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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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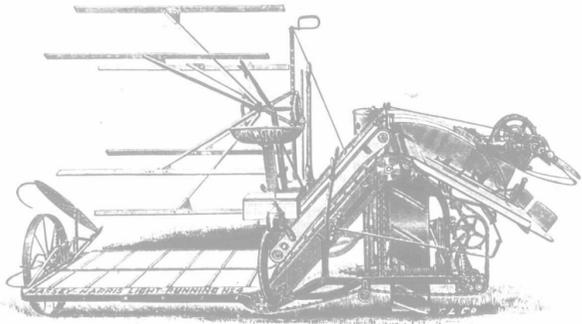
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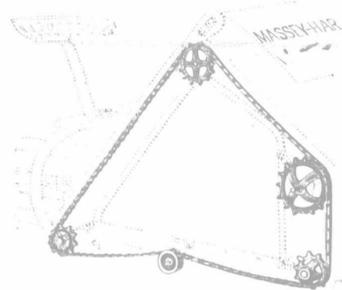
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EDITORIAL.

Spare the Heifers.

The shortness of the supply in this country of steers suitable for feeding for the export trade is well known and is deplored by feeders who seek for them and find all too few of the sort they would like to secure. Owing to this scarcity, we find in the feeding stables not a few heifers of breeding age and of good beef type, which if retained on the farms and bred to good bulls would produce the kind of calves which would by good treatment grow into cattle of the class that is needed to raise the standard of our exports and secure for us the best prices. The slaughter of this class of heifers tends to perpetuate the scarcity of the right kind of steers, and drives feeders to the necessity of putting in an inferior class, many of them showing their relationship to the dairy breeds by their color and form, a form which fails to furnish the best quality of flesh in abundance on the most valuable parts, fails to furnish an attractive and quick-selling beast and fails to make a profitable return for the food it consumes.

We plead for the sparing of the heifers that have some beef breeding; for the mating of them with good pure-bred bulls of the beef breeds, and for the retention of their heifer calves, to be bred in turn to the same class of sires, in order to grade up the rank and file of our cattle to a higher standard. Dairy men long ago recognized the vital importance of selecting and retaining in their herds for breeding purposes heifers of approved milk-producing type and capability, and those who are now looking to the profitable extension of the beef industry should be as wise in their day and generation. There is an urgent need for more good beef cattle in the country, and all the indications point to a steady demand and good prices for the better class. The cheerful prospect of the opening at an early day at principal points in the Dominion of abattoirs for the prosecution of the dressed meat business in our rapidly growing cities, and for export, will inevitably improve the markets for the best class of cattle, and the only possible cause of failing to realize the full benefit of this is the possible scarcity of suitable stock to keep these establishments supplied so that they can be profitably operated. To do this, and sustain our present profitable export trade in live beefs, cannot be done without more good cattle. And there is no reasonable excuse for failing to rise to the requirements of the situation, for Canadian farmers have at their hand all the necessary facilities for meeting it. They have a healthful climate, good land, good grass and water, and can raise grain and roots in abundance, and have the advantages of experience in feeding and easy opportunities to improve the breeding of their cattle by the use of pure-bred bulls, which can be bought at reasonable prices or their services secured for a moderate fee.

The sooner a commencement in improvement is made, the sooner will benefit be realized. Personal interests as well as public prosperity depend largely upon prompt action by the farmers in this matter.

When you make a mistake and discover it, face about and admit it. There is no sense in trying to overshadow wrongdoing; it will quickly come to light. The simplest way is the safest and most manly.

Feeding Balanced Rations.

After all that has been said about balanced rations, little weight seems to be attached to the subject by our feeders, and few of them make any specific attempt at a balance in the fodders being fed. To the ordinary feeder, the subject appears too vague and too much laden with theoretical associations to permit of practical application in cattle feeding. To him the mention of balanced rations conveys the idea of weighing feeds and of a long list of figures in the hands of a professor. This is not as we should like to see it. Among our feeders are to be found many of the most intelligent of men, and if the advantages of forming a balance in the rations could be made clear they would be willing to give it a trial.

In the first place, a ration is the combination of hay, straw, silage, grain, etc., fed an animal during the day. If the moisture or water were all evaporated from it, what would be left is called "dry matter," and this is composed of certain chemical constituents. What the feeder wants to get at is the composition and quality of foods (ration) that will feed his cows or fatten his steers to greatest profit.

Everyone recognizes the importance of having a model in mind when undertaking any constructive work. In cattle-feeding, the feeding standard or the proper balance between flesh-formers (protein) and fat and force producers (carbohydrates and fat), all of which the animal requires, in the ration is the model, and any rations having a composition similar to the standards are balanced rations. In scientific parlance, the proportion between the flesh-formers and the fat and force or heat formers is called the nutritive ratio. In some foods this ratio is wide, in others narrow. Oat straw is 1 to 33.6, and wheat straw 1 to 93, both wide; bran 1 to 3.7, and oil cake 1 to 1.7, both narrow. A ratio over 1 to 6 is said to be wide, and under 1 to 5 narrow.

Now, the feeding standards in America are not purely theoretical ones, but are the average of more than 100 different rations, which were being used throughout Canada and the States, and which were found to give the best results in milk production or cattle fattening. These feeding standards then, or these rations having a certain chemical relation between their vital constituents, are the models by which rations are balanced. It is at once seen that models secured by such practical methods should have a practical value. What is this value?

Feeding standards are not rules laid down to be followed implicitly and mechanically, but are valuable simply as guides. By making up a ration according to a standard, a man has the satisfaction of knowing that the chemical composition of his cattle food is such as has given the best results in all experiments that have been conducted to determine the comparative value of rations. And further, these satisfactory results are obtained because the cattle have been supplied with just sufficient of the several chemical constituents of the food, or, in other words, with a balanced ration. This, therefore, is the value of feeding standards, that they serve as models by which to form other rations.

Now we believe there is a practical value in feeding a balanced ration, but the problem of working out such rations with the feed stuffs on the ordinary farm is regarded as too complicated for the average feeder. Our own conviction is that skilful feeders, by the process of experience and close observation, learn to compound or let

us say "balance" their rations in such a way as to get the best results, though the learning of it may be tedious. Furthermore, the feeder is governed largely by what foods he has on hand or can procure to advantage; but he does find it wise, for example, to mix bran or oats with corn instead of feeding the latter alone. It occurs to the "Farmer's Advocate," and we throw out the suggestion for consideration, that some of our experiment stations and farmers' institutes might do some work in this direction, after the manner of Prof. Robertson's illustration stations for the cool curing of cheese or fattening chickens. Let them select a stable in a district where cattle are fed extensively, and there compound a balanced ration of the foods on hand as an object lesson, and in the hands of a competent feeder the results would be of interest and value, removing the subject from the realm of text-book technicalities. We say competent feeder advisedly, because the ration might be technically "balanced," and yet if it were not palatable to the animals and fed in proper quantities, individually and with proper regularity, the results would be disappointing and progress hindered rather than helped.

Coming Events.

The announcement elsewhere in this issue of the annual meetings of various Live Stock Breeders' Associations, and the Canadian Spring Stallion Show, to be held in Toronto the last week of January and first week of February, will be of interest to many of our readers. The continued active demand for good horses and cattle at remunerative prices should serve to encourage stockmen and enthuse breeders with the determination to go on improving their stock and preparing to meet the demand for the best with a steady supply of the right sort. The holding of these meetings at dates which will enable stockmen from distant points east and west to take them in on one trip will prove a great convenience to many, giving time between events for visiting herds, studs and flocks within easy distance of the places of meeting. The success of the various Breeders' Associations, and of the breeders in their business operations, depends in no small degree on the interest taken in the annual meetings. The Spring Stallion Show, to be held at the early date fixed, Feb. 4th to 6th, is a new departure, which it is hoped will meet the felt need of horsemen throughout the Dominion for a show which will enable them to place before the public horses from which selections may be made for the coming breeding season. This show does not necessarily conflict with the Horse Show held in a later month in the spring, at which light horses are a specialty. The Shorthorn sale at Hamilton, being held on the day following the annual meeting of the Dominion Shorthorn Breeders' Association, will afford breeders the opportunity to participate in a rich treat, the disposal of an exceptionally good lot of cattle. The train service to Hamilton is first-class, and the run less than an hour, by several trains.

One good rule, which if followed will help lead to the goal of happiness, is "live within your income." Raise as much of the necessities and comforts of life as possible, and waste not.

Now is the right time to prepare for the ice needed next summer. The advantages are many; see to it now.

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1. THE FARMER'S ADVOCATE is published on the first and fifteenth of each month. It is impartial and independent of all cliques or parties, handsomely illustrated with original engravings, and furnishes the most profitable, practical and reliable information for farmers, dairymen, gardeners, and stockmen, of any publication in Canada.
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THE WILLIAM WELD COMPANY (LIMITED),
LONDON, CANADA.

A Term Misused.

In this age of specialization, much importance is attached to terms. In every department of trade, and with every professional man, there is a vernacular peculiar to the class. Words originate in or become common to any particular vocation, because they have outstanding significance. Among the breeders of live stock there is a term that is used and misused until it has come to have different meanings with different people. That term is "Thoroughbred."

According to men who are at the very front in breeding and dealing in live stock, this word has but one use, namely, to designate a certain breed of horses—the English Thoroughbred—and stands in relation to that class of horses as the word Clydesdale stands to the great Scotch breed. In other words, the Thoroughbred is a distinct breed, as the Shire or Percheron are distinct. To say that a horse is a thoroughbred Shire, or a bull a thoroughbred Hereford, is just as ridiculous as to say he is a Percheron Shire or a Shorthorn Hereford. To the English race-horse alone belongs the term, because he has been longer bred in a direct line than any other domesticated animal. To distinguish the improved breeds from the scrub stock, the proper term to use is "pure-bred," "registered," "pure," or "pure-blooded," but the best authorities prefer only the term as given—pure-bred. Let the term "Thoroughbred" be used only where it applies.

It may not be generally believed that a horse will put on flesh more readily if watered regularly. A light drink in the morning before feeding will assist very materially in improving the digestion and general health of our noble friend.

To winter twenty animals on the food that would give best returns if fed to only fifteen is poor policy. Although the twenty might not survive the extra time required for them to regain their normal condition would prove the exper-

Robert Elliott.

Died, December 19th, 1902.

"Lightly weave the wheaten garland for the brow of one we love.
With it twine the gracious maple, touch'd with light from Heaven above."

(From Robert Elliott's last poem.)

"Twas Robert's joy to be the herald
(With pleasing fancy fraught)
Of tributes just and true.
He asked no homage of the world—
And so the world forgot
That homage was his due.

He filled the thicket and the glen
With flames of sacred fire,
And glory gave to gloom:
He cheered the weary hearts of men,
With sweet consoling lyre,
O'er many a cheerless tomb.

A world bowed down, with vision dim,
Soul-filled with grief and love,
Should weave, with saintly care,
A garland for the brow of him
Who many garlands wove,
Yet deemed his own brow bare.

FRANK LAWSON.



THE LATE JOHN MILLER, MARKHAM.

Raise the Veterinary Standard.

On several occasions the "Farmer's Advocate" has taken occasion to express strong convictions as to the need of elevating the standard of the veterinary profession in this country, in order to place it in a position which its growing importance deserves. The live-stock interests of the country are rapidly increasing in value, and the preservation of the health of our studs, herds and flocks is of vital concern, not only to their owners, but to the general business interests of Canada. Successful agriculture as practiced to-day is based upon live-stock husbandry. By the recent outbreak of foot-and-mouth disease in the New England States, we see how our whole export live-stock industry might be imperiled and perhaps for years lost without an efficient veterinary staff in Canada. With the growth of dressed meat enterprises, and the increasing exactions of foreign countries regarding the healthfulness of foods as well as animals, a more thorough system of expert inspection will be imperative. It is high time that the standard of veterinary education in this country was raised, else who will occupy the places that are soon to be filled?

It is gratifying to observe that the President of the Ontario Veterinary Association, Dr. J. H. Tennent, V.S., of London, has grasped the deep significance of the situation, and had the courage to nobly express his convictions at the recent annual meeting in Toronto, a report of which we give elsewhere in this issue. It was one of the

most wholesome deliverances ever given before that body in the twenty-eight years of its existence. It is to be hoped that such action will be taken by the Ontario Legislature as will bring about a proper educational standard of admission to the Veterinary College, and the extension of the course from two to three years. The roots of the trouble lie there, and a radical reform is imperative. At present there is practically no standard of admission, and the course consists of two six-months terms of tuition, with an intervening year of practice, to which should be added at least another year of practice and another six months' drill in theory. The Veterinary College being an important Provincial educational institution, it is surely incumbent upon the Legislature to see that the present condition of affairs is not allowed to continue. The members of the Ontario Veterinary Association, and of the profession generally, owe it to themselves to see that this golden hour of opportunity is not allowed to pass unimproved, both as regards the college and their own status in the community. A proper individual self-respect for the profession at home, a stronger veterinary association, higher standards for the college, and its control by the profession, is, in a nutshell, the programme that should now be carried out.

We have reason to believe that the foregoing will commend itself to all progressive and influential veterinarians.

HORSES.

Winter Care of Stallions and Brood Mares.

Stallions that are used extensively in the stud are, of necessity, highly fed during the stud season, and in many cases are allowed to put in the remaining eight or nine months of the year in idleness. During the summer months they receive grass and other green food, and are usually allowed to run in a paddock or lot, and thereby get sufficient exercise. This is good practice, as a horse that does a heavy stud season requires, as stated, heavy rations, and in the majority of cases does considerable road work in travelling from stand to stand. After two or three months of this work, his digestive organs, as well as his physical constitution, require a rest, and this rest and recuperation cannot be obtained in any way better than by the treatment mentioned. But when winter sets in, on account of the slippery state of the ground, the inclemency of the weather, or other causes, he is not allowed in the paddock, and it often occurs that he is shut in a box-stall, frequently of small dimensions, and not given exercise in any way. In order that a stallion may be successful in the stud, his physical condition must be strong during the season, and it is not possible for this to be unless he get regular exercise. When horses are allowed complete rest or inaction for a few months, the muscles become soft and flabby, even though he be well fed, and the respiratory organs also lose tone. It is impossible to get these organs in a strong, robust state in two or three weeks, which is the time usually taken for the purpose. Preparation for the stud season should take the greater part of the winter, and at all events should commence now, the middle of January. We often hear it stated that it is not well to groom a stallion during the winter; that he will shed earlier and better in the spring if he be left to nature in this respect during the cold months. This is a mistake. A horse will feel better, thrive better, look better and shed his hair better if he be regularly and thoroughly groomed at all times, even when he is standing idle. Regular exercise should be given in order to develop both the muscular and respiratory systems. The manner in which this is given will necessarily depend upon conditions and the individual tastes of the attendant. In the lighter classes of stallions, as Roadsters, Carriage Horses and Thoroughbreds, either harness or saddle can be used, while the heavier classes can be led, with the attendant on foot or on a pony, or there is no reason why even these big fellows may not be either driven or ridden. If the horse has had a long period of idleness, the amount of exercise given at first should be slight, say two or three miles daily for a few days, and the distance gradually increased as he becomes more fit. After a time eight or ten miles for the lighter classes and six or seven for the heavier should be given daily. In the meantime, the quantity of food should be in proportion to the work done. Violent changes of food should in all cases be avoided. The use of drugs should also be avoided, except in cases of disease, and then should be given only under instructions from a veterinarian. There are many men who probably understand fitting a stallion for the season better than the average veterinarian, but it is a mistake for any person who has not received a special training to think that he has sufficient knowledge of the actions of drugs



BROOD MARES ON THE BOW RIVER HORSE RANCH, COCHRANE, ALTA.

to enable him to administer them with impunity. The food should consist in the ordinary food for horses, viz., hay and oats of good quality. Better results are obtained from crushed oats than from whole. A carrot or two or a turnip daily, with twice weekly a feed of bran, with the addition of a little linseed meal, is advisable to keep digestion regular. The quantity of grain to be given will depend greatly upon the size of the horse and upon the amount of exercise given, and must be regulated by the groom.

BROOD MARES.

Brood mares that are given regular work of a light nature, work that does not require severe muscular or respiratory exertion, during pregnancy, usually produce stronger foals and give less trouble than those that are pampered and allowed to live in idleness. As with the stallion, in order that the reproduction powers of a mare may be successfully exercised, it is necessary that her physical condition be robust, and this condition can be obtained only by intelligent feeding and exercise. It goes without saying that the sanitary conditions must be good, and that all food and water consumed be of the best quality. She should have a nice, roomy, well-bedded and clean box-stall. This is advisable in all stages of pregnancy, but may be said to be imperative towards the latter stages. Great care should be taken to avoid fright, excitement, foul or disagreeable odors, as fresh blood, etc. The administration of drastic purgatives, sudden chills, pricking with spurs, or anything that will have a tendency to cause violent muscular contraction, should also be avoided. The food should be of an easily-digested nature; liberal quantities of bran should be given, as well as a reasonable quantity of crushed oats. It must be remembered that the mare has to provide for the nourishment of the fetus as well as herself, hence she will require more liberal feeding than the gelding or unpregnant mare of the same size performing the same work. If the mammary gland assume activity too soon before parturition and milk begins to escape, the quantity of bran and other soft food that tends to increase the secretion of milk should be lessened or ceased entirely. If she be given exercise in the yard or lot instead of in harness, care should be taken that she be not allowed out with horses that are quarrelsome. My allotted space is more than taken up, but I will probably have more to say later on re precautions to be taken in regard to both mare and foal during and after parturition. "WHIP."

Horse-meat Banquet.

A cable despatch from Berlin, dated Jan. 8th, shows how old horses are disposed of to advantage in Germany: "Six hundred people sat down to-night to the most remarkable banquet that ever has been given in Berlin. The dishes consisted entirely of horse meat, and were served in various forms. The Society for the Prevention of Cruelty to Animals issued the invitations to the dinner, which was given for the purpose of demonstrating the nourishing and palatable qualities of horse meat, thereby causing increased consumption of meat and a ready market for old horses. This would prevent owners from working the poor animals to death, as well-fed specimens would bring good prices. The bill of fare to-night consisted of horse soup, pickled horse tongue, filet of horse,

and roast horse. All of the dishes were nicely prepared, and were evidently greatly relished. The presiding officer of the society, Privy Councillor Von Seicfeld, said 30,000 horses had been eaten in Berlin last year, and that he hoped for a large increase in the future. Many prominent members of the Reichstag and of the City Council were present at the banquet."

Ontario Veterinary Association.

At the recent annual meeting in Toronto of the Ontario Veterinary Association, the President, Dr. J. H. Tennent, V.S., of London, in his vigorous annual address pointed out that during twenty-eight long years the association had accomplished practically nothing for the advancement of the profession, and he urged the members to awaken from their slumbers and get out of the rut into which they had fallen. "What had the association done," he asked "to place the profession on a footing with their brethren of the medical profession? The answer," he said, "you will find in the reply of the Ontario Minister of Agriculture to Mr. German, M.P.P., when he made a gallant effort to do something for us. Do you think for one moment that the Minister of Agriculture would have dared to say such things of the medical men? No, and why should he of us? Just because we ourselves have done nothing to show the people of this Province and continent that we are somebody and make our influence felt. What have we been doing? Coming to Toronto once a year, electing officers, partaking of Dr. Smith's hospitality, and then going home again to wait for another year, then to repeat the same thing. In all the twenty-eight years of our existence, all the papers that have been read and all the discussions of them if printed word for word would be but a mere pamphlet, and would be hidden in shame behind the papers and discussions that are heard in this college at the students' meeting. Is this a condition that should exist? I say no.

"Then how must it be remedied? Wake up to the need of the profession at this day. Work, get every veterinary surgeon in this Province interested in this work. Let the essayists appointed prepare to meet here, and not offer some schoolboy excuse or endeavor to make this body believe they have not time. I have attended meeting after meeting of this association and not a paper given. Could we conscientiously urge the veterinary surgeons of this Province who are not members to

join us? No. We need the help of every veterinary surgeon in this Province, and the only way to induce them to help us is first to help ourselves. Let us stir up the members of our profession, who are practicing what should be recognized among the first of the learned sciences. For what profession is there that has a nobler aim than ours, that of relieving the sufferings of the brute creation?

REFORMS NEEDED.

"I am going to touch upon another subject that is not at present under the direct control of this association, but in my opinion it would be well if we were interested in it, namely, the Ontario Veterinary College. What is our college doing? Can we as graduates and members of this association, who are doing nothing, expect the man (Professor Andrew Smith) who has made his life's work the work of educating men in our profession, to keep pace with the rapid advancement unaided? No, it would be suicidal to attempt it. His hard earnings of years are locked up in buildings that accommodated us. Look at the thousands of dollars invested where we are meeting at present. Take the risk of keeping and maintaining a college and it is really too much to expect one man to do it all, but I think the time is ripe for a change. In my opinion a three-year course is absolutely necessary, as well as proper educational standing of the student upon entering. A junior matriculation should be required, as anyone possessing an education inferior to this is not able to understand and get up the work as he should. It would also bring into the profession educated men, men who would become lights in the veterinary world, and would rid us of that class of uneducated professional men who are found in bar-rooms, peddling nostrums or manufacturing cure-alls.

"Such changes in connection with our college would, no doubt, cause financial loss to our professor, and would increase his work, but I think that a change should be effected, and I do not feel that Professor Smith should take the responsibility entirely upon himself. Aid from the Legislature might be obtained, as this is one of the sciences that they have almost ignored. I would suggest that a committee be appointed from this association, of men that will do something, to confer with Dr. Smith on ways and means to bring this change about, and I further feel that each and every individual veterinary surgeon, whether a member of this association or not, should lend his moral support to Dr. Smith, and financial support if any loss occurs. I am not here to cast any reflections on the teachers of our college, but I do say that two sessions is not time enough to get up the work as it should be, neither can a young man who possesses only sufficient education to write his name and spell it correctly ever expect to become an ornament or a light in the veterinary profession.

"I ask you, in conclusion, to make this association one of the foremost on the continent. We have the means, we have the men, let us unite and get every practitioner in this Province with us. We need legislation in our behalf, and the only way to obtain it is by united effort."

Dr. Rutherford, chief veterinary surgeon under the Dominion Government, was present and delivered a very practical address. He invited all the members who possibly could do so, to attend the meeting of the American Veterinary Medical Association, which is to be held in Ottawa next September.

Dr. C. H. Sweetapple, secretary-treasurer and



IN THE DRAFT CLASS, PORTAGE LA PRAIRIE, MAN.

registrar, presented the financial report, which, in spite of a considerably heavier expenditure during the year, showed a balance on hand.

Several papers of professional interest were read and discussed, and the association decided to assist the Toronto Exhibition directors in the effort to secure a Dominion show for Toronto in 1903 or 1904.

Officers were re-elected as follows: J. H. Tennent, of London, President; W. Steele, First Vice-President; W. Lawson, Second Vice-President; Messrs. C. Brind, J. H. Engel, S. E. Boulter, L. A. Wilson, J. H. George, F. G. Hutton, R. Milne and F. Bailey, Directors; Messrs. J. H. Reed and C. Elliott, Auditors; Prof. Smith and Col. Lloyd, representatives to Toronto Fair; Mr. J. H. Tennent and Mr. J. D. O'Neil, representatives to the Western Fair.

STOCK.

With the Beefmakers.

Recently a "Farmer's Advocate" representative enjoyed a visit to some of the largest of our cattle feeders in Huron County, Ont. We regret that time did not permit of calling upon a larger number, as there are interesting and valuable lessons to be learned from these practical and extensive feeders. In the Clinton district we found several farmers feeding from 50 to 200 head of steers each year.

FAIR BROS.' METHODS.

In the stables of J. & N. Fair, 66 head were feeding. Some of the large three-year-olds were already finished, and all were in a thriving condition. The cattle here are all tied up in pairs. They are fed three times per day, and watered twice from a trough in front of their mangers. No exercise is given except in the spring. Just before a bunch goes away they are given a run daily in the yard to harden their muscles. Punctuality in feeding is made a strong point in these stables. At 5.15 in the morning the grain is fed, consisting of a mixture of middlings (shorts) and ground oats; one pound of the mixture to 100 pounds of live weight per day. When the meal is finished the roughage is fed. This consists of ensilage, mixed half and half with cut clover, hay and straw, as much as the animal will clean up. At 11.15 grain is again fed, followed by roughage. For the evening meal the roughage is fed first, followed by the grain last thing at night. Roots are fed only for a few days in the fall. No condimental food of any description is used, nor is dehorning practiced.

IN THE LOOSE BOXES.

At Mr. David Forester's two stables, methods are somewhat different. In one stable he has thirty head in loose boxes, and in the other sixty or seventy tied up with chains. The latter method is most popular, as it is more economical of bedding, and allows catering to the individual tastes and peculiarities of the animals. The grain, which is liberally fed in these stables, consists of a mixture of oats, shorts and barley; no roots are used. The roughage consists of ensilage one part to three of cut oat-sheaf and clover hay. All are watered inside, and fed three times daily. They were doing well. From 150 to 200 head are annually fed on Mr. Forester's farm.

Mr. S. H. Smith feeds his sixty head in much the same way as do Fair Bros., and is strongly in favor of short-keeps of good quality. The methods which we have described are typical of most of the Clinton district feeders, whom, we might add, favor finely ground grain.

LIGHTER GRAIN RATIONS.

About Exeter the farmers are less liberal with their grain, but apparently none the less successful as feeders. The same method is in vogue here with regard to long and short keep steers; they are always sold when fit, but are not crowded as hard as are the steers about Clinton.

The operations of Mr. Paul Madge are fairly typical of the feeders about Exeter. In Mr. Madge's stables are eighty head, mostly Shorthorn grades, and all are dehorned. The meal allowance is in striking contrast to that used in the Clinton stables. Mr. Madge feeds only 1½ pounds of grain per head per day, with a slight increase toward the end of the feeding period. Hay also is almost entirely dispensed with. The grain consists of two parts-middlings to three parts ground oats. The roughage is a mixture of ensilage and cut straw. It is all mixed together, enough for one day ahead. (Most of the Huron feeders practice mixing feeds.) A few roots are also fed. As Mr. Madge could not get big steers this year, he expects to finish most of his bunch on grass. At Mr. I. W. Johns' we saw a fine bunch of well-groomed steers, which seemed to have been selected carefully. We also called on Mr. David Gardner, but unfortunately he was away. However, we saw more roots here than on the other farms.

BUYING AND SELLING PRICES.

All the feeders whom we visited were of the

opinion that in order to handle steers without loss, there should be a difference of one cent per pound between the buying and selling price. This difference does not represent a clear gain, but gives a farmer a good market value for his produce and retains fertility upon the farm. Considerable importance is attached to the fact that the highest market value is secured for the roughage of the farm. It was generally agreed by all the feeders that where steers could be had of the right stamp, a short-keep was more profitable than a long-keep steer, although no definite data could be given on the problem. In many cases the profit is due to the speculative ability of the feeder.

SUBSTITUTES FOR PEAS AND CORN.

Peas are no longer to be had, and corn this year is not offered freely. In place of these grains middlings and some wheat are fed. On some farms, cut oat-sheaf is the foundation of the ration. Nowhere did we see any condimental foods, or cake, although there are linseed oil mills at Clinton and Exeter.

GROOMING.

Among the larger herds, little or no grooming is done; the operation is considered altogether too expensive where large numbers of cattle are fed. Every effort, however, is made to keep them clean. Sufficient bedding is used, and the hair is clipped from the thighs and tails. Where lice appear the hair is clipped off, and tobacco juice is freely applied. In some of the smaller herds the steers were carefully groomed, which added much to their appearance and handling quality.

IN GENERAL.

This year fewer cattle than usual are being fed on account of the uncertainty of the markets growing out of the outbreak of the foot-and-mouth disease and the difficulty in getting steers of good feeding qualities. Those being fed are nearly all grade Shorthorns from two to three and a half years old. A great drawback to feeding operations is that in buying a bunch of steers many inferior animals have to be taken in order to get a few good feeders. This lack of uniformity prevents farmers from making a specialty of either short or long keep steers. The whole lot are put on equal rations and sold off when they are finished, the best going in January, while the poorer and smaller ones are finished on grass.

IMPROVING THE STEER.

The problem of improving the quality of the feeding steers is one for the smaller breeders to solve. The extensive breeders have won repute at the best shows on the continent. The reputation of our feeders is of the highest, but the skill of these breeders and feeders does not mould the types of all the cattle offered for export or to the butchers. These cattle are bred largely by farmers who keep cows for two purposes, to raise calves for stockers and to give milk for dairy purposes, a very commendable practice, by the way, but one in which much can be done to improve the quality of our export cattle. What is wanted first is an object in breeding.

If a person is anxious to make the most profit out of dairy farming, then a dairy breed of cows should be kept, and the bull calves vealed or used for breeding purposes. To put the steers of a dairy breed or those having considerable dairy blood upon the market as stockers is simply ruinous to the beef interests of our country. Growthy steers, with a natural tendency to lay on flesh, is what our feeders and exporters want to-day, and for which a good price will be paid.

To Sprout or Not to Sprout?

At present and during the past year, the inventors of a grain-growing machine have been active in trying to introduce their apparatus among stock feeders. The machine has the appearance of a cupboard with a tier of drawers. In these drawers or compartments, grain intended for feed is placed and (by the addition of moisture and heat) subjected to conditions suitable for germination. At the end of four or five days sprouts have formed on the grain, and it is then ready for feeding. The advocates of this method of treating grain advance the plausible argument that in the germination of the grain certain chemical changes, similar to those which take place during digestion, are secured, and that as these changes are much more complete in the machine than in the alimentary canal of the animal, the nutritive value of the food is enhanced. The claims made for such chemically-changed food stuffs are so far in advance of the results obtained by conscientious investigators, that we sound a note of warning to those who are approached by agents of the manufacturers of these machines. We have any number of public experiment stations where the merits of all kinds of apparatus and feeds are independently tested, and until these stations have pronounced upon the success of this new method of treating grain, farmers would do well not to spend money in experimenting with the machine.

The Protection of Cattle Against Tuberculosis by Vaccination.

Some experiments on the vaccination of cattle against tuberculosis have recently been published by Dr. Leonard Pearson, State Veterinarian of Pennsylvania, and Dr. S. H. Gilliland. These experiments were conducted at the Veterinary School of the University of Pennsylvania, with the support of the State Live Stock Sanitary Board. The work has been in progress more than two years, thus antedating all other work along this line, for the German investigations of Von Behring did not begin until July, 1901. No other investigations of this sort have been reported in any other country than in the United States and Germany. The process used was to inject into the vein of the animal to be protected a small quantity of a suspension of tubercle bacilli non virulent for cattle. This procedure, called vaccination, may be repeated several times with gradually ascending quantities. The immediate effect is to produce a passing fever following each injection, which does not annoy the animal enough to cause it to lose a single meal. The general health is not disturbed by the process of vaccination. When the series of vaccinations is completed, the animal had an astonishingly high degree of immunity to tuberculosis. In the last experiments completed, four young cattle were used. Two of these were vaccinated last March. All four were inoculated in July by injecting into the windpipe a quantity of culture of virulent tubercle bacilli. A large quantity was introduced and each of the four animals received exactly the same treatment. These animals were killed in October. It was found that the cattle that had not been vaccinated were extensively tubercular, showing alterations of this disease in the windpipe, lungs, throat and intestinal glands; while the two vaccinated animals, inoculated the same time, from the same material and in the same way, were free from tubercular infection, and were sound.

Dr. Pearson considers that this principle of immunization as applied to vaccination against tuberculosis of cattle is proven, and it now remains only to work out the details of the method. This important work is being continued on a larger scale for the purpose of ascertaining the simplest and shortest practicable method of vaccination.

It is not yet known how long the immunity will last, nor what the ultimate effect upon the animal will be. So far, however, as the few experiments here and in Germany show, no fear need be anticipated of unfavorable results in these particulars. What is needed now is the painstaking use of the method on a few tubercular herds kept under careful and continuous observation. A scrupulously careful trial on a limited scale under proper conditions will do more to furnish the information needed to answer the few remaining questions upon this discovery than any amount of general use under less careful supervision. In the estimation of the investigators, it would be premature to apply this vaccination to herds until such further experiments are completed. An effort will be made to secure State aid for experiments on a scale large enough to solve this most important problem.

Lincolns Champions.

"One of the most notable incidents at the Smithfield Fat Stock Show in London last month," says the Agricultural Gazette, "was the capture by a trio of Mr. Henry Dudding's Lincoln wethers, whose average weight was 278 pounds, of the championship prize as the best pen of sheep in the show. So much has been talked and written about the excessive fatness of the Lincoln, and its unsuitability for meeting the present-day demand for lean meat, that the award of this much-coveted championship prize at the Smithfield Show is likely to attract much attention in sheep-breeding circles. The success of the Lincoln on this occasion is rendered all the more remarkable by the fact that the award was made by a gentleman who is himself an enthusiastic breeder of short-wooled sheep, viz., Mr. Bowen Jones, whose name has long been prominently identified with Shrops and Shrop breeding, and who at one time kept a very choice flock of this breed at his headquarters near Montford Bridge."

The selection of Shorthorn cattle from a dozen high-class Canadian herds, to be sold at Hamilton, Ont., on January 28th, will afford the best opportunity offered in many years to secure good stock of the best type and breeding. No one interested in the improvement of his cattle should fail to attend the sale.

In raising stock, it is only the best ones that add to the bank account. Fasten this securely in a convenient chamber of your memory, where its full significance will continually crop out at each breeding season.



THE FORE END OF MR. DUTHIE'S BAPTON CONQUEROR.

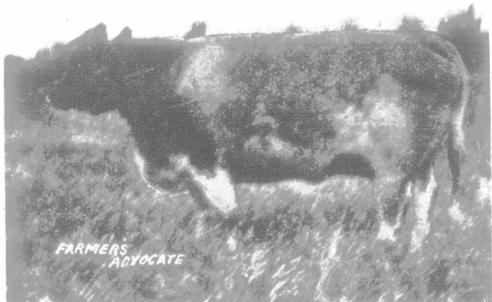
Canada's Beef in Great Britain.

(Special correspondence.)

Lunch time in London, and the luscious rumpsteak is the "piece de resistance," only mataphorically speaking, though, because that rumpsteak is tender and yields readily to the onslaught of English cutlery, not the silver-plated article which passes for a knife in our country. "How do you like that steak?" "It's O.K.; couldn't wish for better!" "That's American, one and two-pence a pound at the stores, just as good as prime Scotch or English, which would have cost one and four!" This dialogue depicts the position at which the American beef-producer has arrived; prejudice against the foreign meat has disappeared because it has the required quality besides being cheaper than the home-produced article. Mere cheapness would never have brought American beef, New Zealand mutton or Danish butter to their present strongly intrenched position had those articles failed in the possession of indispensable quality, without which we may vainly try to capture favor in the eyes and mouth of the British beef-eater.

We may as well come to the following conclusion at the beginning, that "we cannot land grass-fed cattle in a condition fit to compete with the British or American cattle. We may be able to with grain-fed stock, but grass-finished beef can only reach the market and retain what excellencies it may have had, as chilled beef!" Once this conclusion is arrived at, only two ways are open to the cattle-raiser, either finish on grain, and that would mean for the Northwest cattle, finishing in Ontario or Manitoba through a feed-in-transit arrangement with the railroads, such as obtained in the United States; or else the establishment of large abattoirs and packing-houses at central points in the Canadian West. Capital, however, will not come to establish such an industry unless the country produces an article which the world wants and is willing to pay for. A late British Minister of Agriculture, Mr. Chaplin, expressed his determination to the American inspector, Dr. Wray, "to make the foreign beef business a dead meat trade," and his successor, Mr. Hanbury, seems to be bent in the same direction. The Americans study the British market and from the large number of cattle available at such markets as Chicago, make a selection suited to certain times of the year. The British consumer is not as familiar with the use of ice in household economy as the Canadian or American, consequently smaller joints, and, therefore, lighter weight carcasses are required during the summer.

The superintendent of the Deptford lairages says "the chief fault of Canadian cattle is lack of finish and breeding, too old and in some cases too much bone. The flesh is light in color, and there is not enough of it." Early maturing (by some termed baby beef) stuff is now called for,



THE VINE COW.

In the Collynie herd, said to be the best Shorthorn female in Britain.

and commands the highest prices. The Canadian cattle, taken as a whole as seen at the three lairages, are deficient in covering and are bare over the crops, back and loin; lacking in rump and are light in the thighs. Such faults are serious, as the regions mentioned include what are known as "the high-priced cuts." While practically all (sometimes twenty or thirty in a shipment of three hundred or more) will have the well-meated, table-like back) show lack of finish, numbers of them show a conformation on which it is impossible to pack meat. Sharp over the crops and along the back, good rain shredders they are, but mighty poor beef carriers, and their ancestry is easily traced. The rancher owning dairy-bred dogs is to be pitied; he may leave them on the range until four or five and they are then a disappointment to both buyer and seller. The constant praise of Canadian store cattle by the Old Country feeders who once fed our steers gives rise to the following thoughts, either our cattle were better bred, and, therefore, of better conformation than now, or else Canadians are lacking in knowledge of how to feed beef cattle (they may know, but do not put such knowledge to any good use). Beef-bred bulls are needed with the tendency to put on thick flesh, easily and early. Bulls that will ensure progeny with wider-sprung ribs, thicker-meated, even-er-covered crops, backs, loins and rumps; cattle with more quality and capable of taking on finish cheaply and quickly. To the above must be added more and better feed, that feeding to be continued until the animal is finished, not only at such points as the flank, cod, rumps, hooks, but at the finishing points, the shoulders and neck. NOMAD.

Foot-and-Mouth Disease and the Embargo.

To the Editor "Farmer's Advocate":

Sir,—I have received the Christmas number of the "Farmer's Advocate"; it is grand. We have seen the close of a prosperous year with an abundant harvest and good prices for everything that is raised on the farm; we should be truly thankful. Those who have been so interested in the removal of the embargo, still keep the question alive; they are not feeders or shippers of cattle, but railway and steamship agents who would like to get higher freights. Myself, with many others, thought at the time it was put in force, that it would be detrimental to the trade, but it has proved a blessing in disguise. Previous to the enforcement of that law we seldom shipped our cattle at less freight than sixty-five shillings, and often more than eighty shillings has been paid. During the last five or six years the rate was thirty to forty shillings; now there is a fresh trouble, and more dangerous than many people in this country can realize—that is, foot-and-mouth disease in the New England States—and which has closed Portland and Boston ports. Where we were getting freight at 32s. 6d., now we are paying 45 shillings from St. John and Halifax, and agents are asking 50 shillings for it, besides having a longer journey by rail. To spread the disease, infected animals need not come in contact with healthy ones, as it can be carried by people who handle the cattle. Few cases prove fatal; the first symptom is driveling and sucking with the tip of the tongue between the lips. There was an outbreak of the disease in England in 1871, and I had a large number of Irish store cattle quarantined near Bristol for ninety days. The same year I had another lot at Quedgley Farm, near the City of Gloucester. Some cattle get over it in a few days; others take months. It is very destructive to milch cows, and causes great loss to those preparing cattle for beef; they become lean as crows. To young stock which is being kept over, it does little damage, as they recover very fast. I have never seen good effects by treating them with medicine. It spread to Scotland and Ireland in '72, and cleared away in the summer of that year. It was in the year 1865 the rhinderpest was brought to England from Russia, which almost cleared the country of cattle. When an animal contracted that disease it was to be destroyed and buried in quicklime. Many fine herds met their doom in that way. It is not easy to forget such scenes. It is to be sincerely hoped that the disease will pass away from the States without paying Canada a visit.

If the beef should be shipped dressed, instead of on the hoof, the feeders would not get more than 3½ cents for their cattle, and that would be had indeed. I wish you many happy returns of the season. DENIS O'LEARY.

Western Cattle Market.

Fighting Foot-and-Mouth Disease.

Dr. Salmon, the chief of the Bureau of Animal Industry, who is in Boston directing the campaign against the epidemic of foot-and-mouth disease, says that the disease will be stamped out this winter unless it has been carried to some other part of the country where it is yet undiscovered. Large numbers of cattle have been slaughtered.



PRINCE OF THE VALE. Owned by Mr. Wm. Anderson, Saphock, Old Meldrum, Scotland.

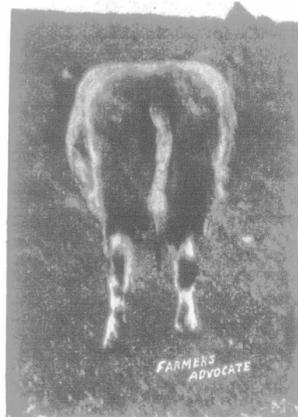
The Last Question.

"When it comes to the butcher's block, the question of whether an animal is a worthy representative of his breed, whether his coat is black and smooth or black and shaggy; whether red, white or roan cuts no figure. What proportion of choice meat is there to waste and cheaper parts? This is then the last question. At the 1902 International, the car-load of Casey Short-horns was pitted for first place against the Escher Angus. Popular opinion favored the reds, and Judge Leavitt admitted that he never had a more difficult decision to make. One lot may have been stronger in breed characteristics than the other, but the trained buyer who for many years has been able to confirm or correct his judgment of cattle on the hoof by the cold records of the same cattle in the cooler could not consider any differences of breed points even if there were any. The difference in the two lots seemed as hard to find as the proverbial needle in a hay stack, but the killing test showing 66.4 per cent. of beef for the first prize and 65.06 for the second confirmed the judgment of the expert and again laid emphasis upon the fact that the end of all live stock is meat.—[A. C. Halliwell, editor Live Stock World before the Kansas State Board of Agriculture.]

Producing Good Bacon.

Speaking at the annual meeting of the Experimental Union at Guelph, Prof. J. H. Gris-dale, Ottawa, mentioned a few facts in connection with hog-raising and the production of good bacon, which apply with considerable force to conditions in the Western country. He said: "Properly cared for pigs, means pigs fed under conditions conducive to health and thrift. Airy, roomy, light quarters are the right sort. If space is an expensive consideration, as it usually is, especially in winter, then let the small space be well ventilated, well lighted, and kept clean. Large runs are not necessary where the other conditions are provided. The quality of the feed supplied is undoubtedly an important consideration. Bar-ley is unsurpassed as a feed for the production of firm bacon. Oats also are excellent. Where skim milk or whey can be secured, it is an infallible guarantee of a good quality of bacon."

Honesty should begin at home, and from there spread.



A REAR VIEW OF THE VINE COW.



EXTERIOR VIEW OF THE NEW SALE PAVILION AND STABLES AT THE STOCK-YARDS, HAMILTON, ONT.

Lessons on Early Maturity.

In these times when early maturity, rapid gains in weight, and profitable production in the feeding of animals is receiving so much attention, the following figures, compiled by the Farmer's Gazette, from the results of the competitions at the late Smithfield Show, will be of interest.

For the purpose of showing at a glance how the representatives of the various breeds stood as regards their rate of increase, we append a table showing the average daily gains of (1) the best of the prizewinning steers under two years old, and (2) the corresponding figures for steers over two years of age:

	Steers under 2 years.	Steers over 2 years.
Devons	1.92	1.67
Herefords	2.12	1.85
Shorthorns	2.39	1.88
Sussex	2.52	1.96
Aberdeen-Angus	2.35	1.97
Galloways	2.14	1.86
Cross-breeds	2.43	2.10

The table just given affords an excellent illustration of the advantage of early maturity. It will be seen that while the young steers of all the principal breeds showed increases of well over two pounds per head per day, only one of the animals over two years of age showed a daily gain of two pounds or over—and that was a cross-bred.

The carcass competition also furnished some very interesting results. We append a table which shows at a glance how the various prize-takers in this competition weighed before slaughter, and afterwards dressed on the block:

STEERS NOT OVER TWO YEARS OLD.

Breed.	Live weight. lbs.	Carcass weight. lbs.	Proportion of carcass. per cent.
1. Shorthorn-Galloway	1,079	693	64
2. Aberdeen-Angus	1,022	641	63
3. A.-A.-Shorthorn	1,235	769	62

STEERS TWO TO THREE YEARS OLD.

1. Welsh	1,698	1,091	64
2. Aberdeen-Angus	1,230	838	68
3. A.-A.-Shorthorn	1,528	994	65

HEIFERS NOT OVER THREE YEARS OLD.

1. Aberdeen-Angus	1,332	908	68
2. Aberdeen-Angus	1,106	710	64
3. A.-A.-Shorthorn	1,339	873	65

Among the sheep, as among the cattle, it will be seen that the younger animals had the most satisfactory gains to their credit, one pen of lambs showing a daily increase of three-quarter pounds, while the average daily increase in the case of the older sheep fell under half pound per day. The Suffolks showed up to special advantage in the carcass competition, where they won not only both the first prizes in the classes for short-wooled breeds, but the much coveted honor of the championship as the best pen of sheep in the block test. These sheep, which averaged 163 pounds in weight, gave a carcass averaging 109 pounds, so that their proportion of carcass to live weight was 67 per cent., certainly a very high figure for sheep. In the table which we subjoin, the carcass percentages of the several prize-winners in the block test can be seen at a glance:

LONGWOOL LAMBS, NOT OVER 12 MONTHS OF AGE.

Breed.	Live weight. lbs.	Carcass weight. lbs.	Proportion of carcass. per cent.
1. Suffolk-Cheviot	117	73	62
2. Cheviot	143	92	64
3. Cheviot	129	85	66

LONGWOOL WETHERS, 12 TO 24 MONTHS OF AGE.

1. Cheviot	148	98	65
2. Suffolk-Cheviot	168	104	62
3. Welsh Mountain	95	62	65

SHORTWOOL LAMBS, NOT OVER 12 MONTHS OF AGE.

1. Suffolk	163	109	67
2. Suffolk	145	88	61
3. Suffolk	163	100	61

SHORTWOOL WETHERS, 12 TO 24 MONTHS OF AGE.

1. Suffolk	202	125	62
2. Suffolk	187	125	67
3. Southdown-Cheviot	119	74	62

pounds were required. This shows a loss of six per cent. of the feeding value of food through cooking."

From the results of many experiments, the only food that should be cooked before feeding is potatoes, and these only when fed to hogs.

"The Finishing Stage" in Cattle Feeding.

To the Editor "Farmer's Advocate":

Sir, A few years ago any reference to the "Finishing Stage" in a January issue would have been thought out of season, but not so now; times have changed for the better and cattle can be finished and exported any month of the year. The finishing stage is not reached until after cattle have gradually been brought to take the full amount of grain food they can profitably consume and they appear to be about as fat as they need to be. After this point is reached, it seems to an unpracticed eye that there is not much increase in fatness or weight, and that the food given is largely wasted. Not so. True, the fat on the outside does not get much thicker, but its feel changes from the soft and spongy to the firm and springy, and there is a filling up of the hollows of the body till the animal, as the saying is, "is as plump as a berry."

At this stage feeding should be steady and even. Not much increase in the amount eaten need be looked for, but the quantity of roots or ensilage given should be reduced and meal and clover hay form the bulk of the ration. Watering should be done twice a day, or what is better, have water before them at all times. At this time cattle will have learned to know, to the minute almost, when they should be fed, and great regularity in time of feeding is important. My experience has been that at this period there has been less trouble with cattle getting wrong in their digestion, going off their feed, than in the earlier stages when the meal ration is being increased, yet it is well to be very watchful, as a little trouble of that kind occasions great loss. Acting on the advice of experienced feeders, I have practiced giving a tablespoonful of sulphur to each beast once a week if there is any tendency to become crippled on the fore feet. This appears to correct the trouble.

It is at this stage in the feeding process that the difference between the well-bred steer and the scrub comes out the most plainly. A well-bred beast will gain right up to the finish, but the one of poor breeding will stop a good deal short; his health appears to be good, but he will not eat his full measure; you cannot get any more fat on him; there he sticks, he has reached his limit.

The "Advocate" has so continuously and sometimes so severely condemned the scrub, that I have often felt like defending the poor beast, and certainly there are some of the common cows of the country that should not be called scrubs, though they lack pedigree. Grand animals they are, with good heads, bright eyes, capacious stomachs and hardy withal, whose excellencies are best revealed at the milk pail, and if bred to the right type of bulls will produce ideal feeding cattle. But there is a class of scrub, or mongrel rather, who have not as yet got their deserts. They can be found where a farmer has bred his cows to a Holstein, afterwards thinking Jerseys were a better breed, tried them, going back again to the Shorthorn, with the result that cattle can be seen of a color in which black, fawn, red and white are blended, a mixture abhorred by feeders. Middlesex Co., Ont. T. BATY.



IMP. DIAMOND PRINCE.

Young Shorthorn bull, contributed by Mr. W. D. Flatt to the combination sale to be held at Hamilton, Jan. 28th. Sired by Bapton Diamond, dam Missie 155th.

Cooking Feeds.

Many people are still laboring under the impression that cooking increases the digestibility of stock foods. The idea probably gains acceptance from the fact that boiled oats or barley make an excellent tonic for horses, but even this practice is gradually being abolished in Scotland, where it was formerly most popular. Some feeders, however, cling to the idea that pigs do better on cooked feed than on raw grain. The question of feeding hogs cooked grain has been carefully investigated by nearly all the Canadian and American experiment stations, with a uniformity of results that at once solves the problem. Summarizing the results, Prof. Henry says: "Including all trials then, so far as known, that have been favorable to cooking feed, and omitting many that are not favorable to that operation, the average shows that 476 pounds of uncooked meal or grain were required to produce 100 pounds of gain with pigs; while after it was cooked, 505

The English Pedigree Sales of 1902.

Were it possible to give full details of the whole of these important events, there is every reason to know that information of great value to your readers could be rendered available. However, seeing that this is impossible, a summary of the more important results will be of interest, and, although the information will not be of so voluminous a character, it will still be of value, mainly because it will indicate which of the breeders of the different varieties of live stock were able, by the merit of the stock offered for sale, to secure the highest prices when tested by that best of all tests, the unreserved sale ring.

In England, the most important and popular breed of draft horses is undoubtedly the Shire. Throughout the whole of the year, the demand has been first-class, and many notable prices have been made. Comparing the ten principal stud sales of the year with a similar number in 1901, we find that in 1902 there was one sale, Lord Rothschild's, with an average of \$1,088, as against none in 1901; one with an average between \$850 and \$1,000, as against three in 1901; four with an average of more than \$500, as against three in 1901, and four with an average of \$250, as against the same number in 1901. The best price at auction sales during this year, \$3,142.50, realized at the draft sale of His Majesty the King, at which the best prices of the year for four-year-old mares, \$1,007.50, and for yearling fillies, \$1,837.10, were also made. Mr. R. Allen made the top price during the year for three-year-old stallions, \$1,732.10, Sir James Blyth making \$1,632.10, for another of the same age, whilst a third of this age, at the Shire horse sale, London, made \$1,575.00. The best price for two-year-old stallions was made by Lord Rothschild, \$1,660.00, and the corresponding price for yearling colts was \$656, at the Welsh pool sale, and that for colt foals was \$708, made at Mr. G. Nursey's sale. Lord Rothschild's \$3,937.50 was the highest price for brood mares, and also the highest price realized for a Shire

horse during the year 1902. His Majesty the King, at his bi-annual sale, making the next best price for this age, namely, \$3,018. A notable series of prices have been made during the past year for three-year-old fillies, the three best prices being \$2,312.50, at Mr. R. W. Hudson's sale; \$2,257.50, at Sir Oswald Moseley's sale; and \$2,152.50, at Lord Rothschild's sale; the two former being in excess of the top prices recorded in 1901, and the latter equal to the then highest price. The results of the sales of the two-year-old fillies have been more notable still, Sir Oswald Moseley making as much as \$2,940 for one of this age, the highest price recorded since previous to 1898. His Majesty the King purchased this record price filly, who goes to the Sandringham stud, from which last spring the second highest priced two-year-old filly of the present year was sold at \$2,362.50, a price which was closely followed by one at Lord Rothschild's sale, who made \$2,152.50. The best price for filly foals, \$1,260, was realized at the Welsh pool joint sale.

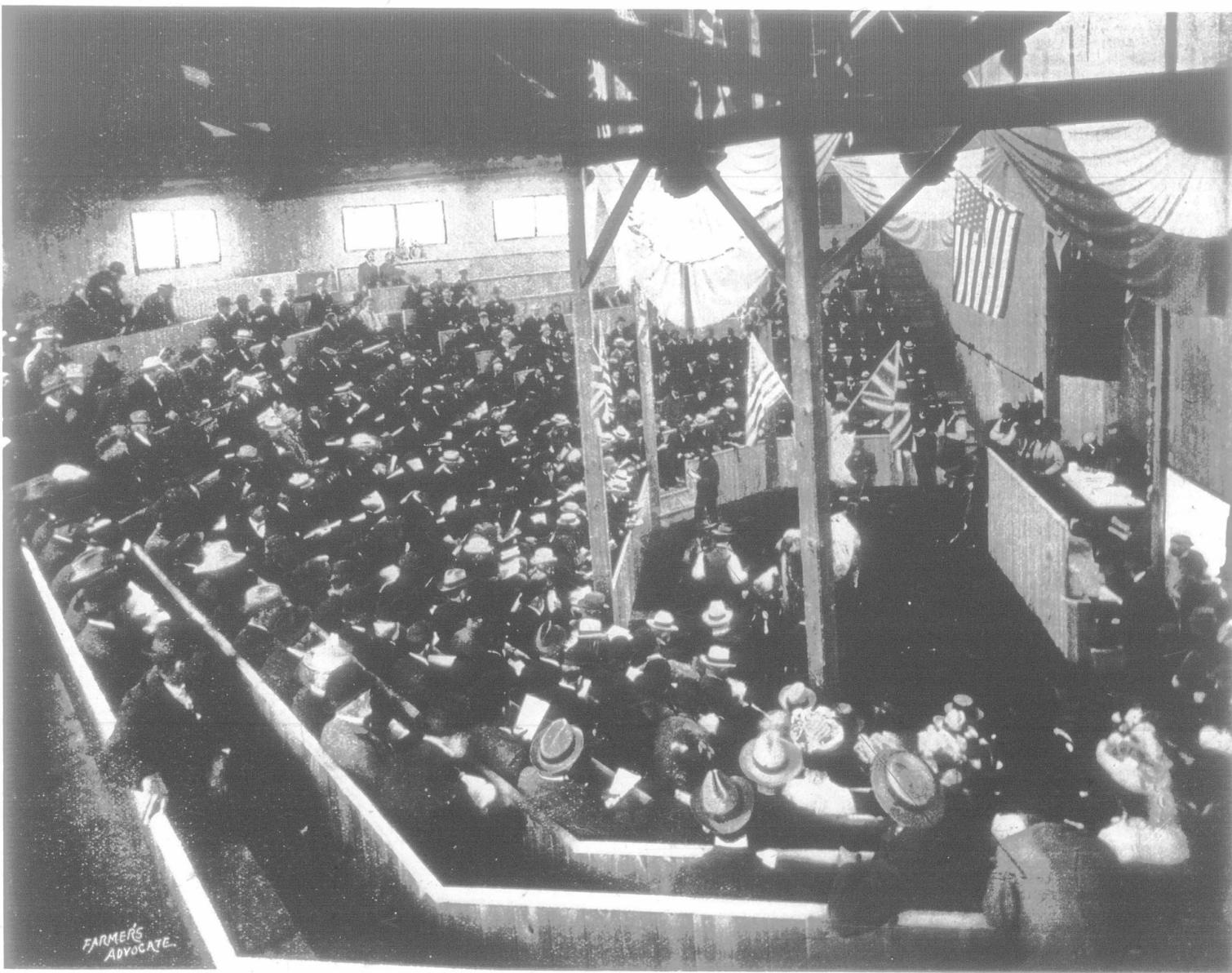
The reported sales of Clydesdales, unfortunately, do not afford so much scope for comparison as those for the Shires, nor have the sales been so numerous, but those results which are obtainable are indicative of a capital demand. The Seaham Harbor Co. realized the highest auction sale prices of the year for stallions, \$1,312.50; two-year-old stallions, \$787.50; colt foals, \$350, and for filly foals, \$200. Mr. Mitchell, of Millfield, made the top price for yearling stallions, \$850; brood mares, \$1,050; two-year-old and yearling fillies, at \$1,076 and \$461.50. The top price for three-year-old fillies was Mr. J. Craig's \$682.50. Amongst other notable prices realized during the past year was \$790 by Lord Durham for a stallion; \$600 and \$550 for brood mares by Mr. A. B. Mathews and the late Mr. Patrick.

The Hackney sales have been very numerous, and taken as a whole, some highly satisfactory prices have been secured. Mr. Burdett-Coutts, M.P., secured top price for stallions, \$1,050; Mr. J. Beldam making \$735, Mr. E. Ostlere \$680, and two others made \$890, one being sold at the London Hackney sale and the other at Peterboro

sale. The best price for a three-year-old stallion was \$315 at the Hedon sale, whilst the three top prices for two-year-old stallions were \$970, \$587 and \$557.50, realized respectively by Messrs. E. W. Palmer, the executors of F. Pembroke, and R. V. Thornton. A grand yearling stallion realized for Mr. J. Baker \$735, the top price of the season, and Sir Gilbert Greenall made the best price for colt foals, \$190. Some excellent prices were made of brood mares; four of the highest recorded during the past season were \$1,102.50, \$840, and two at \$735, the vendors being Sir Gilbert Greenall, Mr. E. Smith, Mr. Thornton and Mr. Howell. Four-year-old mares ranged from \$1,102.50, Mr. J. Beldam's; the three-year-old fillies sold well, one from Mr. E. Smith's stud making \$1,680; another of Sir G. Greenall's \$890, and one of Mr. Thornton's \$813. The best price for two-year-old fillies was made at the Hedon joint sale, \$1,102.50; Mr. Burdett-Coutts' \$630 being the next best price. Neither the yearling fillies or filly foals made any notable prices, the best for the former age being \$390, and for the latter \$320. Space will not permit of detailed reference to the numerous sales of hunters, but we may quote three prices as being indicative of the high values which are readily given for the best specimens of these horses: Mr. Wroughton made the top price of the year, \$2,875, Mr. H. Barkley making \$725, and Lord Southampton \$2,100 for two others.

The demand for harness horses has also been good. Mr. E. Smith sold one at \$2,250, Mr. H. Gould another for \$2,150, two of Mr. Burdett-Coutts' making \$1,510 and \$971, respectively. Pairs, when well matched, commanded very high prices; the top price for these being \$4,460, at Mr. E. Smith's sale, Mr. R. G. Heaton made \$2,615, and Mr. Burdett-Coutts \$2,365; the demand for ponies of different breeds being very keen; for polo ponies the top price of the year was \$1,835.

THE CATTLE SALES, particularly for those of the leading breeds, have been most successful; in fact, in more than one instance more so than was generally anticipated, it being feared that the absence of the Argentine



A SNAP-SHOT OF THE INTERIOR OF THE SALE PAVILION AT HAMILTON ON THE OCCASION OF THE INITIAL SHORTHORN SALE, AUG. 13, 1902.

demand would have had a more prejudicial effect than has been the case.

It is possible to make a comparison of the Shorthorn sales with those of the preceding year, for these are, as a rule, fully reported. Taking thirty-five sales which took place this year, and comparing with the same number of similar sales last year, we find that of those held this year, one had an average of over \$400, Mr. Duthie's; one over \$350, Mr. James Dunro; two over \$250, Mr. V. Cavendish and Col. Makins; four over \$200, five over \$150, and twenty-two over \$100. In 1901 the top average was one over \$250, four over \$200, eight over \$150, eighteen over \$100, and four under \$100. Mr. W. S. Marr made the highest price for the breed this year, \$1,680, for his bull calf, the fifteen averaging \$590; Mr. Duthie being in close attendance with a top price of \$1,510, and an average of \$577. Col. Makins took top place in the bull prices, at \$1,810, and amongst other notable prices realized were \$1,280, at Birmingham March sale, \$655 at Mr. Shepherd's sale, \$760 at Perth sale, and \$605 at Mr. J. Wilson's sale. The top-priced female was made by Capt. W. H. O. Duncombe's noted Warrior Queen, whose price was \$900; two from the herds of Mr. V. Cavendish and Mr. W. J. Hoskin made \$840; one from Mr. C. J. Bates reached \$708, and two others sold by Col. Makins and Mr. James Dunro made respectively \$830 and \$608. A couple of two-year-old heifers from Mr. James Dunro made \$995 and \$760, the former being the top price for her age this season. The same breeder also made top prices in the yearling heifer class, with \$1,050 and \$498, and Messrs. G. Shepherd and F. Summers took the highest places in the heifer calves, with \$341 and \$315 respectively.

The Aberdeen-Angus sales of the past season have placed upon record a range of prices which require very successful sales to displace. The best prices for bulls, two-year-old and yearling were both secured at Perth, namely, \$1,890 and \$1,152.50; another of Mr. A. Geddes' making \$1,050. The Rev. C. Bolden made top price for bull calves, \$185. Col. G. Smith Grant led the price list for cows, with \$1,407.50, Sir G. Macpherson Grant being close up, at \$1,310. The top priced two-year-old heifer was found in an English herd, Mr. C. W. Sofer Whiburn's, where \$1,050 was realized for one of this age. Col. G. Smith Grant's \$775 topped the price record for yearling heifer, and Sir G. Macpherson Grant's \$775 was the highest price heifers under a year.

The Hereford sales at home do not reach the size or importance of those held in America, but it is satisfactory to note that, as a rule, the range of values realized have been most satisfactory. Mr. H. Hayward secures the top price for bulls, \$1,665, followed by Mr. E. Wright, with one at \$575; the best prices for yearling bulls being \$393 and \$315, at the Hereford sale. Mr. A. Rogers made top price for cows, \$575, and Mr. H. Hayward for three, two and one year old heifers, which were \$367, \$420, \$380, respectively.

The few Galloway sales reported were very successful. Good average runs of prices were secured, but nothing worthy of special note.

Of Jersey cattle during the past year, \$840, made by Capt. A. B. Fraser, was the top price for bulls, Mrs. McIntosh making \$365 of another, and the late Lord Braybrooke \$325 of a third. Lady de Rothschild topped the cow prices with \$1,110, the two-year-old heifer with \$575, and the yearling heifer with \$355; the other most notable prices for females being \$451 for a cow, at Mrs. McIntosh's sale; \$390 for a similar animal at Lord Braybrooke's sale, and \$325 at Capt. A. B. Fraser's sale. With the exception of two prices made at Mrs. Fowne's sale, those realized by Guernseys have been about an average with those of former years; these particular prices were \$1,050 for a cow and \$420 for a bull.

The best price noted for Ayrshires was \$125 for a yearling bull at Lanark, and \$215 for a cow at the same sale. The top prices for Dexter and Kerries were those made at Messrs. Robertson Bros.' annual sale, namely, \$420 for cows and \$105 for heifers.

THE SHEEP SALES

have this year been considerably below the average of some of the previous years. The loss of the Argentine demand has been mainly responsible for this result. The highest price for a ram this year was Mr. R. P. Cooper's yearling Shropshire ram, which made \$785; for ram lambs, Mr. T. F. Duxton's Hampshire Down, who was let for the season to Mr. J. Flower for \$525; Professor Wrightson making the highest sale price, \$335, closely followed by Lord Ellesmere's Suffolk ram lamb, who made \$315. The highest price of the year for ewes was \$198 for a Border Leicester ewe, sold by Mr. T. McIntosh; Shropshire ewes making up to \$80, and yearling ewes \$75, whilst Suffolks made up to \$50, and Hampshire Downs to \$51. Shropshire ewe lambs and Border Leicesters of the same age, both made up to \$52.50.

Briefly summarizing the results of some 1,500 sales, we find that the best averages for rams were those secured by Mr. R. P. Cooper with

Shropshires, whose average was \$195, the Oldhamstock flock of Border Leicesters, \$133; the Borland flock of Black-faced Mountain sheep, \$101, and Messrs. R. and W. Wright for Lincolns, \$100. For ram lambs the best averages were, Mr. James Flower \$75, for 101 Hampshire, including nine let at an average of \$192; Mr. T. F. Buxton for six let at \$210, same breed; Mr. A. T. Smith \$82 for Suffolks, and Mr. J. Tompkins \$55 for Southdowns. The best averages for yearling ewes were: Mr. T. McIntosh, Border Leicesters, \$32; Mr. Harry Williams, Shropshires, \$29; Lord Ellesmere, Suffolks, \$20, and Mr. W. Roper \$16.50, for Dorset Horns. The best averages for ewe lambs were \$16, Mr. Harry Williams' Shropshires; Lord Ellesmere's Suffolks \$11.75, and Mr. T. McIntosh, Border Leicesters, \$13.25.

SWINE.

The top sale prices this season for Berkshires are: For boars, Mr. A. Hiscock, \$188; sows, ditto, \$260, and gilts, Mr. E. Burbridge, \$120; Mr. A. Hiscock's average of \$61, for seventy head, being the best average. For Large Whites, the top prices for boars was: \$525, Mr. P. Ascroft, who also made top prices for sows, \$183, Sir Gilbert Greenall taking the corresponding place for gilts, at \$75; Mr. A. Hiscock making the best average: i.e., \$40 for fifty-two head. In the Middle Whites, Sir G. Greenall led all through, making top prices for boars, \$110; for sows, \$85; for gilts, \$60, and the best average, \$36, for thirty-eight head. The Large Black breed met with a growing demand, \$45 being best price for boars; \$43.50 for sows, and \$38 for gilts.

Interesting Facts re Smithfield Show.

Probably one of the most important matters that have been brought out for the use and benefit of breeders and feeders of live stock all the world over, is the early maturity and rapid development of present-day cattle and sheep, as compared with those of former days.

Mainly owing to the industry of Mr. W. W. Chapman, F.S.S. and M.I.J., our London representative, these facts are now rendered more easily available and in far greater detail than was the case some four or five years ago. Space is too limited to give the full details of the table proposed by Mr. Chapman, but it may be remarked that the figures given below are the results derived from the actual working-out of the daily average gain of each animal exhibited at Smithfield show.

The Earl of Strathmore's champion Aberdeen-Angus heifer, who won amongst other honors the King's challenge cup, the champion plate for best beast in the show, and the cup for the best heifer, at 1023 days old gave an average daily gain of 1 lb. 11.93 ozs. The best steer in the show at 1037 days of age gave an average daily gain of 1 lb. 15.42 ozs., and His Majesty the King's Hereford, who won the cup for best animal under two years of age, shows the average daily gain of 2 lbs. 0.02 ozs. The highest daily gain made by any animal in the cattle section was 2 lbs. 8.34 ozs., made by Mr. Gerald Warde's first-prize yearling Sussex steer.

Briefly summarizing the results, we find that the following shows the averages, daily gain and number of entries in each of the classes for steers not exceeding two years: Devons, 10 entries, average 1 lb. 12.65 ozs.; Hereford, 8 entries, average 2 lbs. 0.51 ozs.; Shorthorns, 8 entries, 2 lbs. 2.09 ozs.; Sussex, 13 entries, average 2 lbs. 1.72 ozs.; Red Polls, 2 entries, 1 lb. 14.99 ozs.; Aberdeen-Angus, 11 entries, average 2 lbs. 1.77 ozs.; Galloway, 7 entries, 1 lb. 13.90 ozs.; Welsh, 7 entries, average 2 lbs. 1.78 ozs.; Cross-bred, 12 entries, average 2 lbs. 0.68 ozs.; Cross-bred heifers, 5 entries, average 2 lbs. 0.12 ozs.; small cattle, 6 entries, average 1 lb. 4.96 ozs.

Number of entries and average daily gains of the steer classes above two and not exceeding three years: Devons, 6 entries, 1 lb. 8.12 ozs.; Hereford, 4 entries, 1 lb. 12.70 ozs.; Shorthorns, 6 entries, 1 lb. 14.08 ozs.; Sussex, 6 entries, 1 lb. 11.98 ozs.; Red Polls, 2 entries, 1 lb. 11.03 ozs.; Aberdeen-Angus, 5 entries, 1 lb. 14.24 ozs.; Galloways, 5 entries, 1 lb. 11.30 ozs.; Welsh, 10 entries, 1 lb. 10.42 ozs.; Highland, 6 entries, 1 lb. 8.00 ozs.; Cross-bred steers, 9 entries, 1 lb. 13.18 ozs.

The heifer classes above two and not exceeding three years gave the following average gains: Devons, 4 entries, 1 lb. 8.42 ozs.; Hereford, 1 entry, 1 lb. 7.03 ozs.; Shorthorns, 7 entries, 1 lb. 8.77 ozs.; Sussex, 10 entries, 1 lb. 9.46 ozs.; Red Poll, 1 entry, 1 lb. 7.27 ozs.; Aberdeen-Angus, 7 entries, 1 lb. 10.85 ozs.; Galloways, 2 entries, 1 lb. 5.95 ozs.; Welsh, 5 entries, 1 lb. 10.42 ozs.; Cross-bred heifers, 7 entries, 1 lb. 9.88 ozs.

RE SHEEP AND LAMB CLASSES.

Throughout this section each breed included has two classes, (1) lambs not exceeding 12 months, and (2) wethers above 12 and not ex-

ceeding 24 months. The following are the number of entries and average daily gains of each class: Leicesters or Border Leicesters, lambs, 6 entries, 10.05 ozs.; wethers, 5 entries, 7.02 ozs.; Cotswolds, lambs, 2 entries, 10.74 ozs.; no wethers entered. Lincolns, lambs, 4 entries, 11.74 ozs.; wethers, 4 entries, 8.40 ozs. Romney Marsh lambs, 8 entries, 9.80 ozs.; wethers, 11 entries, 7.08 ozs.; Devon Longwool, etc., lambs, 3 entries, 11.23 ozs.; wethers, 4 entries, 6.70 ozs.; Cheviots, lambs, 3 entries, 9.79 ozs.; wethers, 3 entries, 6.58 ozs. Southdowns, lambs, 14 entries, 8.43 ozs.; wethers, 11 entries, 5.47 ozs. Hampshires, lambs, 10 entries, 10.39 ozs.; wethers, 13 entries, 6.58 ozs.; Suffolks, lambs, 4 entries, 10.81 ozs.; wethers, 4 entries, 7.19 ozs.; Shropshires, lambs, 5 entries, 9.21 ozs.; wethers, 3 entries, 6.78 ozs.; Oxford Downs, lambs, 6 entries, 9.63 ozs.; wethers, 5 entries, 6.95 ozs. Dorset Horns, etc., lambs, 2 entries, 9.81 ozs.; wethers, 3 entries, 5.92 ozs. Cross-breds, lambs, 8 entries, 10.77 ozs.; wethers, 4 entries, 7.06 ozs.; Scotch Cross-breds, lambs, 3 entries, 10.00 ozs.; wethers, 1 entry, 7.66 ozs.

The Lincoln breed secured a notable and well-deserved triumph by the success of Mr. Henry Dudding's notably fine pen of Lincoln wether sheep, whose average daily gain was 8.83 ozs. This pen won first in their class, and Longwool champion prize, and then at the hands of Mr. J. Bowen Jones, the well-known Shropshire breeder, they received the coveted blue ribbon of the show, and were declared the champion pen of the sheep classes in the present year.

PIGS.

The champion pen of pigs, Mr. A. Brown's, gave a daily gain of 1 lb. 8.96 ozs., and the best single pig in the show, belonging to His Royal Highness Prince Christian, a Berkshire under 12 months, gave the average daily gain of 1 lb. 6.72 ozs. The first section of the pig classes is two classes for each breed, one not exceeding nine months, and the other above nine and not exceeding twelve months. The number of entries present and the average daily gain per pig was as follows: Small White, young class, 3 entries, 11.31 oz.; old class, 2 entries, 13.96 ozs. Middle Whites, young class, five entries, 1 lb. 3.05 ozs.; old class, six entries, 1 lb. 1.92 ozs. Large White, young class, 3 entries, 1 lb. 4.73 ozs.; old class, three entries, 1 lb. 5.57 ozs. Black Breed, young class, six entries, 1 lb. 3.06 ozs.; old class, three entries, 1 lb. 3.23 ozs. Berkshires, young class, 11 entries, 1 lb. 3.79 ozs.; old class, nine entries, 1 lb. 3.80 ozs. Tamworth, young class, three entries, 1 lb. 3.78 ozs.; old class, three entries, 1 lb. 2.25 ozs. Any distinct or cross breed, young class, four entries, 1 lb. 6.79 ozs.; old class, six entries, 1 lb. 5.98 ozs. The single pig classes not exceeding twelve months of age: White Breed, four entries, average 1 lb. 2.98 ozs.; Black Breed, 4 entries, 1 lb. 2.88 ozs.; Berkshires, 16 entries, average 1 lb. 2.96 ozs.; Tamworths, three entries, average 1 lb. 5.08 ozs.

The Schmidt Treatment for Milk Fever.

Having at a very early date after its introduction, called the attention of stockmen, especially dairymen, to the Schmidt treatment for milk fever, which is based upon the theory that the seat of the disorder is in the udder, the "Farmer's Advocate" has followed with interest the results of its use in actual practice. Messrs. Tennent & Barnes, well-known veterinary practitioners in Western Ontario, report that in four years, out of 119 cases, 11 only proved fatal, and in three out of four fatal cases in 1902 the cows prior to treatment had been dosed with salts. Under old methods of treatment, it would not be out of the way to say that the fatal cases probably reached seventy-five per cent. While precautionary measures are always to be recommended, once the cow is down what the owner wants is an effective treatment, administered by a competent veterinarian. The Schmidt treatment for milk fever, by the injection into the udder of iodide of potassium, is being generally adopted by veterinarians. The method recommended is to place the cow in as comfortable a position as possible. Then sponge the udder and teats with carbolic acid solution one to twenty, using warm water. Then scrub perfectly dry with a rough, soft cloth. Two drams of iodide of potassium are dissolved in one quart of clear water that has been raised to boiling point and allowed to stand until it cools down to 100 degrees Fahrenheit, the iodide of potassium being added after the water has so cooled down. Then one-fourth of the solution is injected into each teat with an ordinary India-rubber enema syringe, with a teat syphon or teat tube, made on purpose, and fitted into the end of the rubber tube. The enema syringe and teat tube must be scrupulously clean and free from all septic matter, otherwise inflammation of the udder may set in. In the course of two or three hours after the injection the udder is generally found hard and full, when a little milk may be drawn, but not all. It is seldom necessary to inject a second time, but if necessary it is repeated in about six hours.

Sound Doctrine.

The gospel of good blood, so long and persistently preached in the columns of the "Farmer's Advocate," is admirably inculcated in the following paragraph taken from the announcement on one of the cover pages of the catalogue of the grand selection of Shorthorn cattle to be sold at Hamilton, Ont., on the 28th day of the present month:

"Live stock is the corner-stone of agriculture, and good cattle never were required so badly as they are to-day in our country. Why breed the scrub and sell for three cents per pound, when good beef cattle bring six cents? Abundance of well-bred live stock is everywhere one of the most essential conditions of successful agriculture. The reason for this conclusion is plain,—live stock on a farm consumes farm waste and converts it along with our grain and forage into more money than could be realized by selling these products, and at the same time throws back upon the farm added elements of soil fertility that increases its productive powers and its value, while well-bred live stock brings a larger return for the feed consumed. Hence those farmers who have made first-class stock-growing a considerable part of their business are to-day the most thrifty and prosperous. Our country is developing slowly but surely. Our transportation facilities are keeping pace with the requirements, and we are now enabled to reach out for trade in the markets of the world. We must expect to meet with keen competition, and also that we can only secure our share of trade in these markets and hold the same by having an article equal or superior to other countries."

FARM.

A Plea.

Lone, in the open field, the old oak stands,
Tree of a century past;
Its bare limbs spreading o'er the grassy lands,
Braving the northern blast.
Heedless of reverence for its strength and age,
The farmer claims his own
And swings his axe, determined, war to wage,
Against it, left alone.

He covets in his heart, the very ground
Where its roots are entwined,
And lines of beauty he has never found
In all its stately kind.
O spare this landmark of our father's day,
This tree he loved so well,
And count its value more than common clay,
That men can buy and sell.

ANNIE L. JACK.

The Ice Supply.

Ice has come to be one of the summer requisites on all well regulated farms. Its value in connection with an efficient refrigerator for keeping fruits, meats and milk is being appreciated more every year. In some parts of Denmark the patrons of dairies are bound by contract to supply themselves with three pounds of ice for every one hundred pounds of milk produced. The time to get in the supply of ice is when ice, weather and roads are in favorable conditions, and as these conditions are not prevalent for any great length of time, it is well to take advantage of the first opportunity offered.

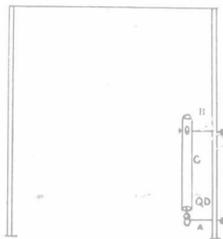
In harvesting ice, it is important to secure it from a pure source. Ice from streams, ponds and lakes that are contaminated by refuse from factories, stables and sewers is not free from injurious bacteria. Freezing does not kill such germs as cause typhoid fever, tuberculosis, cholera, etc.; therefore, if the ice is to be used in drinking water, care should be taken to secure it from a pure water source.

The keeping of ice depends largely upon the care exercised in storing it. See that there is sufficient slope to carry away any water from the bottom of the pile. Put down about eight or ten inches of sawdust for a floor; pack the blocks as closely as possible, filling in the cracks with thin ice chips. Leave about ten inches of space between the ice and the wall for packing material. In summer take the trouble to see that this packing is close and solid. Cover the top of the pile with about ten inches of sawdust or straw, and provide a good circulation of air over the whole. It is always best to handle ice on a cool dry day, so that it will be firmly frozen in the pile.

Uniformity of finish can only be secured by uniformity of stock at the start, and that can best be secured by a man being fitted to do his own breeding as well as feeding.

Dehorning Stanchion.

The accompanying device has proved very satisfactory for holding cattle while dehorning. It is easily prepared, and can be used upon any number of farms. A and B are irons three-quarter inch thick. They are inserted into a post, A near the ground, and B about two feet above. C is a stout piece of timber. A and C are linked together, B penetrates C, and has a key in the outer end to hold C in place; D is a ring in the floor. The device is used as a stanchion.



When the horns have been removed, the key is pulled out of B, C falls outward, and the animal is free. By having a long thread on A and B, the device can be regulated to suit all sizes of animals.

Remember the Mudholes.

We have not yet forgotten the condition of our barnyards last summer as a result of the heavy rains. In many places it was practically impossible to walk to the stable door on account of the depth of the mud. Even in the lanes and dooryards the mud and water stood ankle deep for days. Such a condition is possible again, and we should profit by past experiences. Now that there is some slack time it can well be employed in hauling gravel to fill up the mudholes and to make walks about the yards that are immune from mud and dirt. Nothing is so depressing on the spirits as to be continually "stuck in the mud." Mud on the shoes acts like a load on the mind; it depresses all who are affected by it. The time spent now in the hauling of gravel will be amply repaid when we get our next rainfall. The gravelling of the whole barnyard, when gravel is found within reasonable distance, will prove a great source of comfort and satisfaction.

Good Words for Farmers.

Dr. J. G. Schurman, president of Cornell University, in a recent interview said that his own experience led him to sympathize deeply with a farmer's life and work. His father and his ancestors for many generations were farmers. His own family are farmers. He himself was brought up on a farm and he knows the meaning and realities of farm life. He believes the farmers are the backbone of the country, the most conservative class we have, the people of the most solid character. In the cities families go to seed in two or three generations, and the cities would go to destruction but for their continuous recuperation by the coming of young men and women from the farms. The hope of the country and of the cities, therefore, is in the farming population. In the education of the farmers, Dr. Schurman said he was vitally interested. He knows that the organization of agricultural education is more difficult than the organization of engineering education and the mechanic arts. The farmer stands nearer than any other man to nature's source of supply. His business cannot be syndicated. The

individual must always play the most important part in it, and Dr. Schurman thought that was one reason why the proper provision for the education of young men and women for farm life is really so difficult.—[Iowa Homestead.]

Seed Selection and Plant Breeding.

Among the many educational features of the annual meeting of the Ontario Experimental Union, held at Guelph last month, was the address of Mr. G. H. Clark, Ottawa, on the production of good seed. Mr. Clark said in the McDonald seed competition ninety-two per cent. of the competitors who had continued the competition for three years secured an increase in the yield, owing to careful selection of seed from year to year, of from ten to fifteen bushels per acre, as compared with ordinary seeding. In some instances the increase was double this amount.

Regarding seed for root crops, Mr. Clark said: "Too many farmers have but one object in view in purchasing seed, and that is to get the cheapest. To supply this demand for cheap seed, the English growers would plow down a sod, after the hay crop was taken off, and fit the land up for turnips, which would reach the size of a man's fist by fall. These turnips would then be used for seed the following season. No practice could be better calculated to make our crop of turnips run out."

In the discussion upon grass seed, Mr. Harold Jones said he gave the dealer in his own town orders to buy from the wholesale house in Toronto, seed that was put up for export. In this way he got a first-class quality of seed, with the minimum amount of trash. The seed one pays most for in the beginning is cheapest in the end.

Mr. Duncan Anderson raised the question of grain running out. Mr. Clark said there was no reason why it should, and instanced a case of a man in Quebec who had for sixty years maintained the same variety of grain on the same farm. "I saw the crop this year, and it was superior to anything observed during the whole season."

Gasoline Engine Satisfactory.

During the past season a 20-horse-power gasoline engine has been operating in this vicinity with entire satisfaction to its owner. The cost per day for gasoline and oil has been about \$7, but one man has operated the engine and separator, thereby saving the cost of an engineer, fireman and a straw team, as compared with a steam engine. The separator was fitted with a self-feeder, and next season they intend attaching a blower. The results have been so good that this thrasher would buy no other machine.

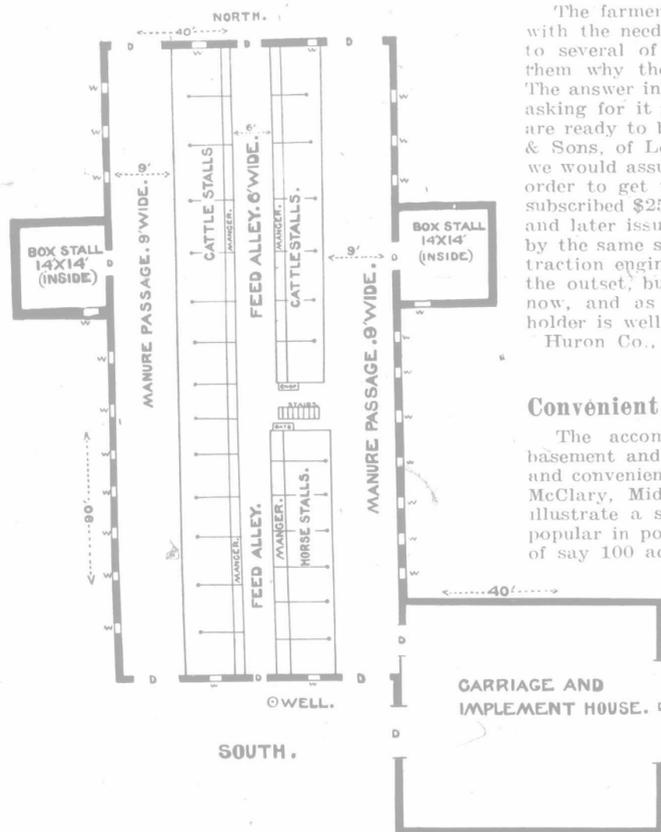
While as portable engines, gasoline has been satisfactory and has done all that its manufacturers claim for it, yet many have the idea that as a traction it would not be a success. Upon this point I am not prepared to speak. One peculiar feature of the gasoline engine is that its horse-power cannot be increased above its normal estimated capacity, while with the steam engine the raising of the steam may increase the power. Thus the amount of fixtures which are being added to a separator must be considered carefully lest the power required be greater than can be



FARMER'S ADVOCATE

CHAMPION LINCOLNS.

Bred by and the property of Mr. John T. Gibson, Manor Farm, Denfield, Ont. (See Gossip, page 92.)



BASEMENT PLAN OF J. H. McCLARY'S BARN.

The farmers in this section were so impressed with the need of such a machine, that we wrote to several of the leading manufacturers asking them why they did not build such a machine? The answer invariably was, "The threshers are not asking for it; when the threshers want them we are ready to build them." Messrs. George White & Sons, of London, said they would build one if we would assume part of the responsibility; so in order to get the thing introduced thirty farmers subscribed \$25 each, and we ordered the separator and later issued more stock, which was all taken by the same shareholders. We bought a 17 h. p. traction engine. We had considerable trouble at the outset, but the machine is working first-class now, and as far as I have heard every shareholder is well pleased with his investment.
Huron Co., Ont. PAUL MADGE.

Convenient Barn Plan for 100-Acre Farm.

The accompanying engravings, showing the basement and upper floor plans of a comfortable and convenient new barn completed by Mr. J. H. McClary, Middlesex County, Ont., last season, illustrate a style of building becoming decidedly popular in portions of Western Ontario for farms of say 100 acres in extent. This one accommodates forty head of cattle and seven horses, and the passages behind the stock are sufficiently wide to allow a wagon or sleigh with team to pass through and remove the manure daily, spreading it upon the field direct, as many do, whereby a great saving in labor is effected. In this basement there are 26 windows of eight lights 8x10 inches. Tiles through the top of the walls serve as ventilators. Water passes before the cattle in a V shaped trough; made of two

had. I think, however, that gasoline is the coming power for this country. It is safe from fire, easy to operate, and any farmer can easily learn to operate an engine.
J. D. MILLER.
Dufferin.

Combined Straw Cutter and Thresher.

I will endeavor to give you a short description of our new threshing machine. In the first place we have a 26-inch four-knife cylinder cutting machine, into which the sheaves or loose grain is fed from the front, just as you feed any other separator; immediately behind the cutting cylinder there is a 32-inch threshing cylinder; then right behind the threshing cylinder is a long chaffer, with wind blast acting on it, and a long shoe below the chaffer, with another wind blast to complete the separation, so you see we do away with a great deal of machinery that is needed in the old separators to divide the grain from the long straw, which is difficult to perform (especially a year like last, when a lot of the straw was soft and tough).

Now as to some of the advantages of this style of threshing: First, the straw is all cut without any extra labor, and cut much better than it can be done afterwards. The straw goes into a very small space when it is cut, and can be stored conveniently for winter use. It makes much better bedding, as the cut straw will absorb more of the liquid manure than the uncut. The manure does not require to lie in the barnyard to rot for one summer, but can be applied to the land at once and worked in with cultivator or harrow without difficulty. Then last, but not least, is the great saving in labor. We have a small blower at the rear of machine which delivers chaff into the mow, thereby doing away with all the straw men. Can we conceive of anything more foolish than for five or six men to be tramping straw in a mow, almost smothered with dust, and then turn around and fork it out again the next day to a straw-cutter, when one operation would do the whole thing much better and at so much less cost, as you will see by the following figures, which are taken from prices for threshing as it exists in our section at present:

10 hours with old machine at \$1.15 per hour	\$11 50
11 men at \$1.25 per day	13 75
Cost of straw-cutter, 10 hours at 75 cents per hour	7 50
Cost of six men one day	7 50
Board, 17 men one day	4 50
	\$14 75
Cost of new machine per hour \$1.50	\$15 00
Cost of six men one day	6 50
Board six men one day	1 50
	\$23 00
Balance in favor of new machine per day	\$24 75

planks, one ten inches wide and the other twelve inches. Where feed passageways intervene, the water is conveyed down and up from one trough to another through 1 1/2 inch iron pipes. The feed alley is six feet wide, manger bottom (six inches below alley), 18 inches wide; from alley to drop at rear of cattle, seven feet; cattle stalls, six feet six inches wide; horse stalls, five feet wide; from front of horse manger to drop at heels, nine feet. The horse-stall floor is one inch cement below and two-inch plank on top. The four large basement doors are eight feet wide, and the ceiling is eight feet high. Behind the cattle is a gutter drop of six inches; the bottom rises two inches in twenty inches outward, and from there to the wall (9 feet) there is a rise of one inch. This style of gutter is much easier to clean than the old-fashioned lox shape. Horses are unhitched from rigs in the driving-shed, and taken in through the side door into the horse stable. There is a large room above the granary (upper floor plan), for straw etc., as the case may be. The basement underpinning is all eight inch square timber, and the barn posts are 18 feet high. The siding is dressed and well painted, the owner's name in good sized white letters faces the road, over the main doors, and on the roof are a couple of galvanized iron ventilators. The walls, floors and passageways are of cement concrete throughout.

Deep vs. Shallow Plowing.

To the Editor "Farmer's Advocate":

Sir,—I have received with great pleasure the Christmas number of the "Farmer's Advocate." I am pleased to see the article by Professor Day. However, I do not think the Professor has read the book as thoroughly as I have, or he has forgotten to connect what is said in one place in regard to plowing with what is said in other portions of the book. But, be that as it may, I am glad to know that Professor Day is a man whose opinions are to be respected, and I am also aware that in a short newspaper article the whole subject of tillage and plowing cannot be treated. I found myself much hampered in writing "The Fertility of the Land" on account of lack of space. There was not opportunity to go into details and modify statements, and sometimes a statement unmodified is somewhat misleading.

Some lands do not need to be plowed at all if there is no vegetation to destroy, and under many circumstances shallow plowing is better than deep plowing, and under other circumstances the subsoil plow (not the trench plow), which I infer produces the same effect upon the soil as the grubber, is very beneficial, and at other times it is very detrimental, as we have found to our sorrow in subsoiling best land in the spring after the heavy rain had ceased. This, of course, reminds us that agriculture is the most difficult of all the professions, and that it is impossible for

any one writer, however able, to make statements or recommendations which should not be modified under radically different conditions. But this Christmas day we should rejoice that so many able men like yourself and Professor Day are hard at work trying to make the complex business of agriculture more rational and more understandable.
I. P. ROBERTS,
Director.

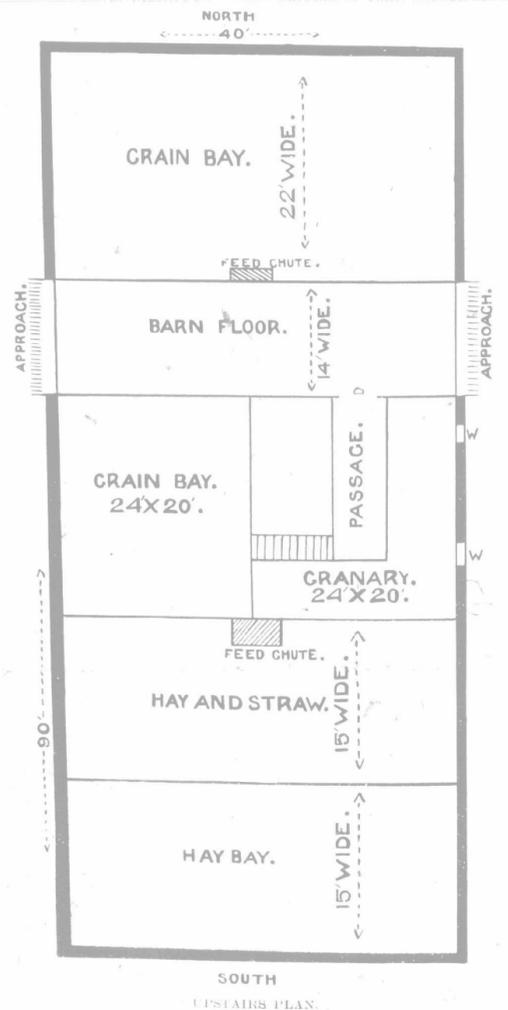
Cornell University College of Agriculture, N.Y.

Wants Free Rural Mail Delivery.

To the Editor "Farmer's Advocate":

Sir,—Having been a reader of your very valuable paper for a great many years, a journal no farmer ought to be without, I find it a great help to me. I read with interest its advocacy of good roads, rural mail delivery, country telephones, etc. Now, I live in a well-settled township, on a leading road, five miles from the capital of Canada; have lived on the same farm for 55 years; a first-class farming section, yet we have none of these things. On the eve after the temperance referendum vote was taken I had to drive to our nearest post office, a distance of nearly five miles, on a bitterly cold night, and I a man on the shady side of seventy. I am not speaking so much for myself, for my time is short, but I would like to see these improvements before I make my exit. I think, as you take such an interest in the welfare of farmers, you can do something for us, at least in the way of advice. Our members of Parliament and our county councillors are not doing much for us. We are able and willing to pay our share. Rural mail delivery, we have reasons to believe, is a success wherever tried. The farmers are doing well in this district. Ottawa is a good place to sell everything that grows on a farm. We get good crops and good prices. The worst trouble is the lack of satisfactory hired help and of the conveniences above mentioned. Farmers are backward in making their wants known, and we look to you to write these up for us and give us more information along the lines of improving our conditions and securing our rights. The prosperity of the country depends upon the prosperity of the farmers, and we are fairly entitled to the privileges that city people enjoy, in so far as it is practicable to extend them to us, and we make no unreasonable demand in asking at least for free delivery of our mail matter.
Russel Co., Ont. JAMES WOODBURN.

Be careful in putting away medicine that has been used, to notice that it is distinctly labeled; it is also well to mark plainly on the wrapper the name of the disease which this remedy is intended to cure. Many a serious mistake would be avoided if this were carried out.



UPSTAIRS PLAN.

Caleb Jinkins: His Letter.

Jinkins Corners Jan 10 1903

To the edditer of the Farmers Advocat,

Dear sir,—



Caleb Jinkins.

I am pleased to heer frum sevril fokes round this sekshin that the 2 letters i rit to you & wus printed in the Advocat noospapper hes ketched on good & sum hes tole me i kin do a lot fer the ginrel farmin bisniss by ritin more of em so i set down agin & take up my pen. these one thing tho that hes bin trubblin me on account of wot Simon fraser told me tuther day wen i was at his place fer a short spell. Of corse he seen the letters i rit & sed he liked em fus rate oney he didnt care bout my bringin him into em and prasin him up the way i dun es he haint the sort of chap that blows his own horn ner dont want eny other feler to do it, but the pint he cum to wus this thet sum farmers mite spose i wus makin fun of em. i ses how kin thay git that idee i haint sed a word along them lines. i haint made fun of no buddy septin you meen hiram Snaley fer bein sech a stick in the mud kine of a farmer so sot in his wase and agin progriss in farmin all he kin be. i dont spose he likes to hev the finger of publick atenshin pinted at him that way but i calklate it will do him good and wake him up a mite so he kin git out of the rut he is in. No it haint thet ses Simon, i gess no comen sense farmer will fine falt with you pokin up hiram and chaps like him, but. and rite thare Simon stopt and lookd es tho he didnt care bout cumin out with it, but at last he



house and jes looked the hull papper over careful & i kin say the putty outside haint the best of it. i red out that artikel Missis Hoodless rit bout eddicashin fer women to my wife and her muther Misses Snodgrass which lives with us, and afore doin it i let em see her pickter. Wel ses my wife of she rites es good and sensibel es she looks it will be wuth reedin. So thay both sot and lisened & wen i got throo thay wus delited. them is my vory idee ses my muthern law oney i cant put em so neat and nice. i jes feel like i wish i cood hug her fer riting em out that way. Thay will be more hapiniss in the world wen gals gits to see thet the sitty haint in it with the farm fer reel sollid comfert and thay will git hole of this grate trooth wen thay cum to lern wot home makin reely is. ime glad the gevermint hes sot up



ses the fack is Jinkins you do spell bad and use bad gramer these no use tawkin and i shoodint be sprised ef hiram Snaley sposed you dun it a puppis to make sport of him. Wel i ses if thet is the difkilty i kin git it fixed up thout no trubbel tho to my wase of thinkin i ses it haint how a man spells ner wether he tawks coreckt thet reely counts but wot his idee is. Hes thay bin eny rong idee in them letters i ses and Simon ses no not es i no of. So fur es ime consernd he ses the idee wus sound and good es enybuddy kin ast fer. So mistr edditer if you put eny more of my letters in the papper plese fix em up in the gramer and spellin pint of vue es i no thare all rong & haint coreckt and i am to ole now to go at it and lern to rite the way thay do at skool. Ef i hed the same chause wen i wus yung thet farmers in ginrel had i wood no gramer & spellin es well es eny of em, so you mus help me out if it is agoin to hurt enybuddys feelins.

[Note.—We fear we are too busy to undertake such a task. Besides, it is very doubtful whether perfect grammar and spelling would improve Mr. Jinkins. This seems to us a case in which "the style is the man."—Ed. "Advocate."]

Wen i went to the pos offis on the day afore Crismis i got yure Crismis papper and took the rapper of rite thare. Thay wus sevril farmers and vilege fokes in the offis and thay all took a look at it. i kin tell you it made em set up. that putty gal on the cover bakin bred by the winder ketched yung Sam Summers. he gin a sharp wistel & ses by jing i dont see how them felers out in the feeld kin go on with thare harvistin with a gal like thet so ni to em. Ever buddy allowed twus bout the slickist papper thay ever seen and wen i gin em a glants at the picktors of live stock & so 4th. thare teeth jes bout watered so i tole em to suskribe and git it rite along and i gess sum of em will do it tho i wunt charge you nothin fer gittin em. it is a favor to them moren to you es i look at it. Wel on Crismis day i sot fer a spell in my dwelin



that skool of domestick art longside the agerkel-tril Colege at guelph, and if you haint a reel meen man Caleb jinkins, yule take Matildy and me up thare to see it sum of these dase. i pronist em i wood and ime agoin to. But es i dont want to take up the hull of your space with this leter i will quit rite heer tho i hev plenty more i cood say bout yure gran Crismis number & lots of other interistin topicks. Yurne till nex time.

Caleb Jinkins, Okshineer and valiater.

A Plea for Free Mail Delivery.

I consider the "Farmer's Advocate" one of the best farm journals published. Having watched your plans and read your appeals and exhortations, I feel confident that if these were more generally accepted and strictly carried out there would be much better farming done, and also much worry, time and labor saved. Your editorials on stock-raising, poultry, beekeeping, farm cultivation and household affairs are able and practical, and these subjects are efficiently discussed by contributors to your columns. But the one topic which I have been noticing with keenest interest is that regarding free rural mail delivery, which has been discussed in the last three or four issues.

In this age, agriculture and almost every other industry has reached so high a point that the country may indeed be termed a farming city. The time has come when the farmer scarcely need go away from home for any article. Agents for the sale of farm implements, pianos, organs and sewing machines, for all lines of books, supply him at home, and even the village merchant sends his peddling wagon into the surrounding vicinity to gather up the trade when his customer is too busy to leave the place.

That all these tend towards saving the farmer time and trouble needs hardly to be mentioned. Why can he not also be freed from the other unavoidable duty of trailing over miles of bad roads at certain seasons by giving him a free delivery of his daily or tri-weekly mail?

C. R. WRIGHT, Bothwell Co., Ont.

Many men are good beginners; they engage in a new venture quickly, but are equally as ready to stop. It is the "stayer" who counts every time. Become a "stayer."

DAIRY.

Jersey Butter Tests.

The following table shows the number of American butter tests reported to the Jersey Bulletin during 1902, giving the number for each period:

Table with 2 columns: Period (For 7 days, 14 days, 16 days, 21 days, 24 days, 30 days, 31 days) and Number of tests.

Total butter tests for all periods.....313

As last year, the largest seven-day butter test reported was twenty-five pounds. In amount of butter produced, the seven-day tests range as follows:

Table with 2 columns: Weight range (Between 14 and 15 lbs. to 24 and 25 lbs.) and Number of tests.

Total tests for 7 days.....297

The cows producing the largest amount of butter for each period are shown in the following table (for 21 and 30 days, the same cow led as in 16-day period):

Table with 2 columns: Cow name and number, and Weight and ounces of butter produced.

Circumstances Alter (Creamery) Cases.

To the Editor "Farmer's Advocate":

Dear Sir,—There is no doubt in my mind that where cream-gathering creameries are being operated the patrons should have hand separators. Experiments made at an American agricultural college showed that forty-seven per cent. of the germ contents in the whole milk were caught in the separator slime. Thus nearly one-half of the germ life is removed immediately after milking, instead of being allowed to rapidly multiply and injure the flavor of the cream during the 24 or 48 hours setting for cream to rise. Also, by the use of the hand separator, cream reaches the creamery fully 24 or 48 hours sooner than by the setting system. Proprietors of cream-gathered creameries should urge upon their patrons the necessity of using hand separators; put a pasteurizer in their creamery, and pasteurize the cream; hold cream at low temperatures; churn at low temperatures; get butter into cold-storage that is cold (say 20° below freezing) as soon as possible, and they will improve the product of their creamery.

Discussing this question as cream-gathered system against the creamery separator system is hardly the right way to accomplish the desired results. Both systems have their place, and in some districts a combination of both systems works well. Where milk is plentiful, within short distance of creamery, and hauling is thus reduced to a reasonable figure, the separator creamery should receive the hearty support of all dairymen adjacent. Their milk is thoroughly skimmed, and where skim milk is pasteurized they have it returned in splendid condition for food. Where conditions are different and milk producers are scattered, the gathered-cream system is the only one that can be operated.

The movement at present is toward the hand separator. Whole creamery districts are being honeycombed with hand separators, and they are driven to accept cream from such patrons or see their patronage divested to other establishments. Instead of attempting to crush out the cream-gathered company, our dairy professors and instructors should seek out the best methods for operating these creameries. Middlesex Co. W. K. MACLEOD.

Eastern Ontario Dairymen in Convention.

Upwards of 200 dairymen attended the 26th annual convention of the Eastern Ontario Dairymen's Association held in the Normal School, Ottawa, on the 7th, 8th and 9th of this month. At the morning and afternoon sessions of the opening day, addresses were delivered by the President, Mr. Daniel Derbyshire; Miss Livingstone and Dr. Saunders.

THE PRESIDENT'S ADDRESS.

In his address, Mr. Derbyshire pointed out the increased trade in Canadian dairy products during the past year; the total increase in value of exports over 1901 exceeding \$7,000,000. The value of cur cheese exports amounted to \$21,000,000, and of butter to \$9,000,000. The experiment of sending instructors to several of the factories during the season was found to be very satisfactory, and would be continued upon a larger scale next year. He urged the makers to make use of the instructors, and to get into closer relation with their patrons. The establishing of the illustration cold-storage plant at Brockville was a great boon. An urgent request was presented to the Department of Agriculture of Ontario, to increase accommodation at the Kingston dairy school.

In short addresses, Mr. G. C. Creelman emphasized the importance of getting at the disinterested producer of milk; Mr. Ruddick pointed to the new dairy country opening up to the north; Prof. Robertson reminded the convention that it was the surplus produce of our farms that formed the basis of our commerce, and dairy farming is the most profitable method of utilizing this surplus. He further submitted the idea that within the association there be formed small associations for specific purposes. The Danes have adopted such methods, and in three years they raised the average yield of butter per cow 47 pounds per year.

Mr. Britton called attention to the fact that factories were so numerous that makers resorted to unlawful practices in order to get patrons. Mr. McGillivuddy contributed a little humor.

Miss Livingstone, in a short address, defined domestic science as a study, with the object of improving our conditions of living. Domestic science training has come to be just as important to the girls of our land as scientific dairy instruction to the dairymen. She cautioned people against saying anything against domestic science until they thoroughly understood its scope.

WORK OF EXPERIMENTAL FARMS.

Dr. Wm. Saunders made a short summary of the work done by the experimental farms in different parts of the Dominion to determine the value of artificial fertilizers, of plowing down clover, the importance of early sowing of all grains, and of selecting seed grains. Imported seeds and grains had also been tested, and the most valuable had been distributed among the farmers. New varieties have been produced. Experiments were conducted to determine the quantity and depth of seed to sow per acre. Work was also done to improve pastures and meadows, especially in the West, where hardy grasses had been imported from Russia and successfully grown on the farm at Brandon and Indian Head. Experiments proved that many more cows can be kept on average farms. Tests of cream from different methods of raising and from cows in different periods of lactation were made. Fodder crops for dairy purposes have been tested; farmers have been induced to thin out their herds, and the value of skim milk for feeding purposes has been tested. Work has been done to determine the causes of soft pork; to compare the relative value of the beef breeds of cattle. In the poultry department breed tests for egg and flesh production were carried on. The chemists, the entomologists and horticulturists had all done considerable work and the results of all experiments have been circulated broadcast throughout the Dominion.

In the discussion, Prof. Robertson said climate determines the occupation of the people. It effects the amount and quality of crops. Therefore study how to be benefited by climate and how to control a certain amount of controllable climate.

Mr. J. W. Rothwell pointed out that clover sowed with corn just before the last cultivation was of immense value to the corn crop. His experience is that ensilage can never take the place of roots. This year he had put his roots in the barn for \$1 per ton.

ELM GROWING.

Mr. Logan called attention to the fact that by the depletion of our elm forests the price of cheese boxes was being raised. A resolution was passed asking the Government to set apart a large section of our elm forests.

At the evening session the convention was formally opened by His Excellency the Governor-General. After the Mayor of Ottawa had spoken, the Hon. John Bryden addressed the convention. He said there are three essentials in successful dairying, enthusiasm, cohesion and education. To the president and good prices could be attributed

the enthusiasm in the E.O.D.A. An agreeable mutual relation between makers and patrons was the kind of cohesion he liked to see. The object of education in dairying to-day is to arouse those who will not adopt modern methods, who will not attend dairy schools and conventions. It was in order to reach these people that we appointed the inspectors to visit the different factories and localities during the past season. In the near future the Government hopes to be able to

SEND INSTRUCTORS TO EVERY FACTORY in the Province. We believe this is an essential and an effective method of improving our dairy products.

Hon. Sidney Fisher, speaking from experience, was certain that the plan of sending instructors to visit the factories will immensely improve the quality of our cheese. Canada produces to-day sixty-eight per cent. of the cheese used by Great Britain, but we must be alert. There are in our country farmers and cheesemakers who refuse to adopt modern and improved methods; these people are responsible for whatever lack of quality is chargeable to our cheese. We must educate these men in order to protect ourselves and our trade.

EDUCATION AND DAIRYING.

Prof. Robertson said Canada was a country great in size, but also becoming great in commerce by the development of her two great institutions, education and agriculture. The source of intelligent power is education. Education teaches us how to utilize our climate, our crops and our animals to our own advantage. As an example of what education had done for dairying, the case of P.E.I. was cited. On the Island 12 years ago there were four dilapidated factories, whose produce valued \$8,000. By the application of intelligent power, the Island has to-day 42 factories, which manufacture \$856,000 worth of cheese and butter.

CHEESEMAKERS' DAY.

Mr. G. G. Publow, of the Kingston Dairy School, delivered the opening address on "Cheesemaking." The important steps in the making of cheddar cheese were outlined, the objects of the address being to suggest points for discussion. The first step in cheesemaking is to ripen the milk; it should contain a certain degree of acidity when the rennet is added. The quantity of rennet and the temperature are two factors that should vary as the milk varies in richness and acidity. In spring a lower setting temperature and a larger quantity of rennet may be used than later in the season. Cutting curd deserves more attention than it generally receives. Curd is cut to facilitate the expulsion of whey, and if the cubes are not of a uniform size, some will become drier than others, and will, therefore, develop acid more slowly. Curd from over-ripe milk should be cut finer than ordinarily, thus checking the development of acidity. When the outside membrane of the curd has begun to toughen, cooking should commence. The temperature to be used will depend upon the richness of the milk, as under the same conditions a curd from rich milk will retain more moisture than a curd from poor milk. This is why a higher temperature should be used when handling rich milk or a pasty cheese will be the result. If when a proper temperature is reached and acidity is developing too fast, then the curd may be washed with water of the same temperature. Properly cooked curd has an elastic feel, falls apart readily when pressed in the hands, and contains from eighth to quarter inch of acid by the hot iron test, or the same per cent. of acid in the whey as the milk contained when the rennet was added. In the matter of dipping, experience has shown that as the percentage of fat in the milk increases, the length of time the curd should remain in the whey also increases. The development of acidity is dependent upon moisture and temperature, and these are under the control of the skillful maker. In the milling of the curd no fixed rule can be laid down. With a normal working curd, from 1 to 1½ inches of acidity with the hot iron test will give good results.

The temperature should be carefully watched through the whole process, and at milling should be about 91° F., and 1% of acidity, as determined by the alkali test, is sufficient to develop in an ordinary curd before salting, the rate of salting depending upon the amount of fat in the milk; the flavor and moisture of the curd. An effort should be made to produce an attractive-looking cheese, uniform in size and suitably finished.

BACTERIA IN MILK.

Following Mr. Publow, Dr. Connell, Bacteriologist of the Kingston Dairy School, gave an interesting address, being a continuation of his address last year. A table giving the number of bacteria in 1 c. c. (16 drops) of milk under different conditions of milking and at different temperatures twenty-four hours after milking was submitted:

Careful milking	4,500 bacteria
Cleanly milking	18,800 bacteria
Ordinary milking	2,500,000 bacteria

After twenty-four hours, milk carefully handled and kept at different temperatures contained:

At 50° F.....	4,500 bacteria per c. c.
" 55° F.....	18,800 " "
" 60° F.....	180,000 " "
" 68° F.....	450,000 " "
" 86° F.....	1,400,000,000 " "
" 98° F.....	2,500,000,000 " "

In different temperatures, the ordinarily taken milk contained:

At 50° F.....	48,000 bacteria per c. c.
" 55° F.....	187,000 " "
" 60° F.....	900,000 " "
" 68° F.....	4,000,000 " "

These figures demonstrate clearly the very great importance of keeping milk clean and cool. It is evident that many of these germs find their way into the milk through dirt and dust. Most of those present under careful milking were the useful souring forms, while the additional number under ordinary handling were of the injurious kinds.

The gas-producing forms seem to grow faster in higher temperatures than do the souring species. Well-cooled milk seldom produces gassy germs. Returning whey in the milk cans is the most general method of disseminating these injurious bacteria.

STARTERS.

In the discussion, the following points were brought out:

To begin a starter, get a pure culture from the Kingston, Guelph or other dairy school.

Do not be surprised if the starter does not give a good result the first time used.

Use a small closet in which to keep the starter. A starter should not get over 5% acid, as determined by the alkali test.

Carefully observe the action of the amount of starter used from day to day.

Try and keep the starter at nearly 60° F.

If water is added to the starter it should be pasteurized first.

Use a starter when milk works slowly, when gassy germs are present and when the lactic acid germs are not active.

In using a starter first, be sure you know what you want to start.

There seems to be a desire on the part of makers to hurry through their work, consequently too much starter is often used.

A bad starter will spoil the best milk.

To test the purity of water from gassy or bad flavored germs, take two samples of milk, to one add a little water, put in some rennet, and compare the curd from each sample.

Milk having even one disease-producing germ should be pasteurized before being used for food.

CHEMICAL ANALYSIS OF CHEESE.

Dr. McFarlane described the chemical analysis of cheese. The sample of cheese is first kneaded with asbestos. The water is then driven off and calculated by difference in weight. The sample is then treated with ether to dissolve out the fat. Alcohol is then used to remove the alcohol-altered casein, the remainder of the cheese being the unaltered casein. The amounts are calculated after each step by difference in weight. Ordinary cheese contains from 32 to 40% of altered casein.

COOL CURING OF CHEESE.

Mr. J. A. Ruddick presented the results of the Government's experiment in cool curing of cheese at Woodstock and Brockville, Ont., and Cowansville and St. Hyacinthe, P.Q. Cool curing may be defined as curing at temperatures between 50 and 60° F. to distinguish from cold curing. For the most perfect cool storage rooms, cement floors, well insulated walls of wood and paper, with staggered studding and shavings, should be employed. Plans of such insulation will be furnished on application to the Department at Ottawa. With this insulation, the temperatures in the Government storage rooms never varied more than 2° F. in the hot weather of summer, nor in the cold snap in December. Comparing cheese kept in cool storage with that in ordinary curing-rooms, it was found that 1.5% of the weight of the cheese handled at the four storage plants was saved in shrinkage, amounting in all to 31,403 pounds, or \$3,139.

The improvement in the quality of the cheese by cool curing is of still further importance. Consolidation of factories for cool curing is not generally recommended. The experiment has proved satisfactory, and those interested can now arrange for cool curing according as their circumstances warrant.

DISCUSSION.

Mr. Zufelt said we have had an object lesson on the benefits of cool curing of cheese. The difference between the cost of cool curing equipment and the increased returns for cool cured cheese is well worth our consideration. The price paid to makers must be raised, as help, wood and boxes are getting more expensive every year. The problem before us to-day is to devise a suitable building for cool curing at the factory.



MAY QUEEN.
Shorthorn cow, to be sold at Alex. Love's dispersion sale, January 22nd.
(See Gossip, page 85.)

REGULATING RATES.

Mr. Dargavel introduced the following resolution re transportation. The resolution was unanimously carried:

"That this association believes that next to efficiency on the part of patrons and makers, the success of cheese industry is most dependent on reasonable rates for transportation; that we believe a sufficient remedy for existing evils will not be obtained until we secure the appointment of a railway commission with full power to adjust and regulate rates.

"Resolved, that this association appoint delegates to act with delegates already appointed by the Farmers' Association, the Ontario Fruit Growers' Association, and the United Fruit Growers' Association of Niagara Peninsula, to wait upon the Dominion Government and demand the appointment of such commission."

Mr. Forester, a cheese merchant of Montreal, gave some figures for rumination. The rates from Acton, 100 miles from Montreal, are 15 cents per 100 pounds on butter and 11 cents on cheese; Bedford, 56 miles distant, 21 cents per cwt. on butter, 14 cents on cheese; Perth, 110 miles from market, 18 cents per cwt. on butter, 12½ cents on cheese; Caughnawaga, nine miles from Montreal, nine cents per cwt. on butter, eight cents on cheese. We cannot hope to compete with the Americans when we are discriminated at to the extent of 25%.

Mr. McCurgle, merchant, can see no increase in the consumption of cheese, but the quantity of butter had doubled during the last few months. The amount of money used by the agricultural department was amazingly small compared with the other departments.

Mr. W. C. Edwards, M.P., announced that he is launching into the dairy business and is erecting a large dairy building with a lecture room, where a first-class instructor will impart information on dairying to the surrounding neighbors.

THE TRANSPORTATION OF DAIRY PRODUCTS.

Prof. Robertson took up this question in detail. We want men to feel that this is their affair. We have to educate the railway men in the methods of handling dairy products. We want improvement in our boxes. Imagine the effect on an English buyer of finding one-third of the cheese boxes broken on arrival in Liverpool. We have put self-registering thermometers on all ships carrying dairy products. Last year we arranged to have built insulated ventilated cars. These have been so satisfactory that many more will be put in use. Refrigerator cars have not given entire satisfaction, the ice being often neglected. Cold storage on steamships is not intended for cheese, but arrangements have been made to carry cheese and apples at about 60°F. It is claimed that our butter has a stale surface on arriving in England. Lately mould has caused trouble. The mould plant grows only when it has been seeded. Strong brine prevents these plants growing in the boxes. Poor paper is responsible for much mould. Paper should be sterilized by dipping in brine, adding an ounce of formaline to three gallons of the brine. This should be universally practiced. When butter is stored at factories keep the room clean, dry and sweet. Seven-eighths of the ice used is required to combat the influence of outside heat, an eighth only being used to cool the products. It is no use expecting railroads to cool butter on the way to market. Inspectors frequently find butter warmer in the center of the box than toward the outside. This butter had never been in cold storage. Since we have instituted cold storage on ships, makers seem to think they need not cool their products at the factories. In the

future those who do not cool their butter at home will have to pay for it at Montreal before it will be taken on board cold storage ships.

MAJOR ALVORD'S ADDRESS.

The subject of the Major's remarks was the relation of the State to dairying, and was a digest of the measures passed by the Federal Government as affecting dairy products, and a review of the dairy produce market in the United States. The three Federal measures described were the first oleomargarine law, the filled cheese bill, and the new oleomargarine law. The principal reason why American dairy products suffer because the inferior

so much in shrinkage is qualities only are used for export, the best being kept at home.

THE ONTARIO DEPUTY MINISTER OF AGRICULTURE SPEAKS.

Following Major Alvord, Mr. C. C. James gave an interesting address, being a forward look into the agricultural development of Canada. He said the question is now being raised, do conventions pay? Conventions furnish instruction, they create sentiments in favor of instruction, and the weak spots in the business are discovered. During the past four generations agriculture has passed through four distinct stages. In the first period the agricultural products for sale were ashes and timber. In the second generation some grain was sold. The third generation began to engage in the importation and raising of livestock, while we of the fourth have largely adopted the dairy-bacon industry. Think of the reason for this development, and be ready to take a part in future advancement. The Ontario farmer is not in a position to compete with the West in wheat-growing, nor can we expect to successfully compete with the corn States in beef-raising? It would seem, then, that we shall be forced into the production of dairy products, including bacon.

In conclusion, there are several problems for the farmers to solve.

First, is the labor problem. Second, the transportation problem, including good roads, rural electric railroads, etc.

Third, the fuel question, involving the development of the peat industry, the coal mines and the reforesting of our waste lands.

Fourth, the problem of education. We are living in a new age; we must revolutionize our rural schools. To solve these problems in the interests of agriculture requires the best of our best minds.

An illustrated address by J. A. Ruddick, on New Zealand, brought to a close the convention on Thursday evening.

BUTTERMAKERS' DAY.

On the opening of the morning session, the following instructors in the E.O.D.A. gave their reports: Messrs. Bensley, Rable, Parvis, Carson, Ward, Lawson, Publow and Lowry. All the reports indicate a decided inclination on the part of patrons to furnish better milk, and a desire on the part of makers to excel in their branch of the industry. There was also a marked falling off in the quantity of adulterated milk.

BUTTERMAKING.

Mr. Hart, Superintendent of the Kingston Dairy School, took up the question of buttermaking. In this year's work he found much difficulty in getting good results from many of the old wooden creameries, and suggested that the walls and ceilings of such creameries be re-covered with metal and painted. The quality of our butter has

greatly improved during the past year, but is not yet up to that of Denmark. If our butter sold for as much as Danish butter our returns would have been increased by over one million dollars. The best butter made this year was from pasteurized milk. Creameries seem to be in a transition state between the separation and cream-gathering systems. By using a heavy starter we can ripen at lower temperatures and make a better quality of butter. The best starter can be propagated from pure skim milk, although the commercial article is good, as it contains a flavor germ with the lactic acid ferment. When cream is rich enough, it can be churned at from 46 to 54°F. The speed of the churn should be increased as churning proceeds. After churning, it is often necessary to cool the butter before working. The best paper only should be used, as poor paper wastes the butter.

DISCUSSION.

A heavy starter is from 10 to 20% of starter in the cream.

One of the reasons why homemade butter is often firmer than creamery butter is because it is not worked so rapidly, and the cream is not subjected to the many different treatments accorded creamery cream.

Cement whey tanks are giving good satisfaction.

Cheese should not be made on Saturday night; it never keeps well.

The cause of cheese turning white in August is acid cut, although not very evident.

Seventy-five per cent. of the bad flavors in cheese can be traced to the whey tank and gutters.

THE PERCENTAGE OF WATER IN CANADIAN CREAMERY BUTTER.

Prof. Shutt discussed this question. Water improves and is necessary to the quality of butter. It appears that there is a relation between the per cent. of water and the body of butter. As butter comes from the churn it contains from 15 to 20% of water. After washing it has from seven to sixteen per cent. Generally about 13% is desirable. Excess of water in butter is due to two causes, carelessness and wilful adulteration. Too high temperature when churning and working is the most frequent cause. In England an enactment provides that genuine butter must not contain more than 16% of water. Analyses here have given 12.31 as the average per cent. of water in 105 samples. This knowledge helps our sales in Great Britain. We do not recommend that our makers put on the market a butter containing the maximum per cent. of moisture, but rather endeavor to produce the best quality with a safe percentage of moisture. The appearance of butter is not a reliable indication of its moisture content.

G. H. Barr, Guelph, spoke on "Experiences as a Government Instructor." One of the first problems we must solve is a test for the per cent. of moisture in curd. It is now "time for a change" in dairy practice. Two facts are prominent: Some makers try to make a good cheese from poor milk, others make a poor cheese from good milk. It is lamentable to see how hard some patrons work to produce good milk, only to lose money on it at the factory. The man who waters milk is not doing more harm than the man who innocently sends gassy milk to the factory. The barnyard and the hogpen contribute these germs; therefore, keep the can away from such places. In some of the factories visited last season there was found to be a loss of \$5 per day from the effects of gassy curd.

Mr. Wheeland, a native of Denmark, said the



HOWARD QUEEN.
Two-year-old Shorthorn heifer, in the dispersion sale of the herd of Alex. Love, Eagle, Ont., Jan. 22nd. (See Gossip, page 85.)

reason the Danes excel in the production of dairy products is because they employ experts in every branch of the industry, and the recommendations of these experts are followed by all the people.

The closing address of the convention was delivered by F. W. Hodson on "Feeding the Bacon Hog." Mr. Hodson gave figures to prove that the bacon hog can be fed cheaper than the large fats.

To produce a pound of gain in a hog weighing from 150 to 200 pounds costs 4.5 cents, while under the same conditions it costs 5.5 cents to produce a pound of gain in a hog weighing from 200 to 250 pounds. If 80% of our hogs marketed last year, instead of 40%, had been No. 1, our returns would have been increased by \$400,000.

The work before the association for the coming year is to carry the gospel of the proper care of milk to the few who will not take an interest in their work, and who are largely responsible for the lack of quality in our dairy products.

To weed out the incapable makers;

And to improve our cold storage transportation facilities.

The officers for the ensuing year are: President, D. Derbyshire, Brockville; First Vice-President, John McTavish, Vancamp; Second Vice-President, L. L. Gallagher, Wilton; Third Vice-President, John Echlin, Carleton Place; Directors: Division No. 1, E. Kidd, North Gower; Division No. 2, Wm. Eager, Morrisburg; Division No. 3, J. R. Dargavel, Elgin; Division No. 4, James Whitton, Wellman's Corners; Division No. 5, T. B. Carlow, Warkworth; Division No. 6, Henry Glendinning, Secretary, R. G. Murphy, Brockville; Treasurer, W. A. Parker, Stirling; Auditors, John A. Kerr, Stirling; F. W. Benton, Belleville. Official stenographer, T. McGillicuddy, Toronto.

The Hand Separator Question.

That hand separators are being used more and more in the Province of Quebec, I regret to say is obvious. The reasons for their increase in numbers are obvious too.

Firstly, a good quality of skim milk is obtained, which can be depended on for raising calves; secondly, the trip of man and horse to the creamery is done away with. These seem to be sufficient reasons for the change which is taking place. It would seem that if creameries were to adopt pasteurization, so as to ensure the return of good skim milk, and also were to arrange for the hauling of the milk to and from the creamery, there would be no call for the hand separator outside the private dairy.

However, I fear it will take more than talking and writing to check the movement in favor of hand separators, for the separator agents have many weighty arguments to advance, and the past furnishes very little evidence that our dairymen are at all inclined to sacrifice their personal convenience in order to supply the British market with fancy butter. I am convinced that wherever the hand separator system replaces the whole milk system, the quality of our butter will suffer unless pasteurization be adopted. I cannot help thinking that pasteurization is the panacea for all past and present difficulties which stand in the way of Canadians placing upon the English market a product equal to the Danish.

Of course, in newly-settled districts, in remote localities, and especially in the West, the hand separator system is a necessity; and no harm to the dairy industry can result, if the product of cream-gathering creameries be correctly graded and sold on its merits. The official grading of all our butter for export should be the first step taken for the protection of all the interests which center in our dairy industry.

Certain I am, that without pasteurization the cream-gathering system will cause the quality of our export butter to suffer; with pasteurization, I doubt if a better butter can be produced than our whole-milk creameries are producing already. But, if the whole-milk creameries were to adopt pasteurization, there would be no need of the hand separator on the score of bad skim milk, and I don't see why we couldn't equal Danish in quality.

Without legislation, dairy problems are not easy to solve, and I believe in doing our best under existing conditions, and we cannot do our best with cream-gathering unless we pasteurize.

I am glad to say that I imagine I have detected one ray of light which reflects from the hand separator system.

The small creamery is going to catch it; many are getting squeezed as their more powerful neighbor extends his business beyond and around them. I look for a decrease of small factories, and I am sure we can spare them.

In conclusion, I repeat that when we adopt pasteurization and the use of pure culture starters, and have our export butter officially graded, we won't need to be bothering so much about what system of delivery of the raw material is in vogue.

H. WESTON PARRY.

Compton, P. Q.

APIARY.

Forced, Brushed or "Shook" Swarms.

Owing to the past season having been an exceptional one, as regards excessive swarming, no doubt many beekeepers will be trying to study out some plan whereby the bees can be better kept under control in the year to come.

While the swarming question is hardly a seasonable theme for this time of the year, yet these long winter evenings afford an excellent privilege for the busy man to study out many problems which will enable him to lessen his labor and at the same time increase his income during the work of the coming season. The ability to control swarming is just as necessary to the farmer who keeps a few bees as it is to the specialist with his larger number of colonies. How many farmer beekeepers are there who can not recall the different times they were hurried from the fields by the warning notes of the farm bell or some other call which signified "the bees are swarming?" Often, no doubt, to find that, after all the hurry and worry incidental to a hasty trip from the fields, during the heat of the day, the bees had just "faked." Gone back to the hive again, for some cause or other, with the promise that the same performance would be rehearsed the following day. Just at present the different bee journals are all much enthused over a plan which is endorsed by a large number of extensive beekeepers living in almost every State from the Atlantic to the Pacific, including some Canadian apiarists as well. The plan, while better adapted to comb honey pro-

duction, can, however, be practiced in the production of extracted honey as well. It is known as brushed, forced or "shook" swarms, the latter expression, by the way, while not grammatical, being, nevertheless, the predominant name at present. Briefly outlined, the modus operandi is somewhat as follows: Colonies at the beginning of the honey flow are examined once a week. Any that have no queen cells started are safe to be left for another week. Any that have cells started are "shook" something in this manner: An empty hive, with starters of foundation in frames, is placed on the stand occupied by the swarm to be treated. All supers are taken from the old colony and put on the new hive, a queen excluder having been placed between the brood and surplus apartments. The combs, with adhering bees, are then taken from the old stock, and "shook" or brushed in front of the new hive, allowing the queen and bees to run in the same. The combs of brood, with the few adhering bees, can be put back in the hive and placed on another stand, if increase is desired. If no increase is wanted, the combs can be tiered up in extracting supers, or otherwise disposed of. The better way, however, is to so manage that the bees, as fast as hatched, can be added to the "shook" swarm, so that the same can be kept very strong all through the honey flow. The plan outlined some time ago in these columns, for the prevention of after-swarms, can be used with good results in this system. Some of the drawbacks of this forced swarming plan are, sometimes the bees will swarm out, and again, in the case of the colony treated having an old or failing queen, a large amount of drone comb will be left in the brood

chamber. Of course, in the event of this, the apiarist can go through the different colonies and cull out all undesirable combs before preparing the bees for winter. If practicing this plan in the production of extracted honey, we would certainly advise that full sheets of foundation be used in the brood chamber, to insure best results. The system, aside from giving the apiarist control of the bees, is useful as well in eradicating foul brood, as the method practiced is really a modified plan of the McEvoy system of treating this dread disease. Editor Hutchinson, of the *Beekeeper's Review*, in the course of a lengthy editorial endorsing the system, says: "Just think of it once more! Swarming controlled, foul brood eradicated and held at bay, bills for foundation cut down one-half, and wax enough to pay the other half of the bill." Personally, I have been following the methods outlined, in a limited way, for some time. Doubtless, if I were a comb-honey producer, and had out-apiaries with no attendants in charge during the swarming season, I would be practicing the plan more extensively, as I certainly believe that it is the best thing before the beekeeper of to-day by way of solution of this vexed problem—control of swarming.

York Co., Ont.

J. L. BYER.

POULTRY.

Trap Nests: Use and How to Build.

The necessity for improvement in the egg producing capacities of hens leads me to describe a trap nest which has been used with success. In the report of a certain experimental station some time ago, some hens laid as many as one hundred and sixty, while others, with the same feed and care, laid less than one hundred. I have no doubt but there is a greater difference than this in some flocks, yet this one case is sufficient to prove the necessity for some method of increasing the average egg yield per hen. If the egg yield could be increased only one dozen per hen per year, what it would amount to on the egg product of our country! The nest box is very simple and inexpensive. There can be as many made in one section as is desired. Each one is two feet long and one foot square (they would be better a little higher). A division board (or rather four thin strips about two inches wide, nailed together at the corners) is placed eleven inches from the back end and twelve inches from front end. Instead of a close door at the entrance, it is made of lath, spaced just wide enough so a hen cannot get her head through (or it might be made of wire-netting tacked to a light frame). The door is made small enough so there will be no friction. It is hinged at the top and opens up into the box. Drive a small hardwood peg in the middle of the bottom bar of the door.

The trip is merely a piece of wire (stiff enough so a hen will not bend it), about fifteen and one-half inches long, bent as shown in the cut. A piece of board three and one-quarter inches wide, and just long enough to reach across the top of box inside, is nailed flat-ways in front of the division board, and one-half an inch below the top, with the space of one-quarter inch being left between the edge of the board and the division. This board is merely to support the trip-wire.

Next slip the long part of the trip-wire down (through the quarter-inch slot) close to and in front of the center of the hole in the division board, letting the three and one-half inch piece of wire rest on the narrow board. Small wire staples are driven over the wire into the board to hold it in position, yet let it roll sideways easily.



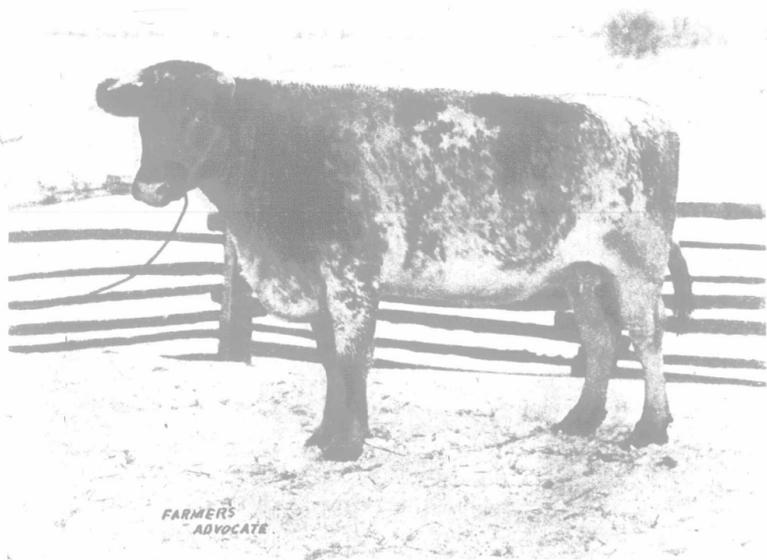
Trap-wire.

The hen passing in at the door (which, by the way, is held up on the half-inch piece of wire by the wooden peg) goes on into the next apartment, pressing the wire to one side in so doing, loosening it from its connection of the door, which swings down in its place and the hen is secured. We have not used any fastening, as the door with us stops in its place.

Huron Co.

Increasing Egg Production.

Often we read of the various foods required for producing eggs, but less often is attention drawn to the direct advantages which comfortable quarters and pure water have in increasing this useful product of the hen. Cold pens, ice water, or even a sudden chill, stops the egg growth for a longer period than most people believe. A hen that is confined in a chilly atmosphere until she has to stand on one foot to warm the other, need not be expected to produce eggs until some change for the better takes place in her surroundings.



VERBENA'S DANDY.

Four-year-old Shorthorn cow, sired by Imp. Prime Minister, dam by Imp. Eclipse. CONSIGNED TO THE HAMILTON SALE, JAN. 28TH, BY J. M. GARDHOUSE, WESTON, ONT.

No Room for Idlers.

In every flock at this time of the year there will be some layers and more idlers. The winter laying propensity seems to be developed in some strains, while in others warm weather and low prices seem to be the only inducement to work. While winter laying is largely effected by proper conditions of rearing and feeding, it is by no means entirely the result of these conditions. In many strains it is a long-descended family trait when their services are most valuable. These idlers should be separated now when their identity is certain. It will be found good policy, even though the numbers are very considerably reduced. The non-layers are simply good for meat, and nothing is gained by keeping them past their prime. Carefully mark the idlers, as they are the most certain to develop into egg eaters. Their influence in the flock is bad, and can easily be dispensed with.

Those having hens with this trait know their value and endeavor to retain such strains. By carefully selecting a cock from a laying family and hatching from eggs laid by such strains, the winter laying proclivities can be fixed in the whole flock. Such a procedure involves the culling out of all hens that do not show an inclination to get down to business.

The Possibilities for Poultry in British Columbia.

A great deal is written about British Columbia as a mining country, but little of its possibilities in other directions; consequently, the outside public have little or no idea of the great future in store for us in every branch of agriculture.

A few practical letters from actual residents in the different sections of the Province, in the pages of some agricultural paper which reaches those directly interested in such matters, would go further to remedy this and to increase our population than almost any amount of promiscuous advertising, provided, of course, that each writer treats only of what comes under his own observation.

Following these lines, I propose to write a little about the possibilities of this corner of British Columbia in which I live as a poultry-raising district.

This locality, upon which I pitched after mature consideration, is an island (Salt Spring, formerly called Admiral's Island) situated pretty centrally between the towns of Victoria, Nanaimo, New Westminster and Vancouver. Besides these, new towns are springing up at Ladysmith and Crofton, two mining centers quite near us, and all of these offer ever-increasing markets for eggs and poultry, at remunerative prices.

Early broilers bring \$6.50 to \$7 per dozen, say till the first week in June, after which they fall off gradually till they reach a minimum of about \$3.50 late in the season; whilst eggs vary from 17½ to 20 cents in the summer, up to 60 cents, or even more, before Christmas. At present they are worth about forty cents.

There appears to be no danger of these prices decreasing in the future, as the mines, both in the upper country and on Vancouver Island itself, afford a permanent and rapidly-growing market hard to overstock. It is, however, a market which wants educating, for at present a dozen

eggs are a dozen, irrespective of size, and the same may be said of the broilers. But this promises to change, as dealers are beginning to discriminate, although so far they have not commenced to buy broilers by weight. Rocks and Wyandottes appear to be the favorites, but Minorcas run them close, though of course their color handicaps them a little.

Our climate is ahead of any other part of Canada for poultry raising, as we have no extremes of heat and cold. In fact, its only fault is that it is rather wet in the late fall for a month or so, but this does but little harm if the runs are on a sandy soil. On the Island, also, we are free from bear and panther; our only pests being

minks and hawks, with an occasional 'coon, but these can be kept in bounds without serious difficulty. I say nothing about the game, although the bones and trimmings of deer carcasses contribute largely to the egg basket at no cost. I might add that wheat here yields nearly sixty bushels per acre, worth at present \$35 per ton.

W. J. S. HAMILTON.

Seasonable Incubator Advice.

(By the expert at Maw's Poultry Farm, Winnipeg.)

It is now an established fact that an incubator and brooder is a necessity, without which you cannot expect to get the largest returns from your flock of poultry, both in winter eggs and large, well-developed carcasses for market.

Early in the season it is very hard to get sitting hens, and when obtained they are very disappointing, often getting the eggs chilled; the chicks when hatched have to be cuddled, and seldom escape getting stunted.

An incubator when purchased should be one adapted to the climate where used, well built of the best material, and perfectly air-tight; avoid all those makes that take in a current of cold outside air direct to the egg chamber. By doing this you can operate your machine in a cold or hot room, without affecting the temperature. In purchasing a machine do not compare all the catalogues you get, seeing who has the cheapest. Remember you lose in one season many times the difference in price of a machine made on honor by people who know what is required and another machine got up of cheap, undried material, with a great deal of outside finish, made to sell, but lacking in hatching qualities. There are many good machines made by reliable firms, but they are not

able to put in the good material and workmanship and compete in price with the cheap machines. Most of us have had some experience with cheap clothing, horses, implements, etc., and have come to the conclusion that the best are always the cheapest.

If possible I would advise all who think of purchasing an incubator to find out who has machines in operation in their neighborhood; go and see them; ask what success they are having and what drawbacks they have had. When you decide to buy try and get your machine from some one whom you know has had experience in operating, and who will be in a position to give you advice on any point you may be in doubt upon. All machines have printed instructions, and some are very simple and easy to operate, but there is always a little "something" that occurs during operating that causes you to wish you had an instructor near by that could tell you just what to do. When you have decided to purchase ask the seller if he will undertake to answer any questions you may wish to get information on by return mail, and in writing be sure and give your questions in a plain manner, writing your name and address clearly. I give all this advice because I have seen many instances when a little forethought would have saved a lot of chickens. I once, many years ago, bought a machine from a firm in the States, who handled a large variety of goods. They were very kind and wrote me all they knew about incubators, but to my sorrow that was not much, and I had to find out all doubts by bitter experience.

The advantages of our incubator can be summed up as follows: By hatching early, a fine flock of pullets will commence laying early in the fall, and, properly fed and housed, will continue laying all winter, when eggs command three times the price of those laid late in the spring and summer.

The cockerels, if sold for broilers when six weeks old, find a ready market at fancy prices. If raised to maturity they are in advance of the fall rush and command top prices.

The later hatched incubator chicks thrive better, and a larger percentage grow to maturity, being free from lice and protected from the scorching sun. By actual statistics carried for many years, the incubator has proved conclusively that a much larger per cent. can be raised by its use than can be raised by hens, and at the closing of accounts at the end of the season a large cash balance on the right side will show that poultry-raising by the aid of incubators and brooders is one of if not the best paying undertaking on the farm.

Quick Profits in Poultry.

With the exception of strawberries, says Prof. A. G. Gilbert, it takes three years to realize on small fruits; a milch cow does not approach her full production short of three and a half years; apple trees do not begin to bear freely short of seven or eight years. How about the hen? Three weeks from the setting of the hen you have a batch of chickens; from four to four and a half months from hatching the cockerels are ready for the market, and in five to five and a half months the pullets will begin to lay. Add to this the fact that in Canadian cities at the present time fresh laid eggs are selling at 30 to 35 cents a dozen, and it is clearly demonstrated that poultry-raising well managed is one of the most profitable branches of farming.



DALMENY FANNY 6TH, PANDORA, AND LOVELY TULIP.
Imported heifers.

CONSIGNED BY MR. W. D. FLATT TO THE COMBINATION SHORTHORN SALE AT HAMILTON, JAN. 28TH.

GARDEN AND ORCHARD.

Interesting Insects.

Two interesting entomological specimens may be found on many apple trees at this season of the year. They are the cigar case bearer and the pistol case bearer, the peculiarity of the specimens being that the cases, about eighth of an inch long, stand on end on the twigs of the trees. In these cigar and pistol shaped cases the insects spend the winter, sheltered in the forks of the branches. When the buds begin to swell in the spring the occupants of the cases begin feeding, finally leaving their cases behind them, and about the end of June change to the chrysalis. In July the moths come out. They fly at night and lay their eggs on the leaves of the apple trees. During September the eggs hatch, and the young larvæ feed on the leaves until the weather gets cold, when they migrate to the twigs, and build their little houses for protection through the winter. These insects do not occur in sufficient numbers to cause serious damage. They may be found on most uncared for trees, and are of interest on account of the resemblance of their cases to a cigar or pistol.

A Paying Garden.

Those of the readers of the "Farmer's Advocate" who were interested in the account published a year ago of my half-acre garden, would probably like to see a statement of the expenses and results in tabular form. The garden in question consisted of four city lots, being hardly half an acre in extent, and although there may have been more money taken from a piece of the same size before, I do not think that as good results were ever obtained in this locality. The work of planting and care of the growing crops was done mainly in evenings and spare time, which reduced the expense of labor considerably. I notice in most statements of this kind the expenses of seed and fertilizer are double mine on a similar piece of land. Besides taking prizes amounting to over \$30, and having a good stock of vegetables in cellar for the winter, the results were as follows:

EXPENSES.	
Seed	\$ 2.00
150 pounds fertilizer	3.00
Manure	1.00
3 weeks work—time that would otherwise have been lost.....	24.00
	\$30.00
RESULTS.	
Plants from hotbeds, 4,000, worth, at market price	\$20.00
Lettuce, 250 heads at 2c.....	5.00
Rhubarb, 35 lbs. at 3c.....	1.05
Beets, 10 doz. bunches at 35c.....	3.50
Beets, 2½ bushels at 60c.....	1.50
Beans, 5 bushels string	5.00
Beans, 1½ bushels shell.....	2.50
Beans, 1½ bushels dry (yellow eye).....	2.00
Potatoes, early, 5 bushels at \$1.25.....	6.25
Carrots, 5 doz. bunches at 35c., 1 bush. at 50c.....	2.45
Turnips, 30 bunches at 3c., 2 bush. at 25c.	1.40
Peas, 12 quarts at 10c.....	1.20
Parsnips, 3 bushels at 60c.....	1.80
Onions, 100 lbs. early at 4c.....	4.00
Corn, 40 dozen at 10c.....	4.00
Squash, 800 lbs. at 1½c.....	12.00
Pumpkins, 200 lbs. at 1½c.....	3.00
Cabbage, 300 heads at 5c.....	15.00
Tomatoes, 1,000 lbs. at 2c.....	20.00
Cucumbers, 500 at \$2.....	10.00
Cucumbers, 1,000 at 50c.....	5.00
Cow feed, exchanged for manure, 20 bbls. at 15c.....	3.00
Vegetables used by family throughout summer	25.00
Gooseberries, 40 quarts at 8c.....	3.20
Currants, 40 quarts at 5c.....	2.00
Raspberries, 30 quarts at 10c.....	3.00
Plums and apples from 20 4-year-old trees.	3.00
Total	\$165.85
Expenses	30.00
Clear profit.....	\$135.85

The garden from which the above results were obtained was dug up, planted and cultivated by hand, and the above is a true record taken from my account books. I did not expect to get as large crops as I did, as I gave the land a very light application of fertilizer and manure. I think my success was due to thorough cultivation with watering in dry weather. It must not be inferred from the above that I had nothing to contend against. My peas were almost ruined by the aphid. Club-root destroyed a large proportion of the cabbage and potatoes were only half a crop, but still I think I had good reason to be proud of the results of my summer's gardening. This heavy yield was secured not by heavy fertilizing, as is usually the case, but by double crop-

ping and the most intensive cultivation, and the prices obtained were only ordinary wholesale prices, and not that obtained from select customers. If fancy prices could have been obtained a larger profit would no doubt have resulted therefrom. I would like to hear of some more successful gardeners. I think that the possibilities of a small piece of land under judicious fertilizing and intensive methods of cultivation are greatly underestimated by the majority of people, and farmers in particular. E. MACKINLAY.
Halifax Co., N.S.

The Louse is Everywhere.

If every man who owns an orchard or a few apple trees will examine them now, they will find evidence of the presence of the oyster-shell bark-louse (*Mytelaspis formosum*) on the smaller branches and twigs. The scale is not difficult to recognize. A small oyster-shell shaped scale lying upon the branches is the winter stage of the insect. Under these scales can be found the eggs which hatch in the latter part of May or beginning in June. The lice are harmless-looking objects, but by their rapid increase and sap-sucking habits they soon drain the vitality out of a large tree.

The best time to begin fighting the louse is in winter. On a fine day take a hoe or some other scraper and scrape the trunk and larger branches of the tree, removing the scales and all rough bark. Then wash with a solution of caustic potash, or caustic soda, one pound in about two gallons of water. This will destroy a great many of the scales, but cannot be used on the more tender twigs. To get the remaining insects, spray, when the eggs hatch, with kerosene emulsion of the following constituency: Hard soap, shaved fine, half pound; water, one gallon; kerosene, two gallons. Dissolve the soap in boiling water, warm the kerosene and add the hot suds to it; then churn with a force pump until it becomes of a milky appearance.

Dilute this mixture nine to twelve times. You will be surprised at the increased vitality of your trees if you take this winter care of them.

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; there fore, 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.

[Answered by our Veterinary Editor.]

WANTS CURE FOR FOUNDER.

What will cure founder? I have a driver that I think was watered while warm; chest has gone in and he is quite stiff. R. W. T.
Wellington Co., Ont.

Ans.—Founder is inflammation of the sensitive parts of the foot. If properly treated in the early stages, a perfect cure can be effected. Treatment consists in giving 10 to 20 drops Fleming's tincture of aconite every two hours until the pulse becomes normal, purging, removing shoes, peering soles well down and applying hot poultices until inflammation is allayed, then shoeing with bars and exercising carefully until fully recovered. Of course complications must be treated according to symptoms. Where prompt and energetic treatment is not adopted, there occurs an alteration of structure, there is a greater or less disunion of the sensitive and insensitive structures, and a perfect recovery cannot take place. This is doubtless the case in your driver. The atrophy of the muscles of the breast is not due to disease of the parts, but to a want of function, due to soreness of the feet. If you are correct in your diagnosis, your horse will never give satisfaction as a driver. Benefit will result from repeatedly blistering the coronets, keeping the feet soft by poulticing, and shoeing with bars.

COLLECTIONS IN THE PREPUCE.

What is the cause of what is locally called gravel in cattle, but which seems to be an impaction of filth in the prepuce, which is common in stall-fed cattle? S. H. S.
Huron Co., Ont.

Ans.—Collections in the prepuce in cattle are caused by the entrance of some foreign body, as a chaff, barley head, etc., which acts as a nucleus, to which adhere the salts of the urine, dust, etc., until the urine does not escape freely. When the concretions are small they are easily removed by pressure, but when large it is often necessary to cast the animal to remove them, after which the sheath should be flushed out daily with carbolic acid, one part; water, thirty parts.

UNTHRIFTY MARE.

My five-year-old mare is in poor condition; coat rough and dry. She is quite low in flesh and has been so for two years. She eats very little hay, and eats oats very slowly, but will consume a gallon at a meal if given an hour. Her eyes are sore. Last winter she was in the same condition. She sweats easily. I keep a blanket on her and keep her in a comfortable stable; feed her good timothy hay and three gallons of oats daily. SUBSCRIBER.

Leeds Co., Ont.

Ans.—Your mare is evidently a poor feeder; will not consume sufficient bulky food, and does not properly assimilate what she eats. The fault may be partly due to imperfect mastication. You had better have her teeth dressed. Get the following prescription: Sulphate of iron, gentian, nux vomica, and nitrate of potash; mix and make into 24 powders. Give a powder every night and morning in boiled oats or dampened crushed oats. If she will not eat them, mix with half pint cold water and drench. Repeat the prescription if necessary, and continue to feed soft food at least once daily; also give a feed of bran with a little linseed meal twice weekly.

ABORTION IN SOW, AND FISTULA IN COW'S TEAT.

Sow due to farrow in six or seven weeks took sick; she lay on her belly most of the time and ate very little. Her body became covered with large purple blotches; in seven or eight days she aborted. She has improved since, but is not really vigorous yet. The skin where the blotches were is dropping off. She had been grazing and had access to apples and roots. Will this interfere with her for breeding purposes?

2. My cow got a transverse wound in her teat and the milk escaped. I bound it up with liquid glue, but a little hole remains through which milk escapes. SUBSCRIBER.

Chateaugay Co., Que.

Ans.—1. Your sow had an eruptive skin disease caused by something she had eaten, possibly too many apples. Dress the sloughing patches of skin with one part carbolic acid and twenty parts lard, until the parts are healed. Purge her with eight ounces raw linseed oil and feed two drams hyposulphite of soda night and morning for two weeks. She will in all probability breed all right next time.

2. When the cow goes dry, get your veterinarian to cast her and scarify the edges of the sinus and stitch carefully with carbolized silk or catgut. Dress the wound with the same dressing that you use for the sow until the wound heals.

SORE SHOULDER IN HORSE—INDIGESTION IN PIG.

1. I have a horse with a lump on his shoulder just below the draft. It appears to be a thickening in the skin, and when used in heavy work his shoulder gets sore and swells up. Sometimes it is inclined to fester.

2. I have a pig about three months old, to which I have been feeding some raw oats, boiled potatoes and slop. He has taken something like piles, projecting about two inches, and swelled. Pig appears lively and well. Lacombe, Alta. PRIMA DONNA.

Ans.—1. Give the animal rest and apply a blister as recommended in next column for ringbone. If two applications do not complete a cure it will be best to consult a veterinary, as it may be necessary to have it dissected out.

2. Your pig is undoubtedly troubled with indigestion, caused in all probability from sour or unwholesome food coming from the slop barrel. To effect a cure, withdraw this part of the food supply and give from three to four tablespoonfuls of Epsom salts until purgation takes place, after which ground oats and boiled potatoes may be supplied, and if shorts are easily obtainable, it would be advisable to add them to the ration.

RINGBONE.

I have a two-year-old colt which became so crippled on one hind leg as to be unable to use it. Finally it got well and the other hind leg became sore and a small, medium hard swelling appeared around the pastern, about one inch above the hoof. For about five months it has continued in this way, sometimes being lamer than others. Kindly tell me what is the difficulty and what is the best way to deal with it. J. A.
Creston, B.C.

Ans.—From the description given, there is little doubt but the ailment is ringbone. The best method of treatment is to cut the hair closely from the parts affected, wash well with warm soft water and soap; dry and rub well into the skin a mixture of the following blister: Binoxide of mercury, four drams; powdered cantharides, three drams, and vaseline, four ounces. After forty-eight hours wash off and apply vaseline. Repeat the blistering three times, allowing three weeks between each application. In obstinate cases firing is necessary, but this can only be performed by a competent veterinary surgeon.

CATARRH IN PIGS.

Pigs ten weeks old appear to have colds. They can hardly get their breath and cannot eat without choking. I feed oat and barley chop and milk.

Norfolk Co., Ont.

Ans.—Your pigs have catarrh. It would be wise to isolate the affected. Give about one ounce Epsom salts or raw linseed oil to each in the milk, feed lightly and keep the bowels moving freely by giving a little oil regularly. Put a mustard plaster on their throats and cause them to inhale steam.

DOG WITH CHRONIC DIARRHŒA.

My collie has been troubled for some time with chronic cholera.

Nova Scotia.

Ans.—Give him 1½ ounces castor oil. Follow this up with the following: Take one dram powdered catechu, two drams nux vomica, with a little vaseline, and make into twelve pills. Give a pill three times daily until diarrhœa ceases. Feed nothing that is sweet or greasy; give principally bread and milk and porridge. Any meat that he gets should be lean and well cooked.

SOW EATING PIGS.

Have a young Berkshire sow that has eaten her first litter of pigs. Can anything be done to prevent her doing the same again? Are Berkshires any worse than other breeds for eating their young? Is the feeding of raw meat a bad thing for sows with young?

SUBSCRIBER.

Alberta, N.-W.T.

Ans.—The eating of young pigs by sows is usually due to the feeding of an improperly balanced ration previous to the time of farrowing. Supply only clean pure food for two weeks at least, and also have a mixture of ashes and salt where they may be taken at will. It will also be necessary for the sow to be carefully watched the next time when farrowing, so that the young pigs may be protected for a few hours until she becomes familiar with them. The feeding of animal food at this time is advisable, because it will supply the constituents which are lacking to a large extent, and by nature the animal has no desire to eat her young. Some claim that Berkshire sows are worse in this respect than others, but such has not been our experience.

CONGENITAL WEAKNESS IN STEER.

I have a yearling steer that was delicate as a calf. He never had a good appetite. He has grown fairly well, but will not gain flesh, although his appetite is better than usual. Nose and tongue are of a reddish color. He tires with little exertion, and his heart beats loudly. Once I noticed him suddenly stop eating and stagger; he nearly fell, but regained his balance and commenced to eat.

Elgin Co., Ont.

Ans.—There is a congenital weakness of the digestive and circulatory systems, and it is not probable he will ever do well. I would advise you to put him in a box-stall and try to fit him for the butcher, by keeping him as quiet as possible and feeding in small quantities and often. The amount to be fed will depend upon his ability to eat and digest, and must be regulated accordingly. A dram each of sulphate of iron and gentian, given night and morning, will tend to improve appetite and digestion.

Miscellaneous.

FROTH IN THE CHURN.

I have to churn hours to get my butter, but until lately had no trouble. After churning a short time cream swells and becomes foamy. Cows are fed hay and a few turnips, and are eight months calved.

1. Would freezing, either before or after souring, affect the cream?
2. Would cows' feed affect it?
3. Would length of time since calving affect it?
4. How long should the cream sour?
5. At what temperature should it be churned in winter?

Cumberland Co., N.S.

Ans.—No doubt the trouble with J. L.'s cream frothing and taking so long to churn, is in having his cream too thin, that is, too small amount of butter-fat left in when skimming, and churning at too low a temperature, with too much cream in the churn. To rectify this trouble, I would not allow any more skim milk or rinsings into

the cream than was absolutely necessary. As soon as the milk was skimmed, hold the cream at a temperature from 60° to 65° in a clean, sweet-smelling room, for no longer than four or five skimmings, stirring each lot as added to the whole, then heat the cream to 70° or 75°, and add some good sour milk, leaving it for four or five hours at this temperature, or until a good sour acid has developed; then cool to a temperature of 55° to 65°, according to the per cent. of fat in cream, which should be between 25% and 35%.

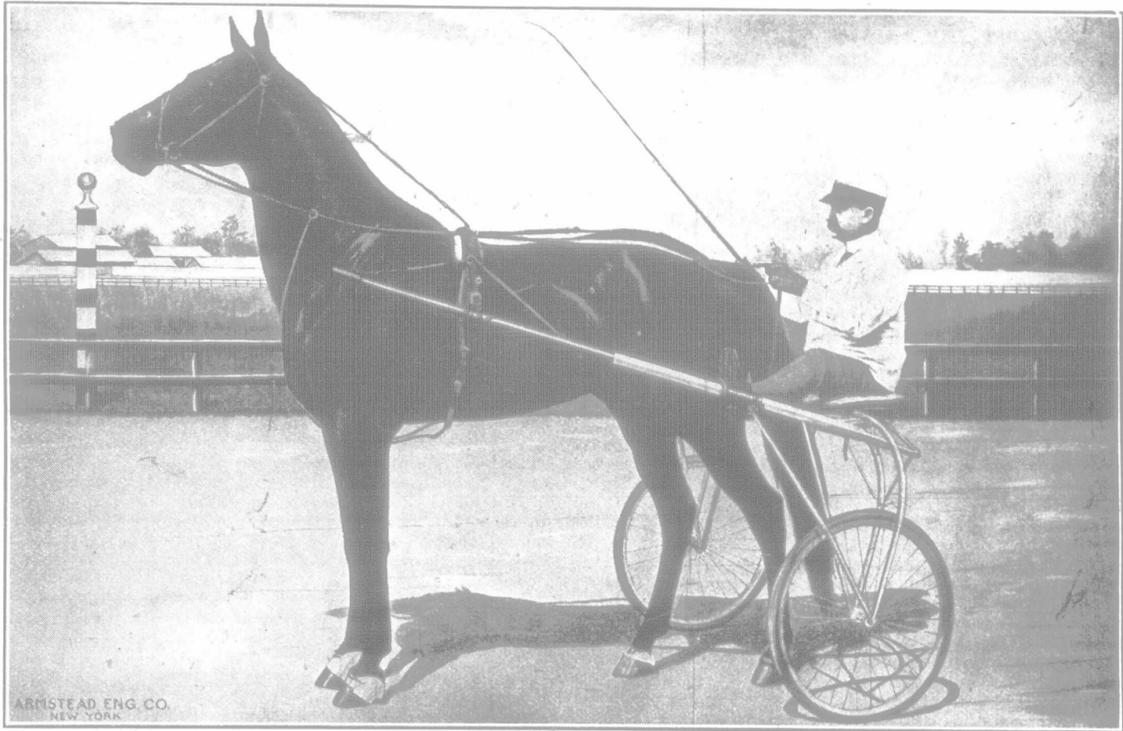
The freezing alone is not harmful to cream, but freezing and thawing it will give a bitter, insipid flavor to the butter, especially before it has been ripened. A few pounds of grain with the hay and turnips would invigorate the cow, giving her more nerve energy.

Next to the temperature and per cent. of butter-fat in cream, the length of time cows are in lactation plays a prominent part, as the longer, especially in fall and winter, when fed on dry food, the smaller and harder become the butter granules.

FRED DEAN.

ANOTHER ANSWER.

There are various causes for cream frothing in the churn, but is usually the result of the cream being too rich and at too low a temperature; the churn being too full, or the cream having developed too much acid. It is sometimes caused by ripening the cream at too low a temperature, which will cause a bitter flavor to develop in-



DAN PATCH, 1,594.

Recently purchased by M. W. Savage, Minneapolis, Minn., for \$60,000. (See Gossip, page 81.)

stead of lactic acid, and also by the use of starter that is too old. It is also claimed that if cows are not given sufficient salt the cream will be much harder to churn. The addition of a small quantity of salt or strong salt-brine to the cream will usually reduce it to its ordinary consistency and cause it to churn properly.

1. If cream is frozen while sweet, and is afterwards ripened by the use of a good flavored starter, the quality of the butter will not be injured. But if the cream is sour or partly sour when frozen, the butter will be almost certain to have a bitter flavor. Heating the sour cream to a high temperature to thaw it would make the conditions favorable for the development of too much acid, which would injure the keeping qualities of the butter. If there is danger of the cream being frozen in transit to the factory, I would advise skimming very rich (from 40 to 50 per cent.) and keeping it perfectly sweet.

ARCH. SMITH,

Supt. Western Dairy School.

2. Not as to foaming.
3. Yes; butter slower coming.
4. About twenty-four hours.
5. More exhaustive churning is claimed at 52 degrees F., but in winter many find it necessary to churn at from 62 to 70 degrees. Ed. F. A.

EXPERIMENTAL FARM REPORTS.

Please advise me where I could get the reports of the Experimental Farms?

Kent Co., Ont.

Ans.—Write for Dominion Experimental Farm reports to Dr. Wm. Saunders, Ottawa, and for the O.A.C. farm reports to Dr. Jas. Mills, Guelph, Ont.

ALFALFA FOR SEED.

Will you please inform me which cutting of alfalfa is best to save for feed?

Elgin Co., Ont.

Ans.—When alfalfa has become firmly established the second cutting in the season is usually taken for seed.

SIX QUERIES IN A BUNCH.

1. On what number of acres would it pay to buy a corn binder and other improved corn machines, and are any corn binders made that will cut and bind grain as well as corn?

2. Would it pay a farmer who grows sweet corn for silage, to run a small canning factory, and after canning the corn put stalks, husks and cobs through an ensilage cutter and silo them?

3. Do you know of any book on raising geese in large numbers for market, or where in Canada is this done? Can goose eggs be hatched in an incubator as well as ducks and hens' eggs?

4. Which young stock would be ripest at eighteen months, stock sired by a pure-bred Short-horn on common cows or those sired by a Polled Angus, and would these latter be all polled?

5. In growing sweet corn in large quantities to sell to canners, must the ears be stripped by hand or would a machine snap the ears off at the time the stalks, etc., were siloed?

6. Which would be preferable for driving farm machinery, an ordinary portable threshing engine or a portable gasoline engine?

Cumberland Co., N.S.

ENQUIRER.

Ans.—1. As corn harvesters cost about \$150, you would probably find it advantageous to own one if growing from 25 to 50 acres of corn. We know of cases where three or four neighbors growing from five to ten acres of corn each find it a good plan to purchase a harvester jointly. We have not seen a successful corn and grain harvester combined.

3. I may say that I know of no book printed which deals with goose-raising in a thorough manner. Goose-raising is carried on more extensively in the State of Rhode Island than in any other State or Province that I know of in America. "Farm Poultry," 22 Customs House St., Boston, Mass., has, during the past two years, published a number of articles dealing directly with this branch of poultry farming; also giving cuts of breeders' yards, etc. I am inclined to believe that your subscriber could get as good information by securing these numbers of the "Farm Poultry" as he could from any other source. Single copies of the paper are worth, I think, ten cents. Goose eggs can be hatched in an incubator, but those who have used incubators claim that there is some difficulty in getting first-class hatches from goose eggs. Mr. Sam Cushman, of Little Compton, Rhode Island, has had considerable experience along these lines, more so than any other man I know of.

W. R. GRAHAM.

Ontario Agricultural College.

[Note.—Useful chapters on goose culture will be found in "Poultry Craft," by Robinson, price \$2, and in "Farm Poultry," by Watson, price \$1.25, either of which excellent works may be

ordered through the "Farmer's Advocate" office. Editor.]

4. Early maturity depends more on the individual sire, and the care and feeding from birth onward, than on the breed. If the Angus sire were reasonably impressive, we would expect most of his get to be black and hornless, but not necessarily all of them. The dam often transmits some of her characteristics to the offspring.

2. and 5. In the neighborhood of one of the largest canning factories in Ontario, the few farmers that have silos put the stalks of sweet corn in them, and express themselves as highly satisfied. The ears require to be selected for canning purposes, and can only be picked off the stalks by hand, and this requires expert pickers. Corn is frequently picked over the second time to get best results. A machine could not be used to slice the ears from the stalks, with a view of selling the ears of corn to canning factory, as the ears must be carefully selected and brought to the factory with the husk about the ear; and they must also be handled promptly, to avoid heating in transit. "We use the husks for ensilage, and sometimes the cob, with good results," states the manager.

6. We understand that a gasoline engine would be less expensive than a steam engine, but apart from that much would depend upon the character of the work to be done. Gasoline engines appear to be a coming power. Information as to cost, etc., can be obtained from advertisers. For grinding, pumping water, cutting fodder, etc., one of the most economical and popular styles of power with farmers is the windmill.

FROST AND FRUIT-GROWING.

We have a new country here, and many would like putting out small orchards, but are a little doubtful as to their success, as we are liable to summer frosts. Could you give a comparison between fruit, such as apples, pears, plums and cherries, and a common vegetable, such as a potato, as to their ability to withstand frost? Will a frost that nips potato leaves in July cause fruit to cast? Are any varieties of fruit more able to withstand summer frost than others? If so, how can I ascertain the fact without actually experimenting?

Yale and Cariboo, B.C.

Ans.—I may say that I have not visited the exact locality in question, but I know where it is. It is directly west of the Okanagan country, about sixty miles north of the boundary, in the valley of the Similkameen River. This should be a very good district in which to grow fruit, and unless the altitude is considerable, there should not be much danger from frost. In the Okanagan Valley, apples, pears, plums and cherries all succeed very well, and I see no reason why they should not do well at Princeton. I do not think there is much difference in fruits in the matter of resisting summer frosts. The hardiest fruits are tender when their foliage and blossoms are expanded. Their hardiness lies in their power of withstanding cold during the winter months. I think the only way to determine the comparative hardiness of fruits is by actual trial; but I do not think your correspondent would run much risk in putting in any of the fruits referred to in the district in which he is settled.

WM. SAUNDERS,

Central Experimental Farm, Director.

[Note.—We have frequently noticed that fruit blossoms successfully withstood frosts that cut back potato or tomato vines severely.—Editor.]

CROOKED-BREADED TURKEYS.

Why are there so many crooked-breasted turkeys? If this is bred in them, why is it that a crooked hen-turkey is seldom seen? Does this keep turkeys back from growing, or does it cause sickness in any way?

Halton Co., Ont.

Ans.—My personal experience with turkeys is somewhat limited; but in talking with many of the best and most prominent breeders of turkeys in the Province, they have informed me that the majority of the turkeys which get crooked breast-bones are generally the largest and most promising of the lot; and that the crooked breast-bone is due to the fact that the birds when young are exceptionally heavy in weight, and the breast-bone not being as strong as it is when mature, is easily moulded to one side or the other, and depressed more or less where it comes in contact with fence poles or tree limbs.

It is quite possible that the crooked breast-bone may be more or less hereditary. During the past year or two, one or two cases of hereditary crooked breast-bone have come under my observation in connection with chickens.

The only reason I can see why the hen-turkey is not crooked in the breast-bone is because she is not so heavy as the male bird; and, second, because the breast-bone is not as prominent as the male's, and in all probability does not come in contact with the roost as much as the male's, whose breast-bone is more prominent.

I do not think the crooked breast-bone will keep turkeys back or make them unthrifty in any way.

O. A. C., Guelph.

W. R. GRAHAM.

HULLLESS BARLEY ORCHARD SITE.

1. Would you give me some information in regard to white hullless barley, as regards its value as a food to fatten stock and as food for the production of milk and butter? Is there any difference between it and other varieties?

2. Can an apple orchard be established on a sandy loam soil, with a gravel subsoil? The forest that grew on this land was almost entirely soft wood, such as fir, spruce, pine and an occasional large yellow birch.

W. H. MILLER.

Victoria Co., N.B.

Ans.—1. We have conducted no feeding experiments with the white hullless barley, nor can I find any records of such experiments having been tried anywhere else. We have some hullless barley under analysis at present, but the reports so far gained are very incomplete, the only thing that has been determined being the nitrogen, which would indicate a feed very little more valuable than common barley, as the protein content is only about one-tenth of one per cent. higher than the average analysis of common barley.

J. H. GRIDDALE,

Central Experimental Farm, Agriculturist.

[Prof. Zavitz, of the Ontario Agricultural College, reports that none of the hullless varieties have given nearly so large a yield as the six-rowed Mandscheuri. The grain of hullless barley usually weighs about sixty pounds to the bushel, as against forty-eight pounds, the standard weight, but the straw is weak and brittle when ripe, so that the heads are frequently broken off.—Editor.]

2. In the colder parts of New Brunswick, apple trees would be likely to succeed best on sandy loam soil with a gravelly subsoil, as where the climate is cold, warm soils have to be chosen, and this should be about as well drained a soil as could be had. A sandy soil would, however, require fertilizing from time to time to maintain its fertility.

W. T. MACOUN,

Central Experimental Farm, Horticulturist.

LICE ON CATTLE-MIXING FEED.

1. What is the most effective way of getting rid of lice on cattle? We brush our cattle every day and would like something that would be cheap, and would leave the hair in nice condition.

2. What is the best way to mix feed for cattle so as to get the chop, ensilage and roots mixed evenly together, so that each animal will get its proper share?

Bruce Co.

Ans.—1. Clip the hair off the necks and about four inches on either side of the backbone, clear back to the tail (the tail also may be shaved, as cattle keep cleaner this way). Then rub on strong tobacco juice, or one of the proprietary sheep dips advertised. Repeat the application if necessary. Common "insect powder" (pyrethrum) sifted from a flour dredger is also effective.

2. In one corner of the feed room lay down a layer of ensilage, on this put a thin layer of chop, then a layer of roots. If cut straw or hay is used let it form one of the layers. Repeat this until enough for one day's feeding is prepared. In feeding work from the edge of the pile, and not from the top. Many good feeders prefer to mix the chop in the mangers rather than in the pile, as by this method the feeder knows just how much each animal receives, and their individual needs can be studied and supplied.

FARM WORK AND WAGES.

A. hires B. by the year as foreman over his farm and dairy. He also hires C. by the year to assist B., and C. agrees to work whenever B. wants him. At the end of the year C. has been away from work several Sundays and twelve work-days, and B. has not been away at all. Near the end of the year C. gives notice to leave when his year is up, and refuses to work on holidays.

1. At the end of the year can C. claim his full year's pay, and put in his lost time after his year is up?

2. Can A. retain his pay for the days when C. was away from work?

3. Can C. be docked half time for the Sundays that he was away from work?

4. Can either of the men claim any extra pay for working every Sunday in the year?

5. Can C. be docked for the holidays that he refused to work?

6. C. says that he is entitled to every holiday and half the Sundays in the year, and if he does not take them he can claim extra pay. He says that B. is not entitled to holidays or Sundays because B. is foreman. There is more work to do on holidays and Sundays than one man can do. Can C. be discharged without notice for not working?

Ontario.

Ans.—1. No. 2. Yes. 3. 4 and 5. No, unless there was an express agreement for it. 6. C. was entitled to observe Sundays and other holidays as such, and to decline to do work on those days other than chores; that is to say, such routine work as must of necessity be done on a farm and in connection with a dairy every day, and if he declined or refused to do chores accordingly, he rendered himself liable to summary dismissal and to some "docking" of pay.

IMPROVING A FATTENING RATION.

I am feeding a bunch of steers two to three and a half years old, some to be finished in the stall and a few of them on grass. My roots are done, but I have a silo of fair ensilage, plenty of oats and a little wheat, but no peas or barley. Plenty of bran and shorts available to purchase. For roughage I have oat and wheat straw. In what way can the above foods be used to advantage, and what should I supplement them with to make a proper fattening ration? About what quantity of the grain ration should be fed per day to each animal?

GRADE.

Huron County, Ontario.

Ans.—I do not think your correspondent has the best kinds of foods on hand for fattening purposes. Oats and bran, with silage and oat straw, would do very well for the steers which he intends to finish on grass. I would feed these steers a light meal ration, say about one-third of a pound of meal per day per 100 pounds of their live weight. Those which he wishes to fatten in the stable should have a heavier ration, and oats are not a first-class food for fattening. If possible, I would advise him to buy corn to mix with the oats; about one part of oats to two parts of corn would make a very good mixture, along with the silage and oat straw. Since he has no hay, he will need to feed a somewhat heavier meal ration than many good feeders practice. Of course, the amount of meal fed will depend upon the condition of the steers and the length of time he wishes to feed them. If he intends to keep them until May, a little over half a pound of meal per day per 100 pounds of their live weight, increased gradually as time goes on to at least two-thirds of a pound of meal per day per 100 pounds of live weight, should make a very satisfactory ration. On the other hand, if he intends to finish them inside of a couple of months, he will need to give them pretty nearly all the meal that they will eat up clean—at least a pound of meal per day per 100 pounds live weight. If he can purchase oil-cake at twenty-seven to twenty-eight dollars per ton, I think it would be an improvement to feed about two pounds of this per day to each steer, especially if he cannot obtain corn. Possibly he will be able to sell some of the oats and purchase some of the foods mentioned with the proceeds. G. E. DAY.

Ontario Agricultural College.

SNOW FENCING.

Can a man be compelled to put down his fence on the north side of a public road where it causes such drifts in winter that it is impossible to keep it fit for travelling on? The fence in question is a cedar log one, about seven feet high, the distance obstructed about sixty rods, and is supposed to be about fifteen feet out on road. The owner has been offered the price of the wire to replace the log fence, or payment for his trouble in putting down and putting up log fence each winter, but he doesn't seem inclined to accept any offer. As the road is a very public one, and the inconvenience very great, I would be pleased to have your advice on this question.

Ontario.

Ans.—Yes. Under the Act respecting Snow Fences, the council of the municipality have full power to suitably deal with the matter. See the provisions of such Act (Revised Statutes of Ontario, Chap. 240), also section 545, s.s. 5 of the Municipal Act (R.S.O., C. 223).

FAKE VETERINARY DIPLOMAS.

I have noticed an advertisement of a veterinary correspondence school professing to give diplomas after about three or six months' course. Would they be of any recognized value?

SUBSCRIBER.

Ans.—No. The knowledge you would get of veterinary science in that way would be too superficial to be worth anything, and the diploma would have no recognized standing. We would advise you not to waste money in securing such worthless documents.

COMPULSORY BRIDGING.

Can ratepayers compel a township council to bridge a creek that never has been bridged on a proven line? It has been travelled more or less for twenty-four years, but in high water is of no use.

B. H.

Renfrew Co., Ont.

Ans.—We think not.

SHEEP TRESPASSING.

Suppose my neighbor is notified in writing to keep his sheep off my land; his part of the line-fence being so built that they can easily come on to my pasture where my cows run. If he will not keep his fence so that his sheep cannot come over what should I do?

B. C.

Ans.—You might have the sheep impounded if there are pound facilities in the neighborhood; or, otherwise, proceed against him as for trespass.

BENGOUGH'S "IN MANY KEYS."

"Enquirer."—Mr. J. W. Bengough's beautiful new book of verse, "In Many Keys," may be ordered through this office at \$1 per copy, post-paid.

TICKS ON SHEEP.

A Middlesex County, Ontario, subscriber writes: "As this is the time of year when sheep are usually infested with ticks, much to their injury, I hereby give you a good plan for ridding them of their tormentors: One part sulphur, four parts common salt, placed where the sheep will have free access to it, will be found effective as a preventive."

NOTES AND NEWS.

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

A Winter Fair at Ottawa.

At a special meeting of influential farmers and breeders held in the city of Ottawa, on Tuesday, January 6th, arrangements were made for holding in that city, on the 9th to 13th of February, a fat stock and dairy show, combined with the regular poultry show of the Eastern Ontario Poultry Association. Committees were appointed, a \$4,000 prize list drawn up and judges appointed. The prizes are liberal and the classification nearly the same as at the Guelph show. There is a separate class for Shorthorns with six sections, the prizes for steers being \$12, \$8 and \$5, and the same number of sections for Herefords and Polled Angus, and for Galloways and Devons, with prizes of \$12 and \$8. The prizes for grades or crosses are the same as in the Shorthorn class. There are three prizes of \$25, \$15 and \$10 for exhibits of three export steers which have been owned and fed by the exhibitor for at least three months previous to the show.

Separate classes are given in the sheep section for Lincolns, Leicesters, Oxfords, Shropshires and South-downs. Dorsets and Merinos show together, as also do Hampshires and Suffolks, and there is a separate class for grades or crosses, the prizes being \$10 for first in the older classes, and \$8 in younger sections.

In swine, there are two sections for barrows and two for sows in the Berkshire, Yorkshire and Tamworth breeds and in grades, all to be under nine months.

Nine prizes are provided in the bacon classes for pure-breeds, the first prize being \$30, and the last \$10, for three pigs, and for grades or crosses three prizes of \$25, \$15 and \$10 for three pigs, and similar prizes for dressed carcasses of hogs, to be brought to the show alive.

In the dairy section, three prizes of \$25, \$15 and \$10 are given for cows over 36 months, and for cows under 36 months in Shorthorns, Ayrshires, Holsteins, Jerseys, Guernseys and grades. It is expected that special prizes will be given by breed associations.

Entries must be made on or before February 1st, by applying to the Secretary, Mr. A. P. Westervelt, Parliament Buildings, Toronto.

An Old Friend with a New Face.

The Christian Guardian, of Toronto, Ont., starts the new year with a new form and a new editor, the Rev. G. J. Bond, B. A., formerly editor of the Wesleyan, Halifax, N. S. The Guardian is one of the oldest religious periodicals in Canada, and one of the most uniformly successful. Mr. Bond is no novice in editorial work, and the paper will advance under his management. The first number shows that the grand traditions of the paper will be more than sustained. The old, blanket-sheet style has been discarded for a more modern, attractive and convenient form, and every page gives evidence of editorial life and vigor. The Methodist Church is to be congratulated upon having so able a paper, and the country itself upon so strong a journalistic force for righteousness, individually and nationally, as the Guardian is and has been for over 70 years past.

At the O. A. C.

The short course in stock judging at the O. A. C. this season has attracted some 210 students, dairy school 47, and the poultry course 9. Prof. G. E. Day, Dr. J. H. Reid, V. S., and Mr. Cumming, assisted by a number of leading breeders, are putting the students through the course in judging. The formal opening of the Dairy School, on January 12th, was the occasion of addresses by Major Alvord, of Washington, D. C.; J. A. Ruddick, Ottawa, and D. Derbyshire, Brockville, Ont.

Hon. John Dryden, Provincial Minister of Agriculture, visited the College on January 12th.

Institutes for Rural Mail Delivery.

At two largely attended meetings of the South Oxford Farmers' Institute, strong resolutions were unanimously passed in favor of free rural mail delivery, and copies were ordered to be sent to the Government through the local member, Sir Richard Cartwright, M. P.

Nova Scotia Meetings.

The annual meetings of the Nova Scotia Farmers' Associations will be held at Windsor, February 2, 3 and 4, and the N. S. Fruit Growers' Association at Middleton, February 5, 6 and 7, with grand programme of local and imported talent.

Live Stock Shows and Sales.

Following are the dates of annual meetings of Live Stock Associations, and shows and sales announced to be held in Ontario in January and February:

January 27th—Dominion Shorthorn Breeders' Association, seventeenth annual meeting, at Richmond Hall, Toronto.

January 28th—Hamilton Combination Shorthorn sale, Hamilton, Ont.

February 3rd—Annual meeting Canadian Hackney Horse Society at Grand's Repository, Toronto, at 8 p. m.

February 4th—Canadian Spring Stallion Show (opening day), also annual meeting Clydesdale Horse Association of Canada, at Grand's at 8 p. m.

February 5th—Canadian Spring Stallion Show and annual meeting Canadian Shire Horse Association, at Grand's, at 10 a. m. The Canadian Horse Breeders' Association at 8 p. m. H. Wade is Secretary.

February 6th—Canadian Spring Stallion Show (final day).

February 11th—Eastern Ontario Provincial Live Stock Sale, Ottawa. A. P. Westervelt, Secretary.

February 12th—Annual meeting of Canadian Ayrshire Breeders' Association, Montreal, Que.

The annual meetings of the Harness, Hunter and Saddle Horse Society of Canada and the Canadian Pony Society will be held the week of the Stallion Show at Toronto.

Yields of Large Wheat Farms for 1902.

	Acres.	Average yield.	Total bushels.
Wm. Douglas, Indian Head, Assa.—			
Wheat.....	640	31	20,090
Oats.....	70	37	2,600
Mutch Bros., Lumsden, Assa.—			
Wheat.....	390	33	12,870
Oats.....	160	52	9,320
Barley.....	25	55	1,375
Jas. Argue, Elgin, Man.—			
Wheat.....	530	25	12,650
Oats.....	100	60	6,000
Barley.....	40	40	1,600
John D. Ross, Elgin, Man.—			
Wheat.....	1,500	22	33,500
Oats.....	160	39	6,200
Chas. Thomas, Hartney, Man.—			
Wheat.....	1,100	25	27,500
Oats.....	234	60	14,000
A. B. C., Indian Head, Assa.—			
Wheat.....	680	26	17,600
Oats.....	300	40	12,000
Hon. T. Greenway, Crystal City, Man.—			
Wheat.....	325	32	10,400
Oats.....	325	75	24,375
Barley.....	130	40	5,200
Spelt.....	15	65	927
N. Wolverson, Brandon, Man.—			
Wheat.....	285	27	7,695
Oats.....	98	70	6,860
Barley.....	15	22	330
Spelt.....	21	40	840
Jas. Clark, Carman, Man.—			
Wheat.....	210	27	5,662
Oats.....	47	48	2,274
Barley.....	12	50	606
Spelt.....	6	64	388
A. E. Wilson, Indian Head, Assa.—			
Wheat.....	550	27 1/2	14,950
Oats.....	75	50	3,750
Sanderson Bros., Indian Head, Assa.—			
Wheat.....	595	30 1/2	18,040
Oats.....	76	58	4,400
W. H. Elford, Carman, Man.—			
Wheat.....	350	30	10,500
Oats.....	50	50	2,500
Barley.....	60	33	2,000
A. Clark, Carman, Man.—			
Wheat.....	450	31	14,000
Oats.....	70	64	4,500
Spelt.....	10	90	900
Barley.....	65	30	1,950

Note.—Mutch Bros. harvested 125 acres of brome grass for seed; heavy crop.

Big Returns from Poultry.

Now what about the returns from eggs and poultry meat when produced? I am disposed to under rather than over estimate in this matter. A very moderate estimate is 100 eggs per hen per year, for sale or use. These eggs at one cent each are worth \$1.00 all told. In addition to this you should have a setting of eggs that would give you eight chickens, which, at 10 cents each, would be worth 80 cents. This makes a total return of \$1.80. What does it cost to produce these returns? This is just where one marked advantage of poultry raising comes in. A great deal of the feed used to produce poultry on the farm is made up of what are, comparatively speaking, waste products—small grain, table scraps, green bone, etc. But we have made experiments at Ottawa with a view of learning just what the cost of production is where foods have to be purchased—the cost of the grain used being placed at a cent a pound. Even on this basis, the cost of feeding a hen, as shown by actual experiment, was not beyond 75 cents per year. This left a profit of at least \$1.00 per fowl. And this was allowing only a cent each for eggs. How much greater would the profits be if eggs were produced in winter, when 25, 30 and 35 cents per dozen can be obtained in our local leading markets? In that case the net profits would run up to \$1.50 to \$2.00 per year.—[Prof. A. G. Gilbert.

Canadian Jersey Cattle Club.

The annual meeting of this Society was held in the parlors of the Walker House, Toronto, December 30th, 1902. The gathering was a representative one, including leading breeders from the far West to Nova Scotia in the east.

R. J. Fleming, Esq., President, in his inaugural address, congratulated the Jersey breeders on the success of the "Dairy Queen" during the past year and the very bright outlook for 1903. The high average obtained at public sales was far in excess of the previous year, and the demand for bulls to use on grade cows was on the increase, due, no doubt, to the requirements of the Health Boards of many towns and cities for a milk testing at least 3.7 per cent. butter-fat; and it has also been demonstrated that there is no breed of cattle so free from tuberculosis as the Channel Island representatives.

The Club passed a resolution commending the Directors of the Industrial Exhibition, Toronto, for their public spirit in erecting a new butter, cheese and dairy building, and cordially approving of the proposed Dominion Exhibition, to be held in Toronto in 1903, and pledged their support and assistance in helping to make the exhibition a success.

Secretary Reid brought up the matter of the so-called dairy test at the Ontario Winter Fair, maintaining that the test is of very little practical value to the dairymen, and that the only true test was the yearly performance of a cow—taking into consideration the value of the food consumed. Mr. D. O. Bull, J. B. Ketchen, and others, agreed with the Secretary. The President, therefore, appointed Messrs. Reid and Ketchen a committee to draw up a resolution embodying the views of the Club, and forward the same to the secretary of the Winter Fair.

Mr. D. O. Bull introduced a resolution to ask the Toronto Fair Board to have herds judged last instead of first, as at present. This provoked considerable discussion. Mr. Bull maintained that judging the herds last certainly made it easier for the judge, but it also prevented him from trying to make the decisions in the individual classes conform to his previous decisions in the herds. On the other hand, it was asserted by other exhibitors that judging the herds first brought out all herds entered and, therefore, made a better display of the breed; it also permitted relieving the cows earlier of their milk. When the herds were judged last it resolved itself into granting the prize to the exhibitor who had the largest number of prize animals in his herd. The resolution, however, was carried.

It was moved by R. Reid, and seconded by Geo. Davies, and unanimously carried, that the Club heartily commends the action of the A. J. C. C. in appointing a committee to take charge of the Jersey interests at the coming dairy test at St. Louis in 1904, pledging them support and assistance, and that a committee, consisting of the president and two vice-presidents, be appointed to confer with the A. J. C. C. and assist in making selections for the test, and, if thought advisable, arrange to send the best specimens of the breed in Canada to St. Louis to compete for prizes in the show-ring.

Prof. H. H. Dean, O. A. C., Guelph, gave an interesting address on the "Dairy Cow." He stated that too much attention had been paid to breeding for "form" and not enough to "perform." The speaker laid great stress on keeping an accurate account of the weight and quality of a cow's milk for not only one year, but for a series of years, in order to find out the true value of a cow as a dairy performer. There is no reliable outward indication of a cow's ability to perform at the pail. No bull should be used in a dairy herd whose dam and grandam were not great yearly performers. An interesting discussion followed, in which almost everyone present took part. Some of the members did not agree with all that the Professor said, but, nevertheless, many valuable points were brought out.

Mr. J. B. Ketchen, manager Dentonia Park Farm, introduced the subject of the "New Score Card." He claimed that as there is such a thing as Jersey form or type there should be a score card indicating the value of each point. The chief points brought out were that "no udder, no cow," and, therefore, the udder should receive the largest number of points. Next in consideration, the body; then the constitution. These should receive at least 80 per cent. of all points, leaving the balance for the minor parts, such as the head, neck, tail, etc. The subject was thoroughly discussed. The new score card of the A. J. C. C. is anxiously looked for.

Officers elected for 1903: President, R. J. Fleming, Toronto; 1st Vice-President, D. O. Bull, Brampton; 2nd Vice-President, J. B. Ketchen, Coleman; Secretary-Treasurer, R. Reid, Berlin. Board of Directors—Geo. Davies, H. C. Clarridge, F. L. Green, H. G. Clark, David Duncan. Representatives on Fair Boards: Toronto—D. Duncan and B. H. Bull. London—J. O'Brien, Frank Turville. Ottawa—P. Clark, A. A. Wright. Winnipeg—John Webster, L. J. C. Bull. Quebec—F. S. Wetherell, R. H. Pope. Dominion Cattle Breeders' Association—Geo. Davies, J. L. Clark.

The following are recommended as judges: Toronto—Valancey E. Fuller, with Col. Geo. V. Green as reserve. London—Geo. Latsch, with H. C. Clarridge reserve. Ottawa—H. G. Clark. Winnipeg—L. J. C. Bull. Halifax—F. S. Peer.

Oxford County, Ont.

CATTLE FEEDING—SUCKLING CALVES.

We are feeding the cattle cut corn, just as it grew, with pulped turnips mixed. I cannot notice any kernels of corn in the manure, and if there were they could not escape the vigilance of our brood sows, who make a diligent search for anything of that kind. The cattle are doing pretty well and eat straw very heartily. We feed roots once a day, and cut corn and pulped roots, mixed, twice a day, and all the straw they will eat up clean, and that is a good deal. We have two calves that are sucking one cow. They get to her morning and night. A friend of mine said to me that three quarts of milk sucked from the cow are as good as five quarts fed from a pail, and I believe my friend was right. He did not give me any reasons, but I have been thinking them all out for myself. When the calf sucks the cow the saliva comes with the working of the mouth, same as chewing brings it in our own mouths, and it is the most natural way. The pail-fed calf gulps the milk down too fast. In these days of scarcity and increased cost of farm help, I believe it will pay, in more ways than one, to have two calves suck one cow, and then when the calves have learned to eat well and are ready to wean, get a newly-dropped calf and put it on the cow to finish up her season. If she raises three good calves without any expenditure of labor in milking, it may pay very well. It may look like extravagance to some farmers, but one of the greatest authorities on agriculture said that it is only what would have been at one time termed "extravagance" that really pays.

I noticed several times in filling the basket that it only took seven turnips to fill it, and it is an ordinary bushel basket. Of course, I took the largest on the face of the pile, but did not turn any over to get them; and our mangolds are equally good.

THE DAIRYMAN PROSPERS.

The past season has been a remarkably good one for the dairy farmer. There has been a good flow of milk all through the season, and the price has been very good during the early part and very high towards the close. Some of our November cheese sold as high as 12 cents, and 12½ cents for Stiltons, and if the milk had been pooled in the old way it would have yielded \$1.11 per 100 lbs. to those who drew their own milk. This was after paying for the making of the cheese. Some of our best patrons on 100-acre farms received a cheque each month varying from \$85 to \$95; others, again, who did not make so much of a specialty of milk, got from \$40 to \$60 per month. Altogether, the season has been a phenomenally good one. But, in any case, cheese and hogs are the best "specialties" in the county of Oxford, and the farmer who feeds the right kind of cows and pigs liberally and judiciously, and acts wisely otherwise, will be sure to stand. Thousands of years ago, it was written: "The liberal deviseth liberal things, and by liberal things shall he stand," and that is still true to-day. But will the demand continue? A well-known cheese exporter said to me that it was the British mechanic and laborer with their dinner-pails that were our largest consumers of cheese, as when business was good and these men had steady work there were such multitudes of them that it took a good many tons every day to put a small piece of cheese in each dinner pail. It would be well for us not to make any fodder cheese in the spring, as it is generally a drag on the market. Now that the price is so good in the close of the season, unless there is some great stagnation in business in Britain between now and May, I think that there is every

PROSPECT OF A GOOD SEASON

for the cheese industry of 1903. Only, let us spare no pains to keep up, and even improve, our reputation as manufacturers of fine Canadian cheese. Let us keep our cows in a good healthy condition, and have them in good form to commence business in the spring.

Every one speaks highly of the "Advocate's" Xmas Number. It is really good. D.L.

Dominion Draft Horse Society Meeting.

The sixteenth annual meeting of the Dominion Draft Horse Breeders' Association was held in Clinton on December 10th, President D. McIntosh, of Brudenfield, in the chair. The annual report showed a considerable increase in the number of registrations, and the addition of twelve new members to the roll. The treasurer's report showed a cash balance on hand of \$650, with no liabilities. The meeting decided to offer to the Industrial, Western and Manitoba fairs of 1903, half the amount of prizes for a class for draft horses registered on its books, or for Canadian draft horses, the breeding animals in which are to be registered in some studbook. Alex. Innes was elected delegate to the Western Fair, and Thos. McMillan to the Canadian Horse Breeders' Association. At the last annual meeting a motion was adopted to raise the standard of registration to five crosses, but owing to representations made during the past season, it was decided to suspend the operation of the motion to December 1st, 1903, the standard remaining at four crosses. The old officers were re-elected, and George Dale, of Hullett, was added to the Council, and Thos. Green, of Mitchell, to the Executive Committee. The secretary, Mr. James Mitchell, of Goderich, will be glad to forward blank entry forms and circulars with the rules of the Society to anyone interested in draft horse breeding. In view of the large number of animals registered on their books now owned in Manitoba and the Northwest, special efforts will be made to interest breeders there in the Society's work.

The Big Three.

To the Wm. Weld Co.:

Toronto, Ont., Dec. 31, 1902.

Dear Sirs,—We received to-day an enquiry from Transvaal, South Africa, enquiring re "The Canadian Airmotor" (on which the sun never sets), stating that our ad. had been seen in the "Farmer's Advocate." Three cheers for Canada, the "Farmer's Advocate," and the Canadian Airmotor. Compliments of the season. ONTARIO WIND ENGINE AND PUMP CO., Limited.

Ontario Veterinary College.

Christmas examinations were held in the Veterinary College, December 23rd. The usual Board of Examiners, composed of prominent veterinary surgeons, engaged in the active practice of their profession, granted diplomas to the following gentlemen, who have completed their courses of study at the College: William G. Chrisman, Harrisburg, Va.; Peter Crerar, Russell, Man.; Fred J. Delaine, Emerson, Man.; Edward L. Fryer, Jr., Blakely, Georgia; Richard L. Kramlich, Fogelsville, Pa.; E. J. Murphy, Metcalfe, Ont.; H. Wynn Nobles, Hastings, Mich.; Matthew S. Suttle, Peterson, New Jersey; William Thompson, Minnedosa, Man.; John E. Wurm, Ubley, Mich.

The Maritime Stock Breeders' Annual Meeting.

The annual meeting of the Maritime Stock Breeders was held at Amherst, Nova Scotia, on December 18th. Officers elected: President, E. B. Elderkin, and Vice-Presidents: Montgomery Campbell, for New Brunswick; C. A. Archibald, for Nova Scotia; and J. W. Calbeck, for P. E. Island. Directors: Cattle—Bliss M. Fawcett, Sackville, N. B.; John Richards, Sidedford, P. E. I.; and W. W. Black, Amherst, N. S. Swine—C. F. Rogers, Woodstock, N. B.; Robert Drake, Cornwall, P. E. I., and Fred L. Fuller, Truro, N. S. Sheep—M. H. Parlee, Sussex, N. B.; Robert Furness, Vernon River, P. E. I., and R. S. Starr, Starr's Point, N. S. Horses—J. F. Frost, Hampton, N. B.; F. L. Hazard, Charlottetown, P. E. I., and A. N. Griffin, New Minas, N. S.

Samples of Seed Grain.

By instruction of the Minister of Agriculture, another distribution will be made this season of samples of the most productive sorts of grain to Canadian farmers for the improvement of seed. The stock for distribution is the very best, and has been secured by the Director of the Experimental Farms from the excellent crops recently had in the Canadian Northwest. The distribution this spring will consist of samples of oats, spring wheat, barley, Indian corn, and potatoes. The quantities of oats, wheat and barley to be sent this year will be sufficient to sow one-twentieth of an acre. The samples of Indian corn and potatoes will weigh three pounds as heretofore. Every farmer may apply, but only one sample can be sent to each applicant; hence, if an individual receives a sample of oats he cannot also receive one of wheat, barley or potatoes, and applications for more than one sample for one household cannot be entertained. These samples will be sent free of charge through the mail. Applications should be addressed to the Director of Experimental Farms, Ottawa, and may be sent in any time before 1st March, after which the lists will be closed, so that all the samples asked for may be sent out in good time for sowing. Parties writing should mention the sort or variety they would prefer, and should the available stock of the kind asked for be exhausted, some other good sort will be sent in its place.

WM. SAUNDERS,

Director Experimental Farms.

MARKETS.

Buffalo Markets.

East Buffalo, Jan. 13.—Cattle—Veals, tops, \$9 to \$9.75; common to good, \$5.50 to \$8.75. Hogs—Heavy, \$6.80 to \$6.90; mixed, \$6.75 to \$6.80; Yorkers and pigs, \$6.70 to \$6.75; roughs, \$5.75 to \$6.10; stags, \$4.75 to \$5.25. Sheep and lambs—Top lambs, \$6.50 to \$6.55; culls to good, \$4.25 to \$6.45; yearlings, \$5 to \$5.25; ewes, \$4.25 to \$4.50; sheep, top mixed, \$4 to \$4.25; culls to good, \$3 to \$3.90.

Chicago Markets.

Chicago, Jan. 13.—Cattle—Good to prime steers, \$5.25 to \$6.15; poor to medium, \$3.25 to \$4.00; stockers and feeders, \$2.25 to \$4.60; heifers, \$2 to \$5; bulls, \$2.25 to \$4.40; calves, \$3.50 to \$7.50; Texas-fed steers, \$3.75 to \$4.75. Hogs—Mixed and butchers', \$6.25 to \$6.55; good to choice heavy, \$6.65 to \$6.90; rough heavy, \$6.30 to \$6.55; light, \$5.90 to \$6.25; bulk of sales at \$6.30 to \$6.60. Sheep—Good to choice wethers, \$4.25 to \$4.75; fair to choice mixed, \$3.25 to \$4.25.

Cattle Shipped via Halifax.

Halifax, Jan. 13.—Thirty-two carloads of cattle arrived here this afternoon from Montreal for shipment. This is the first lot of cattle shipped via Halifax this season.

Toronto Markets.

The receipts of live stock at the Western Cattle Market were large for the week, and the quality of the export cattle fairly good.

Export Cattle.—The trade in export cattle showed an improved feeling and a good demand for choice cattle. For extra choice shippers there were many buyers at from \$5.00 to \$5.25. One load of very choice, extra well-finished cattle sold at \$5.35. Medium export cattle, weighing 1,000 to 1,125 lbs., \$4.90.

Butchers' Cattle.—The quality of the offerings of best butchers' cattle was poor; all of good quality, \$4.40 to \$4.60. Very few choice butchers' equal in quality to exporters, \$4.85; choice picked lots of heifers and steers, 980 to 1,025 lbs. each, \$4.50 to \$4.75; rough common butchers' cattle, canners, \$2.00. This class of cattle has just found a new market. A German firm in West Toronto Junction barrels it for export to Germany.

Bulls.—Best export bulls, \$4.20 to \$4.50; light, \$3.50 to \$3.75.

Feeders.—Not many on offer. There is a small demand from distillery byes to fill vacancies at from \$4.25 to \$6.50. Steers weighing 1,000 to 1,100 lbs. wanted.

Stockers.—There is no demand, and few on offer; very poor quality sold at from \$2.75 to \$3.25; rough, mixed colors, sold at \$2.25 to \$3.00.

Sheep.—Demand good for choice butchers' stock. Export ewes sold at from \$3.25 to \$4.00 per cwt., and bucks at \$2.50.

Lambs.—There were few on offer; sold to a good demand at firm or an advance on last week's quotations, from \$4.00 to \$4.75 per cwt.

Milch Cows.—The demand continues good for best dairy cows. All on offer sold readily at from \$30.00 to \$57.00.

Calves.—Calves sold at from \$4.50 to \$6.00 per cwt. There is a good demand from the Harris Abattoir Co.

Hogs.—The market is firm, and advancing receipts only fair. A general advance of 12½c. per cwt. was made on choice singers. Choice singers, not below 160 lbs., not above 180 lbs., live weight, off cars, not fed or watered, are now quoted at \$6.12½ per cwt. Thick, fat and light, that is those below 150 lbs. and above 200 lbs., are now quoted at \$5.62½; sows, \$4.50 to \$5.00; stags, \$2.00. There is now a good demand for all kinds of hogs.

	Extreme com parative prices to-day, Jan. 10th, 1903.	Two weeks ago, Dec. 15.	Same date last year.
Export cattle.....	\$ 5 45	\$ 5 25	\$ 5 25
Butchers' cattle.....	4 50	4 50	4 40
Export bulls.....	4 60	4 50	4 50
Feeders.....	4 50	4 50	3 75
Stockers.....	3 25	3 25	3 25
Sheep (per cwt.).....	4 50	3 25	3 25
Lambs (per cwt.).....	4 75	4 25	3 75
Hogs.....	6 12½	6 00	6 40
Milch cows.....	57 00	55 00	42 00

Wheat.—Manitoba wheat is easier, at 80½c. for No. 1 hard and 78½c. for No. 1 Northern. At North Bay, all rail, it is quoted at 82½c. per bushel. In Toronto, white wheat is selling at 69c. per bushel, goose at 64c., and red at 69c. per bushel.

Barley is steady, at 46c. for No. 3 extra and 42c. for No. 3, east or middle freights. In Toronto, barley selling, for bright, 48c. to 50c. per bushel.

Oats are steady at 31½c. for No. 2 white. In Toronto, oats are selling at 34½c. per bushel.

Mill feed is steady, at \$16.50 bid for shorts and \$14.50 for bran, in bulk, east or middle freights. Manitoba mill feed is steady, at \$19 for shorts and \$17 for bran per ton, Toronto freights.

Hay.—The receipts not large. There is a good demand. Twenty loads of hay sold at \$13.00 to \$16.00 per ton for timothy, and from \$7.00 to \$8.00 per ton for mixed clover.

Straw.—There is very little straw coming in. Wanted, and sells at \$11.00 per ton for best sheaf straw.

Butter.—There is a good demand for gilt-edge butter, but supply is not plentiful. Creamery prints sold at from 22c. to 24c. per lb. Dairy butter is quoted at from 16c. to 17c. per lb., from farmers' wagons. Choice butter sells on sight, at from 20c. to 24c. per lb.

Potatoes.—Still very scarce, from farmers' wagon at from \$1.15 to \$1.25 per bag. Car lots were offered at from 95c. to \$1.00 per bag.

British Cattle Markets.

London, Jan. 13.—Five cattle steady, at 13c. to 14½c. per lb. for American steers, dressed weight; Canadian steers, 12c. to 13½c. per lb.; refrigerator beef, 9c. to 11c. per lb.

Liverpool, Jan. 12.—Canadian cattle, 6½d. Today's market firm.

Montreal Markets.

Montreal, Jan. 12.—There were about 500 head of butchers' cattle, 8 calves and 50 sheep and lambs offered. There were more prime cattle on the market to-day than has been the case since Christmas. Prime beefs sold at from 5c. to 5½c.; pretty good animals, 3½c. to 4½c.; common stock, 2½c. to 3½c.; calves, \$3 to \$5 each. Sheep, 3c. to 3½c., and lambs at from 4c. to 4½c. per lb. Good lots of fat hogs sold at from 6c. to 6½c. per lb., weighed off the cars.



Keep out of the Past. It is lonely
And barren and bleak to the view;
It's fires have grown cold, and its stories are old,
Turn, turn to the Present—the New.
To-day leads you up to the hilltops
That are kissed by the radiant sun;
To-day shows no tomb, life's hopes are in bloom,
And to-day holds a prize to be won."

Sunflowers.

[BY ELIZABETH M'CRACKEN.]

The doctor lingered. He glanced at the man, who sat staring through the blurred, unwashed window-glass into the noisy street—staring at nothing. The man's face was full of the dumb grief of the uncultured, the grief that is dumb not because it would not, but because it cannot, speak, the grief that needs the tenderest sympathy in the world. It was hurting the man, and the doctor understood and lingered in silence.

The man turned his head restlessly; and the doctor, sitting on the side of the tumbled bed with its shabby coverings, lifted in his arms a small bundle of gray flannel that lay among the unattractive pillows. He loosened the folds of the flannel and touched gently the little pink face thus revealed. The baby stirred and smiled in its sleep. The doctor noted the dimple in its cheek and its fringe of yellow hair. He again glanced at the man's averted face, sullen and hard in its grief.

"What have you named your little girl?" was his unexpected question. The doctor was a young man, but it happened that he understood the man's sorrow for his wife, so lately dead, who had left the baby, with its dimple and its fringe of yellow hair and its baby girlhood, for a keepsake, for a farewell gift. He offered his sympathy very gradually and tenderly.

"Name her? I dunno; don't care. If it hadn't been for her, me woman wouldn't have died!" He met the doctor's serious brown eyes with a defiant stare, which the doctor quite understood. "I don't want to see her! I don't want to talk 'bout her!"

The doctor looked at the baby. "It is a pity not to name her soon. She is such a nice little girl, and she has a dimple in one cheek. My little girl has a dimple in one cheek. It is the prettiest way for a girl to have dimples, I think—just one in one cheek." He looked at the child's cheek, but he was thinking more of the man than of the little girl's dimple.

"An' 'ave you a little gurr?" asked the man, his face turned still to the window.

"Yes. Didn't I really tell you?" said the doctor. "She is the dearest little girl in the world! There couldn't possibly be another one half so nice."

"An' what is it that makes her so out o' the common? Sure, an' likely there's others as foine," remarked the man, with more interest than the doctor had expected.

"There couldn't be another so nice to me," said the doctor, turning his eyes to the man. "You see, her mother died when she was even a tinier baby than your little girl, and she is the only child her mother and I had, and she looks like her mother." The doctor's voice was very low. His little girl was not yet three years old, and he had not learned to speak very often, even to her, of her mother.

The man's face relaxed. "Well, now, an' what's come to me come first to you, an' you know how 'tis," he said in wonder.

"Yes," said the doctor, "I know how it is. Yes, the same thing came to me." He brought his lips very closely together, and then he looked at the other man's baby girl, and smiled and said, "And your little girl has yellow hair and a dimple in one cheek,—why don't you look at it?—just as mine has."

The man looked for a moment at the baby; then his face darkened and he said, "If it hadn't been for your little gurr, I suppose you —"

"Yes," the doctor hurriedly interrupted, "I know what you are going to say."

He bowed his head and was silent for a few moments. Then he lifted his eyes and said, "Come here and hold your little girl, and I will tell you about my sunflowers."

"Sunflowers?"
"Yes; now you hold her while I tell you. Yes, that's the way to hold her. Now if you touch her cheek she will smile in her sleep and you will see her dimple. See?"

The man held the baby in an awkward bundle, and fearfully touched her face. He smiled when the tiny dent came into the pink cheek.

"Is a dimple sich a nice thing for a gurr?" he asked the doctor.

"Very nice," said the doctor, gravely.

"I ain't never held the baby afore," said the man. "You are the first person to notice the dimple," he continued, doubtfully.

"Perhaps no one else has seen her smile," said the doctor.

"I ain't held her," the man repeated, unheeding the doctor's explanation of the general ignorance regarding the baby's dimple, "because—"

"I suppose you were afraid of dropping her," the doctor interposed. "I used to be."

"No," the man said, honestly, "it wasn't that. I didn't want to see her, because if it hadn't been for her, me woman wouldn't have died. Ain't you never felt that way?" he asked the other father, with sudden curiosity.

The doctor's voice had a slight quiver in it when finally he spoke. Had he understood less keenly the meaning of the other man's bereavement, he, perhaps, might not have replied.

With the sympathy of a similar sorrow and a similar consolation, he had heard of this man's utter grief and of his unreasoning resentment toward the child, to whose life the mother has given her own. The doctor had learned much in the three years of his little girl's life, and he had come to tell it to the other man. He found it harder to tell than he had expected, but he did not shrink.

"At first, I think, I did," he said, gently, "and then I saw how much my little girl's mother had left to comfort me. She had left me her own little girl. She—couldn't make up for—"

"Ah, no!" the man murmured.

"She couldn't do that, but she could do a great deal," went on the doctor. "You see, she needed my care. It's the best comfort in the world really to be needed. She helped me to see how much I might do—for her and for other people. She helped me to see that I might perhaps make myself worth the—gift of love I had been given; and then, she is my wife's own little child—and mine," the doctor concluded more simply.

He waited for some comment, but the other man was looking into the face of the little girl. "Do you see what I mean?" the doctor asked.

"Well, I dunno, I dunno," the man said; but he wrapped the flannel more carefully around the baby, and touched the pink cheek in which the one dimple hid. The doctor smiled. The other man was beginning to understand.

"An' what'd be her name?" he asked.

"That's just what I was going to tell you," the doctor replied. "Her name is Clytie—for the maiden of olden times, who looked at the sun so often that she was changed into a sunflower. You see, I always called my wife Clytie because—because she was the bright glory of my life; she was truly a flower of sunlight. My mother and my sisters think Clytie a queer name for my daughter, but you see she is my other sunflower. She has made the sun shine still in my life."

The doctor again paused, but the other man did not speak; his eyes were bent with new interest upon the pink face of his daughter. The doctor did not hesitate now to offer the full measure of his sympathy. "I have told you these things," he said, "because I was sorry when I heard of your loss, because I understand how you feel, and because I know how bright a sunflower the little child left by the mother may be to its father; how much it can help the loneliness."

The doctor concluded the telling of his lesson with unflinching faith in the other man's power to learn it. It was this simple greatness in dealing with the other person; this unflinching belief in the strong bond of a common humanity uniting the rich and the poor, the high and the less high, that had made the first appeal for the doctor to his first sunflower, and caused her to turn to him her bright face. It was sufficiently strong to hold the other man's attention, to make him look with different eyes at his baby.

"Faith, now, an' it was thim things I was sayin' to me woman; but she was me own."

"Well," said the doctor, "when I called my wife my sunflower, it was merely a way of saying that she was my own. And your little girl—"

"An' is yours so much nicer than mine?" the man anxiously asked. "I don't believe she is!"

The doctor laughed softly. He knew now that he had helped the man. "She is the nicest little girl in the world, I think," he said. "Perhaps I can't judge impartially, but she seems nicer to me than any other little girl could be."

"An' that's because she's yours," said the man, indulgently. "Now, I'm thinkin' if we put thim together, mine'd be pretty near yours, let alone bein' a little ahead." He had forgotten that he had not wanted to see his baby, that he had refused to look at her.

The doctor remembered, and he said, soberly, "We shall see. When your little girl is a little older you must bring her to see us, and then we will compare the two sunflowers."

"An' it's Clytie yours is named? Well, now, mine'll be Nora. It was me woman's name, and it's what I called her." He looked at the doctor for approval.

"Yes," the doctor assented. "It means for you what Clytie means for me."

"An' would you see that dimple?" said the man as the baby stirred. "I'm thinking your little gurr's ain't much more than that."

"You shall see for yourself," said the doctor, with a smile. "I must go now and finish my calls, or I won't get home before my sunflower is in bed," he added, seeing that the other father no longer needed him.

The man laid the baby among the pillows, and

went with the doctor to the door and down the first flight of narrow stairs.

"Good day to you," he said. "Sure, an' you was kind to come—an' you knowin' how 'tis."

"I came because I do know," the young doctor said. "Good afternoon, and a good night to your sunflower." He shook the man's hand, and ran down the remaining flights of stairs.

The other man went back to the sleeping baby. He stood gazing at its tiny form. He touched its cheek, and the baby smiled and moved one hand from beneath the flannel coverings. The man touched the little hand, and it softly closed round his finger.

"Well, now, if you'd see that!" he said. "Ah, the docther was right; she is me woman's own gurr, an' a foine wan, too, wid one dimple! Sure, an' sunflower is a good name for her. Faith, but the docther was consated over his gurr! An' it's me own as is as foine—loike enough foiner! It was the truth he said, he knowin' how 'tis; but faith, he was thot consated over his own gurr! An' me own loike enough a foiner, bein' my own Nora's—an' her only wan!"

'Twixt a Christmas and New Year Over Two Decades Ago.

It is not often that my pen lends itself to a story sad in the telling; at least, it loves not to go out of its way to invent a tale with a tragic ending, but when what is unutterably sad comes to one in one's life experience, and one decides to tell it, the happening must be told truthfully or not at all. And then again, so nearly allied are pathos and humor, that there hardly can come to us any event which to the seeing eye and the understanding heart has not its mixture of both. Nor were my experiences upon the "Bonnie Bessie" an exception to the rule. For instance, there was a touch of unconscious humor in the very expression of face of good fat, soncy-looking Mrs. Dollet, who took her turn at nursing the invalid of whom I wrote in No. 1 of this my little series. She had once upon a time been an actress in a very small way, on a very limited and probably itinerant stage, in her younger days, and she enjoyed telling of how gayly she had been attired in spangles and tights, and how she had pranced about the sawdust and leapt through the hoops when her turn came in the programme of the travelling circus. As we looked at her and listened the thing seemed incredible, and it was difficult not to laugh outright at what now appeared so impossible a feat. "I daresay it do sound funny," she would say good-humoredly, "for it would take a pretty strong hoss to carry me and a pretty big hoop to let me through nowadays, but I was a slip of a girl then, and one that no one could wag a tongue against, though I had to earn my bread in the only way I knew, until I met Dollet, and glad enough I was to see the last of the footlights." Poor Mrs. Dollet was at first very seasick, and looked the picture of woe before we came into the quiet of the tropical seas. "Well, Mrs. D.," said the captain, "I've good news for you. We've doubled the Cape at last." "Oh! have we?" she replied, "I thought 'twas t'other way about—I know the Cape has doubled me." And so it literally had, for she had curled herself round the leg of the cabin table, hanging on to it for dear life, "slewing" round with every roll and pitch of the "Bonnie Bessie," marking each "slew" with an agonized shriek, or some desperate appeal to the "little vixen" as she called her, "to hold on a bit." "Why, Mrs. Dollet," I said to her on one of our worst days, "you do not know what glorious sights you are missing by stopping below in this stuffy little cabin; come on deck, you can be tied to a stanchion as I have been, and if you are to be drowned, as you seem to expect, you may as well be drowned out in the fresh air, instead of like a rat caught in a trap!" "Go your ways, Miss," was all the satisfaction I could get. "You be tied to your stanchion, and look at your beautiful waves, but I'll take my chances at this ere table. Yah! there she goes again, and over you goes too!" she added, as I was unceremoniously pitched over against my cabin door. Once out of the storm and into the calm of the tropical seas, good Mrs. Dollet became her true self once more. Unselfish, kindly, and very helpful in the emergency which befell us so soon after, and of which I have already made mention. There was, however, in connection with it a little incident which we were able, fortunately, to keep from the eyes and ears of one to whom it might, had she attached any significance to it, have caused some distress. In relating this last incident, I do not seek to explain it. "What is the excitement at the stern?" asked I. "Hush, don't let the missus hear," said the man at the wheel. "They've caught the shark at last, which has been a-follerin' of the 'Bonnie Bessie' ever since the poor gentleman was took for death." I had seen that huge creature, with its ghastly whiteness, and accompanied by its familiars, the half-dozen or so of pilot fish, steadily, steadily, following, now at our side, now in our wake, but never having given a thought to that which is generally spoken of as a sailor's superstition, I had in no way connected



My dear Guests,—

The following are the results of the recent Memory Gem contest: In Class I. the winner is Miss Olive Kidd, Cookstown, Ont.; closely following are A. L. McDiarmid, Cora G. Pound, V. M. Thomas, Ross W. Doan and Lizzie Noonan. In Class II., Miss Mabel A. Scott, Fairview Farm, Dominion City, Man., is the fortunate competitor; with Alice Bligh and Mary Ker (whose papers received equal marks) a close second; Constance Wilson, Annie Lamont and K. C. McDiarmid are third in merit, while Winnie Spaulding, Maggie Telfer and Rachel Patterson all sent very good papers. Our old friend, Janet Waterman, Fraser-ville, Ont., wins in Class III., with a very good margin; hers will, if possible, be published in next issue; Mabel L. Pound, Verne Rowell, Jessie Fawcett and Alice E. Bull being the other contributors.

Some of the contributors lost marks by using one or more quotations which appeared in last contest, and which were debarred this time. This was the case with your paper, "Annie Laurie," as also with your sister's (?).

To forgive being divine. "Jewess," I hope you will relent and be merciful to me, as it was not my fault that I did not see you. I was not nearer than Peterboro; should I ever go that way again, perhaps, we could arrange a meeting; I always enjoy meeting my "Advocate" friends, whether new or old. I have not your flower essay now, for which I am sorry, as it might have been useful to you.

Maggie T. is thoroughly welcome to make herself as comfortable as possible in the Nook, and I hope she will keep her resolve to try again, undaunted by want of success this time. No, I did not hang up my stocking, but Santa Claus, or his representatives, were very good to me, notwithstanding. On behalf of the "Advocate," my Guests and myself, I thank you for your good wishes, which I am sure all reciprocate.

Thank you, "Margareta," for your pretty little souvenir w/ the bonny Scotch Thistle on it. You are very patriotic, girlie. Kind regards to all.

My thanks are also due to Alice Bligh and V. M. Thomas for kind wishes; I hope both will enter the lists again, and that they may have better success next time.

Jean M.—, I shall send your story to "Cousin Dorothy," to whose corner it belongs, but I shall be pleased to have you enter some of the Ingle Nook contests.

OUR COMPETITIONS.

We again offer three prizes for the three best sets of Memory Gems, selected from Canadian authors only. Each set to contain ten, and only ten, quotations, which may be either prose or poetry, preferably not very long. The author's name must accompany each quotation. The prizes will be awarded in one general class. Contributors should sign their names on their papers, as well as on any letter which may accompany them. All contributions must be sent to address given below, and must reach Pakenham by Feb. 20th. This contest should have a special interest for all.

THE HOSTESS.

Ingle Nook Chats, Pakenham, Ont.

PRIZE MEMORY GEMS—CLASS I.

By Olive Kidd, Cookstown, Ont.

"Now in the sunset glow I stand so near
The hills of light that all the past grows clear;
Even griefs transfigured in this softer ray,
Take on new forms and shine above my way.
With dawning triumph in the words I read,
He taketh from us nothing that we need."
—Frances L. Macco.

"Be still, sad heart, and cease repining,
Behind the clouds is the sun still shining;
Thy fate is the common fate of all;
Into each life some rain must fall,
Some days must be dark and dreary."
—Longfellow.

"The little worries that we meet each day
May be as stumbling blocks across our way,
Or we may make them steppingstones to be
Of grace, O Lord, to Thee."
—A. E. Hamilton.

"Heaven is not reached by a single bound,
But we build the ladder by which we rise
From the lowly earth to the vaulted skies,
And we mount to its summit round by round.
"We rise by the things that are under our feet—
By what we have mastered of good or gain,
By the pride deposed and the passion slain,
And the vanquished ills that we hourly meet."
—Dr. J. G. Holland.

"St. Augustine! well hast thou said
That of our vices we can frame
A ladder, if we will, but tread
Beneath our feet each deed of shame.
Nor deem the irrevocable past
As wholly wasted, wholly vain,
If, rising on its wrecks, at last
To something nobler we attain."
—Longfellow.

"'Would'st thou,' so the helmsman answered,
'Learn the secret of the sea?
Only those who brave its dangers
Comprehend its mystery.'"
—Longfellow.

"Say not, 'twas all in vain—
The anguish and the darkness and the strife;
Love thrown upon the waters comes again."
—Anna Shipton.

"Not what we give, but what we share,
For the gift without the giver is bare;
Who gives himself with his alms, feeds three—
Himself, his hungering neighbor and Me."
—Lowell.

"Without a recognition
You passed Him yesterday—
Jostled aside, unheeded his mute petition,
And calmly went your way."
—Margaret J. Preston.

"Oh dreamers, dreaming that your faith is keeping
All service free from blot,
Christ daily walks your streets, sick, suffering, weeping,
And ye perceive Him not."
—Margaret J. Preston.

"To comfort and to bless,
To find a balm for woe,
To tend the lone and fatherless
Is angel's work below."
—W. W. Howe.

PRIZE MEMORY GEMS—CLASS II.

By Mabel A. Scott, Dominion City, Man.

"If God hath made this earth so fair,
Where sin and death abound;
How beautiful, beyond compare,
Will Paradise be found."
—Montgomery.

"Happy the man, and happy he alone,
He who can call to-day his own,
He who, secure within himself, can say—
'To-morrow do thy worst, for I have lived to-day.'"
—Dryden.

Whoever you are as you read this,
Whatever your trouble or grief,
I want you to know and to heed this:
The day draweth near with relief.
No sorrow, no woe is unending;
Though heaven seems voiceless and dumb,
As sure as your cry is ascending
So surely an answer will come."
—Ella W. Wilcox.

"It needs not great wealth a kind-heart to display,
If the hand be but willing it soon finds a way;
And the poorest one yet in the humblest abode
May help a poor brother a step on the road."
—Swain.

"Give love and love to your life will flow,
A strength in your utmost need.
Have faith and a score of hearts will show
Their faith in your word and deed.
Give truth and your gifts will be paid in kind,
And honor will honor meet.
A smile that is sweet is sure to find
A smile that is just as sweet:
For life is a mirror of king and slave;
'Tis just what we are and do.
Then give to the world the best you have
And the best will come back to you."
—M. S. Bridge.

"There is pleasure in the sun-shine that sleeps on the
hill;
In the fall of the water; in the leap of the rill;
In the leaves that are stirred by the breath of the
wind;
But nowhere such pleasure as in words that are kind."
—D. C. Colesworthy.

"Human bodies are sic fools
For all their colleges and schools,
That when na real ills perplex them,
They make enow themselves ta vex them."
—Robert Burns.

"The Holy Supper is kept indeed,
In what we share with another's need,
Not what we give, but what we share,
For the gift without the giver is bare.
Who gives himself with his alms, feeds three—
Himself, his hungering neighbor and Me."
—Lowell.

Speak gently; it is better far
To rule by love than fear.
Speak gently; let no harsh words mar
The good we might do here.
Speak gently; 'tis a little thing
Dropped in the heart's deep well;
The good, the joy which it may bring
Eternity shall tell."
—David Bates.

Earth gets its price for what earth gives us,
At the devil's booth are all things sold.
Each ounce of dross costs its ounce of gold.
For a cap and bells our lives we pay;
Bubbles we buy with a whole soul's tasking;
'Tis heaven alone that is given away,
'Tis only God may be had for the asking."
—Lowell.

Famous Prescription for all House-keepers.

DR. O. B. JOYFUL,
21 Sunshine Avenue,
Office hours: 6 a.m. to 12 p.m.

A little dash of water cold,
A little leaven of prayer,
A little bit of sunshine gold,
Dissolved in morning air,
Add to your meal some merriment,
Add thought for kith and kin,
And then as a prime ingredient*
A plenty of work thrown in;
Flavor it all with essence of love
And a little dash of play;
Then a nice, old book and a glance above
Complete the happy day.
Take daily, and repeat.

Recipes.

DOMINOES TO PLEASE THE CHILDREN.

Dominoes are not difficult to make. Beat half a pound of butter to a cream, adding gradually two cupfuls of sugar; add the yolks of four eggs. Beat thoroughly; then fold in the well-beaten whites, and three cupfuls of pastry flour sifted with two teaspoonfuls of baking powder. Pour into greased shallow pans to the depth of half an inch. Bake in a moderate oven for fifteen minutes. When done turn out on a cloth to cool, and when cold cut with a sharp knife into oblong pieces the shape and size of a domino. Cover the top and sides with white icing; when this has hardened, dip a wooden skewer into melted chocolate and draw the lines and make the dots of the dominoes. Children are always delighted with these little cakes.

SAND TARTS AND GINGER SNAPS.

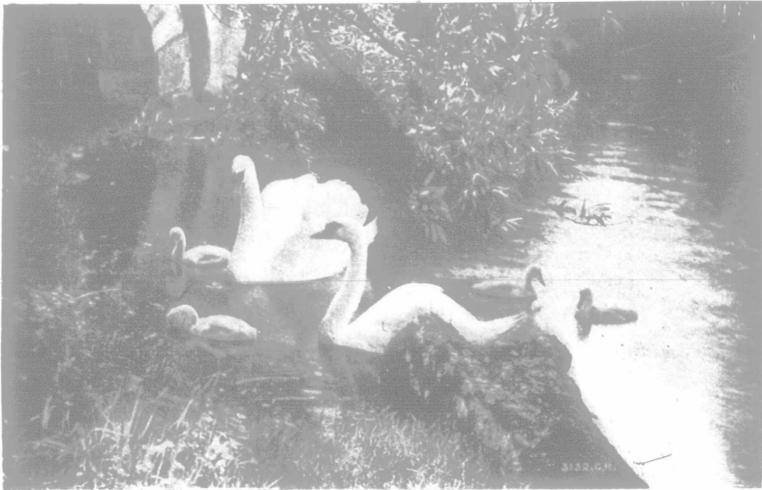
Sand tarts are excellent. Beat half a pound of butter to a cream and add half a pound of granulated sugar; then add the yolks of three eggs and the whites of two, beaten together; add a teaspoonful of vanilla and just a little grated nutmeg. Mix in sufficient flour to make a dough. Dust your baking-board thickly with granulated sugar. Take out a piece of dough; roll into a moderately thin sheet; cut with round corners, and bake in a moderate oven until a light brown. Dust the top of the sheet with sugar instead of flour, to prevent the roller from sticking. By adding half a pound of cleaned currants to the above recipe you will have Shrewsbury currant cakes.

The tiny little ginger snaps and Jackson snaps may be made several weeks before using, and will be the better for keeping. For ginger snaps rub half a pound of butter into two pounds of flour; add a tablespoonful of ground ginger and half a pound of brown sugar; mix thoroughly; then add gradually a pint of molasses; as the dough must be exceedingly stiff, possibly you may not require the entire pint. This condition will depend entirely upon the grade of the flour used. Knead thoroughly, and roll out in a thin sheet; cut with a small round cutter, and bake in a moderate oven until they are quite brown and crisp.

To make Jackson snaps, beat half a pound of butter to a cream, add gradually a pound of sugar, then one egg well beaten, one cupful of water, and the juice and grated rind of one lemon. Knead in about a quart of sifted flour—possibly a little more. The dough must be hard and elastic. Roll in a thin sheet and bake the same as ginger snaps.

AN INEXPENSIVE COFFEE FRUIT CAKE.

To make coffee fruit cake, beat half a pound of butter to a cream; add one cupful of brown sugar. Dissolve a teaspoonful of baking powder in two tablespoonfuls of water; add it to half a pint of New Orleans molasses; add this to the butter and sugar; add a teaspoonful of allspice, one egg well beaten, a tablespoonful of cinnamon and one grated nutmeg. Mix a quarter of a pound of shredded citron, two pounds of seedless raisins and three-quarters of a pound of cleaned currants. Measure three cupfuls of pastry flour; take sufficient from it to flour the fruit thoroughly. Add half a pint of warm, strong coffee to the sugar mixture; then add the flour; beat until smooth; add the fruit, pour into well-greased cake pans, and bake slowly in a moderate oven.



HAPPINESS IN SWAN-LAND.

Travelling Notes.

I am afraid that my few rambling notes will not arrive in time to convey at the proper season my good wishes for a happy Christmas, but I have some hope that they may not be too late for me to say "A happy New Year" to all the readers of our "Home Magazine." Disappointment awaited me when the day arrived for the agricultural show, to which I had so much desired to go, and about which I should then have had something worth writing to you.

Now, how can I write Travelling Notes when I have not been travelling? Well, even that is possible if one makes free use of other people's observant eyes, tongues and pens, and by using one's own eyes in travelling up and down the columns of the daily press. Yes, indeed, one can learn a very great deal thus vicariously, and amongst the lessons, first and foremost perhaps, to be thankful for the many mercies of one's own lot. Ah! my friends, could you read the record in but one day's paper of the appalling amount of destitution—actual starvation, not mere privation only—in the metropolis of England, you would exclaim as I do, "God be thanked that we live in a land where such things are impossible, where there is space for all, and where only the despicably idle, the wilfully lazy, need ever know the pinch of poverty." In congested London there simply is not work to be had, however industrious, sober and capable are those who seek it. Although the very poor suffer more or less every winter, for many reasons this is an exceptionally bad season, requiring exceptional treatment. The effect of the war has been greatly to disturb the whole labor market, and there are many suffering now who have always hitherto kept their "heads above water," who try to hide their condition, and will not go to the soup kitchens. Subscription lists are opened, and bands of helpers organized to look into the merits of every application, as well as to seek out sufferers who make no moan. Let me quote some facts, told by those who have gladly given their services in this work of humanity:

In the first case the husband was a dock laborer, who has only had two or three days work for weeks past. This man was only one of the 13,000 dock laborers out of work. Everything pawnable in the house had been pawned, but the children went to school on Friday morning without breakfast. They came back for dinner, "but," said the mother, "there was nothing for them, and I could not bear to see them crying, so I sent them back to school."

Here is how the wife of a dock-laborer, out of work and with three children to keep, obtained a week's income. She had pawned almost everything in the house. As a last resort she pawned two little bed-ticks, for which she got one shilling. Then she sold the ticket of another bed-tick, and so raised another shilling, while another pawn ticket fetched sixpence. This gave her an income for the week of half-a-crown, which had to keep five people, her only additional resource being an occasional cup of tea from her father.

In another household there were, besides the father and mother, three children under five years of age. The man had been out of work for five weeks, and there was no money in the house. The week before last the husband earned 9d. and the wife one penny. On Friday last they had no food at all, and on Saturday only a pennyworth of bread.

Columns would be required to describe even briefly all the exceptional cases of hunger and misery encountered by the mission workers. Wherever they go the tale is the same. No work for weeks, no money, and scarcely any food in the house, parents and children in a state of semi-starvation. It should not be forgotten, too, that food to these people means simply bread and dripping and weak tea, and not much of either.

Monday morning they found the baby was dead. The coroner asked if the bed-clothes were over the child, but the witness said they had none. Dr. J. Gahagen proved that death had resulted from suffocation. The room and also the children were scrupulously clean, and all the latter were well nourished, but the mother looked as if she had had no food for some time. It was a case of extreme poverty. There was paper at the window for curtains. The coroner's officer said he had made inquiries, and found the parents were sober and honest people. The mother now stated that her husband had got work that day. The jury returned a verdict of accidental death, and expressed their sympathy with the parents."

In reply to her enquiry, came this letter, written in a good, clear hand, and without one single fault in spelling: "Dear Madam,—I received your kind letter and postal order with many thanks; it will enable me, with the help of one or two ladies unknown to me before the accident that happened to my little baby, to buy some bed-clothes, as I believe it was only my pressing my little one to me so tight for warmth that caused his death, for when I laid him down he was laughing at me, and in his little way trying to talk. If he had been ill I would have done my best to make him well, but when I awoke I found him dead. I am told to think that he was taken for a good purpose. I do try to think so, but it seems very hard, as with all my poverty I have been able to see how nicely he was getting on. I think I shall be able to get a little work, and then I hope things will soon be brighter." Not one murmur, not a whine, not a hint of begging!

In addition to the lack of work, there is, as a factor in the distress it causes, a great increase in the cost of living. It takes one pound to purchase what would have cost seventeen shillings (sterling) a year ago. Milk is fifteen per cent. higher in price; meat has gone up 2½d. a pound, and rent twenty-five per cent. "As for clothing," said a city missionary, "thirty per cent. of my people never buy clothing at all." Perhaps none suffer more acutely, or feel more deeply "the iron pressing into their soul," than the women, the wives and the mothers. And, oh! how they work, when work of any kind is possible for them. In basements, in attics, women stitch, stitch, stitch, from six a.m. to nine and ten p.m., week in, week out, making shirts at 1s. 9d. a dozen, if fortunate in their employers, or oftener for 7d. and 8d. a dozen. Then last of all, but not least, amongst the sufferers are the little ones, the "little children of the poor." A city missionary asks:

"Do any warmly-clad, well-nurtured people doubt that little children are sent breakfastless to school, some of them without even the halfpenny which will get them a dinner at the soup kitchen? Let such sceptics listen to the head-mistress of Burnham-street school. 'Just now,' she says, 'about eighty children come to school every morning without breakfast. There are about 1,000 children in the school, and in the case of between 200 and 400 of them the father is out of work

The following is a case which a friend of mine personally investigated, after reading the sad little history in the columns of her daily paper. It ran thus:

A SAD STORY FROM HOLBORN.

Mr. Schroder held an inquest at Holborn on the body of Henry Martin, the infant son of a brass-finisher, of 4 Reed's buildings, Leatherlane. The mother deposed that her husband had been out of work for thirteen weeks. During that time she had pawned or sold all their furniture—in fact, they had only a mattress left to sleep on. On

Monday morning they found the baby was dead. The coroner asked if the bed-clothes were over the child, but the witness said they had none. Dr. J. Gahagen proved that death had resulted from suffocation. The room and also the children were scrupulously clean, and all the latter were well nourished, but the mother looked as if she had had no food for some time. It was a case of extreme poverty. There was paper at the window for curtains. The coroner's officer said he had made inquiries, and found the parents were sober and honest people. The mother now stated that her husband had got work that day. The jury returned a verdict of accidental death, and expressed their sympathy with the parents."

That is the cause of all the misery. The children are suffering, but the mothers are suffering most. They are denying themselves to give to the little ones, but they cannot all give enough. Aunts and grown-up brothers and sisters who are working help, and children who bring bread with them share with those who have none. The kindness of the poor to their own kind hardly ever fails."

Is there not a lesson in all this for us, as we sit down before our bountifully plenshed tables, and gather our children about us for merriment and jollity at Christmastide and New Year? Surely it is good for us, now and then, to lift the dark curtain which hides from us the poverty-haunted homes in the crowded cities of the mother country, if only to learn by doing so how blessed is our lot, cast in a land where peace and plenty are the certain reward of honest toil, and to prepare us to put out a hand of welcome to such of them as decide to accept the invitation extended to them to come out to our big North-west, where for years to come there will be room and to spare.

MOLLIE.

Happiness in Swan-land.

A happy family in Swan-land! Woe betide you if you rouse the ire of the proud father of that graceful little group, should you be tempted to play any unseemly pranks as your slender canoe glides hither and thither amongst them upon the lakelet or stream where their snowy majesties and their offspring are disporting themselves. Like the peacock on the land, the swan on the water appears as if created for ornamental purposes only, and well does it fulfil that mission. "To see the swans," is the goal of many a walk in Regent's Park or elsewhere, where the public are freely admitted, and baby voices shout with joy as the lovely birds glide gracefully forward to pick up the crumbs the baby fingers have been allowed by mother or nurse to throw to them upon the face of the waters, to which they apparently lay sole claim.

H. A. B.

Happiness in Donkey-land.

It is not often given to us in Canada to see in actual life such a pretty illustration of mother-love and filial content as our picture shows, but in nearly every watering place or seaside resort in the Old Land, the tired mother, with the side-saddle on her back or the pair of panniers at her sides, may be seen, all forgetful of her woes, when her often bare-footed young caretaker, rattling the pence in his pocket, which she has earned for him, lets her stand at ease once more, with her four-footed baby by her side. Donkeys stupid? No, indeed. And if their tongues cannot express their emotions, certainly their ears can. Those of Mrs. Neddie are as eloquent as the purr of any mother-pussy in Canada, and is not Baby Neddie beaming his content through every strand of his soft little grey coat and by every twitch of his tail? His mother has come back to him, and his cup of happiness is, at all events for the moment, full to the brim.

H. A. B.

Bjones—That young fellow seems rather pessimistic.
Merritt—Yes; he's an amateur photographer, and always takes a poor view of life.

Maine Lawyer—What is your opinion of the character of Deacon Blank?

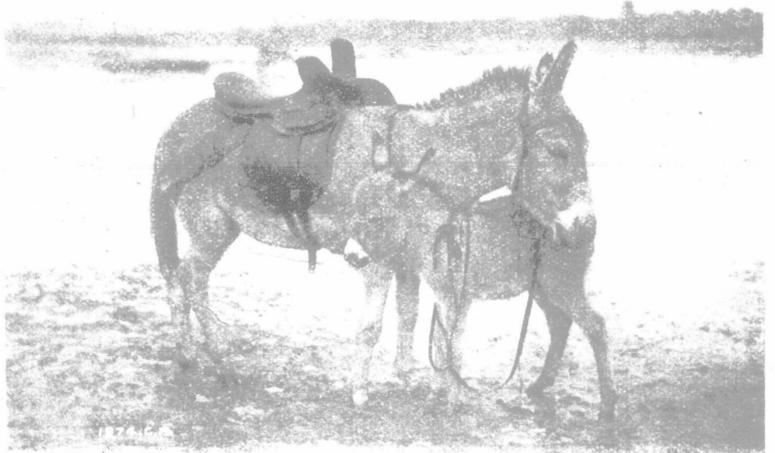
Witness (cautiously)—I never heard nothin' agin him.

"Don't you know him to be an honest man?"

"Well, he's been fair an' square in all his dealin's with me, and with others as far as I know."

"Isn't that sufficient to prove him a man of sterling integrity?"

"Well, I dunno. I never traded hosses with him."



HAPPINESS IN DONKEY-LAND.

THE QUIET HOUR.

The Glory of Common Things.

"The time is great.
What times are little? To the sentinel
That hour is regal when he mounts on guard."

Three weeks ago a train was flying through the darkness, carrying many weary holiday-makers back to their everyday life. How little they thought that some would be called that hour to lay aside their work in this world, and that for all a testing time had come. In a moment, in the twinkling of an eye, without the slightest warning, the great change came, and many souls took the dreaded plunge into eternity. Others were tried more or less severely, and called to prove their heroism by patient endurance of pain. Others showed that they were equal to the great occasion by self-forgetful helpfulness in caring for the wounded and dying; while a few, perhaps, were too occupied in caring for themselves, and in thinking about the shock to their nerves, to be able to spare a thought for others.

But such occasions, happily, do not come often in life; and they never make heroes or cowards, but only bring to sight the heroic or cowardly character which has been slowly growing through years of ordinary life. When such a testing time comes, men and women reveal to themselves and others the material of which they are made. The surface polish no longer hides the real quality of the material. But surely God knows all about us without the test of what we are pleased to call a "great occasion," and even men give more weight to everyday evidences of character than to these flashlight exhibitions, where excitement often supplies a kind of temporary courage.

St. Peter was taught by a vision that it was not right to call anything "common." How can we tell what God hath cleansed, and

"Who shall dare make common or unclean
What once has on the Holy Altar been?"

Nothing that God gives us to do or bear can ever be commonplace. If "those mighty Hands that rule the sky" found work in a village carpenter-shop great and glorious enough to be well worth doing, we may hardly venture to scorn the homely duties which lie ready to our hand in home or farm life. The task God Himself has set us must be far more important than any we could choose for ourselves. The truest heroes are those who, without display, quietly do their work day after day, year after year—no man can do more than that.

Some navvies were once working in an English tunnel. Suddenly the mouth of the tunnel fell in and they were entombed, with very little chance of escape. It was about twenty-three hours before they were found, almost dying for want of air, and how had those terrible hours been spent? Not in useless, exhausting efforts to escape, not in fear and horror. One of those rough men was like an angel in disguise, helping his comrades to endure long hours of torturing suspense bravely and quietly. He said: "Well, chaps, we shall never get out of this alive, so we may as well go on with our bit while we can." So they went on with their "bit" till they fell exhausted, proceeding steadily with their commonplace work of mining, in the very face of death. Was there not something magnificent in the way these rough, ignorant "chaps" continued the wearisome work they had undertaken to do, instead of frantically lamenting their expected doom. Certainly they were not working for money, for they never thought they would be rescued in time. They lived at "Bugsworth" too, and who could expect anything grand to be done in a place with such a name? It was certainly much better for themselves to turn their thoughts from their position to their work, as far as it was possible to do at such a time. People who have to work are al-

ways much less to be pitied than those who can and do nurse their sorrows and hug their griefs in miserable idleness.

No honest work should be scorned as "common," but there is only one way, so far as I know, of making all work glorious. That is, of course, to do it "not with eye service, as men-pleasers, but as the servants of Christ, doing the will of God from the heart, with good will doing service, as to the Lord, and not to men." This is the magic "tincture," as George Herbert quaintly calls it, which "makes drudgery divine," if we could only always remember it. Those simple lines of his, about sweeping a room for Christ's sake, have cheered millions of hearts, and will continue to cheer weary Christians for many years to come. Is it not because we all find some "drudgery" in our path, and welcome any help towards making it "divine?" Does your work often seem wearisome and monotonous? It is not the kind of work that matters so much as the way it is done, and the motive force behind it. If we could only remember always that a beautiful life may be lived anywhere.

"He bowed himself
With all obedience to the King, and wrought
All kind of service with a noble ease,
That graced the lowliest act in doing of it."

Since writing the above I have received a farewell letter from my friend Miss Rye, saying that she is slowly dying of an incurable disease. I know that many women, living in happy Canadian homes, have good reason to love and reverence her who has been such a true and faithful friend to them. I therefore call on all such to join with me in the earnest prayer that God will strengthen and uphold her to the end, cheering her with His own Presence as she passes through the dark river, and filling her soul with joy and gladness as she steps out into the light beyond. God has promised to grant the prayers of those who agree in their petition; let us claim His promise. HOPE.



SUPERIOR

NEVER CLOGS

THINK of Seeding Time! Will your land be trashy? If so you should have a **SUPERIOR Disc Drill**. It saves unnecessary labor. Trash will not bother you. Discs roll over or cut through weeds, grass, matted thistle, pea vines, corn stalks, etc. One man or boy can operate the Superior Disc Drill at all times. Has the most reliable Feed. Disk Wheel for changing quantity without change of parts. No removable gears. We guarantee every Drill and make good our guarantee. **Saves Time, Seed and Labor.** Always sows the required amount. Will pay for itself in a few seasons, and last a lifetime with ordinary care.

SUPERIOR DRILLS

are admitted to be the best in the world. We make Disc and Hoe Drills, with and without fertilizer attachment, Disc Harrow on Wheels, etc. Illustrated Catalogue S tells all about them. Catalogue is free. Send for one.

THE SUPERIOR DRILL CO.,
Springfield, Ohio.



SUPERIOR

FARM FOR SALE

The undersigned offers for sale his farm, situated in the north-eastern limits of the Corporation of the Village of Elmira, containing one hundred acres, more or less. A large and conveniently-arranged brick house, spacious barn and all necessary sheds and outhouses are on the premises; also a good orchard, never-failing wells, and running water. The farm, with the exception of about 10 acres of hardwood bush, is cleared, and is in a good state of cultivation, with no waste land. Possession given in March. Apply at once to

CHAS. KLINCK, SR., - - ELMIRA.

SHEEP BREEDERS' ASSOCIATIONS

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

GOSSIP.

Clydesdale stallions and fillies are advertised for sale in this issue of the "Advocate," by S. J. Prouse, of Ingersoll, Ont. Among the lot is Roslin (imp.), a horse that has been on the same route for seven years, and has proven one of the best sires in Canada. Scores of his get can be seen in Oxford County that have been winners wherever shown. Some of the others advertised are sired by him.

DISPERSION SALE OF HOLSTEINS, ETC.

Attention is directed to the advertisement in this issue of the dispersion sale, on January 28th, by Mr. Andrew Cameron, Westwood, Ont., of his entire herd of high-class Holstein cattle, his flock of Leicester sheep, and a number of Coach horses. The Holsteins are worthy the attention of breeders and dairymen generally, as they are not only bred from deep-milking and rich-testing strains, but cows in milk are individually up to a high-testing standard, as evidenced by the fact that of the 79 patrons of the Westwood cheese factory this herd tested the highest in an official test, showing an average for six months of four per cent. butter-fat. There are twelve females and three bulls in the herd. One of the bulls, Earl of Westwood 2403, two years old, was sired by Diamond Chief, dam Rose of Little Britain, and he is a good one. Mercena's De Kol is a grand yearling bull, bred at the Ontario Agricultural College, sired by Sir Pledge De Kol 1295, dam Mercena 2nd. He won first at Brantford, Peterboro, Lindsay and Markham last fall. His dam, in ten months of 1901, gave 11,379 lbs. of milk, from which was made 437 lbs. butter; while in 1902 she produced 475 lbs. butter. Among the cows are some that have given 50 lbs. and upwards of milk daily, testing 4 to 4.5 per cent. butter-fat, and heifers that gave 40 lbs. with first calf, testing 3.6 to 4 per cent. butter-fat. The prize-winning record of the herd is an exceedingly creditable one, winning first prizes at important district fairs.

Mr. Cameron's Pine View stock farm is situated 1 1/2 miles from Blezard station, on the branch of the G. T. R. running from Belleville to Peterboro, and four miles from Indian River station, on the C. P. R. We are assured that everything will be sold without reserve, and we advise all interested to note the advertisement.

THE DOMESTIC SCIENCE COURSE

Western Dairy School
STRATHROY,

Will open on JANUARY 15th. Classes will assemble on JANUARY 20th,

and continue for two months. Separate apartments have been fitted up with the best appliances for scientific and practical work. The course will include lectures and demonstrations in cooking and preparing foods for the table, preserving fruits, preparing poultry for market, and all subjects in connection with household economics. This department is in charge of Mrs. E. M. Torrance, and is specially provided for the farmers' wives and daughters of Western Ontario. Send for circular, and address all correspondence to

ARCHIBALD SMITH, Supt. Western Dairy School, Strathroy, Ont.

HOLSTEINS BY AUCTION
On Wednesday, January 28th, 1903.

Mr. Andrew Cameron, of Westwood, will offer by public auction his entire herd of high-class Holstein cattle, including

12 FEMALES and 3 BULLS,
among them prizewinners and high-record animals, all registered. Also registered Leicester sheep and Coach horses, and 10 high-grade Holsteins.

TERMS.—\$10 and under, cash; over that amount, 10 months' credit on approved paper. Parties giving notice will be met at Blezard Station, G. T. R., and Indian River Station, C. P. R., on morning of sale.

8 REASONS

Why you should sell

FROST FENCE.

1. It is the strongest.
2. It is the heaviest.
3. It is stock-proof.
4. It is self-regulating.

5. It sells rapidly.

6. No kinks or wraps.

7. It will last a lifetime.

8. Its oldest friends are its best.

Write for catalogue.

THE
FROST WIRE FENCE CO.
LIMITED.
Welland, Ont. Winnipeg, Man.

California - Oregon Excursions.

Every day in the year the Chicago, Union Pacific and Northwestern Line runs through first-class Pullman and Tourist Sleeping Cars to points in California and Oregon. Three through trains daily. The route of the famous "Overland Limited." Personally conducted excursions from Chicago to San Francisco, Los Angeles, Portland, and other Pacific Coast points, leaving Chicago on Tuesdays, Wednesdays, Thursdays and Fridays. Lowest rates. Choice of routes. Finest scenery. Maps, illustrated folders, etc., furnished free. Rates quoted. Address, B. H. Bennett, General Agent, 2 East King street, Toronto.

THOROUGHbred JERSEY BULL
FOR SALE.

Two years old, sire King of Woolwich No. 52209, A. J. C. C. of New York; dam Rose of Erin's Beauty No. 13297, A. J. C. C. of N. Y. Pedigree for this animal can be obtained, if desired. Apply at once to CHAS. KLINCK, SR., - - ELMIRA.

GOSSIP.

A 100-acre farm, with good buildings, near the village of Elmira, Waterloo Co., Ont., is advertised for sale in this issue.

A pure-bred Jersey bull, two years old, is offered for sale as per advertisement in this issue by Chas. Klinck, Elmira, Ont.

PLEASE MENTION FARMER'S ADVOCATE.

Let Us Thresh the Matter Out

No Potash—No Fruit
No Phosphoric Acid—No Seeds
No Nitrogen—No Leaves

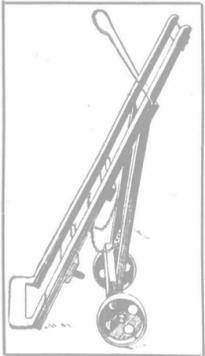


These three things must be supplied to your soil.

Write to us and we will send you some books giving the gist of the whole matter.

GERMAN KALI WORKS
98 Nassau St., New York

YOUR ATTENTION



is drawn to this little article.

Combined Truck and Bag Holder

BECAUSE:

It will pay for itself. Saves your bags. Does away with one man.

You will find it the **HANDIEST ARTICLE** around the FARM. Price, \$3.00.

WINDMILLS, PUMPS, GRINDERS, FANNING MILLS, ETC.

Write us.

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

ASTRAKHAN

Warm, elegant, fashionable, made in the very latest style, of fine quality glossy black Astrakhan, with 5-inch storm collar, fur on both sides, and 10-inch cape, lined with quilted satin and ornamented with six long full tails, as well made as the most expensive fur garments.



CAPERINE, \$4.95

WORTH \$10. We secured a quantity of these caperines for our Christmas trade, and having only 67 left over, we decided to put the price down to \$4.95 in order to clear them out at once. SEND NO MONEY Just your name, address and nearest express office and we will send this handsome caperine for examination. When it arrives call and examine it thoroughly, and if found perfectly satisfactory, and fully equal to caperines sold regularly for \$10.00, pay the express agent our special price, \$4.95, and express charges and secure the biggest bargain in furs ever offered. Send \$4.95 with order and we will send the caperine postpaid.

JOHNSTON & CO., Box 559, Toronto.

Send for our prospectus telling how every one who invests with us can secure a quarterly income. **BE INDEPENDENT IN OLD AGE**
M. L. COFFEY, ILL.-COLO. OIL, GAS & COAL CO. 1658 Unity Building, CHICAGO.

GEO. ISAAC, BOMANTON, ONT.

Scotch Shorthorn Cattle

Have imported, this year, 68 head of Shorthorns—6 bulls and 62 females. Twenty-seven head left quarantine 11th Sept., 1902. Intending purchasers should see this stock or correspond.

BOMANTON P. O., COBBOURG STATION, G. T. R.

THIS RUNT GAINED 360 LBS. IN 160 DAYS. BY EATING 'INTERNATIONAL STOCK FOOD'.



YOU CANNOT DENY ACTUAL FACTS

A Wonderful Growth of 360 pounds in 160 Days By a "Runt" That Had Been Badly Stunted for Nearly 2 Years and Only Weighed 60 Lbs.

Dow City, Iowa.
International Stock Food Co., Minneapolis, Minn.
DEAR SIR:—I have a runt 2 years old which only weighs 60 pounds. It stands 18 inches high, 42 inches long, and 4 inches wide on widest part of the back. I would like to try "International Stock Food" and see if it will make this runt grow. Four of my neighbors owned it before I got it, and none of them could make it grow. I enclose a photograph which shows this hog is too weak to stand alone, and it will not eat.
F. C. HOWORTH.

DEAR SIR:—I enclose a photograph of the "runt" taken five months after our commencing to feed "International Stock Food". It weighs 420 lbs. and has developed into a fine looking hog. "International Stock Food" is a remarkable preparation for making hogs grow, and the two photographs I mail are positive proof. Yours truly, F. C. HOWORTH.
We will pay you \$1,000 CASH to Prove that our Testimonials are not Genuine.

"INTERNATIONAL STOCK FOOD" FEEDS FOR ONE CENT is Prepared from Roots, Herbs, Seeds and Barks, and is a high-class vegetable, medicinal preparation to be fed to stock in small amounts as an addition to the regular feed. It is a Great Aid in Growing or Fattening stock because it increases the appetite and Aids Digestion and Assimilation so that each animal obtains more nutrition from the grain eaten. We positively guarantee that its use will make you extra money over the usual Plan of Growing and Fattening stock. "International Stock Food" can be fed in perfect safety to Horses, Cattle, Sheep, Hogs, Colts, Calves, Lambs or Pigs. It is Absolutely Harmless even if taken into the Human System. You insist on eating medicinal ingredients with your Own food at every meal. Salt is a stomach tonic and worm medicine, Pepper is a powerful stimulating tonic, Mustard is a remedy for dyspepsia, Vinegar is a diuretic. You eat these medicinal ingredients almost with every mouthful of your food, and it is proven that these condiments promote health and strength for people and improve their digestion. "International Stock Food" contains pure vegetable medicinal ingredients that are just as safe and as necessary an addition to the regular food of your stock if you desire to keep them in the best possible condition. "International Stock Food" is endorsed by every High Class Farm Paper. It purifies the blood, stimulates and permanently strengthens the entire system so that disease is prevented or cured. "International Stock Food" is sold on a "Spot Cash Guarantee" by Forty Thousand Dealers throughout the World. Your Money will be Promptly Refunded in Any case of Failure. It will make your Pigs or Hogs grow Amazingly and has the largest sale in the World for curing or preventing Hog Disease. Beware of the many Cheap and Inferior Imitations! No Chemist can separate all the different powdered Roots, Herbs, Barks and Seeds that we use. Any One claiming to do so Must be an Ignoramus or Fallacious.

A \$3000.00 STOCK BOOK FREE

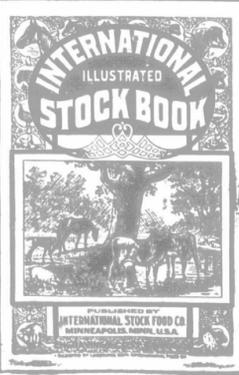
IT CONTAINS 183 LARGE ENGRAVINGS OF HORSES, CATTLE, SHEEP, POULTRY, ETC.

The Cover of this Book is a Beautiful Live Stock Picture Printed in Six Brilliant Colors. Book is 6 1/2 by 9 1/2. See engraving for greatly reduced design of cover. It cost us \$3000 to have our Artists and Engravers make these Life Engravings. This Book contains a Finely Illustrated Veterinary Department that will Save You Hundreds of Dollars. It describes common Diseases, and tells how to treat them. It also gives Description, History and Illustrations of the Different Breeds of Horses, Cattle, Sheep, Goats, Hogs and Poultry. It contains testimonials, and Life Engravings of many very noted Animals. The Editor of This Paper Will Tell You That You Ought to Have This Book in Your Library For Reference.

\$10.00 CASH, we will send you, IF BOOK IS NOT AS STATED.
This Book Mailed Free, Postage Prepaid, if You Write Us (letter or postal) and Answer These 2 Questions:
1st.—Name This Paper. 2d.—How Much Stock Have You?
Write us today for book.

Largest Stock Food Factory in the World. Capital Paid in, \$1,000,000. We Occupy 62,000 Feet of Floor Space. **International Stock Food Co., MINNEAPOLIS, MINN., U. S. A.** We employ over 300 people and have Hundreds of Thousands of Testimonials from Farmers and Stockmen.

TEST 3 FEEDS FOR ONE CENT ENTIRELY AT OUR RISK.



GOSSIP.

Note the advertisement, in this paper, by Mr. John McFarlane, Dutton, Ont., of young Shorthorn bulls, by the imported sires, Blue Ribbon and Royal George; also, yearling and two-year-old heifers.

Cedars stock farm lies in the county of Simcoe, about four miles west of Bradford station on the main northern line of the G. T. R., and is the home of Bell Bros., breeders of high-class Shorthorn cattle, Clydesdale horses and Shropshire sheep. From their youth, Bell Bros. have been educated in the conformation and qualities that make the typical Shorthorn, and their large herd show that they not only know the proper type, but they breed them as well. Their herd at present represents such noted families as Stamfords, Strawberries, Countesses and Duchesses, on which have been used the choice sires, Aberdeen Jock 24503, by Imp. Aberdeen, a number of the females being sired by him; Duke of Cedarvale, by Imp. Hopeful, also the sire of a number in the herd; Brilliant 15825, by Imp. Mexico, that ponderous, 3,100-pound bull, some of whose get are also in the herd. The present stock bull is Heir-at-Law 34563, by that great sire, Prince Arthur 23377, by Prince Royal; dam Myra Lily 22014, by Prince Arthur 8682. Heir-at-Law is a big, thick roan, full of quality, and beef from the ground up, and is a sire of no mean order, as his get show. At present, for sale, there are four young bulls from nine to twelve months old, the get of the stock bull, and four yearling heifers; a lot that will do credit to any herd. In Shropshires, there are eight ewe lambs and two ram lambs, also a number of shearings for sale, that are typical of the breed, low, dark, and well covered. Write the Bell Bros., to Bradford P. O. Anything they have is for sale.

A Marvel of the Age.

THE LONDON FENCE MACHINE

CANNOT BE EQUALLED

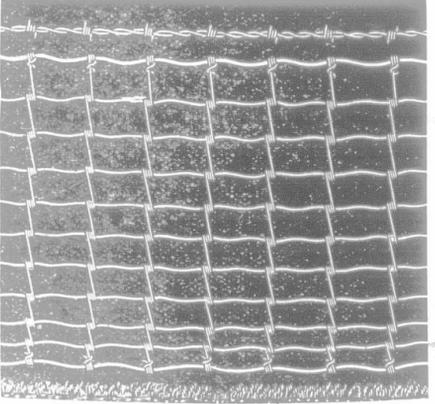
For perfect and rapid construction of coiled-spring woven-wire fencing direct from the bundle of wire and right on the posts where it is to stay. The only way to build a good fence. One half the cost of ready-made fencing, and more easily and satisfactorily erected.

The London will weave more and better fence than any other field weaver in the world.

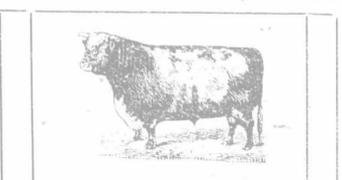


It is a fact that it costs more to weave a rod of wire fence in the factory by any known process than to do it in the field with a London, and that the value of field-woven fence is 25% greater, pound for pound, yet often costs less than half, and takes very little longer to build than shoddy roll fences do.

Write for catalogue.
LONDON FENCE MACHINE CO., Limited. LONDON, CAN.



PLEASE MENTION FARMER'S ADVOCATE.



DISK HARROWS and STEEL ROLLERS



Experienced farmers, who should know, claim that the Bissell Harrows and Rollers are ahead of all others in features of construction, capacity, draft, durability and improvements. Would you care to know the particulars, free? Address: **T. E. BISSELL, DEPT. W., ELORA, ONT.**

DISPERSION SALE!

ALEX. LOVE, Eagle, Ont., will sell by public auction on **JANUARY 22nd, 1903,**

his entire herd of

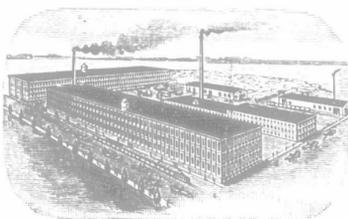
SCOTCH SHORTHORNS

-38 HEAD.

Catalogues now ready.

CAPT. T. E. ROBSON, Auctioneer.

THE LARGEST CARRIAGE FACTORY IN CANADA



Carriages

for all purposes.

100 Varieties to Select From.

We build nothing but the best grade A standard wheels. Cast-steel springs, noiseless brass and rubber washers.

McLaughlin Carriage Co., Ltd.
OSHAWA, ONT.

STAMMERERS

THE ARNOTT INSTITUTE, BERLIN, CANADA. For the treatment of all forms of SPEECH DEFECTS. Dr. W. J. Arnett, Superintendent. We treat the cause, not simply the habit, and therefore produce natural speech. Write for particulars.

No. 3 "Prize"

Best Feed Grinder Money Can Buy for Operation with Gasoline or Steam Engine, Tread Power, Power Wind Mill, etc. **WHY?** Because it grinds rapidly making splendid feed, table meal or graham flour, has ample capacity for 4 or 5 horse power, and an automatic feed regulator, which prevents its choking down the lightest power; is built throughout of iron and steel and will last a life time. Thousands in use for 10 and 15 years still as good as new. We make 26 sizes and styles of Feed Grinders, including the only really successful Corn and Cob, and Corn, Cob and Shuck Feed Grinders. Also a full line of Ensilage and Fodder Cutters, Huskers, Shellers, Wood Saws, Sweep Horse Powers, Tread Horse Powers, Wind Mills, etc. Write to-day for free catalogue. **APPLETON MFG. CO., 53 Fargo St. Batavia Ill.**

GOSSIP.

Graham Bros., of Claremont, Ont., the well-known importers of Clydesdale horses, have lately sold to K. B. McLennan, of Vancouver, B. C., for the Douglass Lake Cattle Co., of B.C., the rare good pair of stallions, Wayward Boy and Torpedo. These horses are each only three years old, and both tip the scales at considerably over a ton. Mr. McLennan scoured the country in search of the heaviest pair of three-year-olds he could find, and they were found in Graham Bros.' stable. They also sold him eight very choice mares, weighing from 1,700 to 1,900 lbs. each, most of them being in foal to the grand old sire, MacQueen.

\$60,000 FOR DAN PATCH.

Mr. M. W. Savage, proprietor of the International Stock Food Farm, Minneapolis, Minnesota, with characteristic enterprise, persistency and pluck, has consummated the purchase of the great unbeaten pacing stallion, Dan Patch, at \$60,000, the highest price ever paid for a pacer. He will make a spring season in the stud and will be out on exhibition during the fall. Dan Patch was bred by D. A. Messner, Oxford, Indiana, who sold him last spring to Mr. Sturgis, of New York, for \$20,000.

At his new home on the International Stock Food Company's farm, Dan Patch will have a worthy stable mate in the great trotting stallion, Directum, 2.05½. Directum is still the champion four-year-old trotting stallion, and for seven years was the champion trotting stallion of the world, while for ten years he held the three-year-old trotting record. Dan Patch, like Directum, comes from a family of great race-horses.

Mr. Savage can boast of owning the three stallions whose average speed is greater than that of any stallions owned by any other man in the world. When Online died last summer, he was replaced with the pacer, Roy Wilkes, 2.06½, after Mr. Savage had made unavailing efforts to purchase Dan Patch. Even after securing Roy Wilkes, he did not give up hopes of securing his original choice, and after repeated conferences and much writing and telegraphing a sale was successfully made last month.

CONSUMPTION CAN BE CURED.

Consumption uninterrupted means speedy and certain death. The generous offer that is being made by Dr. Slocum, the great lung specialist. Sunshine and hope for stricken families.

Confident of the value of his discoveries, he will send free four sample bottles upon application, to any person suffering from throat, chest, lung and pulmonary affections.

TREATMENT FREE.

To enable despairing sufferers everywhere to obtain speedy help before too late, Dr. Slocum offers

FULL FREE TREATMENT

CONSISTING OF FOUR LARGE SAMPLES to every reader of this paper.

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

FREE TRIAL TREATMENT

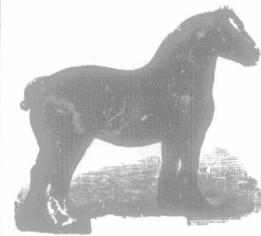
and the Four Free Preparations will be forwarded you at once, with complete directions for use.

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, 173 King Street West, Toronto, giving post office and express address, and the free medicine (the Slocum Cure) will be promptly sent.

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

ENGLISH SHIRE STALLIONS



RIGHT OUT FROM ENGLAND. FOR SALE

Our stallions are sired by the leading sires of England, such as Prince Herald and others; ages from 2 to 4 years. They both include size and quality. Correspondence solicited.

H. GEORGE & SONS,
Putnam Station, C. P. R.
7 miles from Ingersoll, Brampton, Ont.

GREAT COMBINATION SHORTHORN SALE



Scottish Beau, son of the great Silver Plate, consigned to this sale by Hon. M. H. Cochrane, Hillhurst, Que.

IN THE Sale Pavilion OF THE
Hamilton Stock-yards Company,

AT

HAMILTON, WEDNESDAY,

Jan. 28, '03

WILL BE SOLD AT AUCTION

60 Head of High-class Shorthorns

CONTRIBUTED BY THE FOLLOWING BREEDERS:

- HON. M. H. COCHRANE, Hillhurst, Que.
- CHARLES RANKIN, Wyebridge, Ont.
- HUDSON USHER, Queenston, Ont.
- J. W. GARDHOUSE, Weston, Ont.
- HARRY SMITH, Exeter, Ont.
- W. D. ROBERTSON, Oakville, Ont.
- GEO. AMOS, Moffat, Ont.
- HON. G. A. DRUMMOND, Pointe Claire, Que.
- H. J. DAVIS, Woodstock, Ont.
- W. D. FLATT, Hamilton, Ont.
- R. T. McNICHOL, Westover, Ont.
- T. E. ROBSON, Ilderton, Ont.

For Catalogues, apply to

W. D. FLATT, - HAMILTON, ONT.

AUCTIONEERS: CAPT. T. E. ROBSON, ILDERTON; THOS. INGRAM, GUELPH; GEO. JACKSON, PORT PERRY.

GOSSIP.

At the sale of the Shorthorn herd of Geo. Harding & Son, Waukesha, Wis., held at Chicago, January 6th and 7th, an average of \$388 was secured, the highest price being \$1,100.

The office and headquarters of the American Aberdeen-Angus Association has been removed to Chicago, and address of secretary is now Thos. McFarlane, No. 17 Exchange Ave., Union Stock Yards, Chicago, Ill.

The very large demand for the catalogue of the Hamilton Shorthorn sale, to take place January 28th, points to a possibility that the supply, though large, may run short before sale day, and it is urgently requested that parties coming to the sale bring their catalogue with them. The Canadian demand has been exceptionally strong, indicating that this will probably be more largely than usual a Canadian event, which is a consummation devoutly to be wished. It is highly desirable that most of these good cattle be retained in this country, where that class is much needed at present if we are to keep up the standard of our cattle and hold our own in the British market for beef cattle.

Mr. W. J. Walker, Eady, Ont., whose advertisement of Shorthorn cattle and Yorkshire pigs runs in this paper, writes us that there was an error in the advertisement in our January 1st issue, and also in the Gossip review of the herd, the ownership being credited to Mr. W. J. Walker & Son. As Mr. Walker is a young, unmarried man, he disclaims the honor of having a son as partner. For this lapse on the part of our reporter a humble apology is tendered and the mistake is rectified, and we trust that as a result of the present prosperous times, the day may speedily come when the firm name may be consistently adopted. The name of the stock bull at the head of the herd is Royal Lyndhurst 43627, bred by Arthur Johnston, sired by Darnley, a son of Imp. Indian Chief. Royal Lyndhurst's dam is Lady Lyndhurst.

F. H. Neil, Maple Avenue Stock Farm, Lucan, Ont., breeder of Lincoln sheep and Shorthorn and Jersey cattle, writes: "Our ad. in your valuable paper has brought us a great many enquiries for Lincolns, and has made us many sales. We still have some very choice ewes and rams for sale which will do credit to any stud flock. We have sold a larger number of Lincoln rams this past fall than we have sold in any fall before. We shipped twelve carloads of yearling and two-year-old rams, which were distributed over the States of Wisconsin, Colorado, Utah, New Mexico, Wyoming, Idaho, Nevada and California, and as they were a choice lot they have, without exception, given entire satisfaction. The Western demand for long-wool rams has been pretty good this past fall. We also have made some good sales of Shorthorn cattle, twenty-seven of which were purchased by our American cousins. We still have for sale some choice young heifers and bulls, mostly sired by Scotch bulls. We also have some very choice Jersey cows, heifers and bulls, all registered in the A. J. C. C., for sale at reasonable prices.

THE SYLVAN HERD OF SHORT-HORNS.

Messrs. R. & S. Nicholson, Sylvan, Ont., renew their advertisement of imported and home-bred Shorthorns, in this issue, in which they offer for sale 13 imported heifers, 2 imported bulls, and 7 yearling bulls and 20 heifers home-bred. This herd has been long established, and has been kept up-to-date by the importation from time to time of high-class animals of the most approved breeding and type, none but first-class imported bulls and those bred straight from the choicest strains having been used in the herd. A reference to the advertisement on page 87 will show the choice class of families represented in the herd, and as the Messrs. Nicholson are known to be discriminating breeders of the highest integrity and to be among the very best judges and handlers of cattle in Canada, and have made their selections for importation personally, the character of their offering may confidently be relied upon as being up to a high standard of merit.

NOTICE.

"SURE HATCH."—The annual catalogue of the Sure Hatch Incubator Co., Clay Center, Neb., and Columbus, Ohio, is one of the most complete and attractive we have yet seen. A post card will secure the reader a copy.

THE MOST NUTRITIOUS.

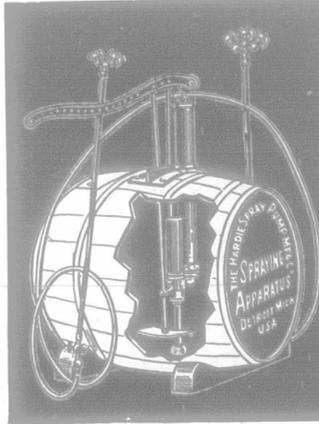
EPPS'S COCOA

An admirable food, with all its natural qualities intact, fitted to build up and maintain robust health, and to resist winter's extreme cold. Sold in 1 lb. tins, labelled JAMES EPPS & Co., Ltd., Homœopathic Chemists, London, England.

EPPS'S COCOA

GIVING STRENGTH & VIGOUR.

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



SPRAYING

That the Difference Between Success and Failure in Fruit Culture.

Big Fruit Crops always follow spraying with the wonderful

Hardie Spray Pumps

That's because they work with such a high pressure that the fog-like spray is forced into every hole and corner, and it stays there. These high-grade machines cost no more than the inferior kinds. Yet the results from their use are so much more satisfactory.

And They Work so Easy.

Our catalogue tells the whole story. It is free—send for it.

THE HARDIE SPRAY PUMP MFG. CO.

93 Sandwich St., Windsor, Ont., and Detroit, Mich.



H-T-T. Published monthly, 52 pages. Tells all about Hunting, Trapping and Raw Furs. Sample copy, 10c. Hunter-Trapper, Box G, Gallipolis, Ohio.

BARRED ROCKS

Bred from prizewinners. Write for prices. JAS. WIGHTON, Ontario County, Balsam, Ont.

BIG OIL REFINERY

makes certain

BIG DIVIDENDS and
BIG ADVANCE IN STOCK

Did you ever think of the enormous profits the Standard Oil Co. pays its stockholders in dividends from the refinery business alone?

This special issue of stock at 50c. a share is for the purpose of building a big oil refinery in Kern River without incurring a dollar's indebtedness.

This is the stock that has paid to its stockholders 27% on the investment in thirteen months—prospects of richer dividends to come.

The Public Thoroughly Aroused!
Large Orders Cabled from Europe,
Over-Subscription Inevitable.

Do you realize that there are several companies to-day whose only asset is a single refinery, paying handsome dividends and whose stock could not be bought for several dollars a share?

Did you ever stop to think that Eastern Consolidated would be cheap at \$5.00 a share with its immense oil properties, big production of oil, refinery of 60,000 barrels capacity and practically not a dollar of indebtedness?

With the extraordinary profits of oil refining added to the present large income the Eastern Consolidated Oil Co.'s stock is certain to jump to several dollars a share with the opening of spring activity.

We Will Refine 2,000 Bbls. a Day
from Our Own Wells in Kern River

50,000 barrels of Kern River Oil is worth about \$25,000. When it is refined it's worth nearly \$100,000.

High-grade illuminating oil from our 107 oil wells in Ohio sells for about \$1.25 a barrel—Thousands of barrels monthly.

Fuel oil is making a new epoch in oil industry—Greater fortunes than ever are to be made now in oil.

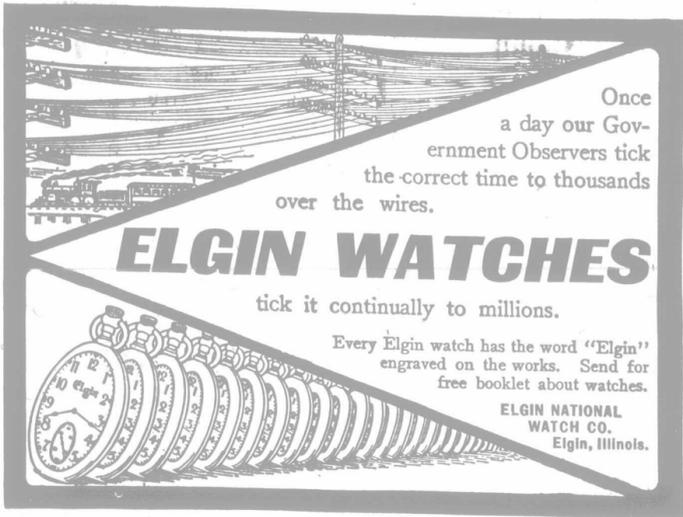
Eastern Consolidated Oil Co.

Thousands of dollars in trust funds invested past week in E. C. Oil stock—Trust companies know a million dollars in assets and practically no indebtedness mean absolute security.

Eastern Consolidated closely follows the footsteps of the Standard Oil Co.—Those who had the foresight to buy even a few shares of Standard Oil Stock in the early days are rich men to-day.

A Wall street syndicate of brokers has asked for lowest figures on the entire 100,000 share allotment. This offer was refused, as blocks of this size will not be sold to any one interest.

C. B. HEYDON & CO., Rooms 401 & 402 Manning Chambers Bldg., 72 QUEEN STREET WEST, Toronto, Ont.
Cor. Queen & Terauley Sts., Court House Sq.,



Once a day our Government Observers tick the correct time to thousands over the wires.

ELGIN WATCHES

tick it continually to millions.

Every Elgin watch has the word "Elgin" engraved on the works. Send for free booklet about watches.

ELGIN NATIONAL WATCH CO.
Elgin, Illinois.

GOSSIP.

Mr. John Lahmer, Vine, Ont., breeder of Berkshire pigs and B. Rock and Buff Orpington poultry, writes: "My ad. in 'Farmer's Advocate' is paying O. K. Am getting a great many enquiries (mostly for sows safely bred, of which I am sold out at present), and my sales are gradually increasing. Have several orders yet to fill. The Manitoba enquiry is increasing, and I expect to shortly get some orders from there."

W. G. Pettit & Sons, of Freeman, Ont., write us that their herd of imported and home-bred Shorthorns is now stronger than it has ever been. "Our last importation, which we expect to arrive home from quarantine January 26th, consists of one bull and twenty females. Amongst them are a number of very choice animals, both as regards breeding and individual merit. This importation was selected principally to be retained in the herd as foundation stock. Amongst the females we secured from Mr. John Young, Tilbouries, Maryculter, Scotland, a very fine four-year-old Roan Lady cow, got by Remus (73402), the sire of the great show bull, Choice Goods, and a two-year-old heifer of the same family, by that excellent sire, Scottish Prince (73593), of the Princess Royal family, and two heifer calves of the Roan Lady family, also by Scottish Prince, and out of dams by Remus, which are very promising, and another, of the same family, by Lord Methuen of the Killbean Beauty family, with Scottish Prince for its grandsire, looks like making a winner. The Roan Lady family have long been considered one of the best families in Scotland. At the Duthie-Marr sale of bull calves last October, one of this family, at eight months old, topped the sale at 320 guineas (\$1,632), and four calves of the same family at the sale, two of them only four and five months old, averaged \$822.40 each. At their sale in 1898, Pride of the Ring, a Roan Lady, topped the sale. We also got from Mr. Young three heifer calves of the Jilt family, all sired by Scottish Prince, and a yearling heifer of the Cruickshank Butterfly family.

From James Durno, Jackson, a good yearling heifer, of the popular Broadhooks family, got by Lord Lynedoch (a Miss Ramsden, and a noted prizewinner). Her dam, Beauty 2nd, is a grand cow and a first-prize winner, and her granddam, Groom Duchess 2nd, was full sister to the celebrated bull, New Year's Gift, which sold for 1,000 guineas.

From the late George Shepherds, Shethin, two beautiful heifers—a two-year-old Cruickshank Crocus and a yearling Waterloo Princess, a great favorite at Shethin, and got by the great sire, Cyprus.

From Messrs. Wm. Anderson, Saphock; Geo. Campbell, Harthill; James Durno, Westerton; John Granger, Pitcur; some choice heifer calves of popular breeding.

From W. S. Marr, Uppermill, the Princess Royal bull calf, Prime Favorite, got by Bapton Favorite (76080), one of the best bulls in Britain to-day. Next in his pedigree come the noted sires, Sea King, Athabasca, Heir of Englishman, King of the Isles. These are all sires known in Shorthorn history. The Uppermill Princess Royal family have produced some of the most successful sires in Britain. At Windsor, Prince Victor, a Princess Royal, was the sire of Royal Duke, champion at many leading shows, besides many other noted prizewinners.

We intend keeping Prime Favorite in the herd to assist our present stock bulls, Imp. Scotland's Pride, a Cruickshank Clipper, by Star of the Morning, and Imp. Scottish Pride, a Marr Roan Lady, by Scottish Prince, a Princess Royal. We feel we have three herd bulls

DISCARD Hamstraps and get "Sure-Go" Hamefastener. A 20th Century Idea. No Buckle. Outlasts Harness. Simple; quick; works like a charm; can work it with mittens on. 100,000 pre-engaged. Introduced through Mail Orders a while @ 50 cents a pair, prepaid. Order today. Send only current funds. Address, JOHN HAUSAM, 175 B RACINE, WISCONSIN, U. S. A.

FOR SALE



Two Clydesdale Stallions,

from two to nine years old, imported and home-bred. Are eligible for Canadian and American Studbooks. They are thick, blocky fellows, and good dark colors. Also four fillies.

PRICES EASY.

S. J. PROUSE, INGERSOLL, ONT.
PLEASE MENTION FARMER'S ADVOCATE.

ENORMOUS PROFITS!

THE GREAT WEST RANCHING CO'Y, LIMITED, OF INDIAN HEAD, ASSA., with an authorized capital of \$100,000.00, divided into 10,000 shares of \$10 each, wish to introduce to you the great secret of the rapid development of the ranching industry in the Canadian West, which is scarcely a quarter of a century old, and by which many have amassed immense fortunes.

This company, with a valuable location at Medicine Hat, is selling its shares at par as long as they last, and offers to be an unequalled opportunity for a right royal investment in the hands of reliable and competent men.

The dropping of a card to this company for their pamphlet on ranching will show you:

That ranching pays from 25% to 50% on investment.
The cost of raising and finishing a canvass.
A demonstration of the difference in the running expense of, say, 250 head and 3,000 head.

It furnishes some interesting statistics.
It gives you a brief history of ranching and the cowboy in the Canadian West.

Also a short biography of the Directors and Managers of this great enterprise upon which the essential point of success depends.

Don't delay if you wish to participate in the profits of this Company, as it is limited in two ways—as to your responsibility and the number of shares to be sold.

The Great West Ranching Co.
LIMITED.
INDIAN HEAD, ASSINIBOIA.

that should do us some good. We have now over 100 head, and as we expect quite a number of calves between now and spring, we will offer a few females for sale, both imported and home-bred, several young cows with calves at foot and bred again. We are also offering our entire flock of Shropshire sheep, about seventy-five head. See our ad. in this issue, and write for particulars, stating what you want to purchase. We are making a special offering for January and February.

Horse-breeders will not fail to note the illustrated half-page advertisement in this issue of the great Clydesdale and Hackney stud of Graham Bros., Claremont, Ont. The record of this firm as importers and prizewinners at the leading shows in America is a proud one, and is not ancient history, but is up-to-date, the championship for the best Clydesdale stallion any age being won by their grand horse, Young MacQueen, in 1902, at Canada's greatest show at Toronto, and at the International at Chicago, where the six head of Clydesdales shown by them won not only the stallion championship, but also the gold medal and the challenge cup given by the Clydesdale Associations of Great Britain and America, respectively, for the best stallion any age, the first prize for the best four animals the get of one sire, first for filly foal, and second for yearling stallion colt. A new importation has been received, and together with the former importations the home-bred contingent, the stud, as at present constituted, is claimed to be the equal if not superior to that of any period in its history. See the advertisement, and study its contents.

Volume 53 of the American Shorthorn Herdbook, for which we are indebted to the secretary and editor, Mr. John W. Groves, Springfield, Illinois, has been received at this office. It is a substantial volume containing 1,180 pages, with the pedigrees of 4,923 bulls and over 7,000 females, recorded by over 6,000 breeders.

SPRING STALLION SHOW

To be held under the auspices of the Canadian Horse Breeders' and the Clydesdale and Shire Associations, for

CLYDESDALE and SHIRE STALLIONS of all ages, at Grand's Repository, Toronto, on February 4, 5 and 6, 1903. LARGE PREMIUMS OFFERED.

A splendid opportunity for buyers from the Northwest to take advantage of the cheap rates to Ontario and select their stock. Entries close January 21st, 1903. Prize lists sent on application to

W. E. WELLINGTON, HENRY WADE, Chairman, Secretary, Toronto, Parliament Buildings, Toronto.

CLYDESDALES AYRSHIRES and POULTRY.



R. Ness & Sons, Howick, Que.

Importers of Clyde, Percheron and Hackney stallions, Ayrshire cattle, and poultry, have for sale 5 Clyde stallions, sired by Baron's Pride, Sir Everitt, and Royal Carrick, 1 Percheron, and 1 Hackney, winners. Ayrshires of both sexes, and poultry.

FOR SALE:

SEVERAL YOUNG Clydesdale Stallions

Also two aged Clydesdale stallions. Also one very fine young Hackney stallion, winner of first and sweepstakes prizes. At very low prices. Write for particulars and prices to

ROBERT DAVIES, TODMORDEN, ONTARIO. OR CITY ADDRESS, 34 Toronto Street, Toronto, Ontario.

Belgian Stallions

Just imported, the finest lot of draft horses that ever came to Canada. For sale:

EIGHT BELGIAN STALLIONS

Fully registered; immense size and wonderful action, ranging from 1,700 to 2,200 pounds; all dark colored. All broken to harness. Can pull easy from a road-cart to a six-story house. Don't mistake for the clumsy, sleepy Clyde. Extra short back, splendid high feet; no long hair on legs to be bothered with. The Belgian draft horse awarded the first prize at the Paris Exhibition, 1900, beating everything in that class, including Clydes and Percherons—beaten at their own home. Visitors cordially invited. Correspondence solicited.

"BARON DE CHAMPLONIS," Proprietor, Importer, DANVILLE, QUEBEC.

OAKLAWN FARM.

Greatest Importing and Breeding Establishment in the World.

Famous Prize-Winning Stud of

PERCHERONS and FRENCH COACHERS.

On hand upward of 500 HEAD.

Four Large Importations in 1902, forming, with our home-breds,

The Choicest Collection Ever Assembled, including Four of the Six First-Prize winners at the great annual French Show of the Societe Hippique Percheronne in 1902. At the recent

INTERNATIONAL LIVE-STOCK EXPOSITION

at Chicago, the Oaklawn Percherons achieved distinguished honors. The Champion Stallion and every First-Prize winner (except one) in the regular stallion classes were imported by Dunham, Fletcher & Coleman.

Notwithstanding the superior quality of our horses our prices are lower than can be obtained elsewhere in America.

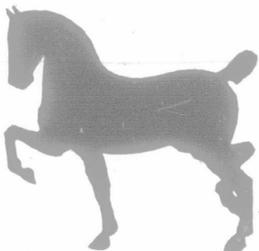
Catalogue sent on application.

DUNHAM, FLETCHER & COLEMAN, WAYNE, DU PAGE CO., ILLINOIS.

100 PERCHERON, SHIRE AND HACKNEY STALLIONS AND MARES



All good ages, good colors, with lots of size, quality and action, at prices below competition, on easy terms. Every stallion sold on a gilt-edge and responsible guarantee. At the Indiana, Ohio, New York State Fairs, and International at Chicago, on eighteen head won 178 first prizes, grand sweepstakes and gold medals in the last three years. SPECIAL INDUCEMENTS TO CANADIAN BUYERS.



LEW. W. COCHRAN,

607 WEST MAIN ST., CRAWFORDSVILLE, IND., U.S.A.

Truman's Pioneer Stud Farm BUSHNELL, ILL.,

Has for 24 YEARS been headquarters for the CHOICEST

SHIRE, PERCHERON, SUFFOLK AND HACKNEY STALLIONS.

Sixth importation for this season received November 10th.

20 to 30 Good Practical Salesmen Wanted

Best lot of draft stallions in the United States or Canada. Notwithstanding the superior quality of our horses, it is a fact that our prices are lower than can be obtained elsewhere in America. If there is no first-class stallion in your neighborhood please write us. For our 24th annual catalogue, etc., address

J. G. TRUMAN, MANAGER,
BUSHNELL, ILL., or om

GOSSIP.

Messrs. J. & W. B. Watt, Salem, Ont., write us: "We have recently sold from our herd of Shorthorns to Mr. F. Gedeke, Fordwich, the bull calf, Roan Sailor; to O. Fleming, Milverton, Royal Matchless, and the imported heifers, Lily of the Valley 21st and Rosa Hope 20th; to H. K. Fairbairn, Thedford, Village Maid, Matchless 16th and Matchless 34th; to C. E. Ladd, North Yamhill, Oregon, the cow, Minnie Salem, and bull calf Challenge Cup, Matchless 28th and Lula Stamford; to Alexander McTavish, Shakespeare, the imported bull, Nonpareil Fame; to G. B. Bristow, Rob Roy, the bull calf, Royal Mildred; to J. M. Harvie, Orillia, the heifer Matchless 32nd, and ten registered Leicester ewes; to Woody & Stewart, Newton, Iowa, the yearling bull, Coming Star; to W. J. Mason, Oliphant, the bull calf, to T. J. McIsaac, Drayton, the bull calf, to T. Lyons & Son, the cow, Sunshine, and bull calf. Our imported cattle are doing well. They are all offered for sale, and are worth looking after. The whole herd never looked better, and are wintering nicely."

NOTICES.

"MILLIONS OF TREES" is the title on the front cover of a very attractive catalogue issued by our advertiser, D. Hill, the veteran grower of evergreens at Dundee, Ill. Mr. Hill has been "at it" for more than forty years, and is known not only all over this land, but in many foreign countries. He is a native of Old England, where forestry is more intelligently understood than here. He grows all his stock from seed and develops them into thrifty, hardy trees. Those who deal with him once do so again and again as need arises. Write for his catalogue, and mention "Farmer's Advocate" when you do.

DEERING LINE IN CHILE.—The highest honors have just been awarded to the Deering line of harvesting machines at the Exposition of Agricultural Machinery of the Sociedad Agricultura del Sur in Chile, South America. The entire Deering line received first prize, and, in addition, the Deering Ideal Mower was honored by special mention. This exposition is one of the most important in South America, and honors from the Society under whose auspices it is given are greatly prized and eagerly sought after, as they are regarded by South Americans as guarantees of excellence.

Horse Owners

Look to your interests and use the safest, speediest and most positive cure for ailments of your horses, for which an external remedy can be used, viz.

GOMBAULT'S CAUSTIC BALSAM

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



SUPERSEDES ALL CAUTERY OR FIRING.

Impossible to produce any scar or blemish. The safest and best Blisters ever used. Takes the place of all blisters for mild or severe action. Removes all Bunches or Blemishes from Horses or Cattle. Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address THE LAWRENCE-WILLIAMS COMPANY, Toronto, Can.

J. M. GARDHOUSE, WESTON P. O., ONT.

SHIRE AND CLYDE HORSES, SHORT-HORN CATTLE, LEICESTER SHEEP.

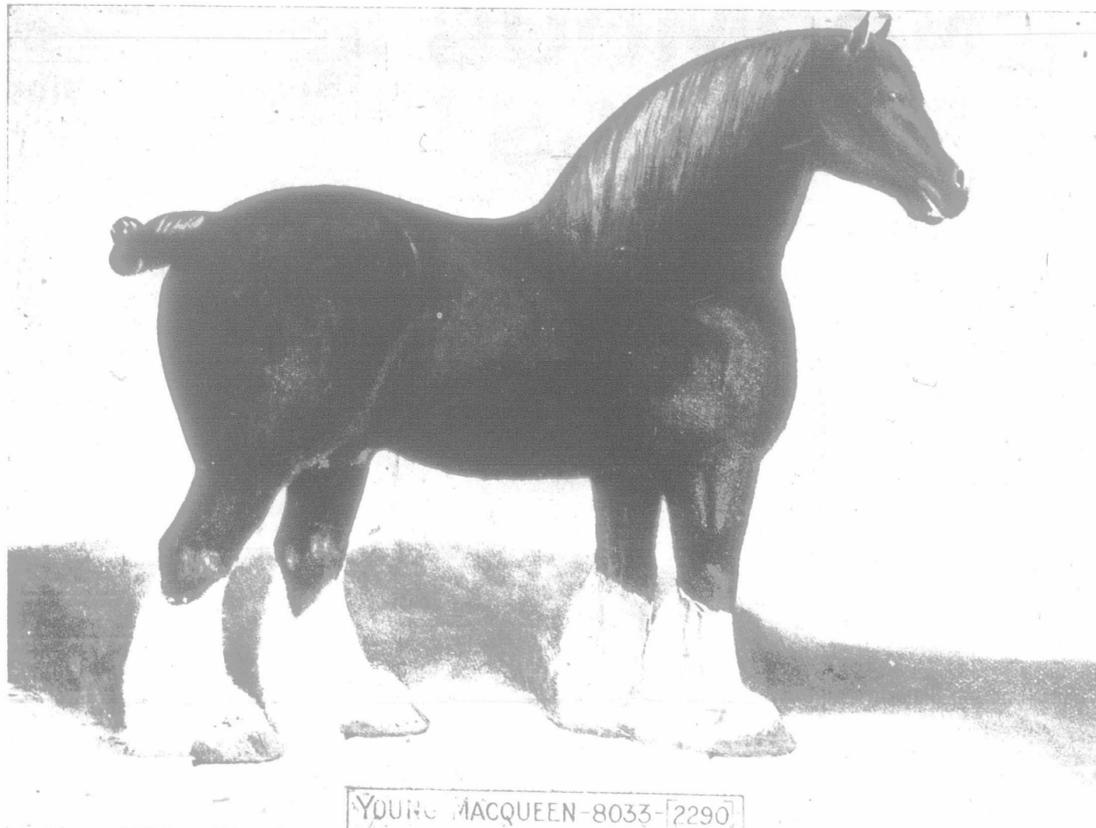
One imp. 4-year-old Clyde stallion, half-brother to the champion Hiawatha, for sale. Also Clyde and Shire stud colts. Newham's Duke, the gold and silver medal Shire stallion, in service. Chief Ruler, bred by W. S. Marr, Uppermill, heads the herd. Imported and home-bred cattle for sale. On Farm, 15 miles from Toronto. Weston station, G. T. R. and C. P. R., telephone and telegraph offices.

Clydesdale and Shire Stallions Wanted.

WANTED TO BUY—A number of Clydesdale and Shire stallions, from 3 to 8 years old; must be sound, good weights, and registered. Send particulars, with price asked, to

LOCK BOX 43, Listowel, Ont.

PLEASE MENTION FARMER'S ADVOCATE.



YOUNG MACQUEEN-8033-2290

YOUNG MACQUEEN 8033 [2290], --- Champion International Winner, 1892.

First Prize and Champion Over All Ages, Toronto Industrial Exhibition.

Champion Clydesdale Stallion at the International.

Winner of the Gold Medal given by the Clydesdale Society of Great Britain for the Best Clydesdale Stallion, any age.

First Prize, International, Four Years Old or Over.

Winner of the Challenge Cup given by the American Clydesdale Horse Society for the Best Imported Clydesdale Stallion, any age.

BESIDES THE ABOVE, WE HAVE OTHER WINNERS, BOTH IN CLYDESDALES AND HACKNEYS.

NEW IMPORTATION JUST ARRIVED.

GRAHAM BROS

Great Stud of
Clydesdales
and
Hackneys.

THE HOME OF THE WINNERS

The place where more high-class prize-winning and champion stallions have come from than any other stud in America. Our showyard record has never been equalled by any competitors, and we have now on hand and can show the finest collection of home-bred and imported stallions ever seen at our stables. We have had many good ones, but never so many with size, quality, action and good colors as at present. New importation just arrived. If you want the best, come and see them. They cannot be duplicated. Correspondence solicited.

GRAHAM BROS,
CLAREMONT, ONT.

Dalgety Bros.

LONDON, ONT.,

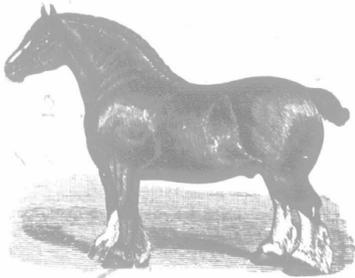
Largest Importers of Horses in Canada.

OUR fourth consignment for this season, per SS. "Parthenia," from Glasgow, of Clydesdale and Hackney stallions and fillies, is now on the ocean, and will be for sale at the

Black Horse Hotel, Toronto,

on and after Thursday, January 8th, 1903. This lot will include some extra good heavy horses. A few very high-stepping, well-bred Hackneys, full of substance and quality. Our motto: Small profits and quick returns.

DALGETY BROS., LONDON, ONT.



Imp. Clydesdales and Shorthorns

Messrs. Smith & Richardson,
COLUMBUS, ONT.,



Importers and breeders of Clydesdale horses and Shorthorn cattle; are now offering 14 stallions, 9 of them imported, including brothers of the world-renowned Baron's Pride, Hiawatha, and Royal Cairnton; also 13 mares bred from imported stock. Shorthorns, imported and home-bred, all ages. Stations:

Oshawa & Brooklin, G.T.R., Myrtle, C.P.R.

Long-distance Telephone, Columbus. Telegraph, Brooklin.



10 CLYDESDALE STALLIONS

FOR SALE:

OF ALL AGES, IMPORTED AND HOME-BRED.

Sired by such noted sires as Baron's Pride, Mains of Airies, Sir Christopher, Prince Thomas, and others. Among them is Prince Fragrant, the first-prize three-year-old at Toronto Industrial, 1902. Stables half mile from town. Parties desiring to purchase, please write or call upon

R. R. Station: Mitchell, G. T. R.

Wm. Colquhoun, Mitchell, Ont.



Clydesdales and Shorthorns

FOR SALE: Seven choice young stallions, and several young mares and fillies. Five young bulls and bull calves, and thirty-five excellent young cows and heifers. Mostly registered in the American Herdbook.

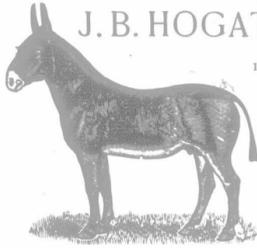
JOHN BRIGHT, MYRTLE, ONTARIO.

International Importing Barn, Sarnia, Ontario.

J. B. HOGATE, PROPRIETOR.

IMPORTER OF

Clydesdale and Shire Stallions, and Spanish Jacks.



I select every one myself, and it is conceded both in Europe and America that I do get the best ones that cross the Atlantic to America. My stallions are sired by the leading sires of Scotland; ages from two to four years. The Jacks are direct from Spain, and registered, two to four years old, 14 1/2 to 15 1/2 hands high. I pay cash for my stock. I buy where I can get the best. Write for particulars. Mention this paper when you write.

H. H. CALISTER, Manager and Salesman.

Hodgkinson & Tisdale

BEAVERTON, ONT.,

Breeders of

CLYDESDALE AND HACKNEY HORSES AND SHORTHORN CATTLE.

are now offering a number of choice mares and fillies, and a few young stallions, winners at Toronto; also a few nice harness horses. Shorthorns of both sexes for sale.

BEAVERTON P. O. AND STATION.



BAWDEN & McDONELL, EXETER, ONT.

IMPORTERS OF

Clydesdale, Shire and Hackney Horses

are now offering several imp. Clydesdale, Shire and two Hackney stallions, prizewinners in England, Scotland and Canada, and representing the best blood alive; also several choice Canadian bred ones. These animals are all true to type, and possess substance, quality, style and action.

GOSSIP.

The twentieth annual meeting of the Holstein-Friesian Association of Canada will be held at the Palmer House, Toronto, on Tuesday, February 3rd, 1903, at one o'clock p. m. The Executive Committee will meet at ten o'clock. Mr. H. Bollet, Cassel, gives notice that he will move that the date of the annual meeting be changed. Everyone interested in Holstein-Friesian cattle is invited to attend. To secure reduced rates, a single ticket to Toronto should be purchased and a standard certificate received from the agent. Members will please note that the annual fee for 1903 is due February 1st. A. Gifford, President. G. W. Clemons, Secretary.

DOMINION SHORTHORN BREEDERS' ASSOCIATION ANNUAL MEETING.

The 17th annual meeting of the above Association, for the report of business done, the election of officers and transaction of new business, will be held at Richmond Hall, 27 Richmond St. West, Toronto, Ont., on Tuesday, January 27th, at 11 a. m. Ask for standard certificate at your station to attend the Shorthorn Breeders' Association convention before leaving, to entitle you to reduced fare home. Henry Wade, Secretary.

ALEX. LOVE'S SHORTHORN SALE.

We would again draw attention to the Shorthorn sale of Mr. Alex. Love, Eagle, Ont., on January 22nd. Owing to the death of his wife and his own ill-health, Mr. Love is selling his entire herd. This sale will afford excellent opportunities for those who contemplate making a start in this popular breed, and also to those who desire to add to their present herds. An inspection of the herd will convince anyone that in it are combined, in a high degree, the three essentials: size, quality and good breeding. There are a dozen young cows that would be hard to duplicate in any part of the Province. Prominent among these is the grand show cow, May Queen (see cut on another page). Cleopatra is a grand breeder, thick-fleshed and smooth, sired by Reporter (imp.), and out of Cleopatra 1st (imp.). Lady Boston is a roan, of great substance and quality, and is proving herself a grand breeder. Lenore of Sylvan, a roan four-year-old, is a sweet, attractive young cow, a good handler, and gives promise of being an exceptional breeder. Myrtle 7th is an excellent roan three-year-old, nursing a grand, thick bull calf. She is not in high flesh, but is full of quality of large size, and a great milker. Rosa Duchess, Boston Queen, Myrtle 7th, Roan Lass, Miss Joan, are all young cows of merit. No mistake can be made in buying any of these cows. They are in calf or have calves at foot to the excellent sires that Mr. Love has been using in his herd, and are certain to prove good investments to the purchaser. In two-year-old heifers, there are six, in calf, and a superb lot they are. Howard Queen is a red two-year-old, of the Kinellar Mina family, by imported Aberdeen Hero. Her picture also appears in this issue. This heifer has an unbeaten record through the southern counties as a calf and as a yearling, and will be a topper in any herd. Rosy Maid, Queen Bess and Queen Ann, by the noted Abbotsford, are splendid types of the modern Shorthorn. Joan is a strong, smooth heifer, from the good cow, Miss Joan, and by Scottish Chief. The yearling heifers and heifer calves are a rare good lot, and will prove valuable in any herd. We would advise intending purchasers to attend this sale, and again state that this sale affords a rare opportunity to intending purchasers. The cattle are in good breeding condition, and all females of breeding age have been bred, and all the young things in the herd are sired by high-class sires. Since Mr. Love commenced breeding Shorthorns he has used nothing but the best of sires. Several of the young females are sired by the champion bull, Abbotsford, whose record as a sire is known to every lover of Shorthorns in America, and who has, until recently, been at the head of the herd of Mr. A. D. McGagan, of Rodney. The grand imported bull, Aberdeen Hero 28850, bred by Watson, of Achnac, and of the same family and breeding as the great Lord Ruff, has also been used in this herd, and many of the females are in calf to him. Royal Arthur has proven himself an unusually good sire, and as he is included in the sale he will be an undoubted attraction to those wanting a tried sire of good individuality. There are also a half dozen young bulls that are a capital lot, and at a time when there is a decided scarcity of bulls of quality these bulls should find ready purchasers on the 22nd. This herd has been bred and selected for usefulness, and are of the thick-fleshed, early-maturing kind so much in demand to-day, and they are remarkably good milkers. Eagle is in the County of Elgin, five miles from West Lorne on the E. E. & D. E. and Bismark on the main line of the M. C. P., and twenty-four miles west of St. Thomas, and there are good connections north, east and west.

Horse Health



is one of the most important things for every farmer to consider.

Dick's

Blood Purifier

will build up a run down horse.

It tones up the system, rids stomach of bots, worms and other parasites which undermine an animal's health.

50 cts. a package.

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Lameness

in all forms and Curb, Splint, Spavin, Sprained Cord, etc., all yield readily to and are permanently cured by

Tuttle's Elixir

Used and Endorsed by Adams Express Company.

Nothing equals it when used internally for Colic, Distemper, Founder, Pneumonia, etc.

Tuttle's American Condition Powder

—A specific for impure blood and all diseases arising therefrom.

TUTTLE'S FAMILY ELIXIR cures rheumatism, sprains, bruises, etc. Kills pain instantly. Our 100-page book, "Veterinary Experience," FREE.

Dr. S. A. TUTTLE, 66 Beverly St., Boston, Mass.

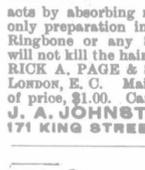
Beware of so-called Elixirs—none genuine but Tuttle's.

Avoid all blisters; they offer only temporary relief, if any.

LYMAN, KNOX & SON, Agents, Montreal and Toronto, Canada.

DR. PAGE'S ENGLISH SPAVIN CURE

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



To cure a Bruise or Strain quickly, proceed as follows: Wring out a sponge in boiling hot water and hold on the affected part, keeping the sponge hot by repeating the operation, for from 15 to 30 minutes. Rub dry and apply

ABSORBINE,

rubbing it in well. Use the hot water steaming process once a day and apply the Absorbine from three to four times a day. One or two days usually cures fresh cases. Absorbine is unequalled in removing lumps caused by a bruise or strain from animal or mankind. Vet. size, \$2 per bottle; for mankind, \$1 per bottle; delivered or furnished by regular dealers. Write for pamphlets. Manufactured by W. F. YOUNG, P. D. F., Springfield, Mass.

LYMAN, SONS & CO., Agents for Canada.

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Saw, Feed Grinders, Ensilage and Fodder Cutters, Huskers, Shellers, Sweep Horse Powers, Tread Powers, Wind Mills, etc. Write to-day for Free Catalogue.

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Snow won't break it.

Snow has no bad effect on Page Wire Fence. And the reason is that it is the strongest wire fence in the world. Mr. A. B. POTTER, of Montgomery, Assa., writes: "Dear Sirs,—Having purchased some 'Page' 11 strand wire fence from you in 1900 for pig yards, this fence was put along some trees that caused the snow to pile up two feet over the top wire, and the fence came out in the spring O. K., only a few staples drawn. Another fence under the same conditions on a neighbor's farm was badly broken and bent. I consider the Page a good fence."

When you buy fence, why not have the best?—The Page. Used on all Canadian Railways. 60,000 miles in use. Page Gates and Poultry Netting are as good as Page Fence.

The Page Wire Fence Co., Limited, Walkerville, Ontario. St. John, N.B. Montreal, P.Q.

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Holsteins and Improved Yorkshire Pigs AT ANNANDALE STOCK FARM.

We are now offering for sale several young bulls from 3 to 15 months; also heifers. The dams of these animals were bred by the late E. D. Tillson, and the Annandale herd has more than a provincial notoriety as milk producers. Therefore, if you wish to improve your stock, this is an opportunity. Write us for catalogue, or we will be pleased to have you call and inspect our stock. Our farm is in the corporation, within ten minutes' walk of M. C. R., Wabash, G. T. R., and T., L. E. & P. R. stations. Correspondence solicited.

E. D. TILLSON ESTATE, Limited, - - - TILSONBURG, ONT.

VALLEY HOME STOCK FARM SCOTCH SHORTHORNS Choice young bulls and heifers for sale from imported and home-bred cows. Also some young Berkshires. **S. J. PEARSON & SON,** om C. P. R. Station and Telegraph Office. MEADOWVALE P. O.

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A GOLD MEDAL
on The De Laval Separator Company,
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OUR MACHINES were awarded the ONLY Gold Medal on Cream Separators at the Pan-American, and our record there for clean skimming was in keeping with the award. The official records showed our average for the entire time to be nearly 50 per cent. better than competitors' machines.
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RIGID BECAUSE IT HAS A HARD WIRE UPRIGHT.

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\$10.00 GRAND CONCERT VIOLIN FOR \$2.95
Bow, tuning pipe, extra strings and Instructor Free. SEND NO MONEY. Just your name and nearest Express Office, and we will send you this grand violin for examination. When it arrives, call and examine it thoroughly, and when satisfied that it is equal in every respect to violins sold elsewhere for \$10.00, pay Express. Avoid our special price, \$2.95, and express charges, and secure the biggest and grandest bargain ever seen or heard of. This is a beautiful Stradivari model violin, made of selected wood with highly polished body, and of elegant and ebony finished trimmings. A splendid, clear-toned instrument of remarkable power and sweetness. Handsome, highly polished, black violin case with extra strings and tuner. For further particulars, \$1.15 extra. Order to-day.
JOHNSTON & CO., BOX 548, TORONTO.

GOSSIP.

LAST CALL FOR THE HAMILTON SHORTHORN SALE.

As the time for the grand joint sale of Shorthorns at Hamilton, Ont., draws near interest in the event deepens, and all indications point to a large attendance of the farmers and breeders from all parts of the Dominion and many of the States. The urgent need of improving the character of the Canadian cattle, if we are to hold our own in the markets and secure a fair return for the cost of feeding them, is being more generally acknowledged, and the desire and determination to take advantage of the opportunities for making improvement is, we believe, growing.

Mr. Harry Smith, Springhurst Stock Farm, Exeter, Ont., writes in reference to the animals contributed by him: "The choice of my consignment is the young bull, Springhurst, a very thick, deep, low-set, massive fellow, with plenty of scale and full of quality, and with a great coat of richly-colored roan hair. We consider this one of the best young bulls ever bred at Springhurst, and he is submitted to the public as a sample of what our young herd bull, Imp. Royal Prince =36092=, is doing as a sire, this being one of the oldest we have by him. The dam of Springhurst is a grand old roan cow that was the choice of the herd of the late Jas. I. Davidson at the time of her purchase for Springhurst, and she, in turn, was a granddaughter of the splendid cow, Mina 4th, that was exported to England, along with old Hospodar, and it is worthy of note that Mr. Duthie bought her first bull calf after landing in England, for service in his Collynie herd. The two heifers that we contribute to the sale were both prizewinners at local shows, and they are smooth, even heifers, of good size and first-rate quality."

Mr. J. M. Gardhouse, Weston, sends six females of superior breeding, including the big, sappy, imported roan two-year-old heifer, Bertha 5th, by Count Sunshine, bred by Mr. Duthie, a son of Count Arthur, sire of many of the highest-priced calves at the Collynie sale in 1898. Verbena's Dandy, a straight, smooth, breezy-looking four-year-old cow, is of the same family as the champion St. Valentine, sired by the Duthie-bred Prime Minister (Imp.); her dam by Imp. Eclipse, a Highland Society winner, also bred at Collynie, and her granddam by Royal Windsor, a first-prize Royal winner more than once or twice. A nicely-bred, handsome roan Crimson Flower heifer calf, five months old, will be sold with this cow, her own heifer calf being retained in the herd, the family being highly prized for its good breeding qualities. Cecelia 10th, a roan two-year-old heifer, of the favorite Cruickshank family of that name, well along in calf, is straight, smooth, and has every appearance of making a very useful cow. Her sire is a son of the Sittyton Secret bull, Imp. Sittyton Stamp. Queen's Diamond, a roan three-year-old of Mr. Crombie's Diamond tribe, her dam by a Kinellar Mina sire, son of Imp. Indian Chief, and her granddam by the Duthie-bred Defiance. She is a thick, short-legged, deep-fleshed young cow, with a nice roan c. c. at foot, sired by Imp. Red Duke, by the Marr Missie bull, Lord Hampton. Smithfield Lass is a roan two-year-old of Mr. Linton's prizewinning Sowerby tribe, with two choicely-bred Scotch sires on the top of her pedigree, bred at Collynie and Kinellar. She is a beautiful heifer, round, level, smooth and deep, with a strong back, good heart-girth, grand carriage, and is a choice heifer all 'round.

Mr. Geo. Amos consigns two richly-bred young females. The Marr Beauty, Blue Bell, a roan two-year-old, has for sire Rustic Prince, by Scottish Prince 4th, by the Cruickshank Secret bull, Scottish Prince, dam by Imp. Royal Bampton. This heifer is thick-fleshed and exceptionally smooth in form, while her breeding readily commends her to favor. Rosedale, a red four-year-old Kinellar Rosebud, is a fine, thick, smooth young cow, and is proving herself a good breeder, her last year's calf winning first at Guelph, under six months, and at three other fairs. Her sire was a son of the wealthy-fleshed prizewinning and champion bull, War Eagle, full of the best of Cruickshank blood, and her granddam was a son of Imp. Indian Chief from a Cruickshank Ceelia dam. Both these are bred to Village Captain, of the favorite Sittyton Village Blossom family, a son of the prize bull, Imp. Knuckle Buster, and winner of five firsts and two sweepstakes last fall.

Mr. W. D. Platt has been generous, as

(Continued on page 87.)

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

is offering Yorkshire sows, in farrow, at \$15 to \$20; sired by 2nd-prize boar at Toronto. Suffolk Down rams and ewes, bred close to imported stock, at \$10 to \$15. Two Polled Angus bulls at \$75.



ABERDEEN - ANGUS.

For Sale: Laird of Tweed-hill 29486. A prizewinner, 4 years old; 1-year-old bull and two bull calves, sired by him and out of winners.

W. HALL, Washington P. O. Drumbo Station.

High Park Stock Farm Galloway Cattle. A few choice young heifers and bulls for sale. Inspection invited. om **SHAW & MARSTON (Late A. M. & R. Shaw),** P. O. Box 294, BRANTFORD, ONT.

HEREFORDS, HEREFORDS

Am offering for sale Herefords of up-to-date breeding, either sex, and all ages; also a good 24-months-old bull; grand stock getter. Write or call on

WALTER BENNETT, CHATHAM, - - - ONTARIO.

CHOICE HEREFORDS

A. S. HUNTER, DURHAM, ONT., has for sale the following high-bred Herefords:

- 25 Young Registered Bulls.
- 30 Young Registered Heifers.
- 10 Young Registered Cows.

The above stock are in good condition, and are bred from imported and American-bred sires. Ranchers will do well to inspect this offering. om

SALE! INGLESIDE HEREFORDS.



Young bulls, cows and heifers of most up-to-date type and breeding. If you want good Herefords at good-value prices, send for illustrated catalogue, and state requirements. Also 3 and 4 bred Hereford cows and heifers. om **H. D. SMITH,** Compton, Que.

The Sunny Side Herefords.



Imp. Sunny Slope Tom 1st at head. We have the best of blood lines, also individual merit. For sale: 8 cows, from 3 to 7 years old; 10 heifers, bred and safe in calf or ready to breed; 1 bull, 2 yrs.; 1 bull, 1 yr., and 12 young bulls ready for service, by our stock bull. Visitors always welcome. om **O'NEIL BROS.,** Southgate, Ont. Alderton station, L. H. & B. Lucan station, G. T. R.

HOLWELL MANOR FARM
SPECIAL BARGAIN

Fifty head steers, 2 and 3 years old; average weight about 1,100 lbs.; short feeders. For sale immediately, to make room.

D. G. GANTON, ELMVALE, ONT. om

GEO. ISAAC, BOMANTON, ONT., om

Scotch Shorthorn Cattle

Have imported, this year, 68 head of Shorthorns—6 bulls and 62 females. Twenty-seven head left quarantine 11th Sept., 1902. Intending purchasers should see this stock or correspond. om

BOMANTON P. O., COBOURG STATION, G.T.R.

SHORTHORNS.

Dark red bull calf, Blue Ribbon 2nd, sired by Blue Ribbon (Imp.) 17095 (63703), dam by Royal George (Imp.) (64728). Bull calf, 6 months old, dark red; also yearling and two-year-old heifers. om

JOHN McFARLANE, - DUTTON, ONT.

SHORTHORNS FOR SALE.

Five young bulls of choicest breeding and quality; also forty cows and heifers, a very choice lot. Herd headed by Bandoleer =10106=.

F. MARTINDALE & SON, York, Ont. Caledonia Station.

ARTHUR JOHNSTON,

GREENWOOD, ONTARIO, CANADA,

Offers at private sale young

SHORTHORN BULLS AND HEIFERS

of the choicest Scotch breeding. Quality unsurpassed. om

Mercer's Scotch Shorthorns

I am now offering four nice red bulls, from 13 to 10 months old; a number of young cows and heifers, in calf and calves at foot. For breeding, refer to Christ-mas number. Prices right. Visitors met on shortest notice. Drop a card or wire before coming. Farm one and a half miles from C. P. R. station, Markdale, Ont. om **THOS. MERCER, Proprietor.**

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is to plants—whether Fruit, Grass, Grain or Roots—what Oats or Corn is to the horse. No other plant food is so essential to plant growth and crop yield.

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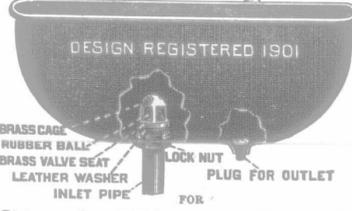
No duty—purely Canadian. Increases the production of milk, flesh and eggs. As an aromatic for horses, it is perfection.

Sample 3-lb. package, 30 cents. 50 lbs., \$3.00; 100 lbs., \$5.00.

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Stock Water Bowls

DOUBLE AND SINGLE. PAINTED OR GALVANIZED.

Circular and quotations given. Write:
A. M. RUSH, HARRISTON, ONT.

Dehorned Cattle

Rest easy and show better milk and beef results. The job is quickly done with the

KEYSTONE DEHORNER.

Cuts four sides at once. Leaves it smooth and clean cut, no breaking or crushing of horn. More widely used than all others. Fully guaranteed.

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FUR RUFF \$1.99

Worth \$5.00. Send no money. Just your name, address and nearest express office and we will send this Ruff for examination. When it arrives call and examine it thoroughly, and if found perfectly satisfactory pay the express agent \$1.99 and express charges and secure the greatest bargain in fur ever offered. This magnificent Ruff is 4 feet long, 5 inches wide, and made of fine quality glossy black Alaska Seal, well padded and ornamented with six full tails. Warm, stylish and very fashionable. Going fast. Order-to-day. Send \$1.99 with order and we will forward the Ruff by mail, postpaid. Johnston & Co., Box 346 Toronto.

TALKING DOLL

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Wonderful speaking doll. Laughs, cries and talks, says "Mamma" and "Papa" as plainly as any living child. She is a beauty, too, prettier than any baby you ever saw. Has rosy cheeks, laughing eyes, real pearly teeth and long golden ringlets. Get her and you will have the only real talking doll in your part of the country. Not one cent to pay. All we ask you to do is to send 10c. each only 15 packages of Lemon, Vanilla and Almond Flavoring Powders. One package equals 20c. worth of Liquid Flavoring and is far better. Nothing sells like it. Everybody buys. Write to-day and we will send you the Flavoring Powders postpaid. You can easily sell them and earn this wonderful Speaking Doll in a few minutes. **The Home Art Co., Dept. 563, Toronto, Ontario.**

GOSSIP.

(Continued from page 86.)

usual, in contributing cattle of high-class breeding and individual merit, comprising 21 head, of which 17 are imported Scotch-bred animals, including the richly-bred young Missie bull, Diamond Prince, a roan, bred by Mr. W. S. Marr, Uppermill, sired by Bapton Diamond, sold last spring for 1,000 guineas to Mr. Hanna, of Ohio. The dam of Diamond Prince is Missie 155th, by Captain of the Guard, bred by Mr. Cruickshank, a Cicely, by a Clipper bull. This young bull has fine form, type and quality, is very much the pattern of Wanderer's Last at the same age, and is included in the sale only to satisfy the people that a select lot of cattle is being offered. Among the females are representatives of the following favorite families: Missies, Nonpareils, Miss Ramsdens, Broadhooks, Augustas, Cecelias, Jilts, Bruce Fannys, Crimson Flowers, and the Duke of Richmond's Marchioness tribe. The imported animals were selected by Mr. Platt in person from such sterling Scotch herds as those of Lord Rosebery; Durno, of Jackston; Law, of Mains of Sanguhar; Robertson, of Haugh of Ballechin; Law, of New Keig; Turner, of Cairnton; Macdonald, of Aberfeldy; Cameron, of Balnakyle, and others. Many of these were prize-winners in Scotland; all were sired by high-class bulls of the choicest breeding; a number have young calves at foot, and most of them have been bred to first-class sires, making them very desirable investments for founding or strengthening herds. Individual reference is out of the question, owing to limits of space, but, as samples, we may mention Marchioness 23rd, coming two in February, sired by Lord Lovat, of the Broadhooks tribe, by the great sire, Royal Star. This is a beautiful heifer, with grand feminine character and heavy flesh. Lucy, bred by Mr. Durno, coming two in May, is a grand daughter of the choice cow, Lady Douglas, imported by Mr. Platt, and sold to the late Mr. Rumsey. She is by a son of Scottish Archer, of the Augustas tribe, and she is a credit to her family. The Broadhooks heifer, Airy Duchess 3rd, a red, will be two in March, and is sired by Pride of All, by the \$6,000 bull, Brave Archer. She will compare well with the best, and is a worthy representative of this noted family, now one of the most popular in Scotland. Dalmeny Nonpareil, bred by Lord Rosebery, is of the choice Cruickshank family of that name, with the Collynie-bred Scottish Sailor for sire. She is in her four-year-old form, and is a grand breeding cow. Her grandam was the best Nonpareil cow in the dispersion sale of the late Sylvester Campbell. She is well along in calf to the show bull, Villager 86177. Boyne Lady, a red three-year-old cow, bred by Mr. Turner, Cairnton, of Boyndie, has for sire Fashoda, by the Clipper bull, Cincinnati. She is among the best things Mr. Platt has imported, having rare substance and quality, and a red b. c. at foot. Spicy Louise, a red two-year-old, of the Miss Ramsden family, bred by Durno, and sired by Spicy King, of the Marr Goldie tribe, is among the good ones, and will be due to calve before the sale. Pandora, of the same family, was the best heifer at Mr. Durno's sale last year, and will doubtless be considered one of the very best in the importation. She is a daughter of the prizewinning bull, Lovat Champion, used in Mr. Duthie's herd, and sold by him at a long price to Mr. A. Chrystal, of Michigan. The grand roan cow, Duchess of Sanguhar 3rd, winner of first prize at Toronto last fall in the three-year-old section, is included in the sale. She was sired by Scotch Thistle, second pick of the Uppermill calves at sale of '97, a Missie bull of fine character, and her dam was by the great Star of Morning, and grandam by Prizetaker, both bred by Mr. Duthie. The four-months-old bull calf, Missie's Hero, will be sold with this cow. She is a cow of lovely character, grand constitution, and first-class quality. Last, but far from least, we mention the grand roan Crimson Flower cow, Crimson Fuchsia 13th, also included in the sale as evidence of the superior character of the offering. She was the first-prize cow and senior sweepstakes female at the Toronto Exhibition last fall, and is a typical modern Short-horn in every respect, and is beautifully bred, having four imported Cruickshank sires at the top of her pedigree, and tracing to the excellent imported Scotch-bred cow, Crimson Flower, by Refiner. She has a nice roan c. c. at foot, sired by Crimson Ribbon, a son of Imp. Blue Ribbon, and will be a favorite number in the offering.

The sale, coming on the day following the annual meeting of the Short-horn Breeders' Association at Toronto, will afford an excellent opportunity for breeders to take in the two events on one trip, as Hamilton is less than an hour's run from Toronto, and the train service is the best in Canada.

J. & W. B. WATT
 BREEDERS AND IMPORTERS OF
Shorthorns, Clydesdales and Berkshires

We breed our show cattle and show our breeding cattle. The imported bulls, Viceroy and Scottish Peer, head the herd. Imported and home-bred cows and heifers for sale. A few choice young bulls on hand. Our herd at Toronto won three firsts, a second and third out of five herd classes.

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 Salem P. O. and Telegraph Office. Elora Sta., C.P.R., G.T.R.

W. G. PETTIT & SONS
 FREEMAN, ONT., CAN.
 Importers and breeders of
Scotch Shorthorns and SHROPSHIRE SHEEP,

make special offering for January and February.

2 imported bulls coming 2 years old, 4 bull calves, from 8 to 12 months old, from imported sire and dam.
 6 bulls, 10 mos to 2 yrs., by Imp. sire.
 Imp. and home-bred cows and heifers of all ages.
 Our entire flock of Shropshire sheep, 75 head.

R. & S. NICHOLSON
 Sylvan P. O. Parkhill Station, Ont.
 Importers and breeders of
SHORTHORNS

Have for sale:
 13 IMPOTED HEIFERS,
 2 IMPOTED BULLS,
 7 YEARLING BULLS,
 20 HEIFERS (choice).

Home-bred herd composed of Nonpareils, Minas, Clementinas, Cruickshank Lovelys, Shethin Rosemarys, A. M. Gordon's Estelles, Miss Symes, etc.

SHORTHORNS FOR SALE:
 10 choice Shorthorn heifers and 10 young bulls, of choicest quality and breeding, at reasonable prices.
 G. A. BRODIE,
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Shorthorns, Clydesdales and Leicesters

FOR SALE: Young animals of both sexes always on hand for sale; bred in the purple, and as good as the best. 20 Leicesters, both sexes, all ages.

WM. McINTOSH, Burgoyne P. O. Port Elgin Sta.

E. JEFFS & SON, BOND HEAD, ONT., breeders of Shorthorns, Leicesters and Berkshires, have for sale 10 young bulls, 7 heifers, 5 boys, 11 young sows and suckers, not akin; 21 rams and 20 ewes, various ages. Write for prices, or come and see stock.

MANITOULIN SHORTHORNS
 Edwin Beck, Gore Bay, Manitoulin Island,
 Breeder of SCOTCH and SCOTCH-TOPPED SHORTHORN CATTLE. A few choice animals.

SCOTCH-BRED SHORTHORNS.
 Combining size and quality, at "let-live" prices. Bulls from 6 to 15 months old, reds and roans, including the Sultana imported bull, = Gold-finder =, now at the head of herd; also several young cows and heifers.
 L. E. WEBER,
 Co. Waterloo. Hawkesville P. O., Ont.

SHORTHORNS. A number of choice young bulls, heifers and cows, for sale.
A. M. Shaver, HAMILTON Sta.
 Ancaster P. O., Ont.

Shorthorns and Shropshires. Scotch and Scotch-topped families of Shorthorns. Young bulls and heifers for sale. Shropshires, bred direct from imported stock; Mansell and Cooper strains. **BRUCE BROS.**
 Stouffville Station, G. T. R. o Gormley Ont.

Choice Shorthorns and Shropshire Sheep.



I am now offering bulls from 8 to 16 months old. Heifers of all ages, some in calf. Present stock bull, Roan McKay = 37867 =.

CHAS. CALDER,
 Brooklyn.

SCOTCH SHORTHORNS AND SHROPSHIRE.
 Present offering:—Five young bulls and 4 yearling heifers, and a few cows. Shropshires of both sexes and all ages.

om
BELL BROS., Bradford P. O. and Station.

Shorthorns, Cotswolds & Berkshires

FOR SALE: Bull calves, 2 to 6 months old. A few young cows and heifer calves. Ewe lambs and yearling ewes. Young pigs of the long bacon type, from 2 to 6 months.

F. BONNYCASTLE & SON,
 Campbellford, Ont.

SCOTCH SHORTHORNS.
 Three bulls, 7 to 13 months old, and several choice heifers of popular strains; also S. G. Dorkings. om
HARRY SHORE, The Firs, White Oak, Ont.

SHORTHORNS. Lady Fannys and Beautys for sale 5 bulls, from 6 to 14 months old; 7 heifers, from 1 to 3 years old, some of them in calf to Prince Eclipse 33049. om
James Caskey, Tiverton P. O., Kincardine Sta.

SHORTHORNS and CLYDESDALES.
 We have for sale five bull calves, from 8 to 24 months, from imp. sire and dam; also six extra good stallions, from two to six years old.

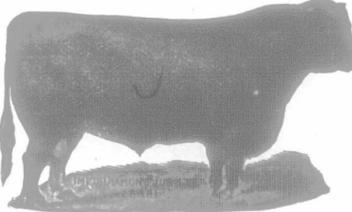
JOHN MILLER & SONS, BROUGHAM, ONT.
 CLAREMONT STATION, C. P. R. om

Bulls! Shorthorns Bulls!
 IMPORTED and CANADIAN-BRED

ORDERS TAKEN FOR BULLS AND HEIFERS, COTSWOLD AND LEICESTER SHEEP, YORKSHIRE AND BERKSHIRE PIGS, AND DELIVERED TO ANY PART OF MANITOBA OR THE NORTHWEST.

Write for prices. Satisfaction guaranteed.

Goodfellow Bros., Macville, Ont.



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

100 SHORTHORNS TO SELECT FROM. Herd bulls (imp.) Diamond Jubilee = 23861 = and Double Gold = 37852 =. We offer for sale a choice lot of young bulls, cows and heifers of all ages. Also one 3-year-old stallion, and one 4-year-old brood mare. Farm one mile north of town.

S. DYMENT, BARRIE, ONT.
 Breeder of Scotch Shorthorns
 Imported Morning Star at head of herd.

HIGH-CLASS SHORTHORNS.
 Heifers and bulls of various ages. Price reasonable.
MAC CAMPBELL, Northwood, Ont.

Maple Grange Shorthorns
CLARETS, LAVINAS AND BEAUTYS.
 Sired by such Scotch bulls as Commodore 31025, Scottish Bard, Imp. Baron's Heir, 18 heifers, 12 bulls, a number of cows (heavy milkers), to be sold well worth the money.
R. J. DOYLE,
 Owen Sound P. O. and Station and Port.

Spring Grove Stock Farm
 Shorthorn Cattle and Lincoln Sheep.



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

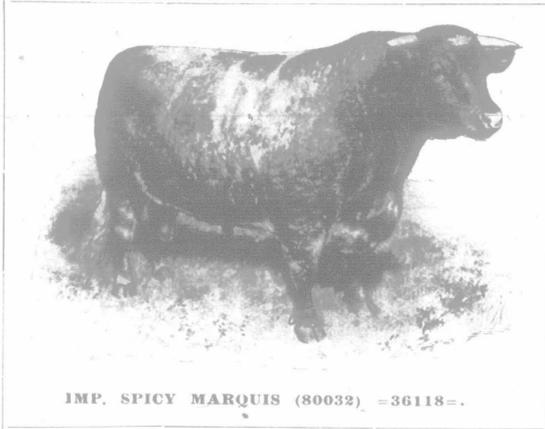
T. E. ROBSON, ILDERTON, ONT.
SHORTHORNS (IMP.)

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

EDWARD ROBINSON, MARKHAM P. O. & STN.

RIVER FARM SHORTHORNS
 I am now offering 6 choice young bulls, from 8 to 16 months old, sired by Lord Lavender 28855. They are rare good ones. Price right.
H. PARKER, DURHAM P. O. and STATION.

TROUT CREEK HERD OF

SHORTHORNS

IMP. SPICY MARQUIS (80032) = 36118.

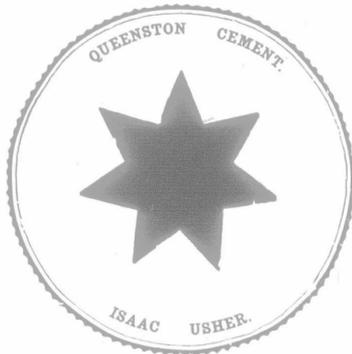
Spicy Marquis (imp.), bred by W. S. Marr, first at London, 1901, first and champion at Toronto, 1902, at head of herd, assisted by Baron Beaufort, bred by Lord Lovat, of his famous Broadhooks family. This is the highest-priced Scotch Shorthorn bull imported to Canada. This herd in 1901 was awarded ten championship prizes out of a possible fourteen. They were exhibited at Toronto, Ont.; Pan-American, Buffalo; New York State Fair, Syracuse, and Illinois State Fair, Springfield, and gained first prize at each place. They were only exhibited at Toronto in 1902, and were awarded first prize, also championship for senior bull and female. Seventeen of the awards given to Shorthorns at the great International at Chicago, 1901, were on cattle formerly owned at Trout Creek Stock Farm. Three of the leading show bulls in United States circuit for 1902 were imported by me, including the senior champion. And the senior champion female at the Chicago International Exposition, as well as about 15 other prizewinners at that show, also supplied by us.

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

JAS. SMITH, W. D. FLATT,
Manager, 378 Hess St. S.,
MILLGROVE, ONT. HAMILTON, ONT.

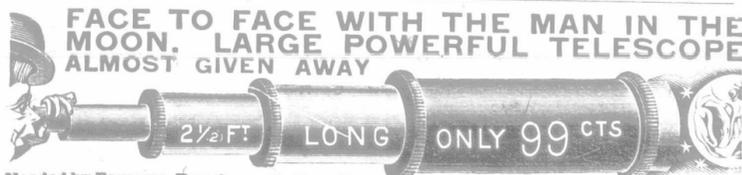
Going to Build?

A new house, barn, silo, concrete floor, or any other such work? If so, use

Queenston Cement

THE old brand made by a new process. No better cement made. All who contemplate using cement should first inspect the different structures built of the different kinds of cement, and then they would know which is best and cheapest. We especially request those interested to ask our many patrons about the new process Queenston Cement used during the latter part of last season. Do not be misled by statements from those who sell the goods most profitable to themselves. Write for prices, estimates and full particulars. We can save money for you when building.

ISAAC USHER,
QUEENSTON, ONTARIO.



Needed by Farmers, Ranchmen, Sailors, Hunters, Tourists, etc. Of use to everybody. A great source of Amusement and Instruction. Made by the largest Telescope Manufacturer in the World. Measures nearly 3 ft. when open. Fitted with powerful lenses, carefully ground and adjusted with scientific exactness. Brass bound tubes, both ends protected by brass caps. Telescopes last year and all our customers were well pleased with them and acted as their champions. William Sites, Blackville, N.B., writes: "Enclosed find \$2.00, for which send me two more Telescopes. I am very much pleased with the one I got, and some friends of mine want one like it." Alva Froom, Heckston, Ont., says: "I like it." Beattie Gibson, Chilliwack, B.C., writes: "Your 99c. Telescope is the best I ever saw. I will buy one." Telescopes of this quality, formerly sold at from \$5.00 to \$10.00. Our Special Introductory Price only 99c. postpaid. A Grand Bargain. Don't miss it. Mail Order Supply Co., Dept. F.A., Toronto.

PLEASE MENTION THE FARMER'S ADVOCATE.

GOSSIP.

The value of the live stock of all kinds received at Chicago last year reached the grand total of \$321,000,000, or over \$29,000,000 more than ever in one year before.

Walter James, of "Maple Grove" stock farm, Rosser, Man., breeder of Shorthorn cattle, visited the recent Fat Stock Show, Guelph, Ont., and afterwards took a look over several herds of Shorthorns in Ontario. Mr. James intends adding new blood to his stock, which already enjoys an enviable reputation.

The Scottish Farmer reports the death, at the ripe old age of seventeen years, of a famous Cheviot ewe named "The Gimmer," who had a long record of show-yard successes and whose progeny numbered a score—eight pairs of twins and four singles. The shepherd devoted nine verses of poetry to recording the achievements of "The Gimmer" and his grief at her death.

The Breeders' Gazette publishes a list of leading sales of pure-bred cattle of beef breeds in the United States and Canada in 1902, at which 6,152 head of Shorthorns sold for \$1,602,023, an average of \$260.40. Of Herefords, 2,597 head sold for \$680,012, an average of \$265.70. Aberdeen-Angus, 1,065 head for an average of \$259.80, and 206 head of Galloways at an average of \$185.80.

Mr. Bowen-Jones had the courage of his convictions when, at the Smithfield Show, he gave the championship of the sheep section to a long-wool breed. The Lincoln is not in the same boat with the Southdown, for instance, as a mutton producer, but value per pound is not a correct comparison. It has its place to fill as a mutton-producer, and the grand pen from Mr. Dudding's flock of Lincolns at Riby were worthy winners in competition with all breeds.

The Royal Agricultural Society of England has at last decided to adopt the single judge system, and the show is to be permanently located in London; \$32,500 is to be offered in prizes. This is \$8,225 more than the sum of the prize list at the Royal Show at Carlisle last year, and does not include the champion prizes and those contributed as specials by the various breed societies. With a fixed home and responsible judges the "Royal" will be up-to-date and in keeping with the progressive spirit of the age.

Messrs. Alex. Hume & Co., Menie, Ont., ordering change in their adv't of Ayrshires, write: "Our stock is doing remarkably well. We have just closed one of the best cheese seasons we ever had. Cows, including several two and three year old heifers, averaged a trifle over 6,000 lbs. milk in cheese factory, besides what went to the creamery. We will sell the bulls advertised at very reasonable prices, as we have to pull down our barns and stables in the early spring to prepare for new buildings and remodeling old ones."

Mr. Reid, manager Isaleigh Grange stock farm, Danville, P. Q., in ordering a change of ad., writes: "Our last year's sales of Ayrshires and Guernseys were more than satisfactory, and we attribute this chiefly to your valuable paper. We are offering a few excellent heifer calves, of great promise and worthy of attention, especially Lady Bates and Mary Ann 9th, dropped in August last, and others from superior dams and of different ages. We compliment you on the Xmas number of your paper, as the best yet, and wish you a prosperous New Year."

The American Jersey Cattle Club has resolved to present a working herd of Jerseys at the St. Louis World's Fair next year, and a committee appointed to make the arrangements has organized. Arrangements have been made for the leasing of a farm near St. Louis, where a selection of cows will be assembled some months before the commencement of the test in order that they may be fully acclimated. The committee will commence forthwith to make selections of cows for the test, and although it is not yet known whether there will be a competitive dairy test in connection with the St. Louis fair, the Jersey Cattle Club will, if such is not provided for, maintain a working dairy during the show to demonstrate what good cows of the breed are capable of doing in the way of milk and butter production.

SHORTHORNS. Imported and Canadian-bred. I have for sale eight young bulls from 8 to 12 months old; also a few choice heifers, all got by Captain Mayfly (Imp.), first-prize aged bull at Toronto and London in 1902.

JAS. A. CRERAR, Shakespeare, Ont. om

SHORTHORNS FOR SALE!

Six good bulls, fit for service; also females. Imp. Prince William at head of herd. om

JAS. GIBB, - - BROOKSDALE, ONT.

SHORTHORN BULLS FOR SALE: A choice lot of Shorthorn bulls from 10 to 16 months old, sired by Imp. British Statesman (63729) = 20833 =; and cows of the Mara family. They must be sold at once. Prices away down to suit customers. FITZGERALD BROS., cm Elmvale Station, G.T.R. Mount St. Louis P.O.

CHARLES RANKIN, WYEBRIDGE, ONT.

Importer and breeder of
Shorthorns, Oxford Downs and Berkshire Pigs
Young stock always on hand. o

**QUEENSTON HEIGHTS
SHORTHORNS**
SCOTCH AND SCOTCH TOPPED

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

HUDSON USHER,
QUEENSTON, ONT. om
FARM 3 MILES NORTH NIAGARA FALLS

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

Shorthorns, Berkshires and Leicesters.
FOR SALE: Choice two-year-old heifers, well gone in calf; also yearling heifers, bull calves. Boars and sows fit for breeding, and young pigs. om
ISRAEL GROFF, ALMA, ONTARIO.

HAWTHORN HERD
of deep-milking Shorthorns for sale. Six young bulls of first-class quality and breeding and from AI dairy cows. WM. GRAINGER & SON, om Lonsdale, Ont.

Lakeview Shorthorns. Herd represented by such noted families as Stamford, Minas, Marr Floras, Crimson Flowers, Village Girls, Bucan Lassies, and Lavinias. Stock of both sexes and all ages for sale. om
James Bowes Strathairn P.O., Meaford Ont.

GREEN GROVE SHORTHORNS:
I am now offering a few heifers, Clarets, Floras, and one Missie; also a choice year-old bull, from Aberdeen of Markham. om
W. G. MILSON, GORING P.O. and MARKDALE STATION.

STOCK BULL
FOR SALE.

Have decided to offer for sale my noted stock bull, Spicy Robin = 28250 =, winner of second prize at Toronto and London exhibitions, 1902. Also a number of cows and heifers for sale. o
GEO. D. FLETCHER, Binkham P. O.,
Erin shipping station, C. P. R. Ont.

JOHN DRYDEN & SON,
BROOKLIN, ONTARIO,

BREEDERS OF
CRUICKSHANK SHORTHORNS AND CHOICE SHROPSHIRE SHEEP.

40 shearing rams and 30 shearing ewes of extra size, substance and quality now for sale. Prices are interesting. Visitors welcome. o

BELLEVUE SHORTHORNS.
Both sexes. Imported and home-bred. All ages. Prizewinners at home and abroad. om
EDWIN BATTYE, Gore Bay P. O. and Port-
MANITOULIN ISLAND.

CHOICE SHORTHORNS.

We are now offering 12 heifers from 6 months to 2 years of age, and 7 bulls from 6 to 10 months old, some of them extra choice and prizewinners—a low down, thick lot. Also, Yorkshires. om
WM. McDERMOTT,
Living Springs P. O.,
Fergus Station.

Shorthorns and Leicesters.
Herd Established 1855.

A number of young bulls, cows and heifers for sale. Imported Christopher = 28950 = heads the herd of large cows of grand milking qualities. Also a number of Leicesters of both sexes, from imported foundation.

JAMES DOUGLAS,
CALEDONIA, ONT.

SHORTHORNS AND LINCOLNS.
J. K. HUX, Rodney, Elgin Co., Ont., P. O. and Station, now offers 7 young bulls, cows and heifers. Abbotsford 19146 now at head of herd. Also ram lambs out of imp. Dudding ewes. o

SHORTHORNS.

FOR SALE: 4 females, from 1 year to 4 years. These are served by Imp. Golden Conqueror, Vol. 17. Also two bulls out of Royal Ury =23630=.

AMOS SMITH,
Listowel Station, Trowbridge P. O.

RARE YOUNG BULLS

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

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

Shorthorns and Yorkshires In Shorthorns we are offering four young bulls from 7 to 9 months, also a few heifers. In Yorkshires we can supply either sex of various ages. All at o J. R. McCallum & Son, living prices. Iona Sta. and P. O., Elgin Co.

Imp. Shorthorns and Lincolns

A. D. MCGUGAN,
RODNEY, ONT., P. O. AND STA..

Imported Aberdeen Hero at the head of the herd, which is composed of the best Scotch families. Ten grand shearing and two-year old ewes for sale, in lamb to a Royal winner. Also ewe lambs from imported Dudding ewes at reasonable prices.

R. MITCHELL & SONS,
NELSON P. O., ONT.

Scotch Shorthorns. The Marr Princess Royal bull, Imp. Greengill Victor, heads herd. We have for sale 4 imported bulls. 12 imported heifers, and a large number of home-bred bulls, cows and heifers belonging to the most popular Aberdeenshire families.

Burlington Jct. Station and Tele. Office

For Sale Some choice young YORKSHIRES (Holywell strain) of both sexes and different ages; also young Shorthorn bulls, sired by British Hope (30946). Price moderate. Write: C. & J. CARRUTHERS, Cobourg Station and P. O., Ont.

Shorthorn Cattle, Lincoln Sheep

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

J. T. GIBSON, om DENFIELD, ONT.

SHORTHORNS (imported)

One imported and one Canadian-bred bull. A few cows and heifers.

THOS. RUSSELL, EXETER, ONT.

Orchard Hill Shorthorns. I am now offering 13 heifers from six months to two years, 4 bulls from 10 to 13 months old, and 7 very heavy milking cows. Here is a rare chance to get stocked with pure-bred cattle at reasonable terms. A. Johnston, Vandeleur P. O., Markdale Sta.

SHORTHORNS.

THORNHILL HERD, ESTABLISHED 27 YEARS.

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

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

LEONARD BURNETT, GREENBANK, ONT., BREEDER OF

Shorthorn cattle and Shropshire sheep.

HIGH-CLASS SCOTCH SHORTHORNS

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

ROBERT MILLER, Stouffville, Ont.

BONNIE BURN STOCK FARM, 40 rods north of Stouffville station, offers Scotch Shorthorns; choice Shropshires and Berkshires from imported and Canadian-bred sows. All at farmers' prices. Inspection invited.

D. H. RUSSELL, STOUFFVILLE, ONT.

HIGH-CLASS SHORTHORNS

Now offering 12 bulls, reds and roans, from 6 to 24 months old—the thick, fleshy kind—and a few heifers. Also Clydesdale horses.

JAS. McARTHUR, Goble's, Ontario.

SHORTHORNS:

JILTS and MARAS: 6 heifers from 1 to 3 years old; 5 with calves at foot and in calf again to Imp. British Statesman. Also two young bulls (roan).

LOUIS ELLARD, Loretta P. O., Beeton Sta.

SCOTCH SHORTHORNS.

Urya, Stamfords and Matchless. Young, vigorous females, all ages, for sale. Shropshire sheep and Yorkshire pigs. ROBT. BATTY, Glenbourne Farm, Meaford P. O. & Sta.

JERSEY BULL

The richly-bred two-year-old Jersey bull, "Pride of Norval," solid color, black points, tongue and switch, quiet and well broken to tread-power, and sure stock-getter. Dam tested 17 lbs. 5 ozs. butter in 7 days. For prices write

W. C. SHEARER, BRIGHT, ONT.

GOSSIP.

Messrs. S. J. Pearson & Son, Meadowvale, Ont., advertise, in this issue, young Shorthorn bulls and heifers, bred from imported and home-bred cows of Scotch breeding and type; also, young Berkshire pigs. This firm has been building up a choice herd in the last few years, and have made judicious selections of foundation stock of the choicest breeding and individual merit, and are in a position to offer some good young things for sale.

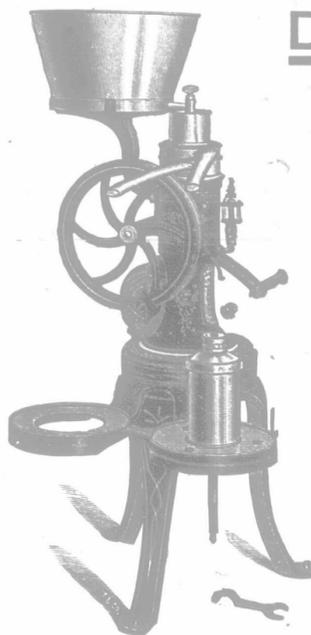
The Aberdeen-Angus breed of cattle has made a remarkably successful record at the fat stock shows of 1902. In Great Britain, the champion and reserve were won by an A.-A. cross and a pure A.-A. heifer at Norwich. The Birmingham champion and reserve were a pure A.-A. and a cross, and so at Smithfield. In the carcass class at Smithfield, the Championship went to a Poll, and at the Chicago International the blue ribbon championship over all breeds was won by an A.-A. cross.

Mr. A. C. Hallman, breeder of Holsteins and Tamworths, Breslau, Ont., writes: "My young De Kols are doing well at the pail, and for beauty of form and dairy quality will please anyone. The silver medal bull, Judge Akkrum De Kol 3rd, is in prime shape, and is leaving his impress in a remarkable degree on his stock. I have now over thirty head, of all ages, and parties desiring to secure good stock will make no mistake in securing same from this old-established herd. My Tamworths number over sixty head, headed by imported British King and Huron's Lad, both of the right type, as also are the sows in the herd. My young stock show the fine combination of careful breeding and bacon type.

Speaking at the dinner of the Scottish National Fat Stock Club, Mr. John Clay, Jr., of Chicago, formerly manager of the Bow Park farm at Brantford, Ont., referring to the breeding of cattle, said the great trouble with them in America had been that they had been running too much after what was called quality. They had sacrificed bone and hair and constitution in order to get a beautiful animal. The climate in America was against the keeping up of bone, and it took away the hair; while running after some fads on the part of breeders had affected constitutional stamina, so that Americans had got to come back to this country for the blood to rejuvenate their stocks. He said without a shadow of doubt in his mind that for years to come, if not for ever, the Americans would have to come to this country for pedigreed stock to give the constitution, the bone and the hair to their native stocks.

Messrs. D. Milne & Sons, Ethel, Ont., write: "The Maitland Bank Shorthorns have been moved into their new and comfortable stable—one of the best in the country—and although a little out of bloom, on account of having to lie out until the snow was several inches deep, they are doing well, and will soon be in good shape, and we will be pleased to have intending purchasers call and inspect our herd of over seventy head of straight Scotch, Scotch-topped and imported Scotch Shorthorns, including representatives of the following families: Clarets, Golden Drops, Claras, Rosebuds, Matchless, Lady Fannies, Bessies, Strathallans, Stamfords, Scottish Maids, Crimson Flowers, Vain Maids, Marr Beautys, Rosebuds, Strawberries, and others. We have more Barmpton Hero blood and Watt's breeding in our herd than can be found in any other outside of Messrs. Watt's own herd, having purchased a number of cows from them, and used from three to nine years each the following grand show and stock bulls of their breeding, namely: Lord Lovell =2030=, a Cruickshank Matchless, got by Barmpton Hero =324=; Perfection =9100=, a Cruickshank Lovely, got by Barmpton Hero =324=; dam Lovely 19th (imp.); Viscount =23706=, by Sityton Chief =17060=, dam English Lady 9th, by Barmpton Hero =324=; May Duke, by Clipper King =16239=, dam Mildred 4th, by Hospodar (51409) (imp.). The following imported bulls have also been extensively used: Chamberlain 2nd =4095= (imp.); Red Knight (54904) (imp.), a Campbell-bred Mina; and for the last two years, the Imp. Bracelet bull, Red Duke (77585). The young imported roan Claret bull, Scotland's Fame, bred by Alex. Campbell, Deystone, Kintore, Scotland; got by the Duthie-bred bull, Golden Fame (76786), now at the head of herd. We hope correspondents will excuse us for any delay in answering their enquiries, on account of building, but in future will attend to business as promptly as possible. Visitors will be met at any train they mention. Catalogue sent on application.

DON'T
BUY A SEPARATOR UNTIL YOU HAVE SEEN THE



National.

EXAMINE
The simplicity of the design. All wheels and bearings protected, being perfectly safe in the hands of a child. It has anti-friction ball bearings. Few parts to wash—only two pieces inside the bowl. The National is made by The Raymond Mfg. Co. of Guelph, whose success with the celebrated Raymond Sewing Machine is sufficient guarantee of the high finish and workmanship. In 1901 five machines a day were manufactured. For 1902 the capacity is increased to 25 machines per day, showing the satisfaction given by the National in the past two years. The 1902 National contains all the strong points found in other separators, and is placed on the market with the guarantee of being the best and most up-to-date machine in every particular offered to the Western farmers to-day.

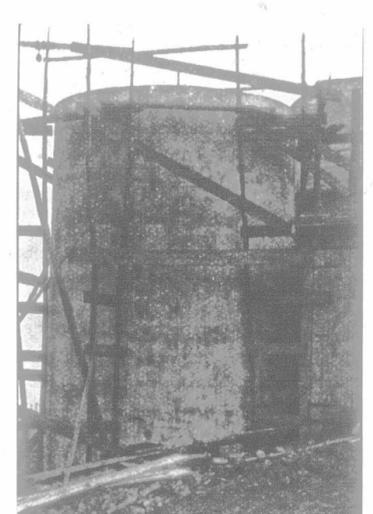
The National will well repay investigation by intending purchasers.
National No. 1, capacity 330 to 350 lbs. per hour.
National No. 1 A, capacity 450 to 500 lbs. per hour.

AGENTS WANTED IN UNREPRESENTED DISTRICTS.

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

om WE ALSO MAKE GOOD SEWING MACHINES.

A Splendid Round Cement Silo
BUILT BY OUR MR. FRED MISENER FOR WILLIAM MCGHEE, OF BEACHVILLE, ONT., WITH



BATTLE'S "THOROLD" CEMENT

SIZE OF SILO:
Walls, 16 inches at bottom, 9 inches at top; 30 feet high; 16 feet in diameter.

COST AS FOLLOWS:

Thorold Cement, 75 barrels at \$1.15	\$ 86 25
Gravel, 56 yards at 10c	5 60
Stone, 10 yards at 10c	1 00
7 men, 7 days at \$1.25	61 25
Superintending, 7 days at \$2.00	14 00
Rent of moulds	7 00
Plastering, 2 men 3 days	7 50
Plastering, 1 man 3 days	6 00
Total cost	\$188 00

Estate John Battle, Manufacturers of "Thorold" Cement
THOROLD, ONT.

PLEASE MENTION FARMER'S ADVOCATE.

NO CURE NO COST



REMOVE THE SPAVIN

Takes but one 45-minute treatment to take off most of the bad ones. Seldom known to fail. You think this claim strong because you think spavins hard to cure, but they are not. Splint, Ringbone, Curb, etc., just as easy. If Fleming's Spavin Cure ever fails it is free. Write today for our free spavin book.

R. B. McKee, Centerville, Pa., writes: "The druggist here sent to you for a bottle of Spavin Cure for a friend of mine. He took off one spavin with it, and I took off two with the rest. I think it wonderful."

Cure Fistula and Poll Evil

Cure in two to four weeks. Not one failure, nor do we believe failure possible. A scientific cure that anybody can use with perfect success. Fleming's Fistula and Poll Evil Cure will make the existence of these diseases impossible. Write us today.

Lump Jaw Will Disappear

Just as soon as all stock raisers learn what Fleming's Lump Jaw Cure will do, the disease will banish from the earth. Known and tried too long for any one to doubt its worth. Costs nothing if it ever fails.

C. L. Tamehill, Hebron, Ind., writes: "The one bottle I got from you cured four lump jaws."

Write today for instructive circulars on above. Mention this paper.

FLEMING BROS., Chemists,
36 Front Street, West, Toronto, Ont.

GOSSIP.
LYNEBOCH AYRSHIRES AND POULTRY.

Mr. Wm. Thorn, Lynedoch, Ont., ordering change of ad., writes: "My Ayrshires are in their winter quarters in fine condition. The past year has been a very successful year with them. I have made many sales. Have shipped animals to the United States, Northwest, and many parts of Ontario, as well as making many sales of young calves around home. I still have as one of my stock bulls, Royal Star, winner of first at Toronto and London, and his young stock are proving to be grand dairy and show animals. In poultry, I have some grand stock. My young birds are bred from Ontario, Ottawa and Toronto winners, and are of No. 1 quality. My Toulouse geese are grand, large show birds, and are very cheap at prices I am offering them at. I won, on my cattle and poultry, at four shows, 103 prizes—51 firsts, 41 seconds, 11 thirds, and bronze medal for three best dairy cows any breed."

OFFICIAL RECORDS HOLSTEIN-FRIESIAN COWS.

From December 1st to December 25th, 1902, the records of 73 cows were approved. Seventy-one cows have seven-day records, two have fourteen-day records, three have thirty-day records, one a record for 84 days, one for 294 days, and one for 365 days. The averages of the seven-day records are as follows: Twenty-two cows in full-age form average, age 7 years 4 months 25 days, days after calving 18, milk 422.4 lbs., butter-fat 14.553 lbs., equivalent butter 80 per cent. fat 18 lbs. 3 ozs., or 16 lbs. 15.7 ozs. 85.7 per cent. fat. Nine four-year-olds average, age 4 years 5 months 15 days, days after calving 31, milk 426 lbs., butter-fat 14.611 lbs., equivalent butter 80 per cent. fat 18 lbs. 4.2 ozs., or 17 lbs. 0.8 ozs. 85.7 per cent. fat. Fifteen three-year-olds average 3 years 5 months 5 days, days after calving 30, milk 383.5 lbs., butter-fat 12.557 lbs., equivalent butter 80 per cent. fat 15 lbs. 11.1 ozs., or 14 lbs. 10.4 ozs. 85.7 per cent. fat. Twenty-four two-year-olds average, age 2 years 3 months 8 days, days after calving 28, milk 286.6 lbs., butter-fat 9.218 lbs., equivalent butter 80 per cent. fat 11 lbs. 8.4 ozs., or 10 lbs. 12.1 ozs. 85.7 per cent. fat. Among the most remarkable of these records are the following:

Lauthe Jewel Mechthilde 49349, age 4 years 18 days, days after calving 19, milk 439.6 lbs., butter-fat 17.867 lbs., equivalent butter 80 per cent. fat 22 lbs. 5.4 ozs., or 20 lbs. 13.5 ozs. 85.7 per cent. fat. Owner, James Rettie, Norwich, Ont.

Toitilla Echo De Kol 44773, age 5 years 7 months 6 days, days after calving 21, milk 522.5 lbs., butter-fat 17.219 lbs., equivalent butter 80 per cent. fat 21 lbs. 8.4 ozs., or 20 lbs. 1.4 ozs. 85.7 per cent. fat. Owner, Matt. Richardson, Caledonia, Ont.

Tidy Abbekerk 60964, age 7 years 7 months 11 days, days after calving 22, milk 505.9 lbs., butter-fat 16.778 lbs., equivalent butter 80 per cent. fat 20 lbs. 15.6 ozs., or 19 lbs. 9.2 ozs. 85.7 per cent. fat. Owner, H. Bellert, Cassel, Ont.

Hulda Wayne's Aaggie —, age 4 years 11 months 26 days, days after calving 117, milk 337.8 lbs., butter-fat 12.070 lbs., equivalent butter 80 per cent. fat 15 lbs. 1.4 ozs., or 14 lbs. 1.3 ozs. 85.7 per cent. fat. Owner, Matt. Richardson, Caledonia, Ont.

Mercena 2nd 62122, age 3 years 18 days, days after calving 92, milk 320.8 lbs., butter-fat 12.225 lbs., equivalent butter 80 per cent. fat 15 lbs. 4.5 ozs., or 14 lbs. 4.2 ozs. 85.7 per cent. fat. Owner, James Rettie, Norwich, Ont.

Oceola Queen 53318, age 3 years 8 days, days after calving 31, milk 268.4 lbs., butter-fat 8.900 lbs., equivalent butter 80 per cent. fat 11 lbs. 2 ozs., or 10 lbs. 6.4 ozs. 85.7 per cent. fat. Owner, George Rice, Currie's Crossing, Ont.

Hulda's De Kol Princess —, age 2 years 3 months 26 days, days after calving 31, milk 280.9 lbs., butter-fat 9.407 lbs., equivalent butter 80 per cent. fat 11 lbs. 12.1 ozs., or 10 lbs. 15.6 ozs. 85.7 per cent. fat. Owner, Matt. Richardson, Caledonia, Ont.

Inka Mercedes De Kol 3rd —, age 2 years 3 months 23 days, days after calving 115, milk 273.8 lbs., butter-fat 8.386 lbs., equivalent butter 80 per cent. fat 11 lbs. 2.6 ozs., or 10 lbs. 6.7 ozs. 85.7 per cent. fat. Owner, Matt. Richardson, Caledonia, Ont.

Carary Starlight Lassie B 77908, age 1 year 11 months 14 days, days after calving 8, milk 218.3 lbs., butter-fat 8.388 lbs., equivalent butter 80 per cent. fat 10 lbs. 7.7 ozs., or 9 lbs. 12.5 ozs. 85.7 per cent. fat. Owner, George Rice, Currie's Crossing, Ont.

S. BOYIE,
Supt. of Advanced Registry.

I GUARANTEE A \$5.00 PACKAGE OF BARREN KOW CURE

to make any cow under 12 years old breed, or refund money. Small size \$2.00 (postpaid), which has always had the desired effect. Give in feed twice a day.

L. F. SELLECK, MORRISBURG, ONT. om

SUNNYLEA FARM.

For sale: Jerseys—6 yearling bulls; females any age. Tamworths—30 boars and sows, different ages. Shropshire sheep—rams and ewes of good breeding. Prices reasonable.

H. E. WILLIAMS, Knowlton, P. Q.

Best Jersey Bulls AT LOWEST PRICES.

Owing to the large sale of registered Jersey cows, all in milk (18 head), that I have just made, I offer several bull calves, of unsurpassed breeding and from tested dams, at prices that will surprise purchasers. This, because the sale of so many cows in profit leaves me short of milk for the present. Also some choice heifers in calf.

Mrs. E. M. Jones, Brockville, Ont.
Box 324. om

JERSEYS:

Present offering: Two bulls, 8 months old; solid color; choice animals; sired by Néro of Glen Rouge, and out of deep-milking dams.

E. B. MINNAN & SONS, GRAFTON, ONT.

DO YOU WANT A SNAP?

Jersey cows and heifers, also two young bulls, at low prices, from prizewinning stock. Write for prices.

W. W. EVERITT, Dunedin Park Farm, CHEATEAM, ONT.

St. Lambert Bull,

15 months old; solid color.

Strong and vigorous. His dam, sire's dam and her dam and granddam are all tested cows. This bull is a snap for a St. Lambert fancier. Also young bulls sired by Brampton Monarch (imp.) and out of tested show cows, and cows and heifers in calf to him. For prices, etc., address

B. H. BULL & SON, BRAMPTON, ONT.
G. T. R. and C. P. R. stations.

JERSEYS, COTSWOLDS, YORKSHIRES.

Registered Jersey cattle, Cotswold sheep and Yorkshire pigs for sale. A few nice heifers, 6 mos. to 2 years, and 1 yearling bull, by Count of Pine Ridge, grandson of Adelaide of St. Lambert, record 84 lbs. milk daily, om WM. WILLIS, NEWMARKET, ONT.

Maple Park Farm Holsteins.

Netherlands Hamming De Kol (imp.) stock bull. Stock of all ages for sale from the great De Kol Pietertje Clothilde and Barrington strains. Home of the great cows, Edgeley Mol, milk record 104 lbs. in 24 hours; Emery Beauty, the great public test winner, and many others with heavy records. SIDNEY MACKLIN, om Streetsville P. O. and station, C. P. R.

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.

HOLSTEINS, TAMWORTHS, COTSWOLDS.

Present offering: Young boars and sows fit to breed, and younger ones. Choice animals. Ram and ewe lambs and two 2-shear rams. Perfect covering.

R. O. MORROW, Hilton P. O., Brighton Stn., om

Riverside Holsteins.

SPECIAL OFFER:—Advance Record of Merit bull, Victor DeKol Pietertje (imp.), sire of 14 two-year-old daughters in A. R. of Merit, average official weekly test of 11 lbs. butter each; also 8 young bulls for sale.

MATT. RICHARDSON & SON,
Haldimand Co. o 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. R. W. WALKER, Utica P. O. Shipping stations: Port Perry, G. T. R.; Myrtle, C. P. R. om

4 HOLSTEIN BULLS 4

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

SPRING BROOK STOCK FARM

Am offering a 12-months, richly-bred DeKol bull; 2 heifers (9 months), and 3 cows. Also a choice lot of Tamworths of different ages. Write at once for prices.

A. C. HALLMAN, BRESLAU, ONT.
Waterloo Co.

CHOICE SCOTCH SHORTHORNS.

An excellent lot of young bulls of the Cruickshank Village Blossom, Lovely and Mysie families; also Marr Missies and Kinellar Clarets. A few choice young females for sale as well.

H. SMITH, Exeter, Ont.
Farm adjoins Exeter Station, on the G. T. R., 30 miles north of London. om

Scotch Shorthorns

BREEDING FEMALES ALL IMPORTED.

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

H. CARGILL & SON,
Cargill Station, G. T. R. CATALOGUE FREE. om Cargill, Ontario.

H. J. Davis, Woodstock, Ont.

40 HEAD IMPORTED and CANADIAN-BRED SHORTHORNS.

22 head just home from quarantine, including a choice lot of heifers and young bulls of the best breeding. Herd headed by the Willis Cruickshank-bred bull, Bapton Chancellor (imp.), and the Lovat bull, Viceroy. Woodstock: Main line G. T. R. and C. P. R. om

MAPLE LODGE STOCK FARM.

ESTABLISHED 1854.
SHORTHORNS.—First-prize milking strains, best Scotch breeding. Young bulls and heifers for sale.

LEICESTERS.—A grand lot of ewes, bred to our imported rams, and a few choice rams now for sale.

A. W. SMITH,
Alisa Craig Station, G. T. R., 3 1/2 miles. om MAPLE LODGE P. O., ONT.

PINE GROVE SHORTHORNS AND SHROPSHIRE.

Our herd comprises over 150 females, including our last importation of 30 head, all of the most esteemed strains. Of Shropshires, we offer a few choice rams, also high-class ewes bred to first-class rams. Address

W. C. EDWARDS & CO.,
Rockland, Ontario.

FOR SALE, 9 Straight Scotch Shorthorn Bulls

from 9 to 18 months Herd-headed at common prices. Also females of all ages. om
Station, Telegraph and Telephone office adjoin the farm.

D. Milne & Son, Ethel, Ont.

THE VALUE OF CHARCOAL.

Few People Know How Useful it is in Preserving Health and Beauty.

Nearly everybody knows that charcoal is the safest and most efficient disinfectant and purifier in nature, but few realize its value when taken into the human system for the same cleansing purpose.

Charcoal is a remedy that the more you take of it the better; it is not a drug at all, but simply absorbs the gases and impurities always present in the stomach and intestines, and carries them out of the system.

Charcoal sweetens the breath after smoking, drinking, or after eating onions and other odorous vegetables.

Charcoal effectually clears and improves the complexion, it whitens the teeth, and further acts as a natural and eminently safe cathartic.

It absorbs the injurious gases which collect in the stomach and bowels; it disinfects the mouth and throat from the poison of catarrh.

All druggists sell charcoal in one form or another, but probably the best charcoal, and the most for the money, is in Stuart's Absorbent Lozenges. They are composed of the finest powdered willow charcoal and other harmless antiseptics in tablet form, or rather in the form of large, pleasant tasting lozenges, the charcoal being mixed with honey.

The daily use of these lozenges will soon tell in a much improved condition of the general health, better complexion, sweeter breath, and purer blood; and the beauty of it is, that no possible harm can result from their continued use, but, on the contrary, great benefit.

A Buffalo physician, in speaking of the benefits of charcoal, says: "I advise Stuart's Absorbent Lozenges to all patients suffering from gas in stomach and bowels, and to clear the complexion and purify the breath, mouth and throat. I also believe the liver is greatly benefited by the daily use of them. They cost but twenty-five cents a box at drug stores, and although in some cases a patent preparation, yet I believe I get more and better charcoal in Stuart's Absorbent Lozenges than in any of the ordinary charcoal tablets."—Adv. om-



Specially adapted for children, on account of its absolute purity.
Baby's Own Soap
 is used by young and old alike and commands an immense sale.
Don't trifle with imitations.
 ALBERT TOILET SOAP CO., MFRS.
 MONTREAL. 5-2



MAGIC BAKING POWDER
 PURE AND WHOLESOME.
 ONE POUND CAN 25¢
E. W. GILLETT COMPANY LIMITED
 TORONTO, ONT.

PLEASE MENTION FARMER'S ADVOCATE

GOSSIP.

Attention is directed to the advertisement of Annandale stock farm Holstein cattle and Yorkshire pigs belonging to the E. D. Tillson estate, Tilsonburg, Ont. Young bulls bred from the Annandale herd, which has a continental reputation, owing to its splendid records in milk and butter production, are offered for sale. Note the advertisement, and write for the catalogue.

NOTED HORSE-BREEDING ESTABLISHMENT.

The great Oaklawn horse breeding and importing firm of Dunham, Fletcher & Coleman, Wayne, Du Page County, Illinois, advertise, in this issue, their famous prizewinning stud of Percherons and French Coaches. Four large importations were made by this firm in 1902, which, with their home-bred horses, they claim constitute the choicest collection ever seen on one farm in America, including four of the six first-prize winners at the great French show of last year, while at the late International Show at Chicago the Oaklawn Percherons made a remarkable record, the championship and every first prize in the regular stallion classes, except one, being won by horses imported by this firm. Parties interested should send for their catalogue and information to the above address.

NOTICES.

INVESTMENT SECURITIES are handled by A. E. Ames & Co., Toronto, bankers and financial agents, as per their advertisement appearing elsewhere in this paper.

CATARRHAL FEVER.



THIS is a disease characterized by inflammation of the respiratory mucous membranes. It is most common in spring and fall, but may occur at any season of the year.

CAUSES.—The causes of catarrhal fever are sudden changes of temperature, exposure to wet, inhalation of poisonous gases, contagion. The disease is most frequent when the animal sheds its coat in the spring or fall.

SYMPTOMS.—The animal will appear listless, with drooping of the ears. The extremities are alternately hot and cold, the hair will stand on end, cough with discharge from the nostrils and redness of mucous membrane of the nose, and dry mouth, are prominent symptoms. The bowels are constipated, and the urine is scanty and of high color. In some cases inflammation extends to the bronchi or even to the lungs.

TREATMENT.—Give animal good surroundings, allow him all the water he will drink. Dissolve in the drinking water a half ounce of saltpetre twice a day for two or three days, then diminish the dose to half the quantity. Feed easily-digested, laxative food, such as bran, oats and grass in season. If there is much exhaustion give two-dram doses of quinine three times a day. If the appetite is much impaired dram doses of tincture of nux vomica with half-ounce doses of tincture of quassia should be given three times a day.

To allay irritation of the mucous membrane and cough, a dram of muriate of ammonia with two drams of solid extract of licorice should be given three or four times a day. Inhalations of steam give excellent results.

Along with this treatment the general condition of the animal's system should not be overlooked. Give that most powerful tonic, Dr. Hess' Stock Food. It is both a nutritive and a curative—gives the correct balance of nutrition to all other foods and tones the vital organs and the blood, so the system is able to throw off the disease quickly. If the animal should require special attention or prescription, in the package of Dr. Hess' Stock Food you will find a little yellow card entitling you to the free prescription and advice from Dr. Hess.

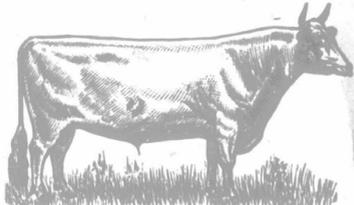
If the medical and veterinary colleges know of nothing better than Dr. Hess' Stock Food for horses, cattle, hogs and sheep, it must be good. Dr. Hess is a graduate of both. No unprofessional manufacturer can equal it.

Sold on written guarantee: 7 lbs., 65 cts.; 12 lbs., \$1.00; 25 lbs., \$2.00; 50 lbs., \$3.70; 100 lbs., \$7.00. Fed in a small dose.

Dr. Hess' Stock Book, a standard work, consulted and commended by the profession, will be sent free if you state what stock you have, what stock food you have used, and mention this paper. Address, Dr. Hess & Clark, Ashland, Ohio, U. S. A.

AYRSHIRES

WATSON OGILVIE, PROPRIETOR.



Ogilvie's Ayrshires won the herd and young herd prizes at Toronto, London and Ottawa in 1900; also at the Pan-American, in 1901, and in 1902 they won all the herd prizes and medals, sweepstakes and diplomas, with one exception. The cows are all imported, and were carefully selected for strength and constitution, style, size of teats, and milk (quantity and quality). The herd is headed by Douglasdale (imp.), champion at the Pan-American and at Ottawa, Toronto and London, in 1902, ably assisted by Black Prince (imp.). Stock, imported and home-bred, for sale at all times.

ROBERT HUNTER, Manager.

Near Montreal. One mile from electric cars. Lachine Rapids, P. Q.

AYRSHIRES AND GUERNSEYS

of all ages for sale. Superior breeding, deep milking strain. A few very choice heifers, 1 year and under, from imported and home-bred dams. Prices reasonable.

ISALEIGH GRANGE FARM, DANVILLE, QUE.

HIGH-CLASS AYRSHIRES

At "Live and Let Live" Prices.

Two bulls fit for service; one February and three March, 1902, bulls, and a number of young bull calves; also heifers bred lately, and younger.

W. W. BALLANTYNE, Stratford, Ont. Neidpath Farm adjoins city, main line G. T. R.

AYRSHIRE CATTLE, Shropshire sheep, Berkshire pigs, and B. P. Rock fowl. A fine lot of shearing and ram lambs for sale. J. Yuill & Sons, - Carleton Place, Ont.

CHOICE AYRSHIRES.

Present offering: 4 bulls, from 1 to 2 years old, by choice sires, and out of producing dams, and A 1 individuals.

N. DYMENT, Clappison P. O., Dundas Sta.

IF YOU WANT A HOLSTEIN BULL, bred from producers, and that is again capable of siring producers, at a living price, write

H. BOLLERT, Cassel, Ont.

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

Tredinnock Ayrshires.

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

AYRSHIRES AND YORKSHIRES.

My Ayrshires are all bred from imported stock; Yorkshires from Mr. D. C. Platt's imported stock. Choice young animals for sale. **James McCormick, Sr., Rockton, Ontario.**

Springhill Farm Ayrshires.

FOR SALE One bull 16 months old, three bulls 7 months old, all from imported sire and deep-milking dams. Females, all ages.

Robt. Hunter & Sons, Maxville, Ont.

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

DAVID A. MCFARLANE, Breeder of high-class AYRSHIRES.

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

Homecroft Stock and Dairy.

Ayrshires, Chester Whites, B. P. Rocks. Write us for best young bull in Canada. Some A 1 bull calves; also some beauties for young sows. See that you look up our chickens.

J. F. PARSONS & SONS, BARNSTON, QUE.

Menie Stock Farm Choice young AYRSHIRE bulls and heifer calves, from 2 to 9 months old. Also cows and heifers all ages. Write **WM. STEWART & SON, Menie, Ont.**

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

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

WM. WYLIE, - HOWICK, QUEBEC.

Maple Cliff Dairy and Stock Farm

BREEDERS OF AYRSHIRE CATTLE, BERKSHIRE and TAMWORTH PIGS.

Cattle of both sexes in single or carload lots. Pigs both sexes, pairs not akin. Farm adjoins Central Experimental Farm. **R. REID & CO., Hintonburg, Ont.**

EUROPEAN ADVERTISEMENTS.

English Shorthorns.

Booth and Bates Shorthorns, topped with Orick-shank bulls. Young cows, bulls and heifers always on hand for sale. Eligible for the American herdsbook. Royal and Highland prizewinners included for the last two years. Close on \$400 won in prizes last year and this. **WM. BELL, Ratoeugh Farm, Alnwick, Northumberland, Eng.**

W. W. CHAPMAN,

Secretary of the National Sheep Breeders' Association, Secretary of the Kent or Romney Marsh Sheep Breeders' Association, and late Secretary of the Southdown Sheep Society.

Pedigree Live Stock Agent, Exporter and Shipper. All kinds of registered stock personally selected and exported on commission; quotations given, and all enquiries answered.

Address: **FITZALAN HOUSE, ARUNDEL ST., STRAND, LONDON W. W.**

Cables—Sheepote, London.

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,** or to our American representative, **Robert Miller, Stouffville, Ont., Canada.**

Robert W. Hobbs,

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

JOHN BRYAN & SON, Southleigh, Witney, OXON.

One of the oldest registered flocks of pure-bred Oxford Downs. Annual sale of rams. Oxford ram fair. Rams and ewes for sale at home. Inspection invited.

FOR SALE, AT MAPLE AVENUE STOCK FARM, CHOICE

Lincoln Sheep and Shorthorn Cattle

Bred from best English stock. Bred from Scotch bulls of fashionable families. CAN SUPPLY EITHER IN CARLOAD LOTS.

Write us before buying elsewhere. Address: **F. H. NEIL, Proprietor, LUCAN, ONT. Box 35. Telegraph and Railway Station.**

PRIZEWINNING COTSWOLDS.

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

SHROPSHIRE FOR SALE.

—Shearling rams, ram lambs, ewe lambs, also shearling and older ewes, about 50 head all told. All registered or eligible. Low-set, well covered, in fine condition and form. Sires from Campbell and Dryden flocks. **MALCOLM McDOUGALL, on Tiverton, Ont.**

SHROPSHIRE.

One well-covered yearling ram, with good bone, from imported Mansell ram, and four home-bred ram lambs. Write for prices **ROWAT BROS., HILLSDALE, ONT.**

The Right Thing.

A New Catarrh Cure, which is Rapidly Coming to the Front.

For several years, Eucalyptol, Guaiacol and Hydrastin have been recognized as standard remedies for catarrhal troubles, but they have always been given



separately, and only very recently an ingenious chemist succeeded in combining them, together with other antiseptics, into a pleasant, effective tablet.

Druggists sell the remedy under the name of Stuart's Catarrh Tablets, and it has met with remarkable success in the cure of nasal catarrh, bronchial and throat catarrh, and in catarrh of the stomach.

Mr. F. N. Benton, whose address is care of Clark House, Troy, N. Y., says: "When I run up against anything that is good I like to tell people of it. I have been troubled with catarrh more or less for some time. Last winter more than ever. Tried several so-called cures, but did not get any benefit from them. About six weeks ago I bought a fifty-cent box of Stuart's Catarrh Tablets, and am glad to say they have done wonders for me, and I do not hesitate to let my friends know that Stuart's Catarrh Tablets are the right thing."

Mr. Geo. J. Casanova, of Hotel Grifon, West 9th street, New York City, writes: "I have commenced using Stuart's Catarrh Tablets, and already they have given me better results than any catarrh cure I have ever tried."

A leading physician of Pittsburg advises the use of Stuart's Catarrh Tablets in preference to any other treatment for catarrh of the head, throat or stomach. He claims they are far superior to inhalers, salves, lotions or powder, and are much more convenient and pleasant to take, and are so harmless that little children take them with benefit, as they contain no opiate, cocaine or any poisonous drugs.

All druggists sell Stuart's Catarrh Tablets at fifty cents for full-size package, and they are probably the safest and most reliable cure for any form of catarrh.—Adv't.

W. S. CARPENTER, "MODEL FARM," SIMCOE, ONT.,

Importer and breeder of Shropshire sheep. My flock was represented at Toronto, and won first on shearing ram, first and second on aged ewes, and second on the pen. First time exhibiting. In need of a first-class yearling ram, imported or home-bred, write! Your wants can be supplied, and at prices consistent with quality. Have a choice lot to choose from, and can guarantee satisfaction. Come and see them, or a card will bring them. om Station One-half Mile from Farm Wabash and G. T. R.

FAIRFIELD LINCOLNS

Imported ewes and lambs. Can supply show flocks. om

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

IMP. COTSWOLD SHEEP

Five rams (year-olds), both sires and dams imp.; 10 ewes (year-olds), sire imp. Also this year's lambs, both sexes; Yorkshire and Tamworth hogs. om

BROOKS & LANGMAID, COURTICE P. O.

LEICESTER SHEEP

Quality, with good size and wool. Address: C. & E. WOOD, FREEMAN P. O. BURLINGTON ST., ONT. om

PENNABANK STOCK FARM.

Twenty-five ram lambs; a few ewe lambs and shearings with Imp. Williams or Knox-bred sires; 1 good two-shear ram. Four fine young Shorthorn bulls, om Hugh Pugh, Whitevale, Ont.

SHROPSHIRE

This season I am offering for sale lambs of both sexes. Also shearing ewes and 2 shearing rams. Prices right and quality guaranteed. om GEO. HINDMARSH, Alisa Craig, Ont.

GOSSIP.

Mr. R. O. Morrow, Hilton, Ont., who advertises Holsteins, Tamworths and Cotswolds in this paper, writes: "I have had a good year for sales in Tamworth pigs. Have one boar fit for service, and a nice litter two months old, and one sow in farrow for sale now."

Readers will notice the change of ad. of W. C. Shearer, of Bright. He is offering a richly-bred Jersey full, from a grand butter cow, and well broken-in to work a tread power for separating and churning, and should be a good investment for any dairyman needing a sire

THE MANOR FARM LINCOLNS.

The pair of Lincoln sheep portrayed on another page of this issue are among the prizewinners in the noted Manor Farm flock of Mr. John T. Gibson, of Denfield, near London, Ont. This flock, which was founded many years ago on first-class imported stock, has been from time to time replenished by the importation of high-class rams and ewes from the leading flocks in Britain. But it is the pride of the owner that sheep of his own breeding have won the principal prizes at leading shows in Canada and the United States in the last two or three years in competition with first-prize winners at the Royal Show of England, fitted by professional shepherds. In 1901, the first flock prize at the Toronto Industrial, the Pan-American, and the Chicago International went to the Manor Farm flock, and in 1902 the same honor was awarded to this flock at Toronto, London; Syracuse, N. Y.; Springfield, Ill.; St. Louis, Mo.; and the International at Chicago, as was also every championship prize for rams at each of these, the leading shows of America, beating this year's imported Royal winner with a ram of Mr. Gibson's own raising, and every championship for ewes but one, and all the flock prizes, bred by exhibitor and open to all. At Chicago, the flock prizes in the breeding class all came the way of this flock, also the championship for best long-wooled wether any breed. Finishing at the Winter Fair at Guelph, the flock won at the greatest shows in America, 1902, 152 premiums, a record, we believe, never equalled by any other flock. Starting out on the campaign of the grand circuit of American shows with a very strong lot of his own breeding, before the Chicago show Mr. Gibson bought six imported Royal winners that had been winning at the Western State fairs. These, with the home-bred lot, made perhaps the best lot of Lincolns ever shown in America. It takes dollars, experience, judgment and faith in the breed to get a lot like this together, and Mr. Gibson is entitled to the congratulations of his countrymen on his brilliant successes. The sheep are now nicely settled in their winter quarters, and some good lambs of both sexes are offered for sale. A limited number of ewes can also be spared, including a few imported ewes bred to imported rams. The show flock is picked out and in training for next year.

The Shorthorns at Manor Farm are doing nicely. One young bull is left for sale—a red Mina, by Imp. Prime Minister, dam by British Chief, he by Indian Chief. The stock bull in use at present is imported—one of the Scotch-bred Miss Ramsden family—which will be priced when another to suit is secured, as his dam and two sisters in the herd must be taken away for service.

The Lincolns have surely made a phenomenal record in the past year, as besides winning the championship for best wether of the long-wooled breeds at America's greatest show, they also captured the grand championship at Britain's greatest fat stock show, the Smithfield, for best three wethers, any age or breed, the judge being a retired Shropshire breeder.

SUMMERHILL HERD OF

Large English Yorkshires.

HEADQUARTERS FOR THE IDEAL BACON HOG.



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

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Large English Berkshires

Southdowns and Collies



Both imported and home-bred. Correspondence solicited. Railway station, London.



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American Leicester Breeders' ASSOCIATION.

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

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Broad Lea Farm. MILDMAY, G. T. R. 7 miles from farm. TEESWATER, C. P. R. 3 1/2 miles from farm.

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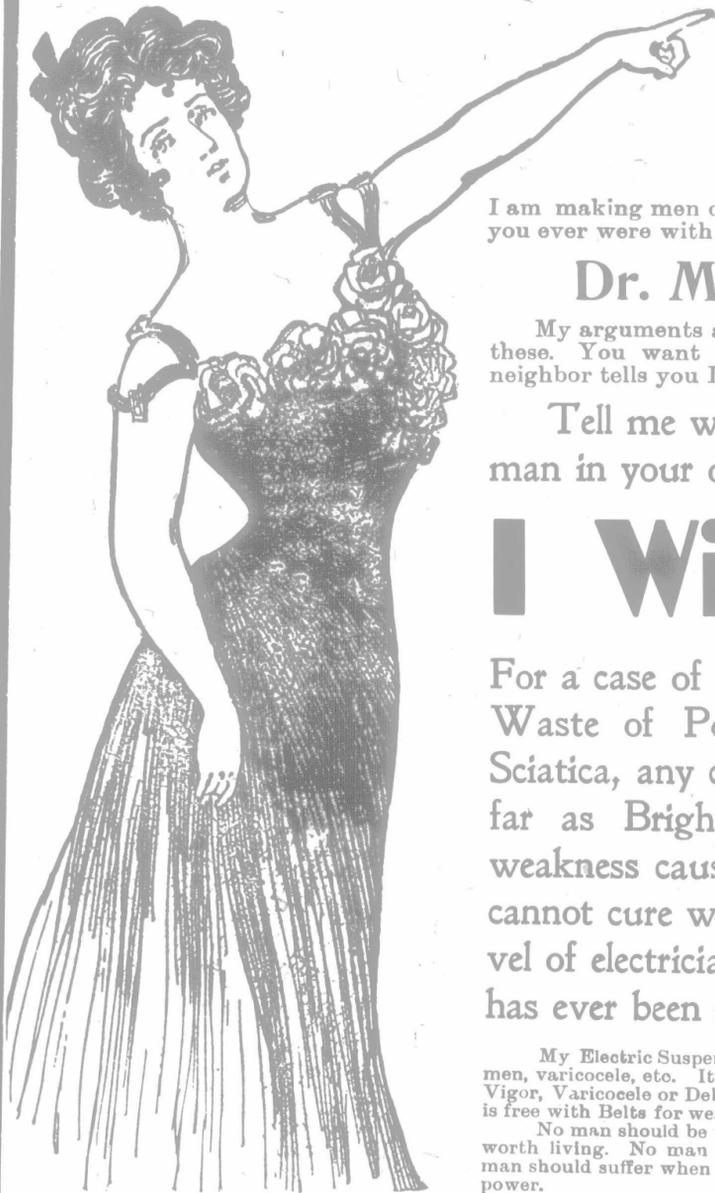
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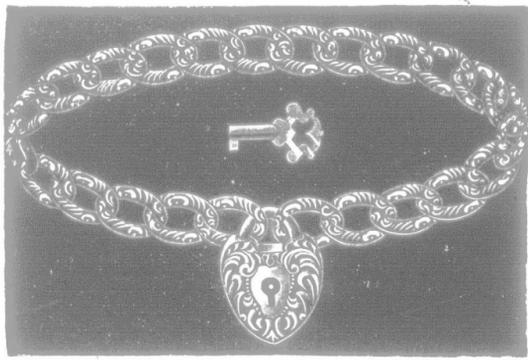
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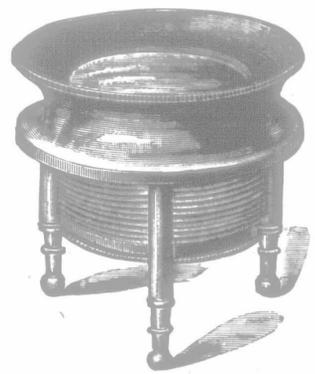
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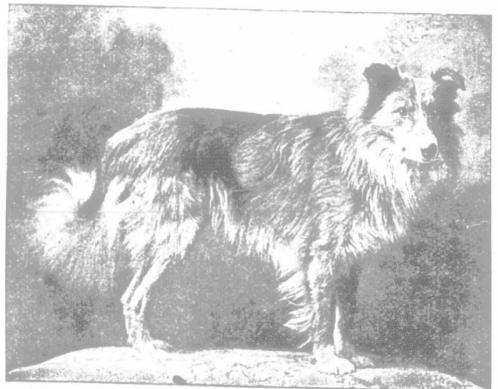
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No. 16. Is the same, only with Sterling Silver case, which can be had nicely engraved.

Nos. 17 and 18 are a good-quality American Watch, O. F. stem wind, and push-in stem and turn to set hands. These are a little larger than the usual Ladies' Watches, and are smaller than the usual Boys' Watches, though can be used for either Boys, Girls or Young Ladies.

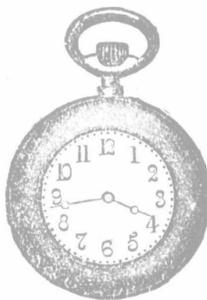
Nos. 19, 20 and 21 are small sized; in fact, are the exact size of cut. These are American Watches, O. F. stem wind, and push-in stem and turn to set hands, and are first-class timekeepers. Will give perfect satisfaction.

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Nos. 22, 23, 24 and 25 are similar to the accompanying cut. These are regular Ladies' Hunting Watches. Nos. 22 and 24 are fitted in 20-year guaranteed Gold Filled cases, nicely ornamented, or to be had in plain or plain engine turned, and the same applies to Nos. 23 and 25, excepting that they are fitted in 25-year guaranteed Gold Filled cases, and 14k Gold Filled; 22 and 23 are fitted with 7-Jeweled Nickel, first-quality Elgin movements. Nos. 24 and 25 are fitted with 15-Jeweled Nickel, first-quality Elgin movements.

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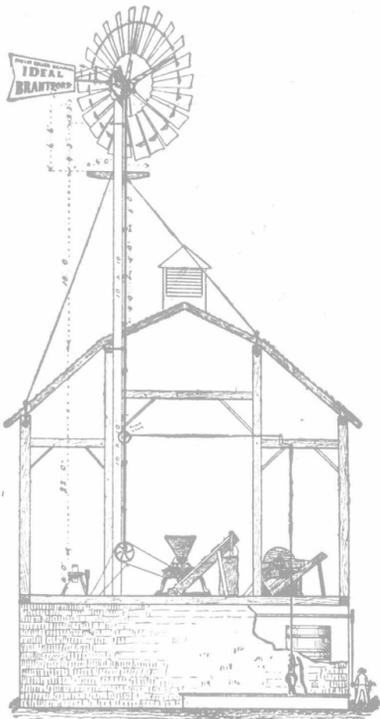
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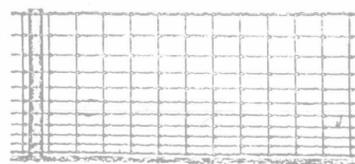
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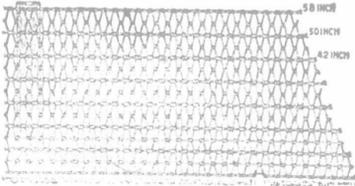


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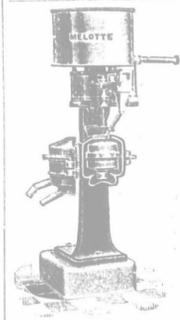


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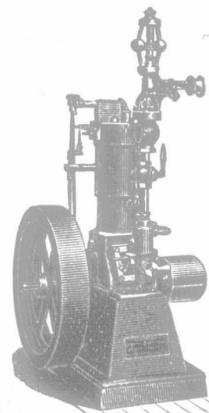
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