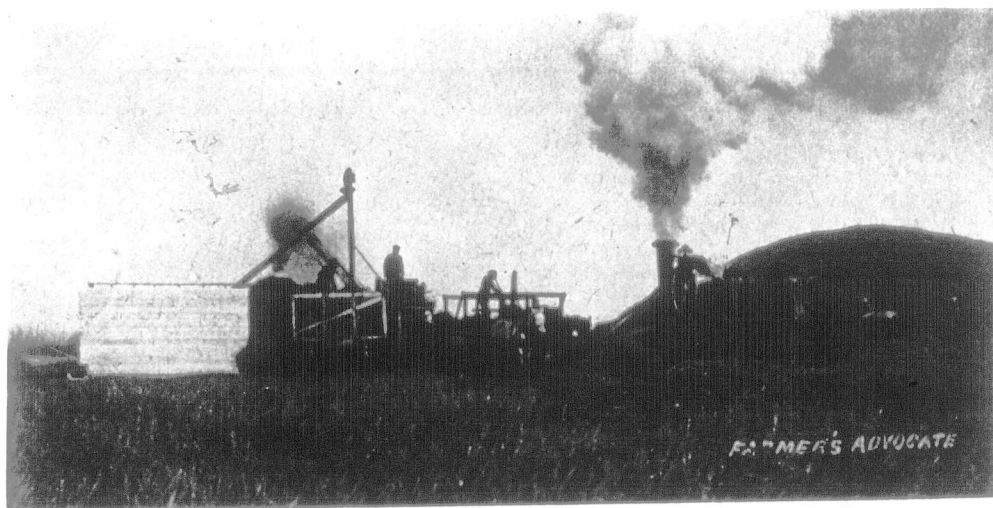
on account of the pea louse or aphid. The usual remedies seemed to be little use. The tall varieties were fairly proof against them, as the Telephone and Champion of England; also the very early sorts, as First of All and Lightning.

Radishes I sowed in with beet or turnip seed, and in the ground intended for a late crop. French Breakfast and Long Scarlet were the best sorts as to yield and flavor. The white sorts ought also to be grown, though not selling as well as the red ones.

Salsify is an excellent vegetable, but the difficulty is to get good, straight roots, it being very liable to branch and be useless for the table. In good sandy soil it ought to do well, but on heavy black soil as mine is it is almost a failure. I had a good supply of spinach this season, and the Victoria, a round, thick-leaved sort, was the most satisfactory. To have spinach very early, the Prickly Seeded variety should be sown in the fall and covered with straw and corn-stalks. It is the hardest sort of any.

I grew over twenty sorts of pumpkins and squash this past summer, partly to find out the most suitable kind, but principally to set off my proposed exhibition collection, which they did to great advantage. The earliest were the Custard and Crookneck, but in quality they could not compare with Henderson's Delicata, a small striped, handsome squash, and very productive. The Turban and Orange Marrow were the best fall sorts, and for winter the Hubbard, Bay State and Marblehead are yet the driest and best-keeping kinds. The Mammoth squashes are of poor quality except the Mammoth Chili, which if left on the vine till it becomes russet at both stem and blossom ends is an excellent vegetable.

In pumpkins, the Winter Luxury and Golden Oblong are the best quality, but do not grow as large as the Cheese and Yellow field. My method of growing very large pumpkins and squash for exhibition, is to sow the seed in hills made very rich with old manure or hen dung, and thin them



THRESHING OUTFIT ON FARM OF SENATOR PERLEY, WOLSELEY, ASSINIBOIA.
SPOUTING THE GRAIN DIRECT INTO PORTABLE GRANARY.

earlier than onions and are much preferred by some, especially in soup. Melons, except the preserving or citron variety, are a failure in this locality. The citron melons I grow in the same manner as for cucumbers. They are very beautiful, and wonderfully heavy for their size, and are produced in abundance, but the market for them is very limited. The sort of muskmelon which ripened a few was the Emerald Gem, but if started under glass would probably do well.

I had splendid success with onions this year. I started the seed in the hotbed and cold frame and set the plants out when about the size of a goose quill. They soon took root and grew rapidly, so that by the last of August they began to ripen up. Those that were sown from seed are still green and of small size, so that in this climate the transplanting system pays well for the extra labor involved. Of the eight varieties tried, I find the large red Wethersfield to be the most satisfactory. It is a very strong and handsome onion and grows very uniform. The Silver-skin and Yellow Globe Danvers were the next best kinds, but were not as firm as the red sorts. The White Pearl and Barletta were the best pickling onions. They were grown from the black seed, sown quite thickly, and each seed seemed to produce a perfect little onion, about an inch in diameter, much handsomer and firmer than the old-fashioned multipliers.

Parsnips are a good crop. The Intermediate sorts are the best shaped roots, though not as heavy yielders as the Hollow Crown and Long Dutch.

The Emerald Moss Curled is a very handsome parsley, and grows more bushy and compact than the other kinds. Early potatoes yielded poorly this season. The earliest sort was the Irish Cobbler, with the Early Ohio next. The first named is a white, round potato, and the other a pink. The Beauty of Hebron seemed to grow and yield better. Peas were also a failure with me

out after the plants are well up to one plant to the hill. After the vine has formed a good fruit, I clip the vine and cover the joints with rich soil, in order that roots may form to feed the squash. Then, I water with liquid manure three times a week, allowing it to soak well in around the roots both in the hill and at the joints. Of course, seed of the Mammoth sorts should be planted. It is no trouble to get squash over 60 lbs. by this method, and sometimes they run into the hundreds. Tomatoes were the best crop with me this season. I had ten varieties on trial, of which the variety called Earliest of All was the earliest, but did not produce as much fruit as some of the later sorts. The heaviest yielder was the Mikado, a potato-leaved sort, producing fine, large, purple fruit. The Canada Victor was the largest red sort, and very early. The Lorillard was another very early red tomato, and the Dwarf Champion the best early pink sort. In yellow tomatoes, Golden Queen was the best variety.

The insect or disease called clubroot is so prevalent in my piece of ground that turnips are almost a failure. The varieties most proof against it were the Purple-top Globe and Golden Ball. The swedes seem to be almost ruined by it.

Herbs do very well, and a good supply of them were gathered. I grew some of the medicinal herbs for the first time, and had good success.

Being only an amateur, and my spare time and evenings spent in gardening, I feel quite pleased with my results, the only drawback being a limited sale for what is grown above what we use.

As I said in my last year's account, this experience is but the result of hard work and close attention to details. Theory is a poor thing to depend on, but perseverance, care and common sense will sometimes work wonders. If I have

encouraged anyone by this article, I shall feel that I have been well rewarded for my trouble. My prominent success at the late exhibition has encouraged me greatly, and the kind words of those who knew the disadvantages I labored under to obtain that success, I shall not soon forget, and hope that the readers of this article will be satisfied with my effort to give a true account of my garden for 1901.

Black Rot of Grapes in Essex.

To the Editor "Farmer's Advocate":

Sir,—Many grape-growers in Essex lost heavily this season from the attacks of the fungus called "Black Rot," or, locally, "Dry Rot." The vineyards about Sandwich, Walkerville, and along the lake shore near Kingsville and elsewhere were badly affected.

Unable to visit Essex personally, I asked Mr. F. P. Gavin, B. A., Science Master of the Windsor Collegiate Institute, to investigate the extent of the injuries, and to send me specimens of the diseased grapes. He reported that the damage at Sandwich and Petite Cote was most serious in vineyards not well cared for, and more especially on the old vines. In the vicinity of Walkerville, the average crop of grapes was less than one-third that of previous years, and there, too, the injury was greatest on the old wood. The large rainfall of July and August is largely responsible for the rapid spread of the disease.

The disease is not a new one. In fact, it is indigenous to America. Ever since 1885, when it was discovered in France, much attention has been given to it, and now it is considered one of the most destructive enemies of the grape throughout the U. S. and Canada.

The disease usually makes its first appearance on the leaves, and afterwards appears on the berry, when it is more than half-grown, as a small brown spot, which rapidly enlarges. In a few days the entire berry becomes diseased, and a soft rot ensues. A collapse and drying of the tissues follows, so that the berries become shrunken, shrivelled, black, and hard. The surface becomes prominently marked with strong, irregular ridges. With the aid of a pocket lens, the surface will be seen to be studded with minute black pustules, which contain the summer spores of the fungus. The spores ooze out of the surface, and are scattered by the rain and wind to unaffected grapes, which soon show signs of disease. The disease also rapidly spreads, especially in moist weather, by contact of diseased berries with unaffected ones in a cluster, and by the spread of the original threads from one berry to another through the stalks of the cluster.

Another kind of spore is produced later, during the winter, on the shrivelled grapes and leaves left on the vine or on the ground. These spores are set free in spring, and are capable of starting the disease afresh on the leaves. With a knowledge of the life-history of the fungus, it is clear that the main remedy is one of prevention. The following preventive remedies will be found effective: 1. Destroy all leaves and dead grapes in the autumn, so as to kill all wintering spores. 2. Spray the vines with Bordeaux mixture just as the leaf-buds are beginning to expand, and again at intervals of ten days or two weeks until the berries are half-grown. If rain occurs frequently to wash off the mixture, frequent applications should be made, for spores will germinate when the vines are not covered with the Bordeaux. W. LOCHHEAD, Ontario Agricultural College, Guelph, Nov. 23, 1901.

POULTRY.

Chicken Fattening and Profits.

The Department of Agriculture at Ottawa has received returns regarding the first shipment of 2,592 fattened chickens sent this season. These were fattened at the poultry-fattening station at Bondville, Quebec. They were sold in Liverpool, wholesale, at fourteen cents per pound, and the net returns were equal to \$1.31 per pair of chickens at Montreal.

The experiments at the Whitby, Ont., fattening-station go to show that as a rule farmers hold their chickens too long to reap as much profit from them as they ought. The younger a chicken can be placed on the market the more money can be made out of it. According to recent experiments, the cost of feed for one pound of gain in live weight for a chicken three months old is four and one-half cents. If the same chicken is kept until twenty weeks old the cost of feed per pound of gain in live weight is six and three-quarter cents. A saving of two and one-half cents per pound can thus be made by selling a chicken when it is three months old instead of waiting until it reaches the age of five months. The experiments also show that a chicken fed in crate makes more gain than a bird that is left running around. This denotes that greater profit is made by feeding a chicken in crate when young than by allowing it to run outside.

Farm Poultry Profits.

Last year about this time I gave the readers of the "Farmer's Advocate" an account of my year's profits and losses in the hen business, and as I have just been going over my accounts and closing up my poultry year, which ends on the last of October, I have been reminded to send it forward again, as it may be a matter of some interest.

We Northwesterners all know that last season was very unprofitable to farmers along almost all lines. When crops are especially good and all wheat grades "No. 1 hard," it is sometimes difficult to make ourselves believe it pays to feed it to hens.

When there is a small crop and the wheat grades low, it is very difficult to make ourselves believe that even the screenings can be spared for hen feed. Last fall the remark was made to me by several people that I would find my hens would not pay this year. I began the winter with a fine stock of fowl, but also with fear and trembling, for I knew it would be a very hard task to carry them over the winter. I had some advantages to count upon: a good, warm, dry henhouse, help enough to keep it clean, and no vermin or disease to get rid of.

On the other hand, all I could count upon for food in the shape of grain was oats, and not a large supply of them even. I had a few bushels of wheat left over, by strict economy, from the year before, and a little bran to mix with what skim milk I could spare from three cows which had been milking all summer. Then I had an almost unlimited supply of pigweed seed and the parings of vegetables. I went bravely to work and continued at it until spring opened, so I could turn my flock out of doors to pick and scratch for themselves. I kept my fowls alive,

Pure-bred Fowl vs. "Any Old Kind."

It is just possible there may be some exceptionally good layers or some birds of exceptionally large size among our flocks of "any old kinds," but they will never show so great uniformity of size nor good laying qualities, to say nothing of shape and color of flesh and color of plumage, as will a flock of pure-bred fowls of no matter what favorite breed. When we are marketing poultry it adds greatly to our prices when the birds are of a uniform size and shape, instead of some little, some big, some long, some short, some thin, some broad, some with well-meated breast, while others are most heavily meated on the legs.

Probably this is not so important when one is selling by the pound, dead weight, but in selling broilers with a mixed lot of poultry, the prices usually rule not according to the few large, plump birds in the collection, but we are paid at the price they would bring were all of them small and thin, as are a few of the number.

With pure breeds one can usually offer birds very similar in appearance, and though they may be of the smaller breeds, yet they will command better prices than the mixed lots.

But it is perhaps in the color of plumage one derives greatest satisfaction. It is a constant source of pleasure to me to view my flock of pure-bred Barred Rocks. Though all are not equally well colored, it is a delight to notice the clear, even barrings through the entire flock as compared with that of the flock of grades and crosses. The pleasure is greater as we get birds more nearly approaching the standard type. Nor is this all: I am surprised at the extra size, shape and weight, finding that though they were



A PEN OF BUTCHER'S STOCK, WINNIPEG STOCK-YARDS.

clean and free from disease, and until spring I lost only five, and these were too young to keep over winter under the best of conditions. But if any one thinks my advice worth paying the slightest attention to, I would say, "never try my experiments." Pigweed seed may keep hens alive, but they will not thrive on it, much less will they lay eggs in winter, and it is simply heart-breaking to me to see the poor things hunting for the grains of wheat which are not there. Now, I believe if people in any business wish to be of any use to others in the way of object-lessons, it is their duty to show the dark side of the picture as well as the bright, at the risk of any criticisms that they may call forth.

When the bright spring days arrived, and I heard once more the happy songs of my feathered favorites as they went scratching hither and thither, my heart was lightened, and I felt as if I could look my hens once more in the face.

It was not long before the egg crates began to fill, and I never had hens lay better all summer, but as they began to lay late in spring, and I had nothing to feed young chickens upon, I raised but few.

As soon as any wheat was ripe I fed sheaves to my fowl, and, fortunately, the prospects are good for this coming winter's feeding. I am keeping over this year only the few pullets I raised, and one-year-old hens. I think it is unnecessary to give items of receipts and expenditure this time, so I will just give the aggregate:

I wintered 100 fowls.
My cash expenditure was \$15.
My receipts were \$86.85.
My profits were \$71.85.
I hope, if spared, to show a better account next year.
MRS. A. NEVILLE.
Central Assiniboia.

sold by the pound dressed, they would be far more profitable than would any flock of mongrels. I feel sure the breeders of Dottes, Leghorns, Dorkings, or even Bantams, must experience the same pleasure as their birds show the uniformity of markings and come near the ideal in coloring.

The same holds good in breeding turkeys, geese and ducks, and it is perhaps in these lines that the size is more noticeable. I remember seeing what I thought some fine, large white ducks sporting themselves near a stream of water, but on approaching nearer I found them to be white geese of the old type. Were these placed beside a flock of Embdens, they would indeed appear as dwarfs, and we find the larger breeds are even more prolific than were the old types. There is also a vast difference in size between the old-fashioned turkey (which is yet too plentiful through the country) and the Mammoth Bronze and Mammoth White as seen in the show-rooms as representative of the flocks in our country, which, I am pleased to see, can hold its own at the large shows, even including the Pan-American. I hope very many farmers will take their wives to the Ontario Poultry Show at Guelph this month, or if this be not possible, that they will send their wives there, where they may see and compare with their poultry at home not only the live birds but the same breeds dressed for market in the approved manner.

Middlesex Co., Ont. M. E. GRAHAM.

How to Keep the Boys on the Farm.

Morley Burroughs, Carleton Co., Ont., writes, in renewing for the "Farmer's Advocate" for 1902, that the paper has helped him in every line of farming. He adds: "We look for its arrival every two weeks with pleasure. It helps to keep the boys on the farm."

Geese and Ducks Laying in Fall.

I am a reader of the "Farmer's Advocate," and I would like to ask a few questions. Have your readers ever heard of geese or ducks laying eggs in the fall? I have a goose and a duck which are laying nearly every morning. I think they would be good stock to breed from. I have asked several persons, but they never heard of such a thing. I am not a farmer myself, but I take great interest in farming. I always wait for and read the "Advocate" before any other paper, and I think every farmer should have it. It would help them if they would study its teachings.

Waterloo Co., Ont.
LONNIE WINKLER.

ENTOMOLOGY.**Entomological Society of Ontario.**

The 38th annual meeting of this Society was held in London on Wednesday and Thursday, Nov. 13th and 14th. The first morning was employed by the council in the transaction of the business of the Society. In the afternoon a well-attended meeting was held for the purpose of discussing the progress and present aspect of the San Jose scale. The Rev. Dr. Fyles, president of the Society, occupied the chair, and expressed the gratification of the meeting at the presence of the Hon. John Dryden, Minister of Agriculture for Ontario, and other eminent persons.

Mr. G. E. Fisher, Provincial Inspector, was the first speaker called upon to address the meeting. He wished at the outset to emphasize the fact that very few fresh localities had been found this year infested by the San Jose scale, which was very encouraging, and that people were now realizing better than ever before how dangerous an enemy it is. Where the scale did exist, its spread and its destructiveness were greater than ever before. As instances of the latter, he mentioned the case of an orchard of 1,600 peach trees which was inspected in August, 1899; after six days spent in its examination by seven experienced men, the scale was found in small numbers on 87 trees. The following year it bore a very good crop of fruit; this year the whole orchard is practically dead; the scale is to be seen everywhere upon the trees. In another orchard he had eaten peaches this last summer gathered from trees which have since become encrusted with the scale and will soon succumb to the attack. From a third orchard, 25,000 baskets of peaches were picked this year. About the 25th of September he visited it and found the scale on every tree along a row; unless this orchard is at once put under treatment, it has only one more year to live. The alarming rapidity with which the scale spreads when once it has found lodgment causes it to be so destructive and so difficult to control. Apple trees he found more resistant than peach, and at first he was inclined to think that they would not be much affected, but now he finds that many have been killed outright. The lower limbs are usually attacked first and then the scale spreads upwards. An orchard of 350 trees bore well two years ago; last year it became infested with the scale, but produced a fair crop; now it is doomed and will never bear again—most of the trees will be dead next year.

Mr. Fisher then gave an account of the most effective remedies. These are whale-oil soap; crude petroleum; lime, salt and sulphur; and fumigation with hydrocyanic acid gas. Whale-oil soap should be made strong, 2½ lbs. to a gallon of hot water, and should be applied freely to every part of the tree. Many people sprayed only one side of their trees, waiting till the wind changed to do the other, and ending by leaving it undone. Crude petroleum could be safely applied to apple trees, but not to peach; it could also be used for pear and most plum trees, but not for Japan and egg-plums. A very fine nozzle was required for spraying; most of those supplied were much too coarse. For large apple orchards this was the most satisfactory remedy and also the cheapest. He gave many interesting details regarding his experiments, the apparatus used, and the results. The lime, salt and sulphur wash was effective, but required so much time in cooking that it was not likely to be generally employed. Fumigation had proved to be a perfect remedy. It had been applied this year to 300 trees in several different localities and not a single live scale could be found after the treatment. Though troublesome and expensive, it will well repay the fruit-grower to employ this method and save his trees from certain destruction.

After replying to many questions, Mr. Fisher closed his interesting and valuable speech by stating that the course of events had proved the wisdom of the efforts made by the Department of Agriculture for the extirpation of the scale. Many who were at first bitterly opposed to the methods adopted were now quite satisfied that they were right and just, because they had seen with their own eyes the deadly effects of the

scale where no proper attempt had been made to keep it under control.

The next speaker was Dr. James Fletcher, Dominion Entomologist and Botanist. He had recently inspected several of the worst-infested localities, and had also visited portions of Ohio. He showed examples of branches from trees that had been treated with whale-oil soap and with petroleum, and from others that had been killed by the scale from want of treatment; also portions of bark from limbs sprayed only on one side, showing the scale flourishing on the neglected part and killed off on the other. These were impressive object lessons. After describing the method of using the remedies referred to by Mr. Fisher and giving much useful information regarding them, he stated that the chief obstacle in the way of successful warfare against the scale was the carelessness and ignorance of the owners of orchards. In many cases they did not take sufficient pains to apply the remedies thoroughly to their trees, and consequently many scales were left to develop fresh colonies and destroy the trees, but in far more cases they did not take the trouble to find out what should be done and left the scales alone to wreak destruction. Hundreds of thousands of dollars were involved, and it would pay everyone who grew fruit trees to learn what remedies should be applied and how best to use them. The Governments both of the Dominion and the Province had done all that could be expected of them; they had caused careful experiments to be made and had published the results; these publications could be had for the asking; it only remained for all interested to read them and apply them. He suggested a system of co-operation by which the fruit-growers

Nothing can be done to enforce remedies, unless people believe in its deadly character. How are we to impress the people with this fact? We must educate them first as to the danger involved and then as to the remedies to be employed. It would be well to teach people how to spray by sending competent men about whom they could see doing it; no matter how plain written directions might be, they were of little use unless people were shown how to do it. This was the experience in improving the buttermaking of the country. One great danger lay in our nurseries, from which scale-infested stock might be sent out even after inspection, as specimens might so easily be overlooked. The only plan, then, was to require compulsory fumigation of all nursery stock before shipment, and this must be done by officers sent by the Government, who shall see that the fumigating houses are perfect and the work perfect. On the whole, he felt much confidence in the efforts that were being made for the preservation of our fruit trees, and believed that if the danger were once fully and generally realized, our fruit-growers would spare no efforts to exterminate the scourge.

EVENING SESSION.

A meeting, to which the general public were invited, was held in the evening at the Normal School, and was well attended, notwithstanding the inclemency of the weather. The chair was taken by the Hon. John Dryden, who said that he esteemed it a great honor to preside over a meeting of the Entomological Society, which was one of the best Associations aided by the Government of Ontario. It had always been composed of gentlemen of wealth, of education, and, above all, of public spirit, who were willing to devote



A PLUM THICKET NEAR MORDEN, MAN.

in a neighborhood could have their trees sprayed or fumigated just as farmers have their grain threshed; one set of apparatus would thus serve for a large number.

Professor Webster, of Ohio, was next called upon to address the meeting. He said that the problem in Ohio was exactly the same as in Ontario, and it was the most tremendous the world had ever had to face as regards insects. He was constantly asked for a cheap, easy, perfect remedy, but such was not to be had. Machinery was required which could not be produced in a day, and which would be the result of long-continued experiments and constant improvements. He had not yet been able to find a good sprayer; the best so far made (it was gratifying to hear) was made in London, Ontario, but it was capable of improvement. Skilled men were also wanted in order to do the work properly, just as skilled men were needed for driving an engine; such men should go about the country, and they could do the work far better and much cheaper than untrained men; there was an opening here for a paying occupation. At present, if remedies are properly used, we can reduce the scale 90 per cent. in one year on peach trees and exterminate it on the apple.

The Hon. John Dryden said he had listened with great interest to the excellent addresses of the speakers, and was rejoiced to learn that definite measures for the extermination of the scale could now be adopted. It was undoubtedly a most serious danger to the fruit industry of this Province, and every possible means must be taken for its removal. The difficulty at the outset was to persuade the public that this danger existed; many do not believe it even now.

their time and energy to the objects of the Society. It was not only one of the best, but also one of the most useful of the Associations connected with his Department, in the opinion of a practical man like himself. We need its accurate work, and we have been greatly helped by it during all these years and shall be for years to come. He came to show his interest in the Society, and the interest which was taken in it by the Government and by the Legislature. He should like to impress all with enthusiasm for the work of the Society, which was doing a great work for the country. He congratulated its members upon their extensive collections of insects, and their library, which was the best of its kind in the country.

The Rev. Dr. Fyles, of Quebec, read his presidential address on "The importance of Entomological studies to the community at large," and illustrated it with a number of beautifully-executed colored diagrams, the work of his own hand. His charming manner and choice diction added to the interest and unflagging attention which was bestowed by the audience. It would not be practicable to give a synopsis in brief form of the address; it will soon be published in the annual report of the Society, and be available to all who wish to read it.

Dr. James Fletcher was the next to address the assembly. He took as his subject "The Value of Nature Study in Education," and delighted all present with the spirited manner in which he discussed the subject and impressed its importance. At the close he illustrated his remarks with a series of beautiful lantern pictures. Votes of thanks were given to the Hon. Mr. Dryden, the speakers of the evening, and Prin-

cial Merchant for the use of the lecture-room and lantern.

THURSDAY'S SESSIONS.

The whole day was taken up with the reading of reports from the council and officers of the Society, the Branches at Montreal, Quebec, and Toronto, the Sections in Botany, Geology, Ornithology and Microscopy, and accounts of the insects of the year by the Directors in their several localities. A large number of papers were read and discussed, many of them of a highly technical and scientific character, but others of a practical nature. The members from a distance brought a variety of interesting specimens illustrating the papers that were read, or showing the notable captures of the year. The following is a list of the officers elected:

President—Rev. T. W. Fyles, D. C. L., South Quebec.

Vice-President—Prof. W. Lochhead, Ontario Agricultural College, Guelph.

Secretary—W. E. Saunders, London.

Treasurer—J. H. Bowman, London.

Directors—Division No. 1, C. H. Young, Ottawa; Division No. 2, J. D. Evans, Trenton; Division No. 3, E. M. Walker, Toronto; Division No. 4, G. E. Fisher, Freeman; Division No. 5, J. A. Balkwill, London.

(The ex-presidents of the Society are ex-officio Directors, viz.: Dr. Wm. Saunders, Ottawa; Rev. Dr. Bethune, London; Dr. J. Fletcher, Ottawa; Mr. W. H. Harrington, Ottawa; Mr. J. Dearness, London; Mr. H. H. Lyman, Montreal.)

Librarian and Curator—J. A. Moffat, London.

Auditors—J. A. Balkwill and J. H. Hamilton, London.

Editor Canadian Entomologist—Rev. Dr. Bethune, London.

Delegates to the Western Fair—W. E. Saunders and J. A. Balkwill, London.

Delegate to the Royal Society—Rev. Dr. Bethune.

Library and Rooms Committee—Messrs. Balkwill, Bethune, Bowman, Dearness, Moffat and Saunders.

VETERINARY.

Dystokia.

Soapsuds, Lobelia Tea, Attention to the Position of the Dam, and Persistence, with Gumption, Will Save Many a Seemingly Hopeless Case.

Few stock-breeders, and especially horse-breeders, but have lost animals from wrong presentation of foetus at the time at which birth should take place. Many who have not been so unfortunate as to lose females personally in this way have been called to assist in the delivery of a mare or a cow that may have been in the maternal throes for hours without apparent success. Frequently animals are lost at such times through lack of understanding or determination to persist until the last resources have been exhausted or found useless. The writer has seen valuable mares led out beside their graves and felled with an axe, that might have been saved had the attending surgeons possessed more knowledge of their profession. J. C. Metchener, V. S., contributes a valuable paper on this subject in the Journal of Veterinary Archives, which we summarize as follows:

First of all, an anatomical and physiological knowledge is of chief importance. Unless one knows the location, texture, and functions of the reproductive organs and their relations, and is perfectly acquainted with the act of normal parturition at all of its stages, by both sight and touch, he is ill prepared to correct the manifold deviations, abnormal conditions, malformations, and misrepresentations we meet. Indeed, the abnormal conditions are so various that a great many different procedures are necessary to successfully meet the individual cases. Careful examination and cool deliberation are the first requisites. First correct everything that is wrong, then our work is done, unless the animal is worn out by futile efforts, or the actual conformations of parts will not admit of delivery, when we have to reduce the foetus with the knife before it can be delivered. There are two points in this connection to be emphasized. The first is that the uteri of quadrupeds is a suspended bag, supported by broad ligaments, and as it becomes filled can swing to and fro like a hammock, and whirl completely over in violent movements of the body, and dip forward or backward as the weight of the foetus is thrown in these directions and the position of the maternal body favors the inclination. In some cases where causes operate for long periods the uterus is displaced; contractions and corresponding elongations in the suspending ligaments until the organ has a permanent deflection, or twist, or may have sunk so far below the pelvic passage that the young creature can never mount the precipice without help. Uneven floors, holes, and gutters under the hind feet and those low both front and back, throwing the weight of body upon the soft parts, are potent causes.

The next point is that we go at it like rational beings. In nearly all cases where the foetus does

not present properly, the uterus is somewhat distorted, putting the cervix and os uteri more or less of a twist, with a partial fold of mucous membrane formed in the vagina. The wedge-shaped head or thighs have not entered the passage to dilate it, and when we are called, after several hours of labor and rough treatment, and just plunge in to correct the displacement and extract the young one, by the rules of the books, we have a mighty dry, tough time of it.

Now I mean to give you the key. All deflections of the womb, from the lateral to the vertical, from partial to complete torsion, can be remedied by changing the position of the mother. After this is effected, the dry, tumefied parts can be relaxed and mollified by copious injections of warm lobelia tea, soapsuds and glycerin, and you can then accomplish a heretofore almost impossible task with an ease that will make you laugh. I use the old-fashioned English casting straps, rope and pulleys, a lot of bags filled with bran or other light material, warm water by the bucketful, Castile soap, glycerin, a large funnel with neck bent at an acute angle inserted into two feet of gum tubing, and plenty of help. Better take the obstetrical tools along for the sake of scientific appearances; some might come handy.

Suppose we have an anterior presentation, feet appearing out of vulva, head turned back to the flank, nose upward, been in labor until parts are dry, uterus contracted, holding the foetus in vise-like grip. Order your warm soapsuds got ready, pulleys up over hind quarters, front legs bent at the knees and fastened thus by quiller straps around arms and pasterns, buckle your straps around hind canons, well wrapped, hook your pulley into the rings of both straps, turn up the back opposite way to which foetal head is turned, moderate traction upon pulley rope, men lifting with blanket under hind quarters, slip under the stuffed bags, when high as prudent

but could not make her get up. I took her by the horns, whirled her completely around, and she got up with ease. Having her held in that position until the legs were brought into the passage, I delivered a living calf in about five minutes, reminding him of an axiom that it is hard to push a load up hill, but that it will move downward of itself. By altering the position of the patient's body, we can alter the presentations of the offspring, or so change its inclination that it may be readily adjusted.

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.

COLT INJURED BY BARB WIRE.

One month ago one of my yearling colts got tangled in a barb-wire fence, and got badly cut on the inside of the hock joint. I have kept the wound washed with clean warm water and castile soap, with a little carbolic acid. The leg has swollen badly from the hock down to the fetlock. The cut is not a deep one, but much torn and ragged. It appears to be doing all right, but the edges can't come together because of the swelling. What can I do to reduce the swelling, as I am afraid it will stay that way if it is not attended to?

Muskoka, Ont.

H. D. F.



J. T. GORDON, THE CATTLE KING, AT WORK IN THE SADDLE, WINNIPEG STOCK-YARDS.

steady and support her there, pour in your soapsuds and glycerin (at intervals for several minutes). Now you will find it easy to push the front legs (already corded back into the uterus), with knee or knees grasped, push the shoulders opposite to the way neck is turned; if the head does not come around, try for it, bearing in mind that the nose must go downward and from the body. If you do not succeed, roll her more to either side as seems to loosen the womb's grip. Do not give up. Make two gallons of lobelia tea from two ounces of the dried herb, strain and pour in warm. Wait a few minutes, and the relaxation will be marvellous, giving an easy chance to adjust ready for the reaction, when away she comes if you have pluck and gumption. If there be torsion, right it by rolling patient's body the contrary way. This, I think, illustrates the principle, to be varied, of course, to suit the case. Should the abdomen be very pendulous and foetus wedged hard in front of the bones, put under the sling well back, buckling breeching tight, front feet bent back. Make her stand behind and kneel in front, and pray until things come right (with your help). According to the best authors, breech presentations with the feet away forward/under the body or the anterior with all of the feet engaged in the passage are hard to overcome. I find such cases very simple and easy by merely standing the animal on a sharp decline. I will relate a case to illustrate, not to brag. An esteemed colleague (the holder of three veterinary diplomas) called, saying he wished my assistance, that he had worn himself completely out trying to deliver a calf, breech presentation, legs forward under the body. Found her lying head sharply up-hill in the meadow. Asked if it were possible that he had been trying in that position. Yes, he knew that she ought to be on her feet,

Ans.—The leg should be well bathed with hot water, to which add half a cup of vinegar to every pail of water. Bathe well three times a day, and keep the leg well bandaged from the foot up to the hock, which include in the bandage, and only remove when bathing the leg. For the wound, which, no doubt, by this time has become chronic, use hydrarg bichloride (corrosive sublimate) 40 grains, dissolved in 8 ounces of water. Apply with a feather three times a day.

PECULIAR TROUBLE IN MARE'S MOUTH.

A mare eleven years old has been sick ten days, and has not ate a bite; does not seem to be able to swallow or work its lower jaw; ate its oats at nine at night as well as ever, but at five in the morning could not eat a bite; examined its mouth, and found that its lip was swollen badly on the inside at the corner of the mouth at the right side; stayed so three or four days and went away. Next day came a kind of blister or ulcer on the left side of tongue, about three inches long and half as wide; lower part of jaw is swollen a little and tongue somewhat inflamed.

Hastings Co., Ont.

Ans.—The soreness and swelling of tongue and lips indicate irregular teeth or aphtha; the inability to swallow indicates either sore throat or paralysis of the muscles of deglutition (swallowing), called by veterinarians "cerebro-spinal meningitis." It is impossible for me to diagnose the disease from symptoms given, and it is probable she will be either dead or better before this reaches you. If she still lives and is not better, I would advise you to leave her in the hands of your local veterinarian. Definite symptoms will doubtless be shown before this.

J. H. REED, V. S.

FOUL IN FEET OF CATTLE.

Some of my cattle, which we ranched out, were affected with a peculiar disease in the feet—swelling to an excessive extent, after which bealing ensues between the hoofs and at top junction with fetlock joint. In one of my own the side of the hoof completely rotted away, and proud-flesh protruded largely. I cut away the proud-flesh, bathed freely in hot water, and applied a lotion of vitriol. What is the disease?

Your very practical paper now appears one of our necessities on the farm.

Yours truly, ROBERT C. BRANDON.
Cannington.

Ans.—Your cattle have foul in the feet, caused by irritation between the clouts. This disease is produced when cattle are pastured on damp ground, especially when they walk through water and then through coarse grass or rushes; or it may be caused by walking through liquid manure or other irritating substances. Treatment consists, first of all, in removing the cause. In the early stages clean out well between the clouts and apply a little carbolized oil (made of 1 part carbolic acid to 20 parts sweet oil) twice daily. In more advanced cases poultice with boiled turnips until the acute soreness is removed, and then use the oil. If eruptions, followed by proud-flesh, occur, apply a little butter of antimony once daily with a feather until the proud-flesh has been removed. In some cases, notwithstanding treatment, recovery is slow and there will be a sloughing of a triangular portion of skin and flesh, and in extreme cases there is a sloughing of the hoof, as you describe, but if the cause be removed and treatment given early, recovery usually takes place quickly.
J. H. REED, V. S.

DEFECTIVE VISION IN COLT.

I have a colt 5½ months old. Shortly after she was foaled, we noticed that the pupils of both eyes were of a light greenish-blue color. This was very apparent late in the afternoon when the light got weaker and the pupils expanded. In a strong light, it was not very perceptible. She blunders sometimes into things as though short-sighted, but judging from her actions, I do not think she is blind. During the last two or three weeks the left eye has got much clearer-looking; the right remains the same. The eyes are not weak or watery looking, and there is no film. It is the coloration right inside the eye. She is a good big colt, and has been and is doing very well. Is it chronic blindness, or can anything be done for it?

W. E. S.
Parry Sound District.

Ans.—The condition of your colt's eyes is congenital, and nothing can be done. From symptoms given, I do not think the colt is blind, but vision is defective. The eyes may be normally weak, and if so they will be liable to occasional attacks of inflammation from trivial causes, and may eventually become blind, but all that can be done is take good care of the animal, and if it should be attacked with inflammation of the organs, keep in a partially-darkened stall, bathe with warm water, and put a few drops of the following lotion into each eye twice daily: Atropia sulphate, 3 grs.; distilled water, 1 oz.
J. H. REED, V. S.

DISEASED OVARIES IN COW.

I have a pure-bred Shorthorn cow, 9 years old, which calved last April, and in June came in season and was served by the bull. In three and six weeks after, I was suspicious that she was in season, but she did not show much sign. After that she came around two or three times, every three weeks, and was served but failed to get with calf. Then she came irregularly, sometimes in two and sometimes in four weeks, and for a month past she seems to be in season all the time, or at least every few days. Can you tell me the cause of her failing to get with calf? Will she be likely to breed again? Would you advise me to let her go awhile before breeding her, or should I keep on letting the bull serve her?

ENQUIRER.
Wellington Co., Ont.

Ans.—In cases such as you describe, the trouble is generally some derangement in connection with the ovaries. We would advise you to let the cow go at least two months before breeding her again, and in the meantime, give her in her feed, twice daily, one tablespoonful of the fluid extract of black haw.

THOROUGHPIN IN COLT.

I have a three-year-old colt that was kicked on outside of hock joint about two months ago. It ran on pasture for a while, but swelling did not go away. I have been rubbing with camphorated oil and arnica, but it is getting like a thoroughpin. Advise treatment.

SUBSCRIBER.
Stormont Co., Ont.

Ans.—If the enlargement is soft and puffy, a little in front of and below the point of the hock and showing on both sides, it is thoroughpin. Apply a little of the following with smart friction once daily, and have patience, as it sometimes takes considerable time to affect a cure:

Iodine crystals, 4 drs.; iodide of potash, 2 drs.; glycerine, 4 ozs.; alcohol, 4 ozs.
J. H. REED, V. S.

FILLY WITH SWOLLEN LEGS.

I have a fine two-year-old mare that got kicked on the hind legs about three months ago, and the insides of her legs just below the hock still remain swollen. What can I do for them to reduce swelling, or will it ever leave?

Norfolk Co., Ont. SUBSCRIBER.

Ans.—Apply a blister composed of 2 drs. each of powdered cantharides and biniodide of mercury and 2 ozs. vaseline. Clip hair off the swollen parts, and rub the ointment well in. Tie her so that she cannot bite the parts. In 24 hours rub well again, and in 24 hours wash off and apply vaseline. Let her head down now, and apply vaseline every day until the scale comes off. Blister in this way once every month, all winter, unless the swelling disappears in the meantime.
J. H. REED, V. S.

NON-APPEARANCE OF GESTRUM IN SOW.

I have a young Berkshire sow, that had her first litter of pigs on the 5th of May last; weaned them when two months old; have never seen the sow in season since; have been trying all summer to keep her low in flesh, but have not succeeded very well, as she would weigh 250 lbs. now, dressed; she has been running in an orchard all summer, and is doing so now. Is there any remedy?

E. B.
Halton Co., Ont.

Ans.—The only treatment that I can advise is to reduce the sow in flesh. This certainly can be done by limiting the amount of food. It is probable that nature will assert herself in time. Medical treatment is of no use.

MILK WITH UNPLEASANT TASTE.

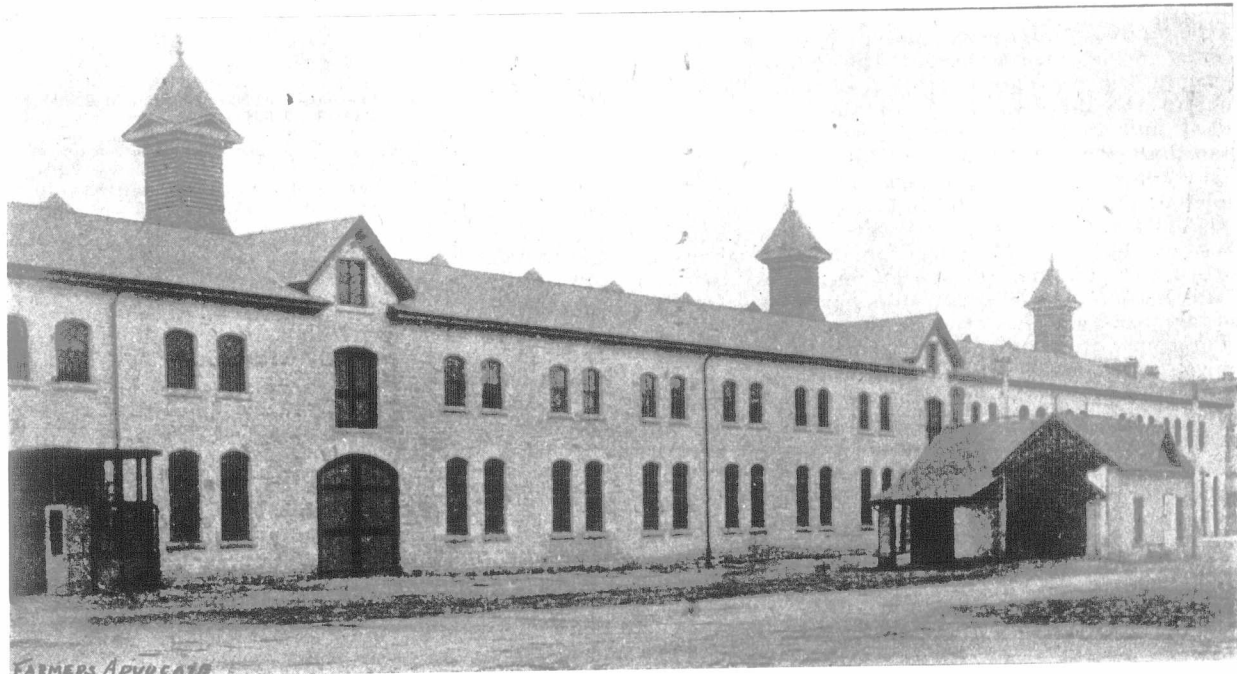
Have a part-bred Jersey cow that is very healthy, and is fed well on hay, grass, and meal (dry). After calving, the milk for quite a long

GROWING SPRUCE TREES FROM SEED.

Can you inform me as to the best method of growing Norway spruce from the seed? I have already a great number of Norway spruce growing for wind-breaks and hedges, all bought from the nurseries, costing me from 7c. to 25c. each. Recently I saw an advertisement from a nurseryman in Illinois, offering spruce trees as low as \$10 per 1,000.

ROBT. C. BRANDON.
Ontario Co., Ont.

Ans.—Much more care is required in growing evergreens from seed than in growing the ordinary deciduous trees, and for this reason it is usually cheaper for the general planter to buy his trees than to attempt raising them for himself. Very few even of our nurserymen raise from seed the evergreens offered for sale in their catalogues. They usually purchase the small seedlings from growers in the Western States, who make a business of it. R. Douglas' Sons, Waukegan, Ill., and D. Hill, Dundee, Ill., make a specialty of growing evergreens, and seedling Norway spruce from 10 to 12 inches high are quoted in their catalogues at \$8 and \$10 per thousand, while seedlings half that size are sold at about half the price. In raising Norway spruce from seed, a piece of well-drained sandy soil should be selected, and be laid out in beds about four feet wide. The seed should be sown early in the spring, rather thickly, either in rows or broadcast, and should be covered with about a quarter of an inch of sandy loam, which should be firmed down on the seed. After this about a quarter of an inch of clear sand should be sprinkled over the bed. The sand is used to keep the surface dry, as a precaution against "damping off" or rotting off of the young seedlings, which often occurs if the bed is too damp. By the time the seedlings appear above ground a framework should be erected over the bed, five or six feet high,



WINTER FAIR BUILDING, GUELPH, ONT.

time tastes and is quite unfit for use, but this passes away and no return of the trouble occurs till she calves again. Please say what is the cause, and give a remedy.

R. C. A.
Ans.—Some cows, and more often Jerseys, give milk of rather a bitter taste, especially just after calving. This may be prevented to a certain extent by giving a purgative of about 1½ lbs. Epsom salts and following up by 4-dr. doses of hyposulphite of soda twice daily.

JAPANESE MILLET FOR PREGNANT MARES.

Will you, through your paper, advise me as to the use of Japanese millet for brood mares? Is it injurious if fed to brood mares? Or would it cause abortion in a mare?

J. A. N.
Androscooggin Co., Me.

Ans.—Japanese millet, if of good quality, can be fed with impunity, in moderate quantities, to pregnant mares, but should not be fed in large quantities. Oats, with an occasional feed of bran, is certainly the best grain ration. There is a danger of abortion in any case where digestion trouble occurs, hence it is wise to be very careful, and if heavier grain than oats be given, it should be fed in small quantities.

Miscellaneous.

SUGAR BEETS FOR HORSES.

Will you kindly let me know in your next issue if sugar beets are good feed for horses? If so, how much would you feed per day?

Victoria Co., Ont. SUBSCRIBER.

Ans.—So far as I know, it is quite safe to feed sugar beets to horses. I think, however, only a limited quantity, say two or three pounds a day, should be used.

G. E. DAY.
O. A. C., Guelph.

upon which laths or brush may be placed to shade the young trees from full sunlight. This shade is required for two seasons, after which the seedlings should be transplanted into nursery rows where they can be cultivated. The young trees make a comparatively slow growth, and are usually not much more than a foot and a half high when five or six years old. The trees are better of being transplanted a couple of times before they reach that height, in order to develop a good root so that they can be more easily moved to where they are to be permanently grown.

H. L. HUTT, Horticulturist.
Ontario Agricultural College.

DOG TRAINING.

I am very much interested in article entitled "Collie Dog Trials," page 735, Nov. 15th, 1901, "Farmer's Advocate." Can you tell me where I can get a work on the subject of teaching dogs? I have some fine collies on my farm, but the men do not understand teaching them well. I am interested in your paper.

T. R. WAUGH.
Vermont.

Ans.—Probably the most complete book on the breeding, training and management of dogs is entitled "The Dogs of Great Britain and America and Other Countries." It comprises the essential portion of the two standard works on dogs by "Stonehenge." It may be ordered through this office. Price, \$1.50.

HOUSE SPACE FOR SHEEP AND HENS.

1. What is the duty on International Stock Food, if any?

2. How many square feet of space is required in a sheep house for each sheep, and how many square feet per hen in a henhouse.

S. H. R.
Grey Co., Ont.

Ans.—1. Twenty per cent. 2. Twenty-five per sheep, and eight per hen.

RAISING CLOVER SEED.

Let me know, through the "Farmer's Advocate," the right way to raise clover seed.

Chicoutimi Co., P. Q. H. P. HEBBERT.

Ans.—Having secured a good "catch" of clover by seeding early in spring on fall wheat or barley, the next season the first crop is cut as early as practicable, say from June 15th to 25th. It is from the second-growth red clover that the seed is secured, the young bumblebees not being sufficiently developed to fertilize the blossoms of the first growth. Large yields of seed are obtained by pasturing the first growth till about June 15th. If any stalks or weeds stand up, run the mower over at that time and then the second growth will come on strong and rapidly. Most of the heads should be allowed to turn brown before cutting, but it is not advisable to wait till every little head is ripe. For cutting, an old self-rake harvester is a good machine, as it is difficult to gather from the ordinary mower swath, though many harvest it in that way. Some use a mower with table attachment. Take into the barn when well dried. It may be necessary to turn the bunches over to the sun. The threshing is done usually with a special mill for the purpose, though some ordinary grain threshing machines can be adjusted to thresh clover. A first-rate crop will yield as much as four bushels per acre. Alsike clover seed matures in the first growth, and we understand that some who make a specialty of growing it for sale find that enough shells out to re-seed the ground for the next season's crop, but that process could not be wisely continued for any length of time.

SUBSTITUTING STUMP FOR RAIL FENCING.

Our farms here are nearly square. In 1872 I built, with pine stumps, a fence 220 yards at south end. About that time my neighbor east built 120 yards with the same material, joining close to mine, going north. There is 30 yards old rail fence. The following year, 1873, I built 144 yards more stump fence, going still towards the north, which leaves about 125 yards old rail fence in the extreme north. I do not know who put up the different parts of the old rail fence, but I find that I put up nearly 100 yards more than half way between the lots. My neighbor east claims that the agreement between my father and his father was that his father take the south end and my father the north end. I never remember the slightest differences or dispute before in regard to said line. Please let me know, through "Advocate," who should build north end, or give me any light on the situation.

Peterboro Co., Ont.

SUBSCRIBER.

Ans.—We think that your neighbor, after standing by and quietly allowing you to replace with stump fencing the portion of the old rail fence which he now says, in effect, is the part he should maintain, cannot fairly or legally insist upon your building the other part too, and that, under the circumstances, the agreement he alleges was made between his father and yours—even if he could prove it by proper evidence—would not be sufficient to sustain the claim he makes.

TILING NATURAL WATER COURSE.

A has two underdrains in his field which have at present for an outlet an open ditch in B's field. This is the natural course of the water. Now these ditches have become almost filled up, and A wishes to have them opened up, or, at least, an outlet for the water some way. Can A compel B to open the ditch up again or put in an underdrain through his (B's) land. B wants to put in a drain, but will only furnish tile large enough to take water off his own land, and wants A to pay the balance to make them large enough to drain A's land. Can B do this, or has he to put in tile large enough to drain his land and A's also.

Poole, Ont.

Ans.—B may be right in claiming that A ought to be at the extra expense which would be incurred by B's putting in tile larger than is required for his own purposes. That, however, is a question to be decided by the engineer appointed by the township council pursuant to the Ditches and Water Courses Act. But B would certainly be in the wrong were he to insist upon and to proceed with the laying of tile such as would not be of sufficient capacity for the surface and other water from your lands as well as his own.

MILLING WHEAT.

Would you kindly inform me in your next issue of the "Advocate" how many pounds of flour an average bushel of wheat is supposed to mill; also the by-products that come from the same, with cost of milling total? 2nd. What is gluten or gluten meal the product of—wheat or corn? A friend of mine says corn, and I say wheat.

DALMENY.

Ans.—Gluten flour is a product of wheat germ called germ meal. Manitoba wheat produces the best sample. Sixty pounds of good wheat will make 40 pounds of flour. By-products: bran, 6 lbs.; shorts, 8 lbs.; screenings, 2 lbs.; low grade, 2½ lbs.; waste, 1½ lbs. Cost of milling, 2½c. per bush. in good merchant mill of 100 bbls. capacity per day. If smaller quantity ground, the cost would be greater.

ROUP IN TURKEYS.

We have a few sick turkeys with swelling like a blister filled with watery substance on each side of head, extending from the ear to upper part of bill; they also have a rattle in the head or upper throat. They eat well and are quite fat, but don't grow much. They have been in this same condition about six weeks, and are shut up by themselves.

A. H. SMITH.

Norfolk Co., Ont.

Ans.—Your turkeys have the symptoms of roup, but being sick six weeks is rather long for not to be getting better or worse. Roup is caused by drafts, wet, over-crowding on roosts, or introducing sick birds into a healthy flock. Remove the cause if possible. Generally speaking, turkeys are better out of doors than housed. Feed a liberal supply of raw onions. If birds will not eat them, catch each one and give about quarter of an ordinary onion daily. We would also suggest the use of one of roup cures advertised in the "Advocate."

SEEDING DOWN A HILLSIDE.

Have a field on the side of a very steep hill, and am anxious to get it well laid down to grass, but find it hard to keep manure on it. Please give an idea of how to plow it, and say the best and most lasting manure to use, and when to top-dress, if in fall or spring?

Newfoundland.

Ans.—It would be better to plow it all one way, turning the furrows down hill. Top-dress with barnyard or stable manure in the fall or winter, preferably in the fall before snow comes to stay. Give surface cultivation and harrowing as early in spring as the land is dry enough to work well without poaching, and seed lightly with barley, cover with the harrow, and seed liberally with a mixture of the grasses which succeed best in the locality. The barley need not be cut, but may be left as a mulch and will help to hold the snow the following winter for protection to the young grass.

BARLEY FOR PIGS—PLOWING AND MANURING ROOT LAND.

1. Does it pay to feed barley to pigs if pork is \$5.50 a hundred and barley worth 45 cents a bushel? 2. Is it better to manure root land in the fall and plow it under shallow or manure it in the spring? 3. Is root land better plowed in the fall for wheat or barley or ganged over shallow in the spring?

J. W. WELLMAN.

Ans.—1. Yes, providing it is ground, soaked, and judiciously mixed with other grains and roots.

2. Yes, and especially when quality of roots is considered.

3. Fall plowing is preferable.

DIVIDING LINE FENCE.

A man sells fifty acres of his farm; there was a division fence in center. How should fence be divided? Part of fence is not exactly on line.

Holstein, Ont.

Ans.—The particulars given are hardly sufficient to enable us to give a definite answer. It is probable, however, that each would be entitled to one-half, and that each should be at half the expense and work of removing and establishing the fence upon the true boundary line. In case of the parties failing to agree, it is a matter for reference to the fence-viewers.

Let every reader of the "Farmer's Advocate" study carefully and take advantage of the rare offers made in our premium announcements on pages 788 and 789.

MARKETS.

FARM GOSSIP.

Nova Scotia.

We had a very dry, hot summer and autumn; no rain from middle of July until 20th of September; a few light showers since.

The hay crop of N. S. is over an average one, and the quality No. 1. Price of hay, \$10, f. o. b., with prospect of higher prices before the New Year. We will have plenty of hay to supply the market in N. S. this year.

The grain crop will not exceed 75 per cent. of an average crop. Oats are worth 50c., f. o. b.; barley, 60c. No wheat for export here.

Potatoes a very good crop on clay soil, and excellent quality. Price 50c. bushel, f. o. b. Turnips also good on clay soil; light on sandy. There is a large quantity grown here to feed to stock. We think them worth about 10c. per bushel for that. Ensilage corn is a fine crop this year. The dry, hot summer favored its maturing. Stock in a general way is in a poor condition. The pastures began to fail about the first of August, and have been very poor since. There was very little adjoined on the marshes this season, which makes store cattle for winter feeding in poor condition. Good beef cattle of 1,200 lbs. and upwards are worth 4c. down to 2½c., live weight. Good stock steers of 1,000 to 1,200 lbs. are scarce and hard to get at any price.

Taking the past year as a whole, it has been a fair average year for the farmers of N. S. The transport facilities is the great question for the farmer. Lower freight rates for short hauls by land and lower insurance rates by water. Down with combines wherever found.

GEO. W. F.

Kent Co., Ont.

We have been favored with a grand fall: fine, even weather, with an occasional rain; just enough, in fact, to lay the dust and keep the late-sown fall wheat growing nicely. We experienced the first hard freeze of the season Nov. 15th. All crops, excepting corn, are safely garnered and considerable fall plowing done, and farmers are well up with their work. The wheat crop was below the average and a very poor sample, largely attributed to the Hessian fly, which got in its work last fall in early-sown grain. Consequently, hundreds of acres was sown this fall, after Oct. 1st, with the hope of escaping the fly. Oats and barley were both fair. Beans away below the average, owing to extreme dry weather and excessive heat during the podding season. Corn is a splendid yield and a large acreage. Husking and shredding machines are being used altogether instead of the old-fashioned way of husking by hand. The machine does the work much easier, quicker and cheaper, with the additional advantage of leaving the fodder in excellent condition for stock feeding. About the only failures were the apple crop and potatoes in some sections. The light apple crop was not altogether unexpected after the extremely heavy one of last year. Occasional orchards were heavily loaded, for which from \$2 to \$2.50 per barrel was paid.

Grain prices are: Wheat, 66c.; oats, 45c.; barley, \$1 per cwt.; beans, primes, \$1.10; corn, 53c. per bushel. Millfeed has gone clean out of sight. Bran \$18 and shorts \$20 per ton. Farmers are buying as little as possible of either, by substituting other feed.

Hog cholera broke out in one section of this county, but by using stringent measures the inspector has it under control, at a cost of thousands of dollars to farmers interested and the Government.

The price of pork has declined from \$7 a month ago to \$5.25 per cwt. at the present time. Dairy butter retails at 20c. per lb., and creamery at 25c. per lb. Eggs 15c. per dozen.

Our Government Poultry Experimental Station, which, by the way, carried off the palm for largest and best-dressed poultry shipped to the Old Country last year, has made its annual shipment again last week. The managers report the birds larger and better than ever.

Nearly all the young men who went from these parts to aid in taking off the Northwest's harvest have returned. They all report a tremendous yield of wheat and a splendid trip, but seem delighted to get back home again.

Nearly everyone around here tried to cut down that enormous Pan-American deficit by attending the Exposition in person. We were all proud of the distinguished position held by Canadian exhibitors, particularly the brilliant way in which Canadian stockmen swept everything before them.

Kent Co., Ont.

W. A. MCGEACHY.

J. R. Alexander, Brant Co., Ont., writes: "I take several papers, but would give up any of them before the 'Farmer's Advocate'."

Prince Edward Island.

At this date of writing, Nov. 22nd, the ground is frozen for the first time to stop the plow. Still the weather continues dry, and well and springs are giving out, and it is becoming difficult in some localities to get the stock watered. Water mills throughout the country that do all our grinding are almost idle for want of water, the streams are so low. If winter sets in without rain, stock will suffer. Fall plowing has been pretty well done, and shipping will soon be over. Quite a lot of potatoes have been shipped this fall to provincial markets, and some cargoes to Boston. Shipments of oats have not been heavy, as the crop was not a heavy one. S. H. Jones, of Sabrevois, Que., has shipped this fall to the American markets 12,000 sheep and lambs, and 8,000 live geese. Other shippers have forwarded to provincial markets quite a large number also. John Richards, of Bideford, Prince County, has imported several Polled Angus cattle from Scotland this season, and also a Shorthorn bull that weighs 2,800 lbs. This is the heaviest Shorthorn ever brought to the Island. These cattle were personally selected by Mr. Richards during a visit to the Old Country a few months ago. They will be a great addition to the breeding stock of the country.

A large steamer will be due here from Liverpool about the first of December to load farm produce for the British market. She will carry a deck-load of cattle and sheep.

Prices: Oats, 40c. to 42c.; potatoes, 24c.; hay, \$10 to \$11 a ton; lambs, 3c. to 3½c. per lb.; live weight; fat sheep, \$4 each; beef, 5c. to 6c.; dead weight; horses, \$100 to \$150 for best drivers; chickens, \$80 to \$100. Hogs, live weight, 5c. to 6c.; dead, 6c. to 6½c.

A large number of chickens have been sent forward from the Government and other fattening stations to English markets, but we have not yet heard what they realized. This fattening business is growing fast here, and is quite profitable.

W. S.

See that your subscription to the "Farmer's Advocate" is paid up for another year.

Oxford Co., Ont.

Up to the last ten days we had remarkably fine weather. The roots were all got in in good shape during the first ten days of the month. The turnips generally did not turn out as well as their appearance warranted us in expecting. Still, they are a fair crop. Neither were the mangolds quite up to the average. Our corn was very good, about the best we ever had, and considering the long period that the seed lay dormant in the ground, during the cold, wet season immediately after planting, it is really astonishing that the corn did so well, and then it grew so fast during the showery weather just about the time that it was getting too high to cultivate, that we did not get ours cultivated as often as we should.

The weather lately has been unfavorable for outdoor work. We had quite a snowstorm in this locality, which prevented the plowing, and the snow has hung on, and now it is freezing too hard to plow even if the snow were gone, and there is considerable plowing to do yet.

The price of hogs has come down until now we are only getting 54c. The difference on the hogs, between 54c. and 7c., would make up the taxes on a 100-acre farm, even when there is the debentures for a new school-house to pay. But the live hogs are getting pretty well cleaned out of the country, and those who had little pigs to sell, and were asking \$3 each, are now glad to take \$2 and even less. Oats and barley have gone away up to an unprecedentedly high price, and peas and corn cannot be bought at all, so it is going to take very careful management and close figuring to make it pay to fatten hogs or anything else this winter, unless the prices also will go up. The cheese market has also been dull, and several of the factories have commenced to make butter instead of cheese. Wheat shows some signs of rising in price, but the majority of our farmers have not much of it fit for market, so that the price does not matter so much.

D. L.

Manitoulin Island.

A representative of the "Farmer's Advocate" recently made a visit to Manitoulin Island, and was delighted with evidences of prosperity noticeable among the farmers of that district. Gore Bay, which is now the county town, lies in the Township of Gordon, snugly ensconced at the foot of a rocky ridge and overlooking as fine a natural harbor as there is on the Georgian Bay. The town, since it received the honor of being chosen by popular vote as the county seat, is growing rapidly. The county buildings now in course of erection present a very creditable appearance, being built of stone, while the style of architecture is both pleasing to the eye and substantial. This town, without a doubt, has a prosperous future before it, being situated, as it is, in the midst of as fine an agricultural tract of land as there is on the Island, where the farms are for the most part all cleared, with good bank-barns and comfortable frame houses, the farms being well fenced and well stocked with both cattle and sheep, which we were pleased to note were nearly all well-bred grades. In that particular, a very large number of our farmers in old Ontario could very profitably take pattern from the farmers on the Island, as there are very few farmers indeed on Manitoulin Island to-day that will use any but a pedigreed Shorthorn bull to breed from. The same with sheep. The major part of the stock rams are brought up from older Ontario, principally Leicesters and Cotswolds. As we said before, the Township of Gordon contains a very large percentage of first-class land, being level and almost entirely free from stone. The Township of Mills, lying directly south of Gordon, is also an agricultural township, but perhaps the banner township is Carnarvon. The crops this year were extra good, spring wheat averaging from 15 to 20 bushels an acre; oats, from 50 to 80; barley, 40. Peas were not so good this year. Hay from two to three tons per acre; while the root crop was enormous. The stock on grass, both cattle and sheep, are looking remarkably well. Without a doubt, there is no better grazing country in Canada than this Island. We were also very much pleased to find a number of the farmers paying so much attention to pure-bred stock, especially Shorthorns, there being several herds of Shorthorns that for quality would be hard to beat, prominent among which is that of Mr. Edwin Battye, which includes a valuable importation from Britain, recently received, and which was reviewed in Gossip in the "Advocate" for Nov. 15th. In fact, we saw animals here that would have made things very interesting at Toronto Exhibition. At the present time stock is the great asset of the Island, but there are other possibilities; for instance, there is practically an inexhaustible supply of marl on the Island, which only requires a little capital to convert into first-class cement. Then there is pulp wood in abundance. Help is scarce, and as a result wages are high, a man commanding from \$26 to \$28 a month, with board. Signs of prosperity are everywhere visible; and the people appear happy and contented, or, as one man put it, Manitoulin Island is Canada's Valparaiso, which is a Mexican word meaning "Paradise."

In practical value and wealth of illustration, our farmers' paper equals the "Farmer's Advocate."

South Perth, Ont.

Winter has apparently come at last, and, as often happens after a fine fall, it has caught some farmers unprepared. A great deal of plowing still remains undone, and we even hear of some fields of turnips still exposed to the merciless blasts of winter. No doubt, that if the good weather lasted till March there would still be some with that fall work undone. This is usually the case with those who follow the extensive rather than the intensive system. The receipts of milk at the St. Mary's creamery are holding out well, the average still being nearly a ton and a half per week. A few of the patrons have invested in hand separators, but, at any rate, as far as the creamery is concerned, the plan is not a success. The cream is often not of nearly the same consistency as that separated in the factory, and whether or not this is the sole cause, it is found that the percentage of butter-fat in the buttermilk from churnings where the two are mixed is much higher than from that separated in the factory. In several instances also, the cream when received at the factory was unfit for churning, the separators having evidently not been properly washed before using. The scarcity of rough feed is putting feeders at their wits' end and making them wary in buying stockers. Hogs have taken a decided drop, but are on the rise again. Poultry is now being closely looked after, the Whyte Packing Co., of Stratford, being in the market for all kinds. J. H. B.

Ontario County, Ont.

In this locality winter is again with us, and the farm stock, after an exceptionally good pasture season, are entering winter quarters in perhaps better condition than for many years. A good corn and root crop also promise for the cattle at least, an abundance of winter feed. The increase in the corn acreage has been very marked, and a great many new silos have been erected. Small silos for very small herds is a prominent feature in this connection. In this immediate neighborhood one herd of only five cattle have a silo for their benefit, and on the next lot a single cow is favored in like manner. The round stave silo is the general favorite, although cement is used extensively in the south townships. As to the comparison (from an economic standpoint) of wood and cement as silo material, it is enough to say that if it were necessary to use the latter at present prices probably not one in a half-dozen of the present number would have been erected. The simplicity of construction of the stave silo is of especial advantage to the tenant class of farmers, and moving silos from one farm to another, by taking down and rebuilding, is sometimes practiced. J. W. W.

Coming Agricultural Events.

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

Fruit Growers at Cobourg, Ont.

The convention of the Ontario Fruit Growers' Association at Cobourg, Ont., Dec. 4, 5 and 6, promises to be one of the best ever held, judging by the programme issued by Secretary Wolverton of Grimsby, which is one of the most varied, practical and attractive ever presented. Our readers within reach, conveniently of Cobourg are strongly urged to attend this meeting. The fruit-growing interests of the country are rapidly growing in importance, and a large number of the best-posted horticultural specialists will take part in the discussions.

Shorthorn Bulls Wanted.

Mr. W. D. Flatt, Hamilton, Ont., writes us that he is prepared to buy a carload of good young Shorthorn bulls, from 10 to 18 months old, reds and roans, for the Western States trade. They must be good individuals, fleshy, well proportioned, in good condition, and at fair prices. No high prices can be paid for the trade for which they are intended. Breeders having such for sale should write Mr. Flatt at once, giving all necessary information as to age, color, breeding, condition, price, etc.

Christmas is coming—so is the beautiful Christmas number of the "Farmer's Advocate." Moral: Forward your renewal.

Mr. Little's Shorthorn Sale.

We again call attention to the advertisement of the dispersion sale, on Dec. 18th, of the entire herd of Shorthorn cattle belonging to Mr. S. G. Little, Hagerman, Ont., 18 miles from Toronto. The herd consists of 34 head, 24 females and 10 bulls, the latter a good, strong, fleshy lot, of good age for service. The catalogue has not reached us at this writing, but we know the foundation stock was well selected, and that high-class imported and Scotch-bred bulls have been used in their breeding, and we feel sure they will be found to be a very useful lot of cattle, and we know that Mr. Little is not expecting fancy prices, but is prepared to let them go at the people's own prices. Buyers may depend upon fair and honorable treatment, and will get good value for their money. The location is convenient to Toronto, and the terms, nine months' credit, or five per cent. per annum off for cash, are easy. Send for a catalogue giving full particulars.

Manitoba Grain Crop.

The Provincial Agricultural Department has received the first instalment of replies from the country crop reports, from which the official bulletin on the grain crop is compiled. Hugh McKellar, Chief Clerk, speaking on the wheat question, gives a few figures which show the amount of grain already in sight. The amount of wheat sent east on the C. P. R. is about 12,000,000 bushels; on the C. N. R., about 3,000,000 bushels; in store at Fort William, 5,000,000 bushels; in store in elevators at C. N. R. terminals, 2,000,000 bushels; in elevators, 18,000,000 bushels; in mills, 2,000,000 bushels. The total wheat in sight approximates 42,000,000 bushels. Mr. McKellar feels that the 50,000,000 aggregation for Manitoba wheat will probably be realized.

Do not delay, but renew to-day your subscription to the "Farmer's Advocate."

Sugar Beet Analyses.

Prof. Shuttleworth's analyses of the average specimens of beets grown on the trial plots in the various districts of Ontario in 1901 show the following results as to sugar content and purity, and the table also gives the yield per acre.

	Per cent.		Yield per acre.	
	Sugar.	Purity.	Tons.	Lbs.
Alvinston	15.19	86.1	21	876
Belleville	15.7	88.8	16	1,728
Cayuga	16.2	88.2	14	1,665
Clinton	14.8	86.7	16	662
Dunnville	15.13	88.15	15	523
Lindsay	16.4	87.3	15	131
London	15.6	86.1	17	59
Mount Forest	16.6	89.3	15	156
Port Perry	17.3	90.6	16	180
Peterboro	15.4	88.4	18	1,701
Whitby	15.8	89.1	22	83
Berlin	14.6	85.8	18	1,398
Simcoe	14.5	86.4	14	610
Waterford	15.3	86.5	17	317

Consult the label on your paper, and in renewing, remit accordingly.

Annual Meeting Experimental Union.

The twenty-third annual meeting of the Ontario Agricultural and Experimental Union will be held at the Agricultural College, Guelph, on Dec. 9 and 10, commencing at 1:30 p. m., Monday. There were over 3,000 co-operative experiments conducted this year. The most important results of these tests will be reported and discussed. Dr. H. W. Wiley, Washington, D. C., is to give an illustrated address on "The Growing of Sugar Beets and the Manufacture of Beet Sugar." Mr. J. A. Ruddick is to speak on "Our Dairy Industry, with Hints and Suggestions as to Needed Improvements." "The Reorganization and Improvement of our Agricultural Exhibitions" will be discussed by F. W. Hodson, Prof. G. E. Day and Supt. G. C. Creelman. "The Growing of Fruit of High Quality" and "The Packing of Fruit for the Best Results" will be handled by W. N. Hutt and Elmer Lick. The ladies' session, Monday afternoon, will be addressed by Miss Watson, Principal of the Ontario Normal School of Domestic Science, Hamilton, and by Mrs. Joy, Principal of the Domestic Science Department, Toronto Technical School. The programme embraces many other equally good features. The Ontario railroads will grant excursion rates to Guelph for those attending the Experimental Union and the Provincial Winter Show.

Owing to increasing duties in connection with the Ontario Agricultural College at Guelph, President James Mills has relinquished his duties as director of the Dairy Schools at Strathroy and Kingston, which will now be taken up by Mr. G. C. Creelman, Superintendent of Farmers' Institutes. The direct personal charge of the two schools continues in the hands of the present superintendents.

Watch for the Christmas number. It will be a beauty. Renew to-day, and induce your friends to subscribe and they will obtain a copy of it.

Toronto Markets.

Considering the class of cattle being offered, trade at the Western Cattle Market has been fairly good. Export and butchers' cattle of good quality are scarce, and selling at good prices, while the common grades are plentiful and cheap. The same can be said of feeders and stockers. Sheep and lambs are selling at the lowest prices recorded this season. Milk cows sold at \$30 to \$50 each. Hogs have advanced 50c. per cwt.

Export Cattle.—The highest price paid for the best load of 16 export steers, 1,300 lbs. each, was \$4.80 per cwt., while the bulk sold at \$4 to \$4.50 per cwt. Export cows sold at \$3 to \$3.50 per cwt.

Butchers' Cattle.—Good to choice butchers' cattle are scarce. Loads of good sold at \$3.80 to \$4 per cwt. Choice picked lots sold at \$4.25 to \$4.50. Common to medium grades sold at \$3 to \$3.50 per cwt., while inferior sold at \$2 to \$2.75 per cwt.

Bulls.—Heavy export bulls sold at \$3.75 to \$4.12½ per cwt. Light export bulls sold at \$3.25 to \$3.60 per cwt.

Feeders.—Short-keep feeders are worth \$4 per cwt. Well-bred steers, weighing from 1,050 to 1,200 lbs. each, are worth \$3.75 to \$3.90 per cwt. Light steers and those of poorer quality sold at \$3.25 to \$3.50 per cwt. The demand for feeders is not as great, as it was, owing to the fact that the distillery byres are all filled.

Stockers.—The bulk of stockers offered were of poor quality, the best selling from \$2.50 to \$3 per cwt., and those of inferior quality sold at \$1.75 to \$2 per cwt.

Sheep.—The run of sheep was light. Prices easy, at \$2.75 to \$3 per cwt. for ewes, while bucks sold at \$2.50 per cwt. Export sheep are not wanted before Dec. 10th, as there will be no shipping space available before that date.

Lambs.—Deliveries were not large. Prices easy, at \$2.50 to \$3.25 per cwt. Very few veal calves offered. Prices easy, at \$2 to \$8 each.

Milk Cows.—Prices steady, at \$30 to \$50 each. Something of choice quality would bring from \$5 to \$10 more than these prices.

Hogs.—Contrary to the expectations of many, the price of hogs has again advanced 50c. per cwt. Best select bacon hogs, singers, not below 160 lbs. and not above 200 lbs. in weight, off cars, not fed or watered, sold at \$6 per cwt. Thick fats sold at \$5.50 per cwt., and light fats at \$5.62½ per cwt.

Dressed Hogs.—Deliveries are not heavy, and prices again advanced, in sympathy with the live hog market. The Harris Abattoir Co. bought 200 at \$7.65 to \$7.85 per cwt.

	Extreme comparative prices to-day.	Two weeks ago.	Same date last year.
Export cattle	\$ 4.80	\$ 4.85	\$ 4.60
Butchers' cattle	4.50	4.40	4.50
Bulls	4.12½	4.25	4.25
Feeders	4.00	4.00	3.90
Stockers	3.25	3.25	3.25
Sheep	3.00	3.40	3.50
Hogs	6.00	5.50	5.75
Milk cows, each	50.00	50.00	50.00
Lambs, each	3.00	3.15	3.75

Wheat.—Receipts on the street market were 1,000 bushels. White sold at 68c. to 75c. for 300 bushels; red, 100 bushels, sold at 68c. to 74c.; goose, 600 bushels, at 66½c. to 67c.

Oats.—Prices firm, at 48c. to 49c. per bushel.

Hay.—Prices steady, at \$11 to \$12 per ton for timothy, and \$7 to \$9 per ton for clover.

Barley.—Two thousand bushels sold at 54c. to 62c.

Peas.—Prices firm, at 75c. to 78c. per bushel, with few offerings.

Bran.—City mills sell bran at \$16 per ton; shorts at \$18 per ton.

Straw.—Sheaf straw sold at \$10 to \$11.50 per ton for five loads.

Dressed Hogs.—Prices firmer, at \$7.60 to \$7.85 per cwt.

Poultry.—Deliveries large. Prices easy, as follows: Chickens at 40c. to 60c. per pair; ducks, 50c. to 80c. per pair; turkeys, 7c. to 9c. per lb.; geese, 5½c. to 6½c. per lb.

Butter.—Prices steady, at 18c. to 22c. per lb.

Eggs.—Strictly new-laid eggs retail at 35c. per dozen.

Dressed Beef.—Fore quarters, per cwt., \$4.50 to \$5.50; hind quarters, at \$6 to \$7 per cwt. Mutton, dressed carcass, \$4.50 to \$5.50 per cwt. Lamb, per carcass, \$5.50 to \$7.50 per cwt.

Chicago Markets.

Chicago, Nov. 27th.—The best lot of steers seen on sale was a bunch of 1,500-lb. steers that went at \$7.25, and most of the really good to choice steers on offer went between \$6.50 and \$7. Below these a very fair to good style of 1,200 to 1,450 lb. steers went at \$5.90 to \$6.35; coarse and underfat 1,200 to 1,300 lb. grades, \$5.25 to \$5.85; very fair, fat, light steers, \$5.50 to \$6; good many medium-fleshed and coarse steers at \$4.50 to \$5.25, with common, thin, light killers, \$3.60 to \$4.40. All cattle to sell below \$6 moving very slowly.

Sheep.—Sheep and lamb receipts to-day included about five double docks of fresh rangers, with a good many hold-overs. The market was steady on fat sheep and lambs. Some export stock was bought at \$3.10 to \$3.60 for ewes, and \$4 to \$4.25 for wethers.

Hogs.—A fair to good grade of strong-weight mixed sold largely within a range of \$5.55 to \$5.75, though a nice smooth, medium and heavy butcher top made \$5.75 to \$5.80. In light mixed the trade was late in getting started, at even lower prices, ranging from about \$5.35 to \$5.55.

Montreal Markets.

Cattle.—A pair of prime large steers were bought for shipment to Britain at 4½c. per lb., but very few of the others brought over 4c. per lb., and from that down to 3½c. for pretty good cattle. Common stock were difficult to sell, and brought from 2½c. to 3c. per lb.

Sheep.—Sheep sold at from 2½c. to a little over 3c. per lb., and the lambs at from 3c. to 3½c. per lb.

Hogs.—Fat hogs sold at about 5½c. per lb., weighed off the cars. A few choice ones brought 6c. per lb.

Buffalo Markets.

East Buffalo, Nov. 28.—Hogs.—Demand active; market firm; Yorkers, \$5.90 to \$5.70; mixed packers, \$5.80 to \$5.90; heavy, \$5.90 to \$6.05.

Sheep and lambs.—Offerings, 11 cars; firmer; top lambs, \$4.60 to \$4.70; culls to fair, \$3.50 to \$4.60; Canadas, \$4.70 to \$4.75; sheep, \$3.25 to \$3.50; wethers and yearlings, \$3.60 to \$3.75.

British Markets.

London, Nov. 25.—United States cattle, 6½d.; Canadian sheep, 5d.; cattle made 5½d. to 5½d. on Saturday.

Liverpool, Nov. 25.—Canadian cattle, 5½d. to 5½d.; sheep 5½d. Cattle fair; sheep slow.

Premium Announcement

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An AI Farmer's Knife
DIRECT FROM SHEFFIELD, ENGLAND.


Finest Steel Blades. Strong and Durable.
Beautiful Nickel Handle.

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IT WILL MAKE AN EXCELLENT CHRISTMAS GIFT.

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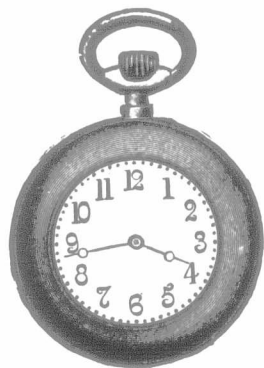
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Along the path of a useful life Will heart's-ease ever bloom; The busy mind has no time to think Of sorrow, or care, or gloom; And anxious thoughts may be swept away, As we busily wield a broom. —Louise M. Alcott.

White Hands.

Six young ladies of a useful class were gathered around a window overlooking pleasant grounds, and talking very eagerly about the future. Their plans were various, reaching onward with no thought of grief or sorrow. Wealth, admiration, fame, were among the attainable. Music and art would each have its devotee. One would continue her studies at a higher institution; another would become the mistress of a beautiful home.

One had not spoken, and when the question, a second time, was asked impatiently, "Louise, what are your plans?" her answer was eagerly awaited.

"I shall help my mother," said quiet Louise. "O-o-oh, we all mean to do that, of course," said one; but what plans have you? You can't mean just to stay at home in a poky way, and not try to do anything."

"Girls," said Louise, "I do mean to do just that, for the present, at least. My business shall be to help my mother in any way it is possible for me to help her."

A glance at the puzzled faces around her, and she continued:

"Shall I open my heart to you a bit, and let you read a sad passage from it? You remember Stella Morton? You remember that I once visited her during vacation? Her home was very pleasant, and a large family of brothers and sisters made the days pass merrily. Our pleasures kept us so much out of doors that we saw little of Mrs. Morton—a delicate, quiet lady, always ready to bestow sympathy when needed. I noticed that the girls were not so tidy and helpful about the house as I had been taught to be; but as I did not see who supplied all deficiencies, I thought little about it. One day a picnic had been planned, and I heard the girls impatiently commenting upon the illness of the one servant, as it threw upon them some disagreeable household duties. How Mrs. Morton ever accomplished the delicious lunch we ate; that day only such overworked mothers can explain; the little assistance given by Stella and Alice must have been most unsatisfactory.

We returned by moonlight, so tired that we went to our rooms without seeing anyone, if, indeed, anyone was up at that hour. By and by—I don't know how long we had slept—a frightened voice called Stella, who had shared my room, and soon we all knew that gentle, tired Mrs. Morton was alarmingly ill.

"At sunrise she was gone, without hearing the voices so full of love and sorrow. Girls, I can't describe Stella's grief; she placed her own delicate white hand beside the thin, toil-stained dead one, and said: 'See, Louise, at what cost mine is so fair; and I have been vain of my white hands.' She kissed the cold fingers again and again.

"One day I saw Stella at her mother's work-table, holding up some unfinished piece, evidently left in haste. 'Louise,' she said, 'mother asked me to do this, and I really meant to; oh, why didn't I do it at once!'

"You can't understand what an impression all this made upon me, and when a few days later I was called home by the failing of my own mother, the hope was intensified. Mother was very ill, and as hope grew fainter my distress was hardly less than Stella's. One night, when my sister and I were too anxious to sleep, I told her about Stella, and we then pledged ourselves to take from mother every possible care, and to make our home our first object. To make the promise more binding and real, we exchanged rings. Mother's illness made it seem more natural and easy at first, and everything moved on so smoothly that I really think she gained her health more quickly. All the mending and sewing was done promptly under her direction, and we always silenced her by saying we liked to do it. She seldom knows what is prepared for tea or breakfast; we engaged her not to inquire, for we know that she enjoys little surprises. The boys and the dear baby are better and happier for having so much of her time and attention.

"Last summer I visited Stella again. She is the light of the home. Only for the discipline I passed through could I understand how she was able to accomplish so much. Once when I expressed something of this to her, her eyes filled with tears, as she asked: 'Do you suppose she can see us—that she knows what I am trying to do?' Her hands were not fair and delicate, but I thought them more beautiful. Why, girls, I never see a pretty hand now without wondering whether it has a right to be fair and white. So I am going home to help mother. I shall be happy, because I know it's my duty."

As Louise finished speaking, the retiring bell sounded. Not a word was spoken, but the kiss which each bestowed upon the flushed face of the earnest speaker told of the impression her words had made. Those mothers alone can tell whether the influence was lasting.

Sympathy.

In this sad world where mortals must be almost strangers, Should we not turn to those we trust To save us from its dangers? Then whisper in mine ear again And this believe, That aught which gives thy dear heart pain Makes my heart grieve.

God wills that we have sorrow here And we will share it, Whisper thy sorrow in mine ear That I may also bear it. If anywhere our trouble seems To find an end, 'Tis in the fairy-land of dreams Or with a friend.

—Lionel Temnyson.

"Are these pure canaries?" said a fashionable lady. "Oh, yes, madam," said the dealer. "I raised them 'ere birds from canary seed."

THE QUIET HOUR.

The Old Church Bell.

"High up o'er the heads of the people, That pass like vague ships on the street, It hangs in its home in the steeple, That throbs with the wind's rhythmic beat. What heeds it the world and its noises? What reck's it of traffic's loud din? Of tears or the clamor of voices That speak of the light hearts within? Enough that its duty is ringing In every condition of weather; Enough that its mission is bringing The spiritual household together; Enough that it strikes for the hours That speed in a ne'er ending chime, And chimes over nuptial flowers, And tolls for the funeral train. Enough that it speaks to the mothers In clear, unmistakable tones, And fathers, and sisters, and brothers, From all the earth's populous zones. Enough that it brings to the altar The ones who have strayed from the truth, As well as the weak ones who falter 'Mid trials and unkindness in their youth. So there while the pale stars are marching, And rivers roll on to the sea, And Heaven's blue vault is o'er-arching, The bell in its belfry will be. And then, when its mission is ended, And turned the last burial sod, The echoes full-toned will be blended With trumpets that call us to God."

A Sunless Sunday.

I thought it was Sunday and I was on my way to church. It was many Sundays since I had been there, but I had nothing to do, and thought it would pass the time away. I did not hear the bells ringing, which so often rang in vain, and it seemed to me I must be late, so I hurried on.

But to my surprise, on reaching the end of the street, no church could I see. I was amazed, and inquired of a passer-by the name of the street.

"St. George's," was the reply. "But where is All Saints' Church?" I asked.

"We have no churches now," replied the man. "So few went, and scarcely one to pray."

As he was speaking, others joined us, and amongst them I recognized many who, like myself, attended church just as a "make-weight" when there was nothing better to be done.

How strangely silent all seemed; no chiming bells, no churches to go to. What a blank, long day it seemed.

"Could not the churches be rebuilt?" was asked on all sides. "They might be," it was thought. "But it would take such a long while," mournfully exclaimed one man who had never been known to attend any place of worship.

"Better wait a long while than never again to hear the chiming of the bells," said another. While we were talking there came toward us an old, haggard man, whom we scarcely recognized as our pastor, so bowed and old had he grown.

"But, my friends," said he, "how is it you have not gone out for the day?"

"Because," answered one, "we came to church."

"My friend," he said, turning to the man who had spoken, "it is too late; I have given an account of my stewardship, and have been found wanting." Tears coursed down his thin, wan cheeks, as he murmured over and over again, "Found wanting, for none would heed me."

The sun was streaming into my window as I woke, awakened by the ringing of yonder church-bells proclaiming it was Sunday, and as I listened to the chimes it sounded the sweetest music I had ever heard.

The Children in Church.

In the morn of the holy Sabbath I like in church to see The dear little children clustered, And worshipping there with me. I am sure that the gentle pastor, Whose words are like summer dew, Is cheered as he gazes over Those dear little heads in the pew.

Faces earnest and thoughtful, Innocent, grave and sweet— They look in the congregation Like lilies among the wheat; And I think that the tender Master, Whose mercies are ever new, Has a special benediction For those dear little heads in the pew.

When they hear, "The Lord is my Shepherd," Or, "Suffer the babes to come," They are glad that the loving Father Has given the lambs a home— A place for their own, with His people; He cares for us and for you, But close to His arms He gathers Those dear little heads in the pew.

So I love, in the great assembly, On the Sunday morn to see The dear little children clustered, And worshipping there with me. For I know that our Heavenly Father, Whose mercies are ever new, Has a special benediction For those little heads in the pew.

—Margaret Sangster.

THE CHILDREN'S CORNER.

The Song of the Wind.

"I've a great deal to do, a great deal to do— Don't speak to me, children, I pray— These little boys' hats must be blown off their heads, And the little girls' bonnets away! There are signs to be cracked and doors to be slammed, Loose window-blinds, too, must be shaken! When you see all the business I have for to-day, You'll see how much trouble I've taken. I saw some ships leaving the harbor to-day, So I'll e'en go to help them along, And flap the white sails, and howl thro' the shrouds, And join in the sailor-boys' song. Then I'll mount to the clouds, and away they will sail On their gorgeous wings through the bright sky; I bow to no mandate save only to His Who reigneth in glory on high."

The Spirit of Cold.

The Spirit of Cold blew his ice trumpet, and the winds sailed to the echo. The birds shivered, and flew to the warm south-land; some of the flowers died when he touched them with his frosty finger, but others fell asleep, saying, "We shall awake next spring!" The wild beasts ran away to their dens, and the tame beasts were cared for by men who gave them shelter.

"Ah, these men!" cried the Spirit of Cold, in anger. "They have no feathers, no leaves, no fur; but they make clothes from flax, and cotton, and from the wool of sheep. I will kill these men."

Then he blew shrill notes from his trumpet, and laughed when he saw men's noses turning blue with cold, and little boys and girls blowing upon their cold fingers. But more wool was made into cloth and flannel to keep everybody warm. And from the skins of beasts were made mittens and coats and shoes to keep out the cold. So when the Cold Spirit blew again everyone had warm clothes, and the children looked so rosy that he could not help saying: "How pretty! Did I paint those cheeks so pink?"

Then the naughty Spirit ran down Poverty-Alley and sounded his trumpet of ice, and poor little starved babies shivered and died, while the ragged, bare-footed girls and boys were hungry and cold and sick.

But good men and women came with food and warm clothes, so the poor little children laughed and played in Poverty-Alley.

Then the Spirit made a new ice trumpet and blew the North Wind through it, saying, "I will freeze all mankind."

But men had gone down deep into the earth and brought up millions of tons of coal; they had gone to the forests for car-loads of wood, and when the Cold Spirit came they were ready for him—with glowing fires that warmed every corner of their houses. They said: "How cold it is! We must send a load of wood and a ton of coal to the poor families in Poverty-Alley."

So the Spirit of Fire drove away his old enemy, the Spirit of Cold, who went to the river, saying, "Here fire cannot come, for the Spirit of Water is the foe of the Spirit of Fire."

"No, no!" cried the Water Spirit. "Fire is my good friend now. He turns me into the Spirit of Steam. When I am water, I can only turn slow mill-wheels, but when I am steam I can pull boats and trains, and work great city mills, and heat houses, and—"

"How dare you speak of heat?" cried the Spirit of Cold, angrily. He took out his ice key and locked up the Water Spirit beneath a great door of ice. But the boys and girls ran out and skated merrily on the frozen river.

"I have only given them a new game!" said the Cold Spirit. "But I will kill them with snow."

Then he poured the white flakes over the hills. But the children played with balls of snow, made snow men and snow houses, and coasted down the hills.

"Only more fun for everyone!" cried the Spirit of Cold. "It seems that I can do no harm. Perhaps I'd better try to do some good."

So he ran off to a Southern Country, where the heat was killing people, and he blew gently on his trumpet and drove disease away from the land. He soon found out that it is far pleasanter to try to do good than to try to do harm.

The Wind in the Chimney.

Over the chimney the night wind sang And chanted a melody no one knew; And the woman stopped, as her babe she tossed, And thought of the one she had long since lost, And said, as her teardrops back she forced, "I hate the wind in the chimney."

Over the chimney the night wind sang, And chanted a melody no one knew; And the children said, as they closer drew, "Tis some witch that is cleaving the black night through— And we fear the wind in the chimney."

Over the chimney the night wind sang, And chanted a melody no one knew; And the man, as he sat on his hearth below, Said to himself, "It will surely snow, And fuel is dear and wages low, And I'll stop the leak in the chimney."

Over the chimney the night wind sang, And chanted a melody no one knew; But the poet listened and smiled, for he Was a man, and woman, and child, all three, And he said, "It is God's own harmony, This wind that sings in the chimney."

—Bert Harte.

Ingle Nook Chats.

My dear Guests,—

We have had a fall of snow. This in itself is not by any means an unusual event; in fact, it is of such common occurrence in this dear Canada of ours that we have almost ceased to regard it as the miracle it really is. "Miracle!" do you say incredulously? Yes, is it not miraculous that those fairy-like, tiny, and seemingly helpless crystals, falling one by one, have almost the power of the philosopher's stone—power to transmute all that might be called gray and unlovely into visions that delight the most fastidious eye? The leafless branches that looked so bleak when shorn of their gala autumn dress, robed in this soft ermine are artistically beautiful. Every panel of the old zigzag rail fence, and every old gnarled stump has donned new graces, while the blustering wind, so madly chasing its downy playfellows, has piled them into marvels of statuary whose delicate curves shame the sculptor's skill. But it is the children, the merry, light-hearted children, who get most pleasure from the first snowfall, just as they, unwitting philosophers, usually get the lion's share of all good things, simply because they guilelessly open their hearts to receive them. What a picture our Royal visitors would have seen had they waited a little longer to visit Our Lady of the Snows! Little men and women—their future subjects—with glowing cheeks and sparkling eyes, gaily climbing on passing sleighs or coasting on every little incline afforded by the streets, would have given them another very pleasant memory to bear across the sea.

Now just a tiny chat about our competitions, and then when next we meet it will be in our grand Christmas number, which is intended to be even more beautiful than before—if that be possible. A few days still remain before the closing of Contest XV., and already a goodly number of papers have been received. I fear this contest has been too easy, as several have sent correct answers; in this case neatness, correct spelling, etc., will assist in determining the winner. Contest XVI., announced in last issue, will prove instructive as well as entertaining to all who try it, and their number will, I trust, be large; indeed, the prize obtained in any of these competitions is but a minor affair; the principal benefit is the brightening of intellect and broadening of mind that invariably follow mental exercise. Then come, my friends, to the cosy Ingle; there are seats in plenty and warmth and welcome to spare for all.

THE HOSTESS.

Ingle Nook Chats, Pakenham, Ont.

A Word of Explanation.

The editor of the "Home Magazine," feeling that an apology is due both to "Mollie" and to the readers of her very interesting and instructive Notes of Travel for the want of sequence in their insertion in its pages, offers this apology now, and with it a word of explanation. The position is this: While Mollie was flitting about from one spot to another, barely stopping at any for more than a day or two at a time, but taking copious notes of all she was seeing, the "Advocate," remaining quietly at home, could only give to its readers a comparatively small portion of the messages she sent, the remainder having to be pigeon-holed for a more convenient season, and sometimes they had to make way for notes of timely visits paid to places of special momentary interest, such as the Glasgow Exhibition. Thus it would occasionally happen that "Mollie" would be ahead of the "Advocate," and sometimes it would be vice versa. This time it has to be vice versa—for we want our readers to know that although "Mollie" is "in winter quarters, and has given up gadding for awhile," before she did so she took a share in the "welcome home" given to the Royal wanderers, and also had a taste of a London fog. We can afterwards, in more leisurely fashion, make room for what lies in the editorial pigeon-hole, of "Mollie's" notes written as from Scotland and Ireland.

Man, Poor Man.

He cannot put a puff round his elbow when his sleeves wear through.
His friends would smile if he disguised a pair of frayed trousers with graceful little shingle flounces.
The poor thing must shave every other day at the outside or pose as an anarchist.
He has to content himself with sombre colorings or be accused of disturbing the peace.
He may not wear flowers or ribbons in his hair, or matter how bald he may become.
The feathers in his cap are as nothing from the decorative standpoint.
He can't edge his coat sleeve with a fall of lace to hide a scarred or maimed hand.
A pink veil is out of the question, no matter how muddy his complexion may become.
As for covering up the stain made by a careless waiter with a blot—no!
Moral: We're glad we're a helpless woman—Philadelphia Record.

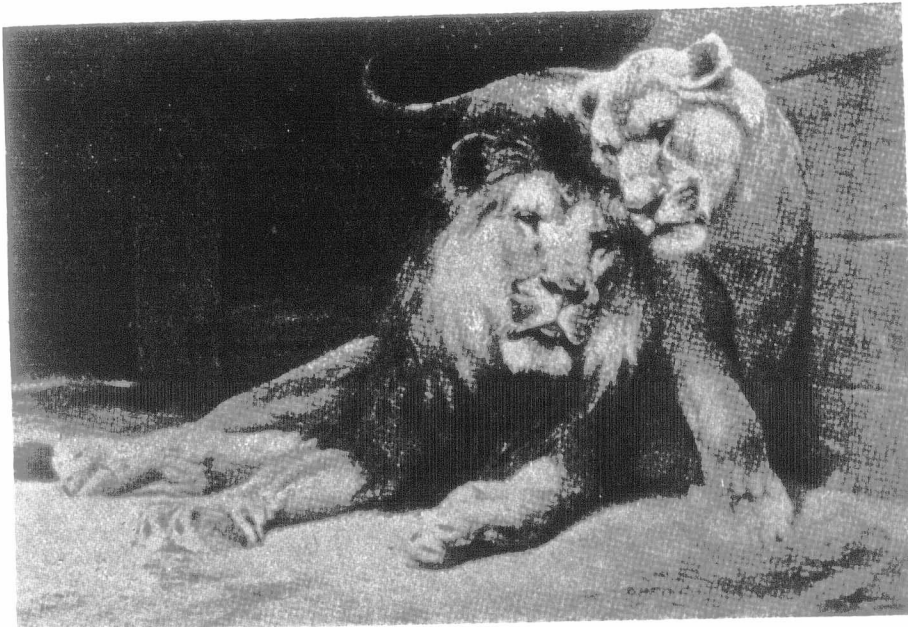
"The Lion Pair."

Poor caged captives! Poor royal forlornities! Poor hopeless, dejected prisoners! How well the artist has made them, both by position and attitude, mutely tell us their tale of sorrow. King Leo, by drooping jaw, watery eye, flaccid paw and ragged mane, is a very picture of despair. Queen Leona is trying to comfort him, as a good wife should, although her lot is as hard as his, and her memories of a lost past just as vividly tormenting as his own. But to comfort is the prerogative of her sex, and Leona can but do her best. She interposes her body, pillow fashion, between the bowed head of her lord and the hard boards of the partition which confines them both alike. She bends her ear to his oft-repeated complaints, and whispers, in lion lingo, what consolation she can. By extended tail, by firm grip of the floor with her big forefront paw, she shows that there is fight in her yet, and that if she can only arouse his kingship out of his condition of hopeless despair, all is not lost. They may never roam forest or jungle again, they may nevermore enjoy the bliss of perfect liberty, but between them they may taste revenge, and revenge is sweet. When their keeper comes, presently, we venture to predict that these monarchs of the forest will give him, in spite of present appearance, a very warm reception. H. A. B.

Different Ways of Cooking Potatoes.

(From Canadian Housekeeper.)

MASHED POTATOES.—Boil in salted water, and strain. Then dry, mash quickly with a wire masher until light and free from all lumps; add a piece of butter the size of a walnut, a quarter cup cream, a teaspoonful of salt, and a dash of pepper. Beat with a fork until very light. Serve in a heated, uncovered dish.



"THE LION PAIR."

POTATO PUFFS.—Prepare the potatoes as directed for mashed potatoes. While hot, shape in balls about the size of an egg. Have a tin sheet well buttered, and place the balls on it. As soon as they are done, brush over with a beaten egg; brown in the oven. When done slip a knife under them and slide them upon a hot platter. Garnish with parsley, and serve immediately.

SARATOGA CHIPS.—Peel and cut into thin slices; make dripping quite hot in a frying pan put in the potatoes, and fry them on both sides to a nice brown. When crisp take up, place them on a cloth before the fire to drain the grease, and serve hot, after sprinkling with salt. These can be cooked more evenly and made more appetizing by slicing as near the same size as possible.

POTATO SNOW.—Boil, mash, and prepare as directed for mashed potatoes. Rub through a heated colander into a deep dish, that it may fall lightly and in good shape. Put in the oven a few minutes till heated, and serve hot.

Special Offer to Subscribers.

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

ANY WHO SUBSCRIBE NOW get not only Dec. 1st number, but also the beautiful Christmas number included in their subscription for 1902.

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

A boy was asked which was the greater evil, hurting another's feelings or his finger. "The feelings," he said. "Right, my dear child. And why is it worse to hurt the feelings?" "Because you can't get a rag around them," answered the child.

Travelling Notes.

Tunbridge Wells. Not knowing just at what fragment of my jottings the "Advocate" of the 15th November enabled me to leave my dear Canadian readers, I think I had better take up my story at its present stage, filling up the chinks later on as room in the pages may offer.

As you will see, I date this (on the 8th November) from Tunbridge Wells, where I am settled down for the winter with the very dearest, brightest, cleverest old lady in the world, about whom I must just tell you a little, for she is a remarkable character; the only daughter of a clergyman who, besides this daughter, had twelve sons (consequently she had twelve brothers), many of them scattered all over the world, in Australia, India, New Zealand, the United States, England, and Canada, one of them being no less than the late worthy and noble founder of the "Farmer's Advocate," and we all know how thoroughly he did his part in trying to make the world better for his having lived in it.

This dear old lady, though now a confirmed invalid, unable to stand on her feet, with hands and limbs drawn up with rheumatism, and suffering with a patience beyond all praise, yet has a mind active as ever, and finds scope for much philanthropic and missionary work. Besides what she does for suffering humanity in general, she keeps in touch with herself, and with one another, the parted and scattered members of a once large family, thus forming a link of love and sympathy which is of itself a benediction, for who can measure the influence of a good mother, sister, or even aunt? I hope the power may be granted to me to be of some comfort and help to this dear old friend and relative during the winter we expect, God willing, to spend together at Tunbridge Wells.

Before coming here I spent a few weeks by the sea at Hastings, on the south coast of England, where a goodly number of dear relations were assembled, and very happy times we had, making little excursions here and there, some of us crossing occasionally to Boulogne. The days were fine and warm; in fact, the whole summer has been exceptionally fine in England. But it is quite time I should tell you of what will probably be my last trip of importance for some time to come. You had your turn in Canada, and now it was mine. You saw the Duke and Duchess of Cornwall and York in Canada. I have seen them in England, for, like the pussy cat in the children's rhyme, I have "been to London to see the Queen,"—and not the Queen only, but the King, and all the Princes and Princesses, little and big, who took part in one of the most wonderful pageants (with the exception of that of the Jubilee of Queen Victoria) which England has ever seen. It was a pageant, too, which was full of meaning—a pageant which was of itself a heartfelt expression of the love and loyalty of the people of Great and Greater Britain, for representatives of every part of the latter were present on the occasion of this public manifestation of joy at the safe return of the son and daughter of the beloved Sovereigns of the Realm. Every incident of this most unique journey of 50,000 miles, during an absence of eight months, had been followed by the people of England with the most intense interest. They had realized how it had drawn forth from over seas spontaneous and unbounded expressions of loyalty, and had cemented a spirit of fidelity to the Crown which not even England's most bitter foe or most jealous rival could gainsay. Could one wonder at this outburst of national joy at their home-coming! Indeed, I would not for worlds have missed the sight. It was well worth the fatigue and strain of standing for hours on tiptoe, with barely room to breathe, as the throng swayed to and fro, until, as with one voice, the vast multitude took up the shout of welcome and joined in that heart-stirring melody, "Home, Sweet Home."

The papers will have told you of the magnificent decorations along the line of route from Victoria Station to Marlborough House, a distance of three miles, garlands of flowers making one entire street into a veritable bower for the Royal carriages to pass through, with our dear young Duchess wearing her Canadian sables. I wonder if they have also told you of the pretty story of one of the little children of the Duchess having been "so imperatively insistent to be taken to 'my mummy' that the King laughingly decided she should have her way, and so at ten o'clock the Victoria and Albert moved out with the Royal children in a great state of gleeful excitement on deck, dragging their laughing grandmother with them as they sought one point of view after another from which to see better the saluting ships and sights of the harbor."

Now, here's a companion picture, of an incident a little later on. "As the shining cavalcade

came by, the ecstatic cry of 'Oh! daddy,' from a very small damsel perched upon the shoulders of her father, a stalwart artisan, whose protecting hand she clutched, caught the attention of the crowd. In the midst of the roar of cheers, with distant pulsations of 'God Save the King' stirring the air, the little maiden kept up her thrilling tribute of two words, 'Oh! daddy.' The dancing white plumes, the hoof-beats, the jingle of the shining swords, were almost too much for the little damsel on her father's shoulder. Pointing with her tiny finger at the wonderful revelation of splendor, the ecstatic cry continued, growing in volume and emotion—'Oh! daddy, daddy! daddy!!'

There were at least two thoroughly happy children in London that Saturday afternoon. One was His Royal Highness Prince Edward of York, who drove through the cheering crowds with his "daddy," and the other was the little subject who greeted the home-coming pageant with an eloquence no poet laureate could hope to emulate.

Just a word about the transformation scene which followed so closely upon that vision of splendor. No one who has not actually been in a London fog could possibly imagine what it is like, and the fog of this early November, which fell like an enshrouding curtain or pall over the metropolis, surpassed all fogs of previous years, endangering life and limb, and in many places causing death and disaster. But besides its tragic, it had its comic side too. Picture your correspondent, if you can, so utterly helpless as to thankfully pay her silver threepenny-bit to a sturdy young urchin, one of a brigade to whom a fog is a veritable harvest-time, just to pilot her across a street, the opposite side of which was wholly invisible to her, a veritable terra incognita. To stand by a lamp-post till aid came was all that was possible to a belated and befogged single gentlewoman. On one side she would hear a voice raised in anger during the un-

Some Things to be Thankful For.

We do not all keep written records of day-to-day happenings. Even good business people may not always keep accurate tally of daily transactions. The owner of a ranch does not round-up his cattle every week, nor does the best of housekeepers invariably weigh out her needful ingredients ounce by ounce before she puts her pudding into the pot. Nevertheless, before the end of the year each of these may arrive at a tolerably fair general estimate of his gains or losses. One comprehensive backward glance suffices for this, and that is what we purpose doing this morning. Well, we have just kept Thanksgiving Day, which means considerably more to us than the orthodox turkey and cranberry sauce. Let us count up some of our blessings for which we are thankful.

Perhaps no year in the old century has been more eventful than has this first year of the new one, upon the last month of which we are now entering, not only for its historical significance, for the effect it must have upon the national life collectively, but for the impress it must leave upon the hearths and homes of our land. There have been growth and progress along many lines which, directly or indirectly, must affect the individual lives of ourselves and children. Our whole perspective has changed; these growing conditions have opened the eyes of all but those who were wilfully blind, and we know "there are none so blind as those who won't see." The relations between cause and effect are surely clearer to all our minds to-day than they were even a few years ago, and even the most unlearned cannot pretend to believe that things just "happen," when by applying a little of the common sense and intelligence bestowed upon us by the Almighty, we ourselves may often avert catas-

realization of the duties they entail. It is no longer to be taken for granted that just because she was born a girl she will know by instinct what is expected of her. Schools of housewifery are being opened in many centers, and a knowledge of the value of foods is considered essential for those to whom the well-being of a family may be committed, whilst the use of the needle is no longer a lost art. It is true that perhaps nine out of ten of our young girls marry and become mothers, yet there is always the contingency that it may be otherwise, and that they may have to carve out an independence for themselves, so another amongst the good things which have come to us during the last two or three decades is the recognition of this and the opening up of careers which, intelligently entered upon and industriously pursued, place the young business woman beyond the reach of want or the humiliation of dependence upon others. Then, too, thank God, there is also some awakening upon the part of parents as to their responsibility in regard to their children. They are invited earnestly and cordially to co-operate with the teachers so that what is the best in their little ones may be brought out and cultivated, though much remains to be done on these lines. Mutual confidence between parent and teacher would smooth many a difficulty from the path of both, and would bear fruit a hundredfold in the after-life of the child. This both are beginning to see. So let us hope that during the coming year there will be more and more a realization, on the part of the parents, of their solemn obligations towards the children whom God has given them and to whom their lives are a daily object lesson. If so, they would let nothing in their conduct or habits tend to weaken the confidence and respect which, so long as it is deserved, is assuredly their due, and thus there would be no risk of the keen wits of an observant child detecting in the home a contradiction of the moral maxims or



ON THE BANKS OF THE SOURIS. SCENE ON THE FARM OF MR. A. H. McGAFFIN HARTNEY MANITOBA.

expected colliding of two passers-by. "Look out!" it said. "Well ain't I a-looking out!" would be the reply; "but what's the good o' looking when you can't see nothink?" Through the mist would come another muffled conversation—"Where does this street lead to?" "Well, into the river if you go on far enough. I knows, for I was just pulled out of it." Traffic was at a standstill—an occasional cab-horse planting its feet with a ring of metal upon the pavement, to the additional horror of the foot passengers thereon. The only people who enjoy a London fog are the pickpockets, and to them it was a carnival of rejoicing. In that four days' fog one could realize the full meaning of the expression, "A darkness which could be felt."

MOLLIE.

Worth While.

'Tis easy enough to be pleasant
When life flows along like a song;
But the man worth while is the one who will smile
When everything goes dead wrong.
For the test of the heart is trouble,
And it always comes with the years,
And the life that is worth the honor of earth
Is the smile that comes through tears.

It is easy enough to be prudent
When nothing tempts you to stray;
When without or within no voice of sin
Is luring your soul away.
But it's only a negative virtue
Until it is tried by fire,
And the life that is worth the honor of earth
Is the one that resists desire.

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

—Ella Wheeler Wilcox.

trophe which is threatening us. There are still some Sleepy Hollows, even in progressive Canada, whose people are content with things as they always were, not realizing "that there is more in life than to have three meals a day, a chat on the street at post time, and a comfortable bed at night," and there are every here and there our Micawbers waiting for something to turn up.

Social problems are now being not only ventilated, but in process of solution, and there appears to be a far more general and clearer realization of all that is involved in doing one's duty to one's neighbor as well as one's duty "in that state of life to which it hath pleased God to call us." "Lesser aims are being gathered up into one great purpose, to fit man, a spiritual being, for the full, rich life which is at once his inheritance and his opportunity." Amongst other good things which our year has brought us, that which has been called "The Educational Revival" has worked wonders for our children from the kindergarten upwards, bringing in its train life and light to teacher and taught alike.

Nowadays children are not merely made to repeat, parrot fashion, words which convey no meaning to them, but they are trained by sight and touch to see their little world just as it is, and not as an abstract world in which they have no recognized part; whilst the teacher of to-day has to go through a preparation by reading, study and even travel unknown to the teacher of the past. There is as little danger of a return to the dame-school methods of long ago as there is of there being found any Topsy even amongst the most forlorn who "spec's she growed." Philanthropy and education are joining sisterly hands with a view to prevent any such possibility, and practical and definite training is already becoming the rule rather than the exception. The young woman of the future need not enter upon her sacred offices of wife and mother without any

religious teachings of his teacher at school during the week or on the Sabbath day. It has been said, with truth, that "with ninety-nine boys out-of-a hundred it is the pride of their lives to imitate their fathers." See, then, how this acts and reacts. "The average boy gauges his treatment of his sisters by the manner in which the father treats the mother, and this attitude towards his sisters he will be very apt to duplicate in that which he will by-and-by adopt towards his wife." Perhaps for the girls, even more than for the boys, the educational revival of the end of the last century has been the greater benison. Co-education has given the girl her opportunity, for when both sexes are engaged in the same work and judged by the same standard, the test of equal capacity must be a fair one. The future will show how much fairer to both is this newer system. The girl in the school rises to what is expected of her, knowing that the prize can be hers if she prove herself worthy of it, and the boy, once for all taught that his greater physical strength is by no means a sign of mental superiority, but rather a gift by which he can protect those weaker than himself, is less likely to turn out a bully at school or a domestic tyrant at home when his school days are over.

Well, these are only some of the things for which we have cause to rejoice, but they are enough to give us hope and courage for the future.

H. A. B.

During a shower, a citizen, carrying a very wet umbrella, entered an hotel to pay a call to some one up-stairs.

After placing his umbrella where it might drain, he pinned to it the following note:

"N. B.—This umbrella belongs to a man who strikes a 250-pound blow. Back in fifteen minutes."

He went his way up-stairs, and after an absence of fifteen minutes returned to find his umbrella gone, and in its place a note reading:

"P. S.—Umbrella taken by a man who walks ten miles an hour. Won't be back at all."

The Model Hostess.

The model hostess is quite independent of either the methods or the criticisms of her neighbors. She entertains because she wants to, not because she has social debts to pay, and she invites those whom she likes, and who enjoy the companionship of one another. She does not go beyond her means, nor does she make a slave of herself in order to arouse the envy of her friends. She does not insult her guests by acting as if she believed they would not come unless she made an extravagant display of wealth, or provided a drawing-card in the form of some celebrity. She believes that her friends come to see her because they like her and are sure of a good time, and she, as the ideal hostess, will be the center of that good time, because she is truly glad to entertain her friends.

There are wealthy people, moving in the most aristocratic circles, who find their "really good times" in what is known as "social Bohemia," and it is simply because while there they are free from the sickening formalities, the mawkish pretence, and the glittering sham of so large a portion of the so-called entertainments which they feel bound to attend.

The ideal hostess can serve corn-bread and milk, and her guests would enjoy themselves more than they ever could as guests of Mrs. Parvenue, even though her dinners cost five dollars per plate. The well-entertained guest feels one of the family circle, and is comfortable in the belief that he has caused no extra labor or worry, but that his presence has been a source of satisfaction to the family.—(The Household.)

Eat More Fruit.

If people ate more fruit they would take less medicine and have much better health. There is an old saying that fruit is gold in the morning and lead at night. As a matter of fact, it may be gold at both times, but then it should be eaten on an empty stomach, and not as a dessert, when the appetite is satisfied and digestion is already sufficiently taxed, says *Vick's Magazine*. Fruit taken in the morning before the fast of the night has been broken is very refreshing, and it serves as a stimulus to the digestive organs. A ripe apple or an orange may be taken at this time with good effect. Fruit, to be really valuable as an article of diet, should be ripe, sound, and in every way of good quality, and, if possible, it should be eaten raw. Instead of eating a plate of ham or eggs and bacon for breakfast, most people would do far better if they took some grapes, pears or apples—fresh fruit as long as it is to be had, and after that they can fall back on stewed prunes, figs, etc. If only fruit of some sort formed an important item in their breakfast, women would generally feel brighter and stronger, and would have far better complexions than is the rule at present.—(Ladies' Journal.)

The Wrong Shop.

Recently an old fellow with long chin whiskers drove slowly up to McRoberts' barber shop and anxiously scanned the sign, "Tonsorial Artists."

He alighted from his wagon, entered, unwrapped a long woollen comforter from about his neck and was soon planted in the depths of a chair.

McRoberts came at him, clippers in hand, and he opened his mouth wide.

"Sit up straight!" commanded the barber, "if you want your hair cut."

"I don't want no hair cut," exclaimed the man in the chair. "I've got tonsillitis, and I want my tonsorial cut. I see your sign 'Tonsorial Artists,' and I jest drapped in."

The astonished barber turned in his bewilderment to clear his throat before answering, and swallowed half a pint of lather in a cup, mistaking it for water.

For Busy Housewives.

- Add a pinch of salt to coffee to give it tone.
- Sprinkle clothes with hot water and a whisk broom.
- Rub tough meat with a cut lemon to make it tender.
- Rub celery on the hands to remove the odor of onions.
- Mix stove blacking with a little ammonia to prevent it burning off.
- Add a few drops of ammonia to the bluing water to whiten the clothes.
- Add a little sugar to milk to prevent it sticking to the vessel when boiling.
- Add one or two tablespoonfuls of sugar to strong turnips when cooking.
- Place an apple in the bread and cake boxes to keep bread and cake moist.
- Mix a little cornstarch with salt before filling the salt shaker, to prevent its clogging.
- Add a tablespoonful of kerosene to a pail of clear hot water to wash the windows.
- Sprinkle grated cheese over oatmeal porridge instead of sugar and eat with cream.
- Wet a cloth in cider vinegar, wrapping cheese in it to keep moist and prevent moulding.
- Make a splendid furniture polish by taking a wine-glass of olive oil, one of vinegar and two tablespoons of alcohol; apply with a soft cloth and polish with flannel.

We'll all Pull Through.

Going the great way together,
Reaping the rose or the rue,
Let's hope that in spite o' the weather,
We'll all Pull Through!

Life is too sweet for the sighing,
Deeds there are ever to do!
Let's hope, as the storm-clouds are flying,
We'll all Pull Through!

Life, with a steadfast endeavor,
Climbs where the summits are blue,
Singing forever and ever,
"We'll all Pull Through!"

—Atlanta Constitution.

The One Bereft.

Call her not utterly bereft,
Though robed in black, and sad and lone,
Bending with tears o'er grass-grown graves—
High memories may for much atone!

But she whose loved ones, yet on earth,
Have strayed and honor's path have left—
Spurning her anguish, tears and prayers—
She is, indeed, bereft, bereft!

—Judith Spencer.

Men, dying, make their wills,—
But wives escape a work so sad;
Why should they make what all their lives
The gentle dames have had?—Saxe.

Mrs. Martha Moore—aged 95—and her great-grand-nephew, William Hall McClinton; great-aunt and son of Mr. S. McClinton, Black Bank, Simcoe Co., Ont. Mrs. Moore is a typical Irish-woman, in possession of all her faculties, and



very active, being able to be about her daily duties, and enjoying the best of health. She has evidently been reading out of the "Children's Corner" of the "Advocate" for Willie's amusement.

Insight.

On the river of life as I float along,
I see with the spirit's sight
That many a noxious weed of wrong
Has root in a seed of right.

For evil is good that has gone astray,
And sorrow is only blindness,
And the world is always under the sway
Of a changeless law of kindness.

The commonest error that truth can make
Is shouting its sweet voice hoarse,
And sin is only the soul's mistake
In misdirecting its force.

And love, the fairest of all fair things
That ever to man descended,
Grows rank with nettles and poisonous stings
Unless it is watched and tended.

There could not be anything better than this
Old world in the way it began,
And though some matters have gone amiss
From the great original plan.

And however dark the skies may appear,
And however souls may blunder,
I tell you it all will work out clear,
For good lies over and under.

—Ella Wheeler Wilcox, in the *Cosmopolitan*.

Things to be Remembered in Cooking Vegetables.

1. To be economical, steam potatoes, or boil them in their skins.
2. Lay all greens in salt and water before cooking.
3. All green vegetables to be put on in boiling water, salt, and soda.
4. Boil greens fast with lid off, and drain well.
5. Serve very hot.
6. All vegetable parings to be burnt, not put in the ash bin.
7. Throw water that greens have been cooked in on the earth when possible, not down the sink, as the smell lingers in the house.
8. When once peeled or scraped, lay vegetables in cold water till they are cooked, as they turn a bad color.

Envy.

The train came to a sudden standstill with a jar that shook all its passengers. The baby in the second seat of the day-coach began to cry with the high-pitched feeble wail of a very young infant, and its mother rocked it nervously, as she had already done many times since the journey began.

She was a slight, plainly-dressed young woman; the pale face under the simple home-trimmed gray bonnet wore an expression of extreme weariness, which did not pass away even after the baby had at length fallen asleep again. Then she leaned back against the shabby red velvet upholstery of the seat, now and again closing her eyes. Oftener, however, they remained open, watching, at first idly, the woman directly in front.

The woman must be years older than she, she reflected slowly; yet how fresh and pink and white she looked! Part of it, perhaps, was due to the plumed velvet hat and the rich black furs that fell prodigally around their owner and lay even over the back of the seat; more of it was due, though, to freedom from anxiety and care. Anxiety and care! The baby stirred restlessly, and the mother rearranged the folds of its long plain cloak more carefully around it.

When she looked up again, the woman in the front seat had changed her position; she could now see a delicately embroidered scarf and the edge of a handsome white silk handkerchief.

Mentally, quite involuntarily, she transferred them to the slight, lightly covered throat of her child. Then the curiosity turned to a deeper feeling: why should one have so much, another so little? Why should the other woman have all—even the very scarf she had longed to give the child? She looked down at the simple would-be finery of the sleeping baby with a new feeling of contempt for her own handiwork. Then her eyes traveled resentfully over detail after detail of the other woman's dress, lingering on the great bunch of English violets, on the faultlessly gloved hands, which made her, half unconsciously, try to conceal her own threadbare mittens; but always returning to the soft embroidered scarf. If she could have had that scarf, she told herself, she could have forgiven all the rest.

The cloud which had settled over the mother's face grew little brighter as the train rolled monotonously along. It was there even when the long-watched-for station was reached and she passed out of the car, wrapping the baby's thin cloak more securely around it as she went.

On the platform of the dull little station a young man eagerly greeted her, and lifted the baby tenderly, though awkwardly, from her tired arms. It was not until, as they left the platform, the young man stopped for a moment, lifted the flimsy veil, and covered the tiny, pink face with kisses, that the mother's face brightened. Her eyes rested momentarily on the outgoing train—but she did not see the woman on the front seat who was leaning forward, watching her through sudden, envious tears.

—Josephine Mason Leslie.

The Singing in God's Acre.

(This poem was set to music and sung at the funeral of Eugene Field at Chicago.)

Out yonder in the moonlight, wherein God's Acre lies,
Go angels walking to and fro, singing their lullabies.
Their radiant wings are folded, and their eyes are bended low,
As they sing among the beds whereon the flowers delight to grow—

"Sleep, oh, sleep!"
The Shepherd guardeth His sheep,
Fast speedeth the night away,
Soon cometh the glorious day;
Sleep, weary ones, while ye may—
"Sleep, oh, sleep!"

The flowers within God's Acre see that fair and wondrous sight,
And hear the angels singing to the sleepers through the night;
And lo! throughout the hours of day those gentle flowers prolong
The music of the angels in that tender slumber song—

"Sleep, oh, sleep!"
The Shepherd loveth His sheep,
He that guardeth His flock the best
Hath folded them to His loving breast;
So sleep ye now and take your rest—
"Sleep, oh, sleep!"

From angel and from flower the years have learned that soothing song,
And with its heavenly music speed the days and nights along;
So through all time, whose flight the Shepherd's vigils glorify,
God's Acre slumbereth in the grace of that sweet lullaby—

"Sleep, oh, sleep!"
The Shepherd loveth His sheep,
Fast speedeth the night away,
Soon cometh the glorious day;
Sleep, weary ones, while ye may—
"Sleep, oh, sleep!"

What is the difference between form and ceremony?—We sit upon the one and stand upon the other.

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

The herd consists of a choice lot of cows with calves by their side, and cows in calf. Some of the bulls are about 2 years old and fit for service. They have all been purchased by the proprietor within the last two years, from some of the most noted breeders in Ontario, and have been sired by such bulls as Chief of Stars (imp.) = 32076 =, Royal Standard = 27653 =, Norseman = 16397 =, Albert Victor (imp.) = 6315 =, Chivalry = 12853 =, Red Stanley = 25345 =, Sir Roland = 23782 =, Ronald = 25525 =, Bobs (406) = 34761 =. The stock is all in first-class breeding condition. Woodlark Farm is one mile from Unionville Station, G. T. R.; 18 miles from Toronto. Conveyances will meet the forenoon trains from both east and west at Unionville. Lunch at 1. Sale at 1. Terms: 9 months' credit, on approved joint notes; 5 per cent. off for cash. Send for catalogue.

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

S. G. LITTLE,
HAGERMAN, ONT.

SKUNK!
KILL THE CHICKEN THIEF!
SKIN HIM AND SHIP HIS SKIN AND ALL

RAW FURS,
GINSING AND DEERSKINS
TO THE OLD-ESTABLISHED SHIPMENT HOUSE
MILLAN FUR & WOOL CO.
MINNEAPOLIS, MINN.
THERE'S MONEY IN IT
Write for Price Circulars

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

Our customers say that the King Washer is the best.
Before buying a washer, get prices of King Washer. We have agents in nearly every city, town and village in Canada handling our goods. If your dealer does not handle them, write direct to us for particulars.
H. A. CLEMENS & CO.,
GUELPH, ONT.



STOCKMEN'S ATTENTION:
There is so much talk at present of the grand work done by
Hersee's Reliable Stock Food.
Everywhere comes words of praise. "Why is it?" one man asks. Because it does the work you want it to do. "Now that's a grand thing. That's what we want."
Ask your dealer about it. 7-lb. bag, 50 cts. Stock book free—write for it.
E. HERSEE, Manufacturer,
WOODSTOCK, - - ONTARIO.

GOSSIP.
A valuable farm, only 12 miles from the thriving and growing town of Collingwood, is advertised in this issue. It is regarded as one of the best farms in the fine County of Simcoe, having been awarded a medal in a Provincial Farm Prize Competition. The buildings are up-to-date. A large hardwood bush and a fine orchard of four acres of best varieties of apples are among its attractions.
Mrs. E. M. Jones, Brockville, Ont., makes a change in her advertisement, in which she offers high-class Jersey cattle, close descendants of her most noted prizewinners. Mrs. Jones' long experience, fine judgment and notable success in the breeding of typical, high-producing and prizewinning Jerseys commend her stock to those requiring the best.
We direct attention to the advertisement of the sale by auction, on Dec. 11th, of "The Plains" farm, belonging to the estate of the late Mr. F. W. Stone, of Guelph. The farm is only three miles from the city, and is in a very fertile condition. A rare chance to locate in a favorite section of Ontario. The Hereford cattle mentioned in our notice in last issue are not included in the auction, but are for sale privately.
Messrs. A. C. Wells & Son, Chilliwaak, B. C., write: "We notice in the last number of your journal that Mr. W. Ladner is credited with winning the prize at the New Westminster Exhibition for the best exhibit of cattle. Your reporter has doubtless made a mistake, as we had the honor of winning the Hudson's Bay cup for this prize, our herd scoring considerably higher than any other. Kindly make correction and oblige."
Mammoth Bronze turkeys and Black Minorca, W. Wyandotte, Barred, Buff and White Plymouth Rock fowl are advertised for sale by R. G. Rose, Glanworth, Ont.
Consult the label on your paper, and in renewing, remit accordingly.
Clydesdale stallions, brood mares and fillies and Shorthorn heifers of various ages are offered for sale in his advertisement by Thos. Good, Richmond, P. O., Ont. R. R. station; Stittsville, C. P. R., near Ottawa.
The 21st annual meeting of the American Clydesdale Association will be held at Chicago on the evening of Thursday, Dec. 5th, at 8 o'clock. For the convenience of those attending the International Live Stock Show, the meeting will be held in the office of Mr. R. B. Ogilvie, Exchange Avenue, just outside the north gate, leading into the show. Alex. Galbraith, Secretary.

NOTICES.
THE ATTENTION OF THOSE needing farm help is called to the advertisement, in this issue, of the managers of Dr. Barnardo's Homes, who are bringing boys from England to be placed in this country. Read the advertisement, and apply for particulars to Mr. Alfred B. Owen, 214 Farley Ave., Toronto.

In practical value and wealth of illustration, no farmers' paper equals the "Farmer's Advocate."
HAVE YOU RENEWED? — The "Farmer's Advocate," which has rendered you the best of service during the past year, will do still better in 1902. Moral: Send in your renewal to-day, and along with it a new subscription for some neighbor who has not heretofore enjoyed the advantage of reading the paper.
THE INTERNATIONAL STOCK FOOD CO., Minneapolis, Minn., under date, Nov. 23rd, writes: "Owing to the immense increase of our business, we have been compelled to again increase our factory help. At this time we are constantly using thirty typewriters, and it requires 74 people to attend to our office work. Our office is acknowledged to be the largest of any of the entire Northwest for any line of business, and we believe it is not exceeded by a very large number in this country. We hope to increase it next year."
With your renewal send one or two new subscribers to the "Farmer's Advocate," and earn a valuable premium.

THE RESULTS WERE EXTRAORDINARY.
Wapella, N.-W. T.
The Lawrence-Williams Co., Cleveland, O.:
I keep your "Gombault's Caustic Balsam" in stock. I have sold it for the last three years. I have been in the drug business in Ontario and this country, but it is not known to the majority. I sold a bottle, which I saw used under my own supervision, which gave most universal satisfaction. The results were extraordinary. I sell it here at \$1.50 per bottle. I am quite a horseman, and would be pleased to use any pictures of the noted racers of the day, to our mutual benefit.
J. A. MACDONALD.

GOSSIP.
Christmas is coming — so is the beautiful Christmas number of the "Farmer's Advocate." Moral: Forward your renewal.
Mammoth Bronze turkeys, Toulouse geese, and three varieties of pure-bred utility fowl are advertised by Alfred E. Shore, White Oak, Ont.
T. Hardy Shore, Glanworth, Ont., advertises 75 Mammoth Bronze turkeys, both sexes, bred from heavy-weight imported stock.
Wm. Howe, North Bruce, Ont., writes: "My stock are doing fine, and sales this fall are very satisfactory, and the young stock I offer for sale are as good as any I have yet had. The young sows I am offering are a good, even lot and are being bred to my imported boar, and I look for good results."
Mr. W. D. Flatt writes: "In your issue of November 1st, reporting the Luthie bull sale, you state that Messrs. Cargill's representative was the runner-up on Mr. Duthie's highest-priced calf, Royal Scotsman. This is an error. Kindly correct same. Mr. George Campbell put in next to last bid for me, and bid on him all the way through against Sir W. H. Willis."
The young Shorthorn bulls and heifers offered for sale by Mr. Robt. Glen, of Owen Sound, Ont., are a good even lot. They are sired by Commodore and Mungo, both splendid individuals, who have proven their worth as sires. His present stock bull, Imp. Baron's Heir (imported by Cargill & Son), sired by Prince of Fashion, by Scottish Archer, is a cracker, and will to a certainty prove a bonanza to Mr. Glen in the improvement of his herd.
The handsome yearling Shorthorn heifer, Diamond Queen, illustrated elsewhere in this issue, is representative of the young stock in the herd of Messrs. John Morgan & Sons, Kerwood, Ont. She was sired by Vice Regent 22920, a son of Imp. Aberdeen 18949, twice a first-prize winner at Toronto, and his dam, Madrina 2nd, of the Scotch Syle family, was by the imported Cruickshank bull, Vice Consul, a Toronto champion. The dam of Diamond Queen is Fair Queen 2nd, grandam imported Star Queen.
Kindly forward your renewal subscription to-day for the best and most attractive agricultural paper published — the "Farmer's Advocate."

GOING INTO CONSUMPTION

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

READ HOW TO SAVE YOURSELF.

Full Free Course of Treatment to Our Readers.



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

Do you cough?
Do your lungs pain you?
Is your throat sore and inflamed?
Do you spit up phlegm?
Does your head ache?
Is your appetite bad?
Are your lungs delicate?
Are you losing flesh?
Are you pale and thin?
Do you lack stamina?
These symptoms are proof that you have in your body the seeds of the most dangerous malady that has ever devastated the earth—consumption.
Consumption, the bane of those who have been brought up in the old-fashioned belief that this disease was hereditary, that it was fatal, that none could recover who were once firmly clasped in its relentless grip.
But now known to be curable, made so by the discoveries of that man whose name has been given to this new system of treatment.
Now known to be preventable and curable by following and practising his teachings.
The new system of treatment will cure you of consumption and of all diseases which can be traced back to weak lungs as a foundation.
It is not a drug system, but a system of germ destruction and body building.
Not guesswork, but science.

Not a step backward, but a stride out of the old ruts.
Made possible only by Pasteur's, Virchow's, Metchnikoff's, and Slocum's latest discoveries in bacteriology, hygiene and therapeutics.
In plain English, a system of modern scientific disease curing.
The Slocum System consists of Four Preparations, which act simultaneously, and supplement each other's curative action.
You are invited to test what this system will do for you, if you are sick, by writing for a FREE TRIAL TREATMENT, and the Four Free Preparations will be forwarded you at once with complete directions for use.
The Slocum System is a positive cure for consumption, that most insidious disease, and for all lung troubles and disorders complicated by loss of flesh, coughs, catarrh, asthma, bronchitis, and heart troubles.
Simply write to the T. A. Slocum Chemical Company, Limited, 179 King Street west, Toronto, giving post-office and express address, and the free medicine (the Slocum Cure) will be promptly sent.
Persons in Canada seeing Slocum's free offer in American papers will please send for samples to Toronto.
Mention the FARMER'S ADVOCATE. For sale by all druggists.

MODERN BUILDINGS
both interior and exterior are constructed of sheet metal in preference to brick and wood.
They reduce the cost nearly one-third, and yet enhance the appearance fully one hundred per cent. We manufacture
Galvanized Steel Store Fronts
in extensive variety of steel, imitating any architecture.
They are fireproof and thus reduce insurance premiums.
We make a specialty of church and chapel decorations.
Our extensive plant permits us to turn out the most artistic work at a minimum cost.
You can thus secure exterior and interior decorations at a lower price than could be furnished in wood or plaster.
Our catalogue will interest you.
We send it on request.
THE PEDLAR PEOPLE, Oshawa, Ontario.
Eastern Branch: 22 Victoria Square, Montreal.



NOTICES.

SHORT COURSES, O. A. C.—Farmers' sons and daughters, and others desirous of improving themselves in dairying, stock and grain raising and poultry-rearing, should read President Mills' announcement elsewhere in this issue. Do not neglect the opportunity.

FARMER BRIGHTON'S PET.—Readers of the "Farmer's Advocate" will who are raising stock of any kind will be interested in Brighton's Swine "V," adapted to prevent pigs from rooting; dehorning calves, and many other uses, and which is advertised in another column. It is a handy device, and many have been shipped during the past years from Canada, Cuba, and other countries, from Fairfield, Mass.

FEEDING DAIRY COWS.—H. L. Breen, Toronto, Ont., makes an announcement in this issue that dairy farmers will read with very great interest just now, owing to the high price of feeds. Economical feeding is the problem of problems at the present time, and where to obtain the right foods is another.

This issue of the "Farmer's Advocate" is a fair sample of the rich stores in reserve for subscribers. We will appreciate your renewal.

Programme of Meetings at the Winter Fair, Guelph.

BACON HOGS:

Tuesday, December 10, 7.30 p. m.
"Desirable and Undesirable Points of Bacon Hogs," illustrated by living specimens; F. W. Hodson, Ottawa.
"How to Select, Breed, Care for and Feed for the Production of Such Animals"; Prof. G. E. Day, Guelph.

BEEF CATTLE:

Wednesday, December 11th, 1.30 to 3.30 p. m.
"Desirable and Undesirable Points of a Beef Bullock," illustrated by living specimens; Prof. G. E. Day, Guelph.
"How to Select, Breed, Care for and Feed for the Production of Such Animals"; Hon. John Dryden, Toronto.

MUTTON SHEEP:

Wednesday, December 11th, 3.30 to 6 p. m.
"The Desirable and Undesirable Points of Mutton Sheep," illustrated by living specimens; J. H. Grisdale, Ottawa; A. W. Smith, Maple Lodge; John Campbell, Woodville.
"How to Select, Breed, Care for and Feed for the Production of Such Animals"; John Jackson, Abingdon.

PUBLIC MEETING:

Wednesday, December 11th, 7.30 p. m.
(Hon. John Dryden, Chairman.)
Addresses by Dr. Jas. Mills, Hon. Sydney Fisher, Hon. G. W. Ross.

MUSIC.

POULTRY LECTURES:
Thursday, December 12th, 9 to 11 a. m.
Results of experiments at Dominion Fattening Stations and Central Experimental Farm, 9 to 9.30 a. m.; F. C. Hare, Ottawa; A. G. Gilbert, Ottawa.
Results of experiments conducted at the Ontario Agricultural College, including the effect of food on the color of the meat, 9.30 to 10 a. m.; W. R. Graham, Guelph.
Necessity of and use of incubators, 10 to 10.20 a. m.; L. H. Baldwin, Toronto.

"Poultry Raising for Profit," 10.20 to 10.40 a. m.; G. R. Cottrell, Milton.
"The Best Shaped Fowl from a Feeder's Standpoint"; W. R. Graham, Guelph, 10.40 to 11 a. m.
"The Desirable and Undesirable Points of the Different Breeds of Poultry," illustrated by living specimens; Sharpe Butterfield, London; T. H. Smelt, Woodstock; L. Jarvis, Montreal; Jas. Anderson, Guelph.

SWINE CARCASSES:

Thursday, December 12th, 2 to 5 p. m.
"The Sort of Carcass Required to Make Wiltshire Sides," illustrated; F. W. Hodson, Ottawa; J. W. Flavelle, Toronto; C. F. Hodges, Brantford; C. C. L. Wilson, Ingersoll.

CATTLE CARCASSES.

Thursday, December 12th, 7.30 p. m.
"The Kind of Carcass Required to Bring the Highest Price in the Best Markets," illustrated; Wm. Russell, Mgr. Beef Department, Swift & Co., Chicago, Ill.; Prof. G. E. Day, Guelph; H. A. Foulds, Brantford; A. W. Tyson, Guelph.

DAIRY CATTLE:

Friday, December 13th, 9 to 10.30 a. m.
"The Desirable and Undesirable Points of a Dairy Cow," illustrated by living specimens; Prof. H. H. Dean, Guelph; Prof. J. W. Robertson, Ottawa.
"Feed and Care of the Dairy Female from Birth Until Four Years Old"; Hon. Sydney Fisher, Ottawa.

SHEEP CARCASSES:

Friday, December 13th, 10.30 a. m. to 12 noon.

"The Kind of Carcass Required to Bring the Highest Price in the Best Markets"; Wm. Russell, of Swift & Co., Chicago; J. H. Grisdale, Ottawa; H. A. Foulds, Brantford; A. W. Tyson, Guelph.

POULTRY PLUCKING COMPETITION:

Friday, December 13th, 1.30 to 2 p. m.

AUCTION SALE:

Cattle, sheep and swine carcasses, and dressed poultry.
Friday, December 13th, 2 p. m.

Auction Sale.

There will be offered for sale by public auction (subject to a reserved bid), at the front door of the City Hall, Guelph, 12 o'clock noon, on

Wednesday, 11th Dec., '01

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

"THE PLAINS."

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

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

S. E. STONE,

The F. W. Stone Stock Co., Guelph,

Or A. D. CARTWRIGHT, Esq.,

Macdonald, Cartwright and Garvey,

37 Yonge street, Toronto.

THOS. INGRAM, Auctioneer. -om

VALUABLE FARM FOR SALE:

The executors of the late Wm. Robinson offer for sale, at a very low price, that valuable farm situate in Sunnyside Township, 2 miles from Stayner and 12 from Collingwood, and known as the Model Farm. The property is one of the finest in the County of Simcoe, having been awarded a medal in a provincial competition. It consists of 234 acres, 174 in high state of cultivation, balance fine hardwood bush. The farm is well watered. There are two dwelling houses, up-to-date barns and stables, and fine orchard of the acres of best apple trees. To insure quick sale the property will be sold at a bargain. For terms, address the executors: **GEO. ROBINSON,**

or **THOS. BURROWS,** Claude P. O. Stayner, Ont. o

Ontario Provincial

WINTER FAIR,

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

WILL BE HELD AT

GUELPH, ONT.,

DECEMBER 10 TO 13, 1901.

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

Practical Lectures Delivered on the Following Topics:

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

RAILWAY RATES:

SINGLE FARE FROM ALL POINTS.

For information, prize lists and entry forms apply to

A. P. WESTERVELT,

SECRETARY,

PARLIAMENT BUILDINGS, TORONTO.

A. W. SMITH, PRESIDENT,

MAPLE LODGE, ONT. o

For Sale or to Rent.

200-Acre Farm.—Parts of Lots 6 and 7, concession 6, Tp. of Blenheim, 2 1/2 miles from Drumbo, 2 miles from Wolverson, 1 1/2 miles from Richwood. Church, school and post office; good brick house, large bank barn, well fenced, well watered, good orchard. Apply to **DALZELL & BARRIE,** Solicitors, GALT.

SPLENDID STOCK AND GRAIN FARM FOR SALE.

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

GEORGE LEAK, WOODSLEE, ONT.

See that your subscription to the "Farmer's Advocate" is paid up for another year.

GOSSIP.

If your renewal subscription to the "Farmer's Advocate" the handsomest and most helpful paper published—has not been remitted, please do so at once.

The American Cotswold Association will hold its annual meeting Tuesday night, Dec. 3rd, in the Committee Rooms of the Breeders' Gazette Building, Exchange Ave., Union Stock Yards, Chicago.

Arrangements have, we are informed, been made with the Grand Trunk Railway by which passengers for the International Live Stock Show at Chicago, the first week in December, will be carried from all points in Ontario at a single fare for the round trip, plus \$2.

Superintendent G. C. Creelman has arranged over 700 Farmers' Institute meetings for the present season. Fifty speakers are engaged. Women's Institutes have now become quite a feature. Last year there were two of these; now there are 33, with a membership of 1,602. They hold monthly meetings at private houses, and discuss better home methods, sanitation, bread and butter making, and the rearing and feeding of poultry.

Cotswold Hill Stock Farm, the home of Messrs. Jno. Park & Sons, Burgessville, Ont., the well-known importers and breeders of Cotswold sheep, is situated in the County of Oxford, about 2 1/2 miles north of Burgessville Station on the G. T. R. branch running south of the City of Woodstock, which is seven miles from farm. This firm's flock contains an exceptionally large number of prizewinners both in Canada and the United States. Of the leading shows in Canada, this flock took at Toronto this year first on aged ewes and a number of seconds, first for pen of four lambs and first and second for Canadian-bred flock of Cotswolds, bred by exhibitor. At London, 1st on aged ram, 3rd on shearing, second and third on ram lamb, second on aged ewe, first on shearing, first on lambs and first for best flock of Cotswolds, and sweepstakes for best Cotswold ram on the ground. This flock swept all before them at Ottawa. At the Pan-American, sheep fitted by this firm won first and second on aged ram and first and second on aged ewes. A few choice ram lambs and ewe lambs left for sale, that will make prizewinners another year.

Robert Miller, importer and breeder of Shorthorns and Shropshires, Stoutville, Ont., writes: "The sheep trade is about closing for the autumn, and with me it has been a strange trade, as compared with other years. Very few ewes have been asked for, excepting imported ewes, and imported rams of the best quality sold faster than home-bred rams. Everybody seems to want the best. Have sold rams to many of my old customers from York State to Nebraska and Minnesota. The last sale I made of a carload was to our own Northwest. Have a beautiful lot of ewes one year old, in lamb to one of the best Mansell rams I imported, that will be sold low. Will hold over about 100 lambs, and they are very nice. Trade in good Shorthorns has been good. John McKenzie, Kerwood, Ont., got a Missie bull from Golden Fame that will be a good one for him to follow the great bull, Golden Crown, with Golden Crown is a grandly-bred Brawith Bud, and I have him now. He has been a good and sure sire. By the way, have you noticed the difference in the direction of keeping such good sires until they are worn-out now. Have sold to S. H. Buckler the nice Cruickshank Cecilia cow, 'Cecilia A.' and her heifer calf. He is starting a herd, and wants them right. Have sold to W. C. Edwards, M. P. Rockland, Ont., the imported, Marr Missie calf, Missie 176th; sire Bapton Favorite (the best bull I know of), and dam Missie 155th, by Captain of the Guard. This calf is from one of the favorite cows in Mr. Marr's herd. With this calf I also sold Missie of Neidpath 12th and her heifer calf, a beautiful pair of royally-bred ones. Have sold two cows, one heifer and one bull to the B. C. Government, and five good heifers to Geo. Harding & Son."

OFFICIAL RECORDS OF HOLSTEIN-FRIESIAN COWS—FROM OCT. 1 TO NOV. 15, 1901.

Thirty reports have been received during this period; of these, seven were of full-age cows, averaging: Age 6 years 9 months 8 days; 18 days after calving; milk 389.6 lbs.; butter-fat 13.327 lbs.; equivalent butter 80 per cent. fat, 16 lbs. 10.5 ozs., or 15 lbs. 8.8 ozs. 85.7 per cent. fat. Four were of the four-year-old class, averaging: Age 4 years 10 months 13 days; 65 days after calving; milk 371.1 lbs.; butter-fat 13.327 lbs.; equivalent butter 80 per cent. fat, 17 lbs. 5.1 ozs., or 16 lbs. 2.7 ozs. 85.7 per cent. fat. Ten were of the three-year-old class, averaging: Age 3 years 6 months 19 days; 35 days after calving; milk 350.4 lbs.; butter-fat 12.104 lbs.; equivalent butter 80 per cent. fat, 15 lbs. 2.1 ozs., or 14 lbs. 1.9 ozs. 87.5 per cent. fat. Nine were of the two-year-old class, averaging: Age 2 years 7 months 26 days; 35 days after calving; milk 317.7 lbs.; butter-fat 10.954 lbs.; equivalent butter 80 per cent. fat, 13 lbs. 11.1 ozs., or 12 lbs. 12.5 ozs. 85.7 per cent. fat. A very remarkable heifer in this class—Age 2 years 11 months 18 days; 27 days after calving—produced during her week's test 390 lbs. milk, containing 16.957 lbs. fat, equivalent to 21 lbs. 3.1 ozs. butter 80 per cent. fat, or 19 lbs. 12.5 ozs. 85.7 per cent. fat.—S. Hoxie, Supt. Advanced Registry.



Warranted to give satisfaction.

GOMBAULT'S CAUSTIC BALSAM

A safe, speedy and positive cure for

Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address: THE LAWRENCE-WILLIAMS COMPANY, Toronto, Can.

New Ontario.

DO YOU WANT A FARM ?

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

Hon. E. J. DAVIS,

Commissioner of Crown Lands,

TORONTO, ONT.

Dairy Feed.

The percentage of digestible protein is the first consideration in dairy feeding. 100 lbs. prime cotton-seed meal contains as much protein as 600 lbs. corn meal. Cotton-seed and gluten meals increase dairy farmers' profits. Cotton-seed meal, gluten meal, hay, straw and feed grain for sale by **H. L. BREEN, 41-45 Cottenham St., Toronto.**

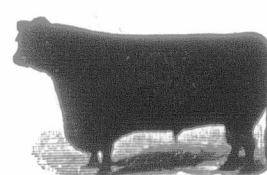
FOR SALE:

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

Rams! Rams!!



We are offering a choice lot of registered Shropshire and Suffolk Down rams and ewes, at \$10 to \$15 each. Yorkshire boars and sows (bacon type), ready to breed, at \$15. Three Aberdeen

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

TURKEY CLUB MEETING.

The annual meeting of the Turkey Club of Canada will be held in the Council Chamber, City Hall, Guelph, on Tuesday, Dec. 10th, 3.30 p. m.

Besides passing constitution and by-laws, and reading of papers sent in by exhibitors of turkeys, election of officers for ensuing year will be proceeded with. It is also expected that lectures by Prof. Graham will be given on black-head and roup in turkeys.

The Secretary of the Club will have all the latest works on turkeys for perusal. The object of the Club is to help all breeders, whether members or not, but all breeders are invited to join and help along the good work. Annual fees \$1.00. **W. J. Bell, Secretary, Angus, Ont.**

L. BURNETT, GREENBANK, ONT.

BRKDR OF
Clydesdale horses, Shorthorn cattle, and
Shropshire sheep.
Four bulls from 12 to 14 mos. old, bred from imp.
Cruckshank blood, for immediate sale.

Clydesdales--Hackneys.



QUEEN.
A Few Choice Yearlings of Either Breed
can be spared.

**O. SORBY,
GUELPH, ONT.**

**FOR SALE:
Clydesdales and Shorthorns.**

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

ONTARIO COUNTY. JOHN BRIGHT, Myrtle, Ontario.

**FOR SALE:
CLYDESDALES AND SHORTHORNS.**

Stallions from sucking foals up. Brood mares and
fillies of superior quality and breeding. A few grand
young Shorthorn heifers, bred in the purple. Special
mention, the great four-year old stallion "Prince
Lyon."

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

**CLYDE SHIRE HORSES
SCOTCH SHORTHORNS, LEICESTER SHEEP.**

Stock of different ages and sexes for sale. Two stallions,
colts, and a few young bulls now ready. Also
choice rams and ewes. Our flock won 1st prize at
Toronto, Ottawa and Chicago in 1900. Write for
what you want. My motto: The best is none too good.
J. M. GARDHOUSE, Rosedale Stock Farm,
Malton, G.T.R.; Weston, C.P.R. Highfield, Ont.

4 Imp. Clydesdale Stallions

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

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

**WM. SMITH, COLUMBUS, ONT.,
IMPORTER AND BREKDR OF**

Clydesdale Horses & Shorthorn Cattle

Shires, Shorthorns, and Leicesters.
Young stock of both sexes for sale. Imported
Prince Louis = 32082 = heads the herd. Write for
prices or come and see them.
John Gardhouse, Highfield P. O.
Weston, G. T. R. and C. P. R.

**Wm. Brash, Ashburn, Ont.,
BREKDR OF**

CLYDESDALE HORSES and SHORTHORN CATTLE.

Clydesdales and Ayrshires

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

HEREFORDS FOR SALE.

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

A. S. HUNTER, DURHAM, ONT.

**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.**

FOR SALE:

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

ISALEIGH GRANGE FARM,
J. N. GREENSHIELDS, Prop. Danville, Que.
PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

THOS. MERCER'S SHORTHORNS.
The Shorthorn herd of Mr. Thomas
Mercer, Markdale, Ont., was established
in 1896, by the purchase of Dollie
Stamford 29129, from Mr. W. B. Watt,
his second-prize heifer in Toronto that
year. The successful show bull, Aber-
deen (bred by Jas. Miller, Markham),
was placed at the head, and Red Rose
and Fairwell 5th, from the herd of Jas.
Hunter, Alma, Ont., were added. Then
came three from the Gardhouse herd:
Two choice young cows sired by Imp.
Albert, and one Red Lilly, by Imp.
Premier Earl, she being a grand cow
and a capital breeder. Another pur-
chase was made from Mr. Alex. Burns,
Rockwood, Ont., in the cow, Fashion's
Fancy, and her daughter, Fashion 2nd.
The old cow has been a show cow, and
has also put some good show stuff in
the ring. She is the dam of Hillsburg
Tom, second-prize two-year-old in To-
ronto in 1899. The first prize in this
contest went to George Bruos, the sire
of Fashion 2nd, now breeding in this
herd. The old cow has a grand bull
calf this year, sired by Lovely Victor,
now at the head of G. B. Bristow's
herd. Mr. Mercer also has four Match-
less females and some other good
families and individuals. The second
sire used was Lovely Victor 22170,
bred by H. Cargill & Son. This was a
show bull as well as a pure Scotch
Cruckshank, and he was assisted by a
son of Imp. Royal Sailor, which is a
fine individual, now two years old, and
is for sale. Now at the head of the
herd is Village Squire 24993, another
grandly-bred sire from the Maple
Lodge herd of Mr. A. W. Smith, an ex-
ceptionally well proportioned bull, now
bidding fair to outstrip his great sire,
Abbotsford, as a breeder and show bull,
having grand substance, with pleasing
qualities, a rich roan in color, and
possessing a style and sprightliness not
common among Scotch-bred bulls. He
has probably more Royal prize and
sweepstake winners in his pedigree
than any other bull in Canada, eight
out of nine of the top sires in the pe-
dgree of both his sire and dam having
won champion cups and sweepstake
prizes. Since he left Maple Lodge Herd
he has been at the head of Mr. George
B. Bristow's herd, and Mr. Bristow
says after having him three years in
his herd he believes him one of the good
stock bulls of Canada. One year ago
Mr. Bristow and Mr. Mercer changed
stock bulls, the former taking Lovely
Victor. Although Village Squire is now
six years old, he is as smart as a calf
and a grand handler, with ideal hair.
His calves are prizewinners, one having
carried off, this fall, first in his class as
a two-year-old and the championship
over all ages in a large class, in the
hands of Mr. Lemon, Walter's Falls.
There are over 35 head now in the herd,
19 being cows and heifers in calf.
Seven bulls are now for sale, also cows
and heifers in calf. The farm is only
one mile from Markdale Station, C. P. R.
Visitors will be met at train if notice is
given, and the motto is, "No business,
no harm."

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



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

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FARMERS AND STOCK-RAISERS,
ATTENTION:**

Have you tested Prof. A. V. M. Day's Eng-
lish Tonic Powders—five separate packages,
containing specially-prepared powders for the
horse, cattle, hog, sheep, and poultry? Each
package will make 25 pounds of flesh-forming,
tonic food. Price, 35c. a package, or 5 for \$1.50.
Our special offer for 10 days only:
If we have no agent in your town, we will ship
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age of each powder or 5 of any one kind for
\$1.00. Only one order to each person. It is
our desire to have you test the powders, there-
fore we have reduced the price below cost for
10 days only. Write your name and address,
and enclose \$1.00, and you will receive the five
packages by express. Address—

The Day's Stock Food Co.,
TORONTO, ONT.
Sole owners for Canada. Express C.O.D. if desired.

**FARMERS!
KEMP'S INSTANTANEOUS
Sheep Dip**

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

W. W. Stephen,
MEAFORD, ONTARIO.

**Go take a look at an
ELLWOOD STEEL
WIRE FENCE**

Examine it thoroughly and you will buy it, we are sure of that. Best steel wires, heavily galvanized! Six styles, all sizes.

To the eye of a practical man it is the perfect woven steel fence. Sold everywhere. Guaranteed. If your dealer hasn't it, write to

AMERICAN STEEL & WIRE CO., Chicago, New York, San Francisco, Denver.

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

Barclay's Patent Attachment
FOR THE CURB OF
BALKING AND KICKING HORSES.

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

THE BARCLAY MFG. CO., Brougham, Ont.

LATELY IMPORTED A FRESH LOT OF

Clydesdale Stallions,

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

ROBERT GRAHAM,
Ringwood P. O., Ont.
Stouffville Station, G. T. R., and telegraph office.

**THEY WANT
Dr. Hess' Stock Food in England**

Read what the great English importer, Mr. M. G. Rich, Bath Bridge, Tetsbury, Gloucestershire, Eng., and owner of 1,000 acres of land, writes:

BATH BRIDGE, TETSBURY, GLOUCESTERSHIRE, ENG., Aug. 8th, 1901.

DR. HESS & CLARK, Ashland, O.:
GENTLEMEN,—Where can I get Dr. Hess' Stock Food in England? In my travels in America I find it in many stables, and highly recommended by my friends.

P. S.—I farm nearly 1,000 acres.

Yours respectfully, M. G. Rich.

DR. HESS' STOCK FOOD

is not a stimulant, but a tonic. It expels worms, cleanses the blood and system generally; calls into healthy action every organ of the animal body; allows no food to pass off undigested. It pays to feed it as a health promoter and as a flesh and milk producer.

EVERY PACKAGE GUARANTEED.

7-lb. sack	\$.65	25-lb. sack	\$2.00
12-lb. sack	1.00	50-lb. sack	3.75
		100-lb. sack	\$7.00

If your dealer can't supply you, send your order to

THE GREIG MFG. COMPANY, Canadian Agents, Montreal, Quebec.

FREE. Dr. Hess' new scientific veterinary work, giving the symptoms and latest treatment on stock diseases, will be mailed you for the asking. Address—Dr. Hess & Clark, Ashland, Ohio.

**A Good Thing
EVERY FARMER SHOULD HAVE ONE.**

This cut represents our steel Storm King Forge. It is without doubt the most perfect article of its kind. It has a powerful blast, and is capable of taking off a welding heat of considerable size. Height, 30 inches. Size of pan, 26 x 27. PRICE, \$8.50.

FRED. HAMILTON, HAMILTON, ONT.
Wholesale and Retail Hardware and Implements.

If you are building, or want anything in Hardware or Implements, write us for prices.

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.**

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

Owned and Manufactured by R. H. McKenna, V. S., Picton, Ont.

TWO YOUNG ROAN SHORTHORN BULLS
Eight to ten months old, also a few choice two-shear
Oxford ewes, ram lambs, one imp. Stielgoe year-
ling ram, one two-shear ram.

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

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

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

PLEASE MENTION FARMER'S ADVOCATE.



On Jellies
preserves and pickles, spread
a thin coating of
**PURE REFINED
PARAFFINE**

Will keep them absolutely moisture and
acid proof. Pure Refined Paraffine is also
useful in a dozen other ways about the
house. Full directions in each package.
Sold everywhere.

IMPERIAL OIL CO.



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.,
Palgrave.

GREENGROVE HERD OF SHORTHORNS.
This herd was founded over 18 years ago, by
John Fletcher, and contains such Scotch-bred
tribes as the Missies and Mysies, Languishes and
Butterfys, and is now headed by the famous stock
bull, Spicy Robin = 28259 = (bred by J. & W. B. Watt), a
worthy grandson of Imp. Royal Sailor = 18959 =, and
of Barnpton Hero and of Ruby Vengarth = 15559 =,
and is of the noted English Lady family. Some good
young stock for sale. For prices and particulars,
address **GEORGE D. FLETCHER, BINK-
HAM, ONT.** C. P. R. Station, Erin.

SHORTHORNS—
Scotch and Scotch-topped. War Eagle = 27609 = at
head of herd. Young bulls, cows and heifers for sale.
Railway station: Coldwater, Midland branch, G. T. R.
Write for prices. **S. Dunlap, Eady P.O., Ont.**

SHORTHORNS AND BERKSHIRES.
Choice calves of both
sexes; a lot of fine young
pigs of the Highclere fam-
ily. Also Barred Rock
cockerels of E. B. Thomp-
son strain.

JOHN RACEY, JR., Lennoxville, Que.

Maple Lodge Stock Farm.
ESTABLISHED 1854.
SHORTHORNS.—First-prize milking strains, best
Scotch breeding. Young bulls and heifers for sale.
LEICESTERS.—A grand lot of ewes, bred to our
imported rams, and a few choice rams, now for sale.
Also **Bronze turkeys.**

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

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.

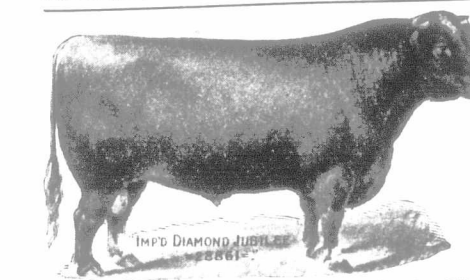
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BREEDER OF
Scotch and Scotch-topped Shorthorns,
Barred Plymouth Rock fowls, and
Bronze turkeys.

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GEO. RAIKES, BARRIE, ONT.,
BREEDER OF
SHORTHORNS & SHROPSHIRE.
YOUNG STOCK FOR SALE.

FOR SALE:
SHORTHORN BULLS AND HEIFERS
from such sires as Mariner (imp.), Royal Judd 17499,
Sultan Selam (imp.), Grenadier 26251, and Roseville
Abott 30874, on a Victoria foundation. Also one
extra Kinellar Stamp 10-mos. red bull. Come or
write.

HURON COUNTY, THOS. CUDMORE & SON,
EXETER STATION, Hurondale,
and Telegraph Office. **Ontario.**



T. DOUGLAS & SONS, STRATHROY, ONT.,
BREEDERS OF
Scotch Shorthorns.
100 HEAD TO SELECT FROM.
Offer for sale 20 young bulls, and cows and
heifers of all ages, of the most approved breed-
ing, bred to (imp.) Diamond Jubilee = 28861 =, at
head of herd. Farm one mile north of town. **om**

GOSSIP.
A NOTED ENGLISH SHORTHORN
HERD.

Ratcheugh Farm, Alnwick, Northum-
berland, England, is the home of Mr. Wil-
liam Bell's noted herd of Shorthorns,
which a "Farmer's Advocate" repre-
sentative had the pleasure of visiting a
few months ago. The farm, which forms
part of the estate of the Duke of Nor-
thumberland, consists of 160 acres,
most of which is under grass, only
about sixty acres being under plow.
The herd numbers about 70 head, from
twenty to twenty-five calves being
raised each year. Baron Abbotsford
76087 is the chief stock and show bull,
and barring a slight fault in the horn,
it being a trifle weak, he might be con-
sidered nearly perfect in character and
contour, being beef to the very hock
and thickly-fleshed throughout. He is a
good roan color, has a good-handling
skin and messy coat of hair, and is
proving an excellent stock-getter. His
calves are excellent in color, form, and
quality, and Mr. Bell has used him very
largely in his herd again this year. Mr.
Bell sold, this summer, a very fine roan
heifer to Mr. Andrew Crystal, of Mar-
shall, Mich., which was in calf to Baron
Abbotsford. In 1900 this bull was only
once defeated in his class, and the fol-
lowing week he defeated the winner at
six of the leading shows, including the
Royal and Yorkshire, and this year he
was 1st at the Shropshire, 1st at the
Royal as a two-year-old, 1st at Don-
caster and Northumberland and 3rd at
the Highland, 1st at Durham, and the
champion cup and also 1st at the York-
shire. In doing these shows he travel-
led nearly two thousand miles, along
with his yearling brother, Baron's
Pride, which is considered to have a
better horn than his older brother, and
many judges consider he will make the
better bull of the two, being a great,
level, straight bull, of a rich roan
color. Many good judges consider the
above two of the best bulls of their age
in England. Baron's Pride was 1st at
Shrewsbury, 3rd at the Royal, 1st at
Doncaster and Northumberland (here
beating the Royal winner and by the
same judge), 4th at the Highland Agri-
cultural Society, and 2nd at the Dur-
ham and Yorkshire. Buttercup's Pride,
another great, straight, lengthy bull,
about eighteen months old, promises to
make both a first-class show bull and
an A1 stock bull. He has a handsome
head and horn and a good look-out,
good roan color, and was sired by Pride
of Freedom, a Cruickshank bull, out of
Buttercup. The sire of the two first-
named bulls, which are full brothers,
is Baron Alnwick. He was sold when
three years old for £200, to go
to South America. Their dam is
Lady Clara 3rd, a Cruickshank
cow, by Abbotsford 66588. Mr. Bell
gave 100 guineas for this dam when she
was six months old, and she has won
prizes for the last four years at all the
leading shows. Along with her two
sons, she has won the family prize two
years running at the Yorkshire Show,
which is considered the second best show
in England. Two other very promising
young bulls about one year old were
seen. In the first field visited were
twelve cows and thirteen calves, a num-
ber of the calves sired by Baron Abbot-
ford. In the next lot were about fifty
laid bulls, which are being milked, two ex-
tra good cows among them.

In the next field were 6 or 7 good
cows due to calve from September to
December. In another field were about
a dozen yearling heifers, and among
them some real choice ones; while the
30 calves raised this year were a
thrifty, well-haired and well-fleshed lot,
and all good colors. Mr. Bell won
over £200 in prizes last year, and this
year's winnings will amount to about
the same. Mr. Bell, like many of the
other leading breeders in England and
Scotland, is a bachelor, and many of
them have their homes furnished luxu-
riously. He is also very particular about
his flower and kitchen garden, which are
a great credit to him, as also are his
farming and his cattle. Mr. Bell has a
standing advertisement of this herd in
this paper. His two bulls, Baron Abbot-
ford and Buttercup's Pride, are il-
lustrated in this issue.

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

JAS. GIBB, Brooksdale, Ont.

Live Stock Labels
in large or small lots.
Also odd numbers sup-
plied. Send for circular
and price list.

R. W. James, Bowmanville, Ont.

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. **om**

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

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

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



MEDALS

**GRAND PRIZE,
PARIS.**

**GOLD MEDAL,
PAN-AMERICAN.**

**THE KING'S MEDAL,
TORONTO EXPOSITION.**

We are just at home when the medal question is
agitated.
Our collection of about 500 are from all countries
under the sun, and every one the highest honors in its
class.
We have more medals than some separator concerns
have cheek, which, from recent display, is something
tremendous.
If you doubt our medal claims, send for photographic
reproduction.

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PHILADELPHIA. 77 YORK STREET. WINNIPEG,
SAN FRANCISCO. TORONTO. NEW YORK.

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

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

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 il-
lustrated, cheapest and best book of its kind
ever published. Large wages to agents. A
full-page announcement of this book appeared
in the ADVOCATE of the issue of June 1st.
Particulars mailed free. Address **WORLD
PUBLISHING CO., Guelph, Ont.**

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

H. PARKER, Durham P. O. and Station

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

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

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

**LAIDLAW'S CONCENTRATED
TOBACCO POWDER**



**Sheep
Dip.**

THISTLE BRAND.

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

ROBERT MARR,
WALKERTON, ONT.

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

J. T. GIBSON,
DENFIELD, ONT. **om**

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

ARTHUR JOHNSTON, Vandeleur, Ont.

SPRINGFIELD FARM
HERD OF
**Shorthorns, Oxfords,
and Berkshires.**
Young bulls and heifers
on hand. Also a few
choice Berkshires.

CHAS. RANKIN,
Wyebridge, Ont.
Simcoo Co. **om**



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

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

ROBT. GLEN, Owen Sound, Ontario.

CENTRE WELLINGTON SHORTHORNS
Herd consists of Scotch and Scotch-topped females,
with Lord Stanley 4th = 22678 = at the head. Stock
all ages for sale. Farm adjoins the town. **o**

Box 66. **H. E. WEBSTER, Fergus, 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. **o**

JAS. McARTHUR, Goble's, Ontario.

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.

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

JAMES DOUGLAS,
CALEDONIA, ONT.

SPRINGBANK FARM.
Shorthorn Cattle, Oxford Sheep, and Bronze Tur-
keys. Young bulls for sale.

JAS. TOLTON, WALKERTON, ONT.

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

Meaford Station, **JAMES BOWES,**
G. T. R. North. **om** Strathalrn P. O

SHORTHORNS

SCOTCH IMPORTED.

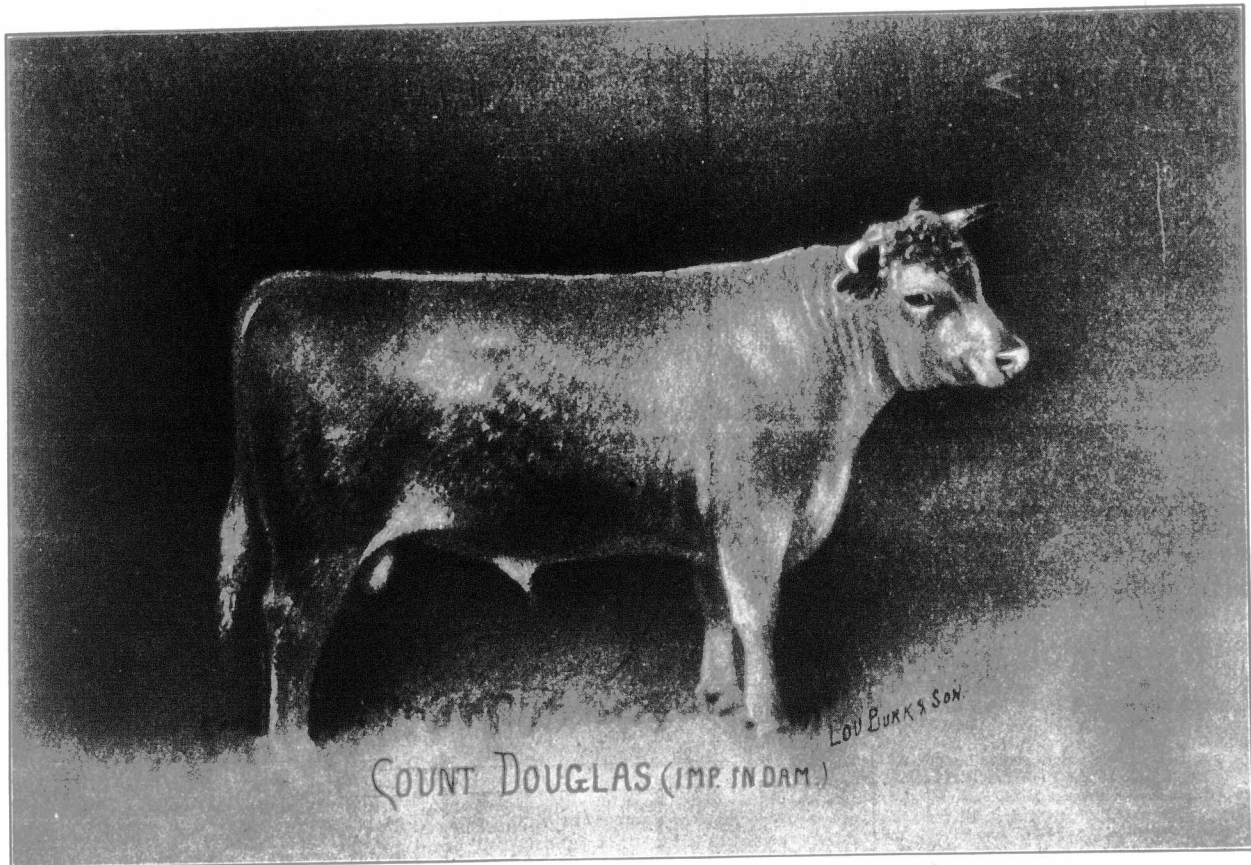
160 HEAD.

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

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

- AUGUSTAS
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- LANCASTERS
- MAYFLOWERS
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- MEDORAS
- MINAS
- VILLAGE MAIDS
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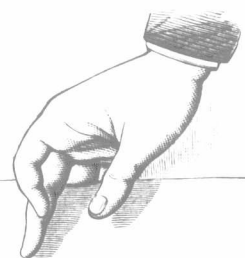
Herd headed by the imported bulls, GOLD-EN DROP VICTOR and PRINCE BOSQUET.



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W. D. FLATT, Proprietor, HAMILTON, ONT.

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

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High-cl highest families, of Great heifers br and full p

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Famous Doctor Urges Pyramid Pile Cure.

Dr. Williams, a prominent official surgeon, says: "It is the duty of every surgeon to avoid an operation if possible to cure in any other way; and after many trials with the Pyramid Pile Cure, I unhesitatingly recommend it in preference to an operation." For sale by all druggists. Little book, "Piles, Causes and Cure," mailed free. Pyramid Drug Co., Marshall, Mich.—Advt.

SCOTCH SHORTHORNS.

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

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

SHORTHORNS.

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

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

HIGH-CLASS SCOTCH SHORTHORNS of the following families, for sale at moderate prices: Village Girls, Broadhocks, Beaufort Roses, Missies, Claretts, Marr Floras, Nonpareils, Minas and other choice families. Write for catalogue. Shropshire rams and ewes for sale as usual. -om ROBERT MILLER, Stouffville, Ont.

SHORTHORNS FOR SALE.

Bulls and heifers from such families as Stamfords, Matchlesses, Fashions, Lovelies, etc. Dams and sires all prizewinners. In 1900 we took all the prizes in this northern county and other large shows, and others have produced Toronto prizewinners. Sire at the head is Village Squire 24963, by Abbotsford. Royal Sailor bull two years old. Five younger bulls, some nice heifer calves, cows in calf, and heifers. Write for prices or come and see them before buying. -om

THOS. MERCEER, Markdale, Ont. Farm 1 mile from Markdale P. O. and C.P.R. station.

NO HUMBAG—3 Perfect Tools in One. Hussey's Swiss Y Stock Marker and Calf Identifier. Works fine of all ages from routing. Makes 48 different ear marks, large or small. No change of blade. Extracts Horns. Testimonials free. Price \$1.50, or send \$1.00, get it on trial. If it suits, send balance. Pat'd Apr. 23, 1901. FARMER BRIGHTON, FAIRFIELD, IOWA.

SHORTHORNS.

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

For Sale: 10 Chocibly-bred Scotch Short-horn Bulls, from 4 to 22 months; also cows and heifers in calf to imported Red Duke =39084= (77385). Farm 1 mile from Ethel station, G.T.R. -om D. MILNE & SON, Ethel, Ont.

SPRING GROVE STOCK FARM

Short-horn cattle and Lincoln sheep. Herd prize and sweepstake at Toronto Industrial Exhibition, 1897 and 1898. Herd headed by the Marr Missie bull, imp. Wanderer's Last, last of the set 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, ILBERTON, ONT.

Hawthorn Herd of Deep-Milking Shorthorns

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

Wm. Grainger & Son, Londesboro, Ont.

SHORTHORNS (imported)

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

GOSSIP.

Mr. N. M. Blain, importer and breeder of Tamworth swine, St. George, Ont., writes:—"Have never, in eleven years' experience, had a better demand than the present year. All my spring boars and sows are sold. Have some of the best fall pigs I ever offered. Big, strong, lusty fellows that should go on and give a good account of themselves in the future."

Mr. William S. Marr, Uppermill, the noted breeder of Shorthorns, is to be represented at the International Exhibition, Chicago, by the cow, Missie 153rd, by Wanderer, a typical representative of his herd, which has been referred to in flattering terms by the American press. Mr. Marr is now visiting in Canada. He is to make a tour among the Canadian breeders and herds, and will then proceed to the Chicago Exhibition on December 1st. Mr. Marr will be able to visit a number of the leading herds in the States, as well as in Canada, and will be able to compare the position of the Shorthorn breed as it is to be found on both sides of the Atlantic.

In reference to the fine Berkshire boar, Baron Duke, illustrated elsewhere in this issue, Mr. George Green, Fairview, Ont., by whom he was bred and exhibited, writes: "Baron Duke was farrowed Oct. 8th, 1899, and is now two years old. He won first in yearling class at Toronto, 1901, and silver medal for best Berkshire boar any age; also won first prize at London Western Fair and headed my first-prize herd; first prize at the Central Fair, Ottawa, and headed my first-prize herd, and was sold to the University of Wisconsin, Madison, Wis., at a long price. My herd of Berkshires are doing well, and I have the best lot of all ages I ever had at this time of the year. They have both size and quality, length, smoothness and depth of sides, with lots of bone and the right kind of feet."

The splendid flock of Thomas and Tanner bred Shropshire sheep, owned by Mr. A. Rudell, of Hespeler, Ont., are at present in fine fit, the major part of them being in show-ring form. The flock, which now numbers about 65 head, was founded 20 years ago on imported stock. During all these years Mr. Rudell has continually striven to bring his flock to the highest standard of excellence, and to attain that result has used as sires nothing but the best imported rams he could procure. That he has succeeded is conclusively proven by his very successful tour of the fall shows, having won at Rockton six first prizes (three seconds and one third; at Galt four firsts; at Berlin, six firsts; and at Guelph, six firsts. This season's crop of lambs are an exceptionally even lot, being sired by a ram bred on the estate of the late Wm. Nevitt, Eng. The ram in use this fall is a grand model of Shropshire perfection, which was imported by Brethour.

A. & D. BROWN'S SHORTHORN SALE.

The dispersion sale of the Shorthorn herd of Messrs. A. & D. Brown, Iona, Ont., was considered successful and satisfactory, an average of \$164 per head being realized. The low price made by the 14-year-old imported cow (who was not in calf, and was in doubtful condition as to future usefulness as a breeder, and who went at beef price) reduced the average price somewhat, but it was a good sale, and the stock was in good condition and creditable to the Messrs. Brown, who have been successful breeders and handlers of cattle and have had an entirely satisfactory experience with Shorthorns. We give below the list of animals, with the age, price, and address of buyers:

Carnation (imp.), 2 years; J. G. Chapman, St. Thomas, Ont.	\$385
Heather Blossom, 7 years; John Hall, Wellesley, Ont.	310
Heather Blossom 2nd, 1 year; W. D. Platt, Hamilton, Ont.	400
Carnation 2nd, 8 months; W. G. Sanders, St. Thomas, Ont.	205
Euphemia, 6 years; Jas. Cowan, Seaforth, Ont.	210
Ruby Syme, 10 years; Herbert Lee, Highgate, Ont.	110
Euphemia 3rd, 1 year; John Hill, Miss Campbell 2nd, 1 year; James Cowan, Brantford, Ont.	170
Verbera, 8 years; W. H. Taylor, Parkhill, Ont.	180
Verbera 2nd, 1 year; Jas. Cowan, Roonette, 7 years; W. D. Platt, Cressida, 8 years; David Bennet, Campbellton, Ont.	170
Cressida 2nd, 11 months; W. D. Platt, Laurostan, 8 years; John Hill, Character, 8 years; R. S. Brooks, Brantford, Ont.	135
Junemont, 8 years; W. H. Easterbrook, Freeman, Ont.	130
Lady Steele, 4 years; E. Scott, Highgate, Ont.	200
Evelyne, 2 years; Nelson Blue, Duart, Ont.	175
Lady Ava, 2 years; F. H. Medcraft, Sparta, Ont.	125
Daphne Syme 2nd, 6 years; W. H. Easterbrook, Ont.	90
Charlotte (imp.), 14 years; I. Evans, Lawrence, Ont.	125
BULLS.	
Blue Ribbon (imp.), 9 years; Alonza Rose, Iona, Ont.	50
Muncey Chief, 2 years; John Hand Alvinston, Ont.	135
Red Ribbon, 1 year; John McKillop, West Lorne, Ont.	110
Dalmuir, 10 months; F. H. Medcraft, Ont.	75
Dunblane, 9 months; M. Campbell, Northwood, Ont.	85
Grey Rock, Ont.	130
	75

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

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- (2) Twelve Weeks' Dairy Course—Jan. 4, 1902.
- (3) Two Weeks' Course in Stock and Grain Judging—Jan. 8, 1902.
- (4) Four Weeks' Course in Poultry Raising—Jan. 10, 1902.

Ladies admitted to Dairy and Poultry Courses. SEND FOR SPECIAL CIRCULARS.

GUELPH, NOV., 1901. -om JAMES MILLS, M. A., President.

J. & W. B. WATT, SALEM, ONTARIO,

BREEDERS OF (POST AND TELEGRAPH OFFICE) Shorthorn Cattle, Clydesdale Horses, Leicester and Oxford Sheep, and Berkshire Pigs.

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

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

LESS LABOR AND MORE MONEY ON THE FARM.

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

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

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

Bibby's Cream Equivalent

FOR REARING CALVES.

IT is plain that the best article for any purpose is the one which will eventually take the premier place in popularity and will hold its place until a still better article is produced. This is what "Cream Equivalent" is doing. For supplementing the supply of whole milk, or enriching skim or separated milk, or if necessary rearing calves without any milk whatever, we believe "Cream Equivalent" is unequalled, and its unrivalled popularity is proof that our opinion is correct.

Price:—50-lb. bag, \$2; 100-lb. bag, \$3.50, freight prepaid to nearest railroad station. To be obtained from local dealers or direct from

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

Enthusiastic Converts.

There are thousands of Them Who Believe as This Woman Does.

Mrs. Ira Knowlton, of Butte, Montana, is a most enthusiastic convert to the virtues of Stuart's Dyspepsia Tablets as a cure for obstinate stomach trou-



ble. She says: "I had poor digestion nearly all my life. It now seems to me that for years I never knew what it was to be hungry, to have a good natural appetite."

"I was troubled with gas in stomach, causing pressure on the heart, with palpitation and short breath. Nearly everything I ate soured on my stomach; sometimes I had cramps in the stomach which almost resembled spasms."

"Doctors told me I had catarrh of the stomach, but their medicines would not reach it, and I would still be a sufferer had I not, in sheer desperation, decided to try Stuart's Dyspepsia Tablets."

"I knew they were an advertised remedy and I didn't believe anything I read about them, as I had no confidence in advertised remedies, but my sister, living in Pittsburg, wrote me last spring, telling me how Stuart's Tablets had cured her little daughters of indigestion and loss of flesh and appetite, and I hesitated no longer."

"I bought a fifty-cent box at my drug store and took two of the large tablets after each meal and found them delightful to take, being as pleasant to the taste as caramel candy. Whenever during the day or night I felt any pain or uneasiness in the stomach or about the heart I took one of the small tablets, and in three weeks it seemed to me as if I had never known what stomach trouble was."

"I keep Stuart's Dyspepsia Tablets in the house, and every member of the family uses them occasionally after a hearty meal or when any of us have a pain or ache in the digestive organs."

Mr. E. H. Davis, of Hampton, Va., says: "I doctored five years for dyspepsia, but in two months I got more benefit from Stuart's Dyspepsia Tablets than in five years of the doctor's treatment."

Stuart's Dyspepsia Tablets is the safest as well as the simplest and most convenient remedy for any form of indigestion, catarrh of stomach, indigestion, sour stomach, bloating after meals, sympathetic heart trouble.

Stuart's Dyspepsia Tablets are sold in every drug store in the United States, Canada and Great Britain.—Advt.

SAVE ONE HALF YOUR FUEL.

THE WINNIPEG HEATER CO. OF TORONTO, Limited.

77 Victoria St., TORONTO, ONTARIO.

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

9 CORDS IN 10 HOURS

RUNS EASY **SAWS DOWN TREES**

By one man with the **FOLDING SAWING MACHINE.** It saws down trees. Saws any kind of timber on any ground. One man can saw more with it than 2 in any other way. Manufactured at Essex Center, Ontario. No duty to pay. Write Main Office for illustration, catalogue showing latest IMPROVEMENTS, and testimonials from thousands. First order secures agency. Address: **FOLDING SAWING MACHINE CO.,** 55-57-59 No. Jefferson St., CHICAGO, ILL.

IT PAYS TO ADVERTISE IN THE FARMER'S ADVOCATE.

GOSSIP.

The annual meeting of the Ontario Poultry Association will be held in the Council-Chamber, in the City of Guelph, on Thursday, December 12th, 1901, at 1.30 p. m. Every person interested in poultry-raising should be present. A. P. Westervelt, Secretary.

At the semi-annual sale of Berkshire hogs from the Biltmore Farms herd of Mr. Vanderbilt, at Biltmore, N. C., last month, an average of \$107.80 was made for sows in pig, and an average of \$60 for young and old. The highest price was \$201, for the sow, Duke's Lass of Biltmore 2nd. Seven others sold for prices ranging from \$100 to \$180.

At a sale of Shorthorns in Kansas City, Mo., last month, the yearling heifer, Lovely 30th, sold to T. J. Ryan & Son, Iowa, for \$1,410, and the heifer calf, Orange Blossom of Fairview 3rd, to N. P. Clark, Minn., for \$1,310. The cow, Lovely 29th, brought \$675, and Udora of Fairview, \$630. The bull, Golden Knight, brought \$525.

Geo. Kerr, Franklin, Man., one of the leading farmers of the Beautiful Plains district, has recently imported some Shorthorns from Ontario. His consignment consists of 1 bull, 1 cow and 8 heifers, procured from Jno. Gardhouse, Aberfeldy Stock Farm, Highfield, Ont. Mr. Kerr, while engaged in wheat-farming on an extensive scale, is of the opinion that live stock is absolutely necessary to keep up the fertility of the land and the flow of dollars into the farmers' pockets.

The death, on Nov. 6th, is announced of Mr. John McDiarmid, late of the staff of the Iowa Homestead, a large-hearted and genial Scotchman, who was at one time in the employ of Mr. T. C. Paterson, on his farm at Eastwood, Ont., and at different times with N. H. Gentry, Sedalia, Mo., and other Western States breeders. Mac was a familiar figure at the leading shows and sales in the West, was well versed in the pedigrees of Shorthorn cattle, and held positive views on stock breeding and management. He will be missed in the meetings of stockmen in the West.

Mr. John T. Gibson, Denfield, Ont., reports a good year's trade in Lincoln sheep. His first-prize flock at the American Exhibition has recently been reinforced by the importation of a first-class shearing ram from the famous flock of Mr. Tom Casswell, Poynton, Lincolnshire, and a ram and two ewe lambs from the old and reliable flock of Mr. J. Pears, of Nocton Heath. These last were first-prize winners in England, beating in one competition at least the winners at the Royal Show. Thus strengthened, Mr. Gibson's Manor Farm show flock will be on hand at the International Show at Chicago this week, and will make a grand showing for the breed, which has deservedly obtained popularity in America as well as in the Old Land of its origin.

W. F. Stephen, breeder of Ayrshire cattle, Trout River, Quebec, in ordering change in his advertisement, writes: "I have sold Klondike of St. Ams 8897 and Lottie 8884 to R. Parker & Son, of Ferrisburg, Vt., as well as several head of younger stock. Klondike has proved a splendid stock-getter, and has mated well with Uncle Sam's heifers. I have lately purchased from the W. W. Ogilvie Estate the young bull, Canada's Last (second-prize bull calf at Toronto last fall), to head my herd, and he promises to be a first-class animal. My stock have gone into winter quarters in fine condition. My average test for the season has been 3.80 per cent of butter-fat. Although I ship cream to the City of Montreal, I frequently get the milk tested. We invite intending purchasers to come and see our stock at any time."

John Davidson, of Balsam, Ont., the well-known breeder of Shorthorns and Clydesdales, called at our office recently while on his way home from the Pacific Coast. Mr. Davidson had been out in British Columbia judging at the Provincial and other leading fairs, and on his return had visited several of the ranching districts and also the farming districts of the West. He was thoroughly impressed with the advantages offered in Western Canada for young men with energy and ambition and no fear of work. He also thinks the breeders of pure-bred stock in Manitoba have unlimited possibilities for the development of their industry, as they will have the rapidly-developing ranch country to supply with pure-bred bulls of the beef types.

Mr. J. M. Gardhouse, Highfield, Ont., is now exhibiting selections from his flock of Leicester sheep at the International Live Stock Show at Chicago. His strong contingent of show sheep have done wonderfully well since the fall fairs, and are in fine fit for the fray at the International. They are certainly splendid representatives of the approved type of modern Leicesters, combining size, style and quality of flesh, bone and fleece in the highest degree, together with robustness of constitution and freshness of appearance, denoting perfect health and thrift, which is characteristic of the entire flock. The magnificent ewe from his flock illustrated in this issue, bred by himself, has been in the winning list since a lamb, and is now four years old. She has been either first or second at Toronto, London and Ottawa for the last three years. In 1900 she was one of the first flock at Toronto, Ottawa and Chicago. In 1901 she was one of the first-prize pair of ewes at Toronto, and second at the Pan-American. Few ewes have stood the test so long or so well.

Excelsior Feed Cookers

Are Indispensable for Fattening Stock and Poultry.



Why not bring this branch of your farming up to a good profit point?

A "Famous" Excelsior Cooker will help you to do this.

By means of it you can fatten your stock in less time and with half the work of the ordinary way.

They are inexpensive, easily worked, light enough to be moved and set up anywhere, easy on fuel, and can be used for boiling sap and many other purposes.

No harm to write for free pamphlet which tells you all about them.

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Men Wanted

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

FREE OF CHARGE

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

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

Farmers!

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

VENTILATION.

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

For pamphlet, prices, and other particulars, write to

ISAAC USHER,

QUEENSTON, - ONTARIO.

ARTHUR JOHNSTON, GREENWOOD, ONTARIO.

SHORTHORNS ONLY.

FOR SALE: 9 imported bulls and bull calves. 11 home-bred bulls and bull calves, from imported cows and by imported bulls. 17 home-bred bull calves. A large and excellent lot of young cows and heifers of various ages.

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

GOSSIP.

L. Rogers, Weston, Ont., advertises in this issue A1 Large Yorkshire pigs of bacon type, of various ages and both sexes.

The death is reported of Mr. I. N. Barker, of Thorntown, Indiana, a successful breeder and exhibitor of Berkshire pigs, a good judge of that class of stock, and an honorable, affable, and kind-hearted gentleman.

At W. C. Hunt's semi-annual sale of Holstein cattle, held at Syracuse, N. Y., Nov. 14-15, seventy-eight animals, contributed by six breeders, brought an average of \$138. The highest price, \$725, was paid by H. A. Moyer, for Netherland Hengerveld's Daughter, an eight-months-old heifer, bred by H. Stevens & Sons, Lacona, N. Y., and got by his stock bull, Calamity Jane's Paul 24970, bred by Geo. Rip, Currie's Crossing, Ont. Three other females sold for \$400 to \$500 each, the latter price being paid for Mutual Friend's Pauline De Kol, seven years old.

Messrs. Edwards & Co., Rockland, Ontario, have recently purchased from Mr. John Young, Tilbury, near Aberdeen, four excellently-bred females, including the three-year-old cow, Rosetta 10th, by Clan Gwynne, together with her heifer calf, Lady of Pinegrove, by the Collynie bull, Scottish Prince. Another of Messrs. Edwards' purchases is the one-year-old heifer, Scottish Fancy, descended from the Jilt family, and by Scottish Prince, and the fourth is a heifer calf by Scottish Prince, out of the prize heifer, Rosetta 11th, which was first this year at the Kincardine County Show at Stonehaven. Rosetta 11th, it is worthy of mention, was by Remus, the sire of Mr. Merson's 500-guinea bull, Choice Goods.

Henry Arkell, "Farnham Farm," importer and breeder of Oxford Down sheep, Arkell, Ont., writes: "Sales have been extra good at Farnham Farm all season. We have sold between three and four hundred head of Oxfordeys to both old and new customers. Have customers I have sold to every year for fourteen years, and one gentleman for seventeen years, never missing one season. Have retained between 70 and 80 head to Manitoba, Maritime Provinces, United States, and Ontario. Am breeding between 90 and 100 ewes to Bryan 125 and Hampton Duke. Have sold nearly all Bryan 125th's last season's ram lambs to head flocks, and everybody is pleased who got one. He is one of the best stock-getters I ever had. Hampton Duke is an imported yearling of very fine quality, imported by Robert Miller, of Stouffville, Ont., for George McKerrrow. I purchased him from Mr. McKerrrow at the Pan-American at a high figure. Am offering a number of ewes of different ages, in lamb to those two excellent rams. See my ad. in Advocate. Have also some fine young Bronze gobblers, and Barred Rock cockerles, also as per ad. Wishing the 'Advocate,' our old stand-by, ever-increasing success, which it decidedly deserves."

W. G. Pettit & Sons, Freeman Ont., report the following recent sales of Shorthorns from their herd: To Alex. Crerar, Lisbon, Ont., the nine-months-old bull, Lord Durno (imp. in dam); bred by James Durno, of Westerton, Aberdeenshire, Scotland. He was got by King of Hearts, of the Diamond Lovely family, and out of Imp. Aggie Douglas, by Lord Douglas, a richly-bred Lavender by Gravesend. To H. P. Fry, Bettsville, Ohio, the yearling imp. bull, Feudal Lord; bred by John Marr, Cairnbrogie, Old Meldrum, Scotland; got by Prince Cruickshank, a grand stock bull of the Diamond family, and out of Folly, first-prize two-year-old heifer at Strathbogie Farmers' Club Show in 1897; by Sittytton's Farwell, a Cruickshank Lavender. Mr. Fry also took two home-bred heifers with good Scotch tops. To R. G. Wood, Conshohocken, Pa., Brave Amaranth (imp. in dam); bred by Alex. Campbell, Deystone, Kintore, Aberdeen; got by Count Amaranth; bred by Mr. Duthie; a bull that is proving himself an excellent sire. Mr. Wood also took Imp. Lilly of Lowie, by New Year's Gift (bred by W. Webster, Lowie, Barclay, Aberdeen); Imp. Princess, same family as Scottish Champion, the calf that Mr. Duthie paid \$1,650 for at W. S. Marr's sale in 1898; Imp. Bess 6th, bred by John Cran, Kirth, Scotland. Mr. Wood was after dairy Shorthorns, and picked out six home-bred cows and heifers from our best dairy families. We have a choice lot of imported bulls for sale of the leading Scotch families and got by such noted sires as Prince of Archers, half-brother to Marengo, Brave Archer and many other good ones; Scottish Prince, by Captain Ripley, out of Scottish Princess by Scottish Archer, g. d. Princess Royal 41st, by William of Orange; Count Amaranth, by Count Arthen, out of Sittytton Amaranth, by Master of the Realm. We have decided to offer for sale one of our stock bulls, Prince Cruickshank, bred by John Marr, Cairnbrogie, Scotland. He belongs to the Cruickshank Lovely family, and has proved himself a valuable sire both in Scotland and Canada. Our home-bred bulls are got by Imp. Prince Cruickshank Imp. Pure Gold (a Brawith Bud, by Cyprus, by William of Orange), and Imp. Matabel Chief, now at the head of Mr. C. E. Blodgett's fine herd in Wisconsin. We are getting some very promising calves from our Cruickshank Clipper bull, Imp. Scotland's Pride, by Star of Morning. We have placed at the head of our flock of Shropshire, this season, a very fine imp. Mansell ram, which we expect good results from.

LARGEST FOUR YEAR OLD HORSE IN THE WORLD

WEIGHT 2500 Lbs., Age 4 Years, **PERCHERON**. Owned by International Food Co., Minneapolis, Minn. We feed "INTERNATIONAL STOCK FOOD" every day to our four Stallions, Brood Mares, Colts, etc. "INTERNATIONAL STOCK FOOD" causes Horses, Cattle, Hogs and Sheep to grow very rapidly and makes them Big, Fat and Healthy. It is used and strongly endorsed by over 500,000 Farmers. It is sold on a Spot Cash Guarantee to Refund Your Money in any case of failure by over 30,000 Dealers. It will make you extra money in Growing, Fattening or Milking. Owing to its blood purifying and stimulating tonic effects it Cures or Prevents Disease. It is a safe vegetable medicinal preparation to be fed in small sized feeds in connection with the regular grain. It fattens Stock in 30 to 60 Days less time, because it aids Digestion and Assimilation. In this way it saves a large amount of Grain. The use of "INTERNATIONAL STOCK FOOD" only costs 3 FEEDS FOR ONE CENT. Ask your dealer for it and refuse any of the many substitutes or imitations. It always pays to feed the best. "INTERNATIONAL STOCK FOOD" is endorsed by over 100 leading Farm Papers.



A \$3000.00 STOCK BOOK FREE
MAILED TO EVERY READER OF THIS PAPER.

This Book Contains 183 Large Colored Engravings of Horses, Cattle, Sheep, Hogs, Poultry, etc., and of this Horse. It cost us \$3000 to have our Artists and Engravers make them. It contains a finely illustrated Veterinary Department that will save you Hundreds of Dollars. Gives description and history of the Breeds of Horses, Cattle, Sheep, Hogs and Poultry.

THIS BOOK FREE, Postage Prepaid, If You Write Us a Postal Card and Answer 3 Questions:
1st—Name this Paper. 2nd—How much stock have you? 3rd—Did you ever use "INTERNATIONAL STOCK FOOD" for Horses, Cattle, Sheep, Hogs, Colts, Calves, Lambs or Pigs? The Editor of this Paper will tell you that you ought to have a copy of our finely illustrated Book for reference. The information is practical and the book is Absolutely Free.

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Largest Stock Food Factory in the World. Capital Paid in \$300,000.00.

INTERNATIONAL FOOD CO.,
MINNEAPOLIS, MINN., U. S. A. **3 FEEDS FOR ONE CENT**

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.

JOHN DRYDEN,
BROOKLIN, ONTARIO.

BREEDER OF
CRUICKSHANK SHORTHORNS AND CHOICE SHROPSHIRE SHEEP.

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

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

SHORTHORNS FOR SALE.

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

James Smith & Son, Inglis Falls, Ontario.

Shorthorns, Berkshires, Leicesters

An offering at present the grand stock boar, Crown Prince; also some young ones.

ISRAEL GROFF, ALMA, ONTARIO.

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.

To Rid Stock of Lice

AND ALL SKIN DISEASES.
Also to Keep Poultry Healthy

WEST'S FLUID

Which is also a SURE CURE OF CONTAGIOUS ABORTION. STANDARD SHEEP DISEASE CHEAP AND GOOD. Pedigree forms free to customers. Manufacturers:

The West Chemical Co.,
TORONTO, ONT.

Riverside Holsteins

Victor De Kol Pietertje and Johanna Rue 4th Lad head the herd. Six bulls from 6 to 8 months old, some from officially-tested dams—Hulda Wayne's Aaggie and Inka Mercedes De Kol, of the Model Dairy Farm.

MATT. RICHARDSON & SON,
Caledonia, 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. **E. W. WALKER, Utica P. O.** Shipping stations: Port Perry, G. T. R.; Myrtle, C. P. R.

SUCCESS WITH HOLSTEINS

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

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

4 HOLSTEIN BULLS 4

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

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.

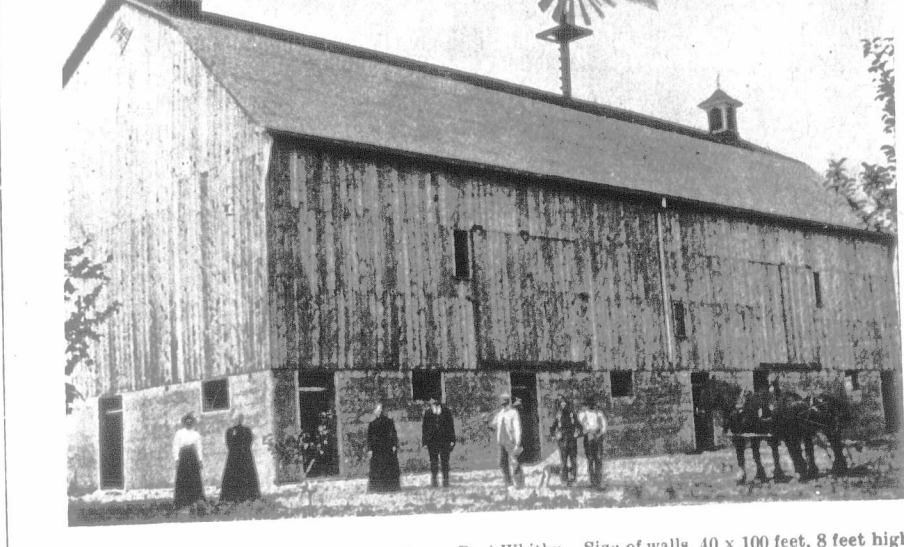
Robert Hunter, Manager
or **W. Watson Ogilvie, Lachine Rapids, Quebec.**

JOHN SMITH, BAYSIDE FARM, PORT WHITBY, ONT.,

BUILDS A FINE BASEMENT BARN WITH

BATTLE'S THOROLD CEMENT

AND FULLY APPROVES IT.



Basement Barn of John Smith, Bayside Farm, Port Whitby. Size of walls, 40 x 100 feet, 8 feet high.

ESTATE OF JOHN BATTLE, CEMENT MFGRS., THOROLD, ONT.: Bayside Farm, Port Whitby, Oct. 9, 1901. Gentlemen.—It is with much pleasure that I testify to the good qualities of your Thorold Cement for building purposes. I have built a new barn this summer, using your cement for basement walls, cistern and floors throughout the whole building. Size of walls is 40 x 100 feet, 8 feet above the floor, 12 inches thick at one side and both ends, the other walls being 18 inches by cistern, while the other part of the same wall is 16 inches thick. I used 220 bags of your cement. I built the basement walls and of the same wall is 16 inches thick. I used 220 bags of your cement. I finished the floors a few days ago, and they also seem to be as hard as a rock. The work was under the direction of your Mr. Geo. W. Read, who understands his work well. To anyone intending to build, I can recommend your Thorold cement. My walls and floors are here for the inspection of any one who wishes proof. **JOHN SMITH.**

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

Maple Glen Stock Farm. For sale, three-year-old Jersey and Cotswolds. stock bull, Count of Pine Ridge 53662, a grandson of Adelaide of St. Lambert, that gave 824 lbs. milk in a day, and 2,005 lbs. in a month. Also two of his sons—one year old, and a few daughters; and a useful lot of Cotswold rams and ewes. For particulars and price write: **WILLIAM WILLIS, Newmarket, Ontario.**

F. L. GREEN, JERSEYS.

Two choice high-grade cows, fresh calved—one six years old, the other three years old. Both are very easy to milk, quiet and gentle to handle, and they will give great satisfaction as family cows.

GREENWOOD P. O., W. C. SHEARER, BRIGHT, ONT.

CHOICE JERSEYS.

Am offering 1 cow, 4 yrs. old (very choice); 1 bull 17 mos. old; 2 bull and 1 heifer calves.

W. N. HASKETT, "Avon Manor," Markdale, Ont.

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.

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

JERSEYS FOR SALE.

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

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

BRAMPTON JERSEY HERD

For sale: 2 yearling bulls; 8 bull calves, sired by Brampton's Monarch (imp.), and out of first-class cows.

B. H. BULL & SON, BRAMPTON, 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.

THE ONTARIO VETERINARY COLLEGE (LIMITED), TEMPERANCE ST., TORONTO, CANADA.

Affiliated with the University of Toronto. Patrons: Governor-General of Canada, and Lieut.-Governor of Ontario.

AYRSHIRES AND LEICESTERS We breed for milk and quality, and employ only the best sires.

AYRSHIRES FOR SALE: 4 yearling bulls and a number of spring calves of deep-milking strains.

AYRSHIRE FEMALES FOR SALE Carrying the same breeding as our prize-winners, including such offspring as Floss and Tom Brown.

High-class AYRSHIRES, including cows, heifers and young bulls out of our prize and sweepstakes cows.

Ayrshire Bulls from 1 1/2 years to 6 months, from special milking stock, sired by prize bull, Jock of Burnside.

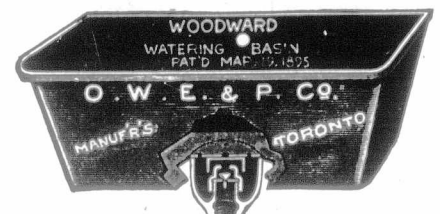
Maple Cliff Dairy and Stock Farm. BREEDERS OF AYRSHIRE CATTLE, IMPROVED BERKSHIRE AND TAMWORTH PIGS.

TREDINNOCK AYRSHIRES Imported bulls at head of herd: Glencairn 3rd, Napoleon of Auchinrain, and Lord Dudley.

AYRSHIRES Five bulls ranging from 11 to 23 mos. from such noted cows as Jean Armour, Lady Ottawa, Sprightly and Primrose (imp.).

Spring Burn Stock Farm, H. J. Whitteker & Sons, Props., North Williamsburg, Ont., breeders of Ayrshire Cattle, Oxford Down Sheep, Berkshire Pigs, and Black Java Fowls.

Water Basins.



EIGHT REASONS FOR ADOPTING THE Woodward Water Basin.

4th. Another feature worth price alone is that in the Woodward each animal draws absolutely its fresh supply direct from the tank, so preventing spread of disease.

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

LIVE STOCK AUCTIONEER. The undersigned is prepared to conduct pure-bred auction sales.

RIDGELING CASTRATION. Dr. J. Wilson, V. S., Wingham, Ont., Specialist in the castration of ridgeling horses and colts.

Ayrshires.

One bull fit for service, and a very fine April calf; also 4 August (1901) calves.

W. W. BALLANTYNE, STRATFORD, ONTARIO, "Neidpath Farm" adjoins city, on main line G. T. R.

SPRINGHILL FARM. Ayrshires

5 AYRSHIRE bull calves for sale, from 6 to 12 months old. Sired by Klondyke of St. Ann's 8897.

DAVID A. McFARLANE, Breeder of high-class AYRSHIRES. Young stock for sale from imported and home-bred foundation.

75 GRAND MAMMOTH Bronze turkeys (both sexes), got by my imported heavy-weight tom.

R. G. Rose GLANWORTH, ONT., offers for sale a choice lot of M. B. turkeys from his 40-pound imported yearling tom.

Mammoth Bronze Turkeys. S. G. and colored Dorkings, S. C. Br. Leghorns, Black Minorcas, Barred Rocks, Toulouse geese.

Mammoth Bronze Turkeys, and Chester White Swine from 5 to 6 months old.

"VIGILANT" NEST SLIDING-ADJUSTABLE (Patented Can. & U.S.) The only nest in the World which positively prevents hens from eating their eggs.

BARRED ROCKS (EXCLUSIVELY). We have a large number of large, strong, vigorous cockerels, bred for utility.

Barred Plymouth Rocks.

We have a number of cockerels which we wish to dispose of within the next month.

JAS. BOWMAN, Elm Park, Guelph, Ont.

Tamworths and Bronze Turkeys

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

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

Chickens, Turkeys, Ducks FOR THE ENGLISH MARKET.

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

Scott, Ashton & Company LONDON, ONTARIO.

GRAMMING MACHINES, FATTENING COOPS, Incubators and Brooders POULTRY SUPPLIES.

BUILT FOR BUSINESS! THAT'S THE IDEA. The Cyphers Incubators

are positively warranted to last TEN YEARS, without repairs, and are guaranteed to OUT-HATCH, during three trials, any other make of incubator on the market.

All Prizewinning Strains: 60 Oxford Tamworth swine, Collie dogs, 100 Bronze and Narragansett Turkeys.

English Shorthorns.

Both and Bates Shorthorns, topped with Cruickshank bulls. Young cows, bulls and heifers always on hand for sale.

AYRSHIRE HERD OF 150 cows and heifers, bred from deep milkers, with large teats, of a commercial stamp.

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

LINCOLNS. Laughton, Folkingham, Lincolnshire, England. Breeder of Lincoln Long-wooled sheep.

FAMOUS ALL OVER THE WORLD ALFRED MANSELL & CO., LIVE STOCK AGENTS AND EXPORTERS, SHREWSBURY.

BRITISH STOCK selected and shipped to all parts of the world. Write for prices to ALFRED MANSELL & CO., Shrewsbury, England.

HAMPSHIRE DOWN SHEEP.

SPLENDID MUTTON, GOOD WOOL, GREAT WEIGHT.

English Breed of Sheep

Is unrivalled in its rapid and wonderfully early maturity, possessing, too, a hardiness of constitution adapted to all climates.

JAMES E. RAWLENCE, SECRETARY HAMPSHIRE DOWN SHEEP BREEDERS' ASSOCIATION, SALISBURY, ENGLAND

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

W. W. Chapman, Secretary of the National Sheep Breeders' Association.

Pedigree Live Stock Agent, Exporter and Shipper. All kinds of registered stock personally selected and exported on commission.

WALTON HERD OF PEDIGREE PIGS.

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

REGISTERED Southdown Sheep, Suffolk Sheep AND Berkshire Pigs.

THE Cheveley flocks and herds, the property of Col. H. L. B. McCalmont, M.P., are unique for the purity of their blood, typical character, and individual merit.

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

SHEEP BREEDERS' ASSOCIATIONS

American Shropshire Registry Association, the largest live stock organization in the world.

PLEASE MENTION FARMER'S ADVOCATE.

FAIRFIELD LINCOLNS.

Rams and ewes (all ages), consisting of those bred at Fairfield and importations from the flocks of Dudding, Dean, Wildsmith and Wright. A new importation of 103 head will arrive at Fairfield, Sept. 1st, including first-prize yearling ram, yearling ewes, ewe lambs and ram lambs, also first-prize and champion 2-year-old ram and third-prize 2-year-old ram at the Royal Show, and 70 yearling rams and 30 yearling ewes. I can supply show flocks that will win.

J. H. PATRICK, ILDERTON, ONT., CAN.

One mile from Ilderton.
10 miles from London.

Lincolns, Shorthorns, Berkshires.

Am offering a few choice bulls from 3 to 18 months old, from imp. stock of Miss Ramsden and Varuna families; also some extra nice Berkshire pigs.

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

LEICESTERS.

Our present offering are all ages and both sexes. Choice animals.

C. & E. WOOD, FREEMAN, ONTARIO.

SOUTHDOWNS AND COLLIES.

Imported and home-bred prizewinning aged sheep. After the Pan-American a number of particularly good ram and ewe lambs. Collie puppies by imported Holyrood Leek and champion Alton Monty, out of noted prizewinning dams.

ROBT. MCEWEN, BYRON, ONT.
ALLOWAY LODGE STOCK FARM. Rail'y Stn., Ont.

BROAD LEA OXFORDS.

We have a choice lot of lambs this year, bred from our imported rams, Royal Warwick 3rd and May King 1st, some weighing 17 lbs. at birth. Also some good shearing ewes and rams. Also a few shearing ewes and rams fitted for show purposes. All of which we are offering for sale at reasonable prices.

HENRY ARKELL & SON,
Teeswater, Ont.
Phone and telegraph, Teeswater.

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.

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.

FARNHAM FARM

Can sell 40 superior Oxford Down ewes in lamb to "Byran 125" and "Hampton Duke." Five ewes of different ages. Also 100 good ram and ewe lambs. Choice Bronze gobblers and Barred Rock cockerels. Prices reasonable.

HENRY ARKELL,
Guelph, G. T. R.
ARKELL, ONT.
Arkell, C. P. R.

OXFORD DOWN SHEEP

This season's lambs, both sexes; yearlings, both sexes; breeding ewes, imp. and from imported stock. Young Shorthorns of both sexes for sale.

JOHN MCFARLANE,
Dutton P. O. and Stn.

COTSWOLD HILL STOCK FARM

Offers imp. and home-bred Cotswolds of both sexes and all ages, from the champion flock of Canada for the last six years.

JOHN PARK & SONS,
Burgessville P. O. and Stn.

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.

JOSEPH FERGUSON, UXBRIDGE, ONT.,
BREEDER OF

Pure-bred Cotswolds

choice quality
om UNBRIDGE P. O. AND STATION.

CHAS. GROAT,

BROOKLIN, ONT.
OFFERS FOR SALE

Cotswold Ram Lambs

for service this fall, of good quality and breeding. Also yearling Shorthorn bull and Tamworth brood sows. Write for particulars.

50 CHOICE RAM LAMBS
10 shearing rams by imported sires.
Write for prices.

Thos. Lloyd-Jones & Sons, Burford, Ont.

SHROPSHIRE FOR SALE.

Ram, two-shear (winner); yearlings, both sexes; ram and ewe lambs.

N. W. SWITZER,
Streetsville, Ont.; C. P. R.

PLEASE MENTION FARMER'S ADVOCATE.

SHROPSHIRE

AT HOLWELL MANOR FARM.

Extra choice ram and ewe lambs from imported Mansell rams. Single or in large lots. Satisfaction guaranteed or money refunded. Also Barred Rock cockerels at \$1.50 a pair.

D. G. GANTON, ELMVALE, ONTARIO.

FAIRVIEW

Has still a few good rams for sale. Also a limited lot of ewes, bred to choice rams.

Barred Plymouth Rock cockerels now for sale, at \$1 for good utility birds, and \$2 each for extra good ones.

JOHN CAMPBELL, Woodville, Ont.

Bonnie Burn Stock Farm. 30 Shropshire rams and Canadian-bred sires; also Shorthorn bulls and heifers with calf; and Berkshire pigs from Imp. and Canadian-bred sows. All cheap for quick sale.

D. H. RUSSELL, STOUFFVILLE, ONT.

W. H. BEATTIE, Wilton Grove, Ontario,

IMPORTER AND BREEDER OF

Shropshire sheep, collie dogs, White Holland and Mammoth Bronze turkeys, and Barred Rocks.

SHROPSHIRE

LAMBS FOR SALE.

WM. PIERCE,
BRINSLEY P. O., ONT.

Shropshires...

At present I offer for sale: Shearing rams, shearing ewes, ram and ewe lambs. Also a few aged ewes. Prices reasonable.

GEORGE HINDMARSH,
AILSA CRAIG, ONT.

50 REG. SHROPS. 50

FOR SALE:

Shearing and two-shear rams; also stock ram, bred by John Miller & Sons, and this season's crop of lambs ready for the fall trade. Foundation stock bred by Mansell, England. Prices moderate. A card will bring them.

ROWAT BROS.,
Phepston station, G. T. R., 5 Hillsdale, Ont.
miles east, Simcoe County.

HIGH-CLASS SHROPSHIRE.

A flock of 75, of good type. Two-shear rams, shearing rams, ram lambs, ewe lambs, fine lusty fellows. Flock headed by a fine imported ram. Write for prices. **Abram Rudell, Hespeler P. O., Ont.**

C. P. R. and G. T. R.

FOR SALE: Berkshires (both sexes), Shorthorn

stock bull, cows, heifers and young bulls. Prices reasonable. Write or come and see us.

A. J. C. SHAW & SONS, Thamesville, Ont.

A few Chester Boars fit for

good service. Also some Dorset ewes and ewe lambs. Prices required for 30 days.

R. H. HARDING,
Thorndale, Ont.

LARGE ENGLISH BERKSHIRES.

Pairs supplied not akin. Boars fit for service. Sows ready to breed.

MAC. CAMPBELL, NORTHWOOD, ONT.

WILLOW LODGE BERKSHIRES FOR SALE

Young boars and sows for sale, from 8 weeks to 6 mos. old; sired by Long-fellow 10th of Hood Farm No. 8633 and Gallant Prince No. 7691. Pairs supplied not akin.

WM. WILSON, SNELGROVE, ONTARIO.

Fresh Berkshire Blood,

from the most noted prize herds of Eng. and the U. S., including among others the famous sow, Elphick's Matchless—never beaten, and imported at a cost of nearly \$100. We can offer some especially good young pigs, in pairs and trios not akin, of splendid length and type. Also young sows, bred to good boars. All at very reasonable prices. We are making no reserve for show this season, so our best are for sale. Take Kingston Road electric cars to the door from the city.

DURHAM & CAVAN,
East Toronto, Ont.

LARGE ENGLISH FOR SALE.

YOUNG boars and sows carrying the blood of Baron Lee 4th, Bright Star (imp.), Enterprise and Highclere, on Bow Park, Teasdale and Snell females, with Allandale Boy 5875 and Royal Lad 3rd 4307 heading the herd.

S. DYMENT, BARRIE, ONT.

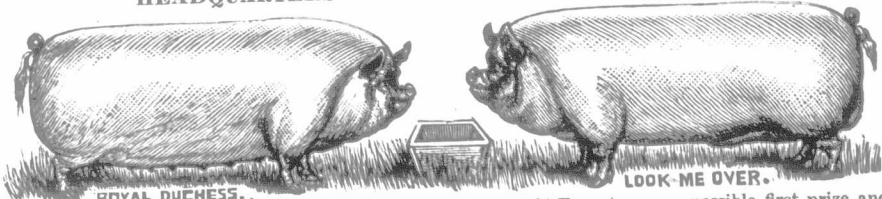
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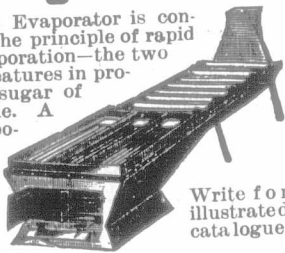
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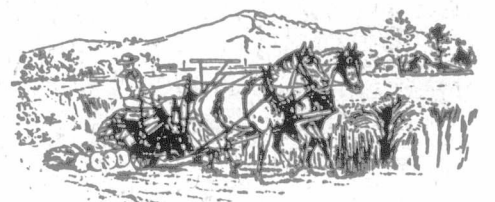
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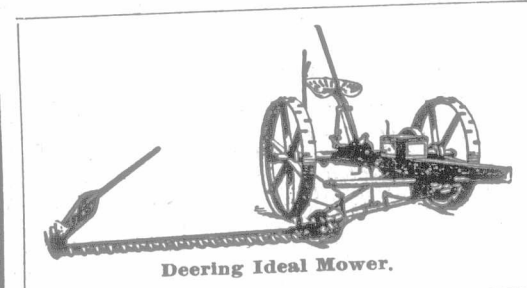
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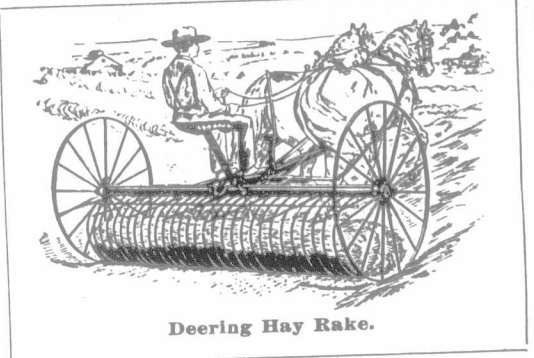


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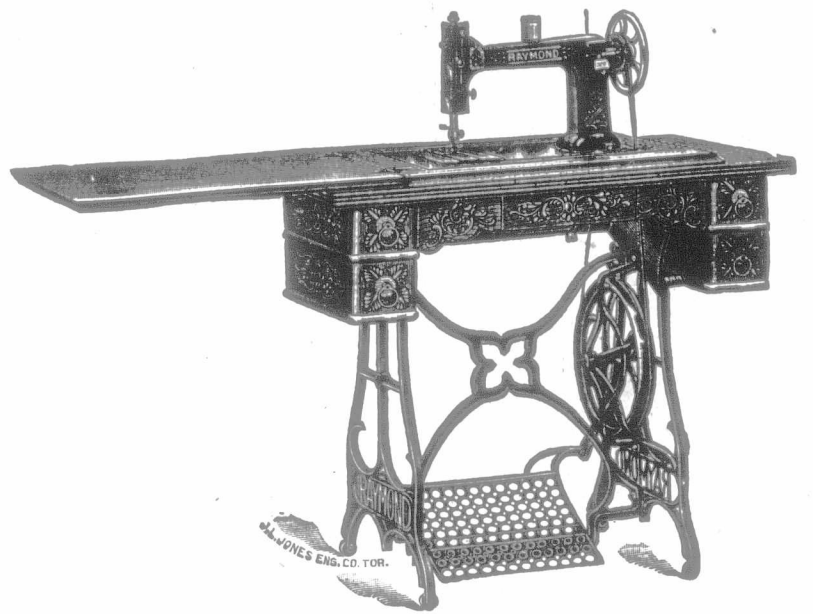
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