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A combination of different foods combining in proper proportion the different constituents required to produce the desired finished product is called a balanced ration.

The great mistake usually made in the make-up of a "balanced ration" is the omission of those qualities that go to aid in the assimilation of the nutriment-containing parts. We are safe in taking nature as our model in these matters, and while nature at her best never neglects the parts that are rich in food values, neither does she omit those qualities that have no food value, but which supply the aromatic aid to digestion that is needed to insure the thorough assimilation of the parts containing food values.

Without these aromatic parts there can be no truly balanced ration. It is the food assimilated and not the food eaten that gives the results, and the more thorough the assimilation is, the more satisfactory will the results be. No amount of carbohydrates or fat will produce flesh or butter unless it is assimilated.

Nature's way is the true way and aroma is as necessary to the true balance of a ration as is nutritive ratio.

In the manufacturing of Herbageum nature's lines are closely followed, and Herbageum, when added to dry winter feed, assures perfect assimilation, and makes that feed equal to good June pasture. This makes a truly balanced ration, and this is true science in feeding, and it is science that will stand the dollar-and-cents test, which is the true test from the standpoint of the man who is feeding for profit rather than amusement.

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**THE HERBAGEUM THEORY.**

Some twenty years ago a certain man had a theory that the sweet, fragrant pastures of early summer could be so nearly reproduced by proper blending of pure spices of an aromatic nature as to assure to farm stock throughout the whole year that thorough assimilation of their foods which they enjoy while living on the buds, blossoms and tender grasses of a perfect June pasture. He knew that if his theory was a true theory, it meant freedom from disease, a rapid, healthy growth and great economy in the production of all animal products. He also knew that unless true economy could be assured to the feeder the venture could not possibly prove a permanent success financially.

The Herbageum proved to be a true theory, and the product was put on the market in such shape and at such a price as to give the feeder the best and of the profit. All this took place twenty years ago, and since that time there has been a steady increase in the demand for Herbageum. There have come numerous preparations of concentrated and so-called condimental stock foods, but Herbageum only has proven permanent. This is largely because in feeding Herbageum the feeder has the greatest margin of profit. For instance, 50 cents' worth of Herbageum will make one and one-quarter tons of skim milk, equal to new milk, for calves. Certainly there is substantial margin of profit there, and the fact has been proven beyond all doubt.

If fed regularly to young pigs from the first, they will be mature bacon hogs at five months instead of at seven months, and the Herbageum-fed hog always grades "firm."

It will keep milk cows right up to their highest standard of production, and at the same time keep them up in flesh, and with a coat like that which a June pasture gives. "The Herbageum Theory" excludes all injurious drugs and dopes that act directly on the system; the idea being simply to produce a substitute for those aromatic qualities that pass from the green food in the ripening and drying process.

Horses thrive when they have Herbageum added to their daily ration of dry winter feed, and there is no after ill effect from its use. The Herbageum theory is a true theory, and its truth is never questioned by those who have tested it in every-day practical feeding.

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# The Farmer's Advocate

"PERSEVERE AND SUCCEED." *and Home Magazine.* ESTABLISHED 1866.

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No. 593

## EDITORIAL.

### Mail-order Business.

One of the most remarkable characteristics in modern business is the growth of transactions by mail. All the indications point to its continued development, and there must be good reasons for it. One of these exists in the advantages offered by large mercantile or manufacturing enterprises, which grow up in the great centers of population, where transportation and other facilities are concentrated and secured upon larger and more favorable terms than under more isolated conditions. The departmental store is one illustration of the way in which concentration and specialization in buying and selling go hand in hand. The rapidity of distribution has been made possible by improved means of communication by post-office and telegraph, and still later the telephone, which is rapidly transforming old ways in country districts. When the Postmaster-General gets ready to institute free rural mail delivery in Canada, he will still further help the good work along. In the way of distribution or filling the order, the postal, express and freight service have all been taken advantage of, and the demands upon the speedier methods of carriage will steadily increase. Through the press and otherwise, those in business make known to half a continent in a week's time advantageous offerings, and the mails and transportation companies do the rest.

One can hardly credit some of the lines which mail orders now cover. From one of the leading piano men of the country a short time ago, we were surprised to learn the extent to which costly instruments were now purchased in that way. One would naturally think the musical buyer would want to see, hear and choose for him or herself, but this does not follow. Said the dealer referred to: "We are more particular in filling an order upon instructions received by mail than if persons came to our warerooms, because then they act and judge for themselves, and may not be so well suited in the end as if the onus were placed upon our judgment. We must satisfy the distant customer or his sisters and his cousins and his aunts would all know, and we would soon see our mish. But when he is pleased they all know it too, and more orders follow from the locality. An order by mail puts our house upon its honor."

This view of things, and the mail order business generally, shows that humanity is not losing faith in itself, despite occasional rude shocks and some pessimistic notions to the contrary. The piano man said it was surprising the few bad debts they had ever incurred in selling that way. When people order by mail they really need things and carefully consider the cost, and the question of settlement which they sometimes forget under the spell of the travelling salesman.

In the pure-bred live-stock trade we have another and still greater evidence of the satisfactory and economical character of this system of doing business. It would, of course, be difficult to compute the vast volume of business upon this continent transacted in this way, and which has done so much for the improvement of our studs, herds, flocks and poultry yards. When fresh blood is needed men consider well the class of animal or animals which they require, and by means of a simple letter their requirements are carefully and fully stated to one or more breeders who have on hand the kind of stock desired. Terms are stated, and like the piano man the breeder is then placed upon his honor, and in ninety-nine cases out of a hundred he will take special care to

satisfy his customer, whom by upright dealing he makes a friend, who returns again and sends others as well. Considering the vast volume of business annually carried on in this way, complaints are rare, and we have found in long experience and observation that where something turned out unsatisfactory the one responsible has been ready and willing to make things right, as between man and man. Clear and frank statements in correspondence, and integrity on both sides, are the conditions of satisfactory mail order transactions.

### The Transportation Commission.

The permanent Canadian Railway Commission, the purpose and composition of which was discussed in the last issue of the "Farmer's Advocate," is entirely distinct from the Transportation Commission, which is temporary in its character and designed for the purpose of obtaining information for the guidance of Parliament and the Government. The commission consists of well-known business men, Messrs. E. C. Fry, of Quebec City; John Bertram, of Toronto, and Robt. Reford, manufacturer and live-stock breeder of Montreal, with Mr. C. N. Bell, Winnipeg, as Secretary. Its objects have been summarized in the following way: "The broad, underlying principle of the commission is that we have competitors carrying out goods, and it is before the commission to find out why competitors were carrying out goods and how much they do carry, how they are equipped and what there is for us to do to meet this competition." The competitors referred to are American railways, and the ports are Boston and Portland and others. The commission has practically carte blanche, so that its powers are large, and the inquiry will be exhaustive. Covering Canada from the Atlantic to the Pacific, it may be a couple of years before its work is wholly completed. At an early date, however, they should have secured information upon certain points that can be utilized in the extension and improvement of our facilities for transportation by our lakes, rivers, canals and railways, so that the country will enjoy the full advantage of the St. Lawrence route and the Maritime ports. Sessions of the commission have already been held at St. John, N.B.; Halifax, N.S., and other points in the Maritime Provinces, and its work is probably completed there. The commission were impressed with the magnificent natural facilities, and the growing trade of Halifax and St. John harbors, and the imperative need for early extensions and improvements. It was suggested that the Government should establish a Canadian Lloyd's, in view of the fact that Halifax was unfairly discriminated against by the insurance companies. The view was also expressed that Halifax would be the great winter passenger port and St. John for freight.

The shipping facilities of Quebec, Montreal and Toronto will yet be investigated, and evidence taken at Depot Harbor, Owen Sound, Collingwood, Midland, Kingston, and an investigation made of the Trent Valley Canal and its possibilities. Coming on west, the upper lake ports will be enquired into, and the transportation requirements of the west on out to the Pacific coast.

In view of the visit of Commissioner Fry to England this winter, and the absence of several important persons connected with Canadian shipping interests, the commissioners have adjourned until spring, when they will be better able to proceed with their investigation and interview the

men they want. In the meantime the secretary has been instructed to get together certain statistics and attend to general routine business.

### Sheep Profitable Stock.

The almost unanimous testimony of farmers and breeders who raise sheep is that, considering the cost of keeping, there is no class of live stock that is as profitable. No stock can find for itself so early in the spring or so late in the fall, and their winter term of feeding is therefore shorter by nearly two months than that of other stock. They require no expensive buildings for housing, an open shed being the most wholesome quarters for them, and only where early lambs are required is a closed fold necessary. Where clover or peas are raised, the vines of these crops make the best of fodder for sheep, and may constitute the principal part of their winter feed. Where roots are grown very little grain need be given, though the last year's lambs will be the better for a light ration of oats and bran, and the ewes as lambing time approaches should have the same to keep up their strength and provide milk for the lambs when they arrive. No other stock can be so quickly and cheaply cared for; no daily cleaning of stables is needed, no grooming, no tying and untying; thirty to fifty, or more, may be safely kept in one lot in one pen, if sufficient ventilation be afforded; the waste litter from their fodder, as a rule, supplies sufficient bedding, and so closely do their feet pack it that the accumulated manure is practically air tight, and cleaning out of the pens more than twice in a winter is seldom necessary. In summer, sheep will live largely in lanes and by-places, where other stock would starve, and will eat many weeds which no other animals will consume, preventing these from seeding, and thus helping to keep the farm clean. The complaint that they rob other stock by biting the pastures close has little force, as they leave the long grass for the cattle, preferring the short, sweet bite, and are content to follow after their bovine friends, picking up the crumbs, while the ground they pass over is enriched by their droppings, and made to produce better crops.

Even where dairying is a specialty, a small flock of sheep may be profitably kept, and we know comparatively large flocks are paying well in conjunction with beef cattle. A natural increase of from one hundred to one hundred and fifty per cent. may safely be counted on in the average of years in the flock besides the fleece, a dividend paid by no other farm stock, which, when the price is good, brings nearly half the value of an ordinary grade sheep, and pays for its winter keep. True, wool has been low for several years. Like everything else, it has its ups and downs, but the prospect for better prices both for wool and mutton and for breeding sheep is steadily improving, and no one need be surprised to see in the near future a substantial advance in values of both. The indications certainly point that way.

As that discriminating and successful breeder, Mr. John Campbell, clearly pointed out in his letter on this subject in our last issue, the cost of getting an increase of lamb is quite one dollar a hundred pounds, live weight, less than that of adding a hundred pounds weight to the cattle beast, and for the past ten years well fed lambs from February to April have sold at one dollar to one dollar and a half more per hundred pounds than good quality cattle, while the cost of labor in caring for the flock is much less. Given a field of rape in the fall months, lambs will

## THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE  
DOMINION.

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JOHN WELD, MANAGER.

1. THE FARMER'S ADVOCATE is published every Thursday (52 issues per year). It is impartial and independent of all cliques or parties, handsomely illustrated with original engravings, and furnishes the most profitable, practical, reliable information for farmers, dairymen, gardeners, and stockmen, of any publication in Canada.
2. TERMS OF SUBSCRIPTION.—In Canada, United States, England, Ireland and Scotland, \$1.50 per year, in advance; \$2.00 when not paid in advance. All other countries, 12s.
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12. ALL COMMUNICATIONS in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.

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

### LETTERS FROM OUR SUBSCRIBERS TELL US:

1. That the "Farmer's Advocate" is the most useful farmer's paper published in America.

2. That it is the most attractive.

3. That it pays to take it.

4. That its matter is high-class, its illustrations instructive, and its paper a pleasure to handle.

5. That many of our subscribers are keeping the "Advocate" with the intention of having it bound in volumes for reference.

6. That the women are as much interested in it as the men.

7. That our subscribers cannot see how we can give so much for the money.

We are glad to hear these things, and assure our readers that we are determined that the "Farmer's Advocate" shall retain its position as the best farmer's paper published, REGARDLESS OF EXPENSE. We ask the readers of the Home Department to help in spreading the circulation of the "Advocate" by talking about it to their friends, and getting them to subscribe. Our paper is not a cheap affair, like so many others that drift through the country and get burned up for kindling. Nevertheless, it costs the subscriber a little less than a dollar a week. Surely no one would grudge that for the "Farmer's Advocate."

gain weight faster than any other stock without grain. And, again, the consumption of lamb in our growing towns and cities is rapidly increasing, so that a profitable market for all that is likely to be raised is assured.

In no country in the world are the conditions more favorable for sheep raising than in Canada. Our dry climate suits them admirably, and they fear not the cold winters if given the most ordinary shelter. Nowhere are sheep more free from common or epidemic diseases or pests of any kind, and nowhere can a greater variety of suitable foods be more successfully and cheaply grown. No great outlay is required to found a flock. Pure-bred sheep may be purchased at moderate prices, and a half dozen ewes will soon breed a good flock if the female produce is retained, while good grades may be had at little more than mutton price, and these bred to a pure-bred ram will rapidly improve. And the care needed by sheep is such that the average farmer and his boys can readily learn to manage a flock. It is incomprehensible, that in a country where all the conditions for sheep-raising are so favorable the business has been so neglected in late years, but it is gratifying to find that there are encouraging evidences of a revival of interest in this branch of stock-raising.

#### Everybody Delighted.

John Young, Huron Co., Ont., writes: As the old year is gone and a new year with us, which reminds me that my subscription for the "Farmer's Advocate" is due, please find enclosed money order for the same, as I don't want to miss a single copy. I think it is the cheapest and best farmers' paper printed. I thought it cheap at \$1.00 for twenty-four copies, but now as you say 52 copies for \$1.50 it is a grand chance for any person to get so much information and good reading for so little an outlay. Wishing you every success in the new undertaking.

Jessie Matthews, Prince W., P. E. I., writes: I was determined to get you a new subscriber before I wrote. I take a good many papers, but think the "Farmer's Advocate" the best and cheapest. As long as I have the money I shall take the "Advocate."

F. Fitzrandolph, Annapolis Co., Nova Scotia, writes: I like the "Farmer's Advocate" very much, and am pleased to think that you can send it weekly for the small sum you ask.

Frank Hitchcock, New York State, writes: I wish to thank you very kindly for the painstaking effort you put forth, and succeed in publishing a paper which in my opinion ranks among the highest. I enjoy it very much, and am very pleased that it is to be a weekly from this on.

Thomas Williamson, Huron Co., Ont., says: I have been taking the "Farmer's Advocate" for a number of years, and I think it is the best farmers' paper that can be got.

Geo. S. Docker, Kent Co., Ont.: I have been a subscriber to your paper since the second year of publication, and have been well satisfied with it.

H. M. Vasey, N. Westminster, B. C.: I was very pleased to hear of your turning the "Farmer's Advocate" into a weekly paper, and am certain your efforts to make it an up-to-date weekly will be appreciated by all true lovers of the farm. Wishing you success and the compliments of the season.

Wm. C. Clark, Fairfield East, Ontario, writes: I am sure if every one who scratched the face of mother earth for a living knew the worth of the "Farmer's Advocate" they would not be without it.

E. L. Lutz, King's Co., Nova Scotia: I send the renewal and one new subscriber to the "Advocate" for 1904. Would say that I consider the "Farmer's Advocate" the best farm paper published in North America, and I would not care to be without it. Thanking you for your generous dealings.

M. V. Miller, Bruce Co., Ont., says: I am pleased to say that the farmers of our fair Dominion will have the pleasure of receiving a weekly copy of your valuable paper. No farmer or tiller of the soil should be without it. Wishing you every success in your new enterprise.

#### THE BEST.

John J. Preston, Bruce Co., Ont., writes: I think that the "Farmer's Advocate" may be justly considered the best farm journal in Canada to-day, and I wish you a happy and prosperous New Year.

#### FILLS A LONG-FELT WANT.

Thomas Richardson, Carleton Co., Ont., writes: I would say that the publication of your paper will fill a long-felt want of a weekly agricultural paper, devoted to the interests of the farming community in general. With best wishes for success in the venture.

#### BETTER NOW.

J. L. Andrews, Renfrew Co., writes: I was glad when I heard it was to be a weekly, as my family used to think it a long time between issues. Hoping you may have every success with your paper on account of change.

#### MARVELLOUS.

John Raymond, King's Co., N. B., writes: The Christmas number, I think, was a marvellous production, and when I show it to my neighbors hope to succeed in sending you some more names. Wishing you success in your new departure, I remain a constant reader.

#### Give the Address.

Some of our readers are overlooking the rule that all communications and questions for answers must be accompanied by the full name and address of the writer. This is imperative. We cannot undertake to deal with enquiries that are frivolous or which may not be genuine. We gladly expend large sums to furnish our readers with trustworthy information, and do not require the names for publication, but merely as a guarantee of good faith.

### HORSES.

#### Horses in Canada.

The different breeds or classes of horses for which Canada is noted are the heavy draft, carriage, saddler, hunter, and road horse. Let us briefly consider how these classes have been, are, and can be improved. I speak of these as classes rather than breeds, as few Canadian farmers own pure-bred mares, hence, cannot produce horses eligible for registration in the various studbooks. In the various Provinces of our Dominion the production of pure-bred horses is largely confined to large breeding farms, and not attempted to any considerable extent by the ordinary farmer.

OUR DRAFT HORSES were produced by the importation of different breeds of draft sires from various countries, as the Clydesdale from Scotland, the Shire and Suffolk from England, and the Percheron from France. In most parts of Canada the produce of the Clydesdale or Shire out of our Canadian mares has given the best results. In some places where it is required to move loads of considerable weight at a fast pace, the Percheron is used as a sire. Where the cross is not too violent, or, in other words, when the mare is not too small, the produce of the Clydesdale or Shire is usually a fairly good draft animal, and after three or four crosses is typical. Clydesdales and Shires have been imported to Canada for many years, the number of the former far exceeding that of the latter. Even comparatively young men will notice a great difference between the animals of these breeds that are imported to-day and those of a few years ago. At one time size and weight were the main consideration. The stallions were very massive, many with upright shoulders, short and upright pasterns, beefy legs, with an abundance of coarse and often wavy hair, and in other respects showing coarseness. It became evident to both Scotchman and Englishman that something more than size was required, and that animals of the type mentioned were clumsy movers, and their feet especially would not stand work on hard streets or roads; hence, they began to breed with the idea of producing quality, even though it might be to a certain extent at the expense of weight. The typical and fashionable Clydesdale or Shire of to-day is a horse of considerable quality, oblique shoulders, clean, hard, flinty bone, with straight fine feather, a pastern of medium length and considerable obliquity, and free, easy and comparatively light action, both while walking and trotting. He must have a well-sprung rib of fair length, deep girth and moderately broad and well-muscled breast. His back and loins short

and strong, croup strong, well muscled and of medium obliquity; haunch and gaskin well muscled; his neck of fair length, strong and muscular, with well-developed crest; head of medium size, neatly attached to neck, and well carried. He should be of the blocky type, and stylish. The greater weight we can get, so long as he retains the quality, the better. Notwithstanding the opinions often expressed, that there is a distinctive difference between the two breeds, we contend that there are coarse, beefy-legged, common individuals of each breed; that the desirable characteristics of each breed are identical; that the producers of each are aiming to produce the same type, and that a typical animal of either breed is identical with that of the other. By carefully selecting sires of these breeds our draft horse has been produced, and can be improved.

The various Provinces and Territories of our Dominion are using sires of these breeds to produce draft horses, and the results are, in most sections, more satisfactory than where other draft sires, viz., Percheron, Suffolk, French or German drafts are used. In cases where weight of body and bone without long hair on the legs is desired, the last named sires can be used with success.

**CARRIAGE HORSES.**—Another class of horses largely produced in Canada is the carriage or heavy-harness horse. As with Clydes and Shires, the fashion has materially changed in the last two decades. Formerly a horse of fair size, say 15½ to 16 hands, of good conformation, stylish in appearance, and of good quality, would win in good company, provided he looked well when in action and could move at a seven or eight mile an hour gait. At present, horses of this class must have the characteristics mentioned, but may be smaller (according to conditions for class), and he must have excessive flash action, both fore and rear, and the faster he can go the better, so long as he retains the quality of action. He must go high, whether jogging or going fast. These qualities are all required in the modern heavy harness horse to enable him to win. The Hackney and the French Coach are the most typical of this class, especially as regards action. The demand for this excessive action was caused by the introduction of the Hackney (an English production) into this country. The great majority of the carriage horses bred in Canada are not pure-bred. They are the produce of mares of fair quality and action by sires of different breeds, as the Hackney, French or German Coach, Cleveland Bay, Standard-bred and Thoroughbred. When the mare is rather hot blooded, and the production of action is the prime consideration, the Hackney is usually selected as a sire. Where the breeder is looking for size at the expense, to a certain extent, of action, he selects one of the larger sires, usually called coach horses, as the German or French Coach, or the Cleveland Bay. While action is in most cases the first characteristic, we must not sacrifice quality. When we can produce fair size, with extreme quality and action, we will have reached our ideal in heavy harness horse breeding.

**SADDLERS AND HUNTERS.**—Another class of which Canadians have just reason to be proud is the saddle horse and hunter. The importation into the Dominion of the English Thoroughbred is responsible for the production of this attractive, useful and valuable animal. There are few individuals of this class that have distinguished themselves in the show-ring, on the road or in the hunting field who have not Thoroughbred blood close up; either sire or dam, in most cases, being registered or eligible for registration in the Thoroughbred Studbook. While half or three-quarter breeds excel in the saddle, this is not all they are useful for. They make excellent harness horses, and are probably the best combination horses produced. They have not the necessary speed to win in the road class, nor the action to win in the carriage class, but as serviceable horses for either light or heavy harness, where neither excessive speed nor excessive action is demanded, they probably cannot be excelled. Ontario, especially, has produced and is producing saddlers and hunters of high class. A large percentage of the winners in the best exhibitions of the continent are Canadian-bred, as are also many of the best performers in the hunting field, while many half breeds are used with much satisfaction and pleasure for both harness and saddle work, where owners cannot afford to keep both classes. The horse that is essentially saddle-bred gives greater satisfaction in harness than the harness-bred animal does in the saddle.

**STANDARD-BREDS.**—This class is an American production, and has been bred for generations with the sole idea of producing extreme speed at the trotting or pacing gait. Mostly if not quite all the horses that have won distinction in harness racing, trace on both sire and dam's side to the Thoroughbred. Only a small percentage of those produced have sufficient speed for racing purposes, and, unfortunately, many of the class that are not fast enough to race are too small for general roadwork, and hence have

no great market value. Horses eligible for registration in the Standard-bred Studbook are of various breedings, and probably should be spoken of as a class rather than as a breed. They have not attained sufficient individuality to render them prepotent or capable of transmitting to their progeny with reasonable certainty their own characteristics of gait and speed. The breeding of Standard-breds with the idea of producing race horses is the province of the rich man. The man of ordinary means who undertakes it will, in all probability, meet with financial disaster. Those who observe the prizewinners in the best exhibi-

**Old Royal: An Aged Horse.**

The engraving on this page represents a horse that is 32 years old past, whose owner, Mr. Geo. Henderson, Guelph, writes: He was broken in by myself when a boy, and has had very few drivers but myself. Some of your readers will no doubt think he has done little work, but I honestly think there is not a horse on top of the earth that has plowed more furrows than Old Royal (I say plowed, for we were taught to plow, not root), and right good he was at it. He got the work without the abuse—the way all horses should be treated. His breeding did not amount to much. His sire was Royal George; dam, a mongrel. He was bred by Mr. Fulton, and bought by my father, Thos. Henderson.

**STOCK.**

**The Breeding of Sheep.**

That there is room in Canada for an immense development of the sheep-raising industry will readily be admitted. In this country we are almost entirely free from the ravages of those diseases which interfere so seriously with the profits of the sheep grower in some other lands. Then, too, we grow in abundance nearly all the foods best suited for feeding sheep. We have excellent pastures in summer, and with rape and turnips there is no lack of succulent food for fall and winter. Where clover hay and pea straw are not available, some other suitable roughage can usually be found. Oats and bran are everywhere convenient grain feeds, while peas and beans may also be provided in many localities. Unfortunately, too, we have in nearly all parts of Canada an abundance of weeds, which may partially be kept in check by maintaining large flocks of sheep. It is said that 85 per cent. of our common weeds are readily eaten by sheep, and consequently, we find, as a general rule, that a sheep farm is a clean farm.

Sheep-breeders, like all other live-stock growers, should start out with some definite aim in view. In Canada this will doubtless be the production of mutton for the home and foreign markets, with wool-growing merely as a side line. The breed chosen should be one adapted to the purpose in view, as well as one for which the farmer has a liking. In addition to this, it must be a breed suited to the conditions of soil and climate prevailing in the locality. As a general rule the heavier breeds do best on somewhat low lying or level land, while the lighter breeds prefer upland or even mountainous country. These characteristics are largely due to the nature of the soil in the district where each breed originated, as has been shown by Mr. Primrose McConnell, in his excellent work on agricultural geology. If a pure-bred flock is to be kept, the farmer should choose a popular breed, or one gaining in popularity, in order to be reasonably sure of a demand for his stock. Whether the flock be pure-bred or grade, a knowledge of the anatomy of the sheep, and of the methods of treating common disorders of sheep, will prove of decided value to the owner.

In starting a flock only healthy, robust ewes should be selected, and all of them should be of the same type. They should be mated with a first-class ram of similar type, and one of the same breed as the ewe flock, unless the farmer is crossing for some special purpose and does not intend to retain the progeny for breeding. Each year the ewes should be carefully weeded out, only the best being retained; too many Canadian farmers in the past have followed exactly the opposite course, allowing buyers to pick out the best specimens and retaining only the cull females for breeding. By following the system of culling closely, a high degree of uniformity will in a few years be established in the flock. Every farmer knows that the presence of a few culls in a lot of animals always proves an obstacle to a sale at a remunerative price; therefore, great pains should be taken to have the flock of uniformly good quality.

Good, comfortable, roomy sheds or stabling for the cold and stormy weather are necessary. These need not be expensive, but should be well ventilated, free from drafts, and situated on dry ground. A large open yard, apart from that occupied by other animals, should be attached to their houses in every case, to allow exercise. Too much confinement in over-warm, illy-ventilated or drafted stables is fatal to success with sheep. On the other hand, comfortable quarters, regular and liberal feeding, plenty of pure water and access to a sufficiency of salt, will go far to ensure their successful wintering, and a strong crop of lambs in the spring. Careful attention must be given at lambing time, but at other seasons comparatively little time need be spent in looking after the flock. Indeed, sheep require less costly buildings and equipment, and less labor in caring for them than almost any other class of live stock.

Ottawa. W. A. CLEMONS.

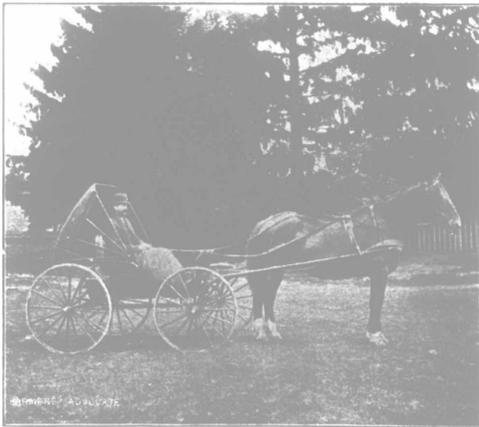


G. C. Creelman, B. S. A.

Newly appointed President of the Ontario Agricultural College.

tions will notice that it is not uncommon for horses of this breeding to win in the heavy harness classes or as high actors, and this lends support to those who state that the Standard-bred is the best carriage horse and actor produced. The majority of winners in these classes are stags (horses that have been left entire until adulthood). When we consider the very large number of Standard-breds produced, and note the few which excel as actors, we are forced to the conclusion that, while an occasional individual makes a heavy harness horse of high quality, the percentage of such is so small that it would doubtless be disastrous to attempt, as a business, to produce this class by breeding Standard-breds.

Horse-breeding in Canada, and, in fact, in all countries, has proved that in order to be successful sires of pure breeding must be used. Where



Old Royal, Aged 32 Years.

Sired by Royal George. Property of Geo. Henderson, Guelph, Ont.

pure-bred mares can also be procured, no question as to the breed of sires can arise, but when the mare, though probably typical of a class, is of mixed breeding, the selection of a sire to produce a colt of a certain class must to a marked degree depend upon her individuality and characteristics.

Improvement in horse breeding has been marked of late years in all Provinces and Territories of the Dominion. To some considerable extent in the N.-W. Territories and B. C. the native broncho is still bred, but efforts are being made to improve even this class by the use of improved and pure-bred sires.

"WHIP."

### London (Eng.) Letter.

The Board of Trade figures for the complete year, ended 31st December, which were issued a week ago, are as usual a source of useful information. From them we learn that out of a grand total of \$47,215,095 worth of live stock imported, Canada contributed \$16,670,933, or 36.51%, practically double the amount of the 1902 returns. In fact, with the exception of butter and oats, there have been substantial increases in the volume of Canadian imports, which, I hope, and have reason to believe, will be still greater this year.

In the valuation of the cattle for these returns it is interesting to note that while those from the United States are valued at \$2.50 per head more than Canadian, in the market quotations the difference works out on an average 90 stone bullock (720 lbs.), at from \$3.75 to \$7.50.

When the Canadian shipper makes up his mind to send forward only the best finished beasts in carefully graded bunches, he will find that all the markets on this side are good. The only preference that is known here is a very decided one, and that for the best wherever it comes from. Unfortunately, our markets are flooded daily with "secondary" meat from all parts of the globe, which in many cases barely realizes enough to pay expenses. The American exporters long ago grasped the salient points of the market tendencies, and are, as a rule, sending us the best they can buy, knowing that the competition for their choicest lots will be on the buyer's side, while plain lots go begging.

As regards the difference in the shipments from the two countries, and they are many, Canadian shipments as a rule are made up of all sorts and conditions, while the American lots are carefully classed in bunches of equality, breed, age, condition and weight, all being taken into account. This being so, it is not difficult to account for the big difference in values.

The same rule holds good in the dressed meat department, the best always commands the market. In the meantime, there is NO ROOM FOR ANY MORE FRESH MEAT COMPETITORS in our markets. The great Chicago firms—Swifts, Morris, Cudahy, and S. & S.—rule the roost. Armour's are represented here, it is true, but they are making no headway, and if they are being squeezed out of it, Canadian enterprise would want a lot of patience and perseverance not to mention the almighty dollar side of the question to gain a foothold.

Among the many reforms to be brought about, I am pleased to see that an effort is being made to have the country of origin declared for our import statistics. At present there is great confusion, owing to the fact that goods are credited to the country according to the port from which they are shipped; thus Canadian cattle reaching us via Portland and Boston are included in the United States returns.

The Colonial Products Exhibition at Liverpool was, as regards Canada, rather disappointing, the colonies principally represented being the West Indies and South Africa. This might have been expected, as Sir Alfred L. Jones, the organizer of the affair, is more intimately associated with them. Nevertheless, the exhibition was so successful that it is proposed to make it an annual one. St. George's Hall at Liverpool, while being a building of considerable size, is not large enough for holding a large combined Colonial Exhibition, and while advocating the holding of such exhibitions, I would suggest that Canada take the initiative of having "one of her own."

Last week's Canadian contribution to the great London improvements was the opening of the splendid new offices of the C.P.R. Railway in Trafalgar Square by Lord Strathcona. As usual with every thing this company undertakes on this side, they are fitted up in a most attractive and luxurious style.

The omission of a meat trades' representative on the Chamberlain Tariff Commission, mentioned in my last letter, has been rectified by the invitation and acceptance of a place thereon by Mr. William Cooper, a prominent salesman in the Central Meat Markets.

Canadian bacon is still in great demand, and prices have gone up appreciably during the week, but only for the leanest light weights. In this department fat selections have gone out of favor, and it is difficult to find purchasers, whilst the lean descriptions are always wanted. The latest official quotations are 11½c. for bacon averaging 40 lbs. to 50 lbs., best and leanest selections.

This week the business done in Canadian cheese has been somewhat limited, but this was only to be expected from the extensive trade which took place the previous week. Prices are well maintained, and show no sign of weakening. Some of the best white and colored varieties were sold at 11½c., but the majority of transactions were on 11c. basis.

The butter market, as far as the imported article is concerned, has shown a decided falling off lately, both as regards prices and supplies. "Colonial" butter, the name by which Aus-

tralian produce is known here, has taken a decided lead in the London market, and owing to its abundance and handy price, is now becoming an article of everyday consumption, where but a short time ago it was looked upon with suspicion, which usually greets anything "new" in this country.

The trade in the central meat markets has been very slow, hundreds of tons of inferior and stale meat being shown daily, for which there is no demand.

At Deptford business has not been very brisk, but prices have not dropped, as the even quality of the stock coming to hand is well maintained. The latest prices quoted for cattle there being 11½c. to 12c.

Jan. 16th, 1904.

### Scottish Feeders Want Canadian Cattle.

Lawton, Coupar-Angus, Scotland,  
December 24th, 1903.

To the Editor "Farmer's Advocate":

Sir,—I have just been favored with a report of a farmers' meeting, in Guelph, during the Winter Fair, at which some remarks were made on the British "embargo" against Canadian cattle by "Colonel Ferguson, of Pictstonhill, Scotland," whom we all know and greatly esteem here, as Mr. William S. Ferguson, tenant of the farm of Pictstonhill, whose presence at convivial meetings is indispensable, and had our friend reserved his wholly irresponsible bombastic utterances on the embargo for an audience acquainted with the circumstances, it would have called for no comment, but, to prevent misunderstanding in Canada, I should like, with your kind permission, to offer some explanations.

It is absolutely not the case to say that three-fourths of the people directly interested in live stock in Great Britain are opposed to the free import of Canadian cattle, and even if they were, their only reason for this opposition would be to exclude competition from Canada by subterfuge, and they would form a ridiculous minority of the whole electorate who decide the Fiscal Policy of this country to be "Free Trade." It is perfectly certain that the Embargo Act would never have been passed but for the evidence of the existence of disease among Canadian cattle—pleuropneumonia, to wit—brought before Parliament by the Board of Agriculture—evidence which time and events have now proved to be utterly erroneous. Under these circumstances, the continuance of the Embargo Act is in the same sense a crime, as would be the continued imprisonment of a person who had been found guilty by a jury, on evidence afterwards proved false.

Now, I notice, the "Colonel" said he would neither "give the reason, nor his own opinion," why the embargo should be maintained. "Raise your own corn, and feed your own cattle," he says. "That is what 'we' (Who are we?) are trying to impress on the British farmer," and doubtless he would expect Canadians to take this lying down. But I greatly mistake if Canadian, any more than British, farmers will accept an unreasoned order, even from a "Colonel" arrogantly using the "we" of authority.

Before me I have a report of a speech delivered by Mr. Ferguson at a meeting of the Scottish Chamber of Agriculture, in 1901, when, in seconding an amendment in opposition to a motion calling for the removal of the "embargo," he said: "Remember that you are not asking for the introduction of Canadian cattle only. If you ever get a measure to introduce cattle, it means foreign cattle. It is impossible to restrict the operation to Canadian cattle." Also, "What security have we that there is no disease in Canada? You speak at large, because you do not know. Some of 'us' have been across the great undefined frontiers of thousands of miles. We have seen the cattle roaming backwards and forwards between Canada and the States."

Well now, his first reason has vanished like last winter's snow. Canadian cattle can easily be given freedom of entry to Great Britain by a simple amending bill, exempting Canada from the operations of the 1896 Act, without consulting Germany or any foreign nation; while the second, and sole other reason, is—in view of all the facts—nothing better than a suggested slander, and the "Colonel" showed greater discretion than valor in refraining from repeating it to his Canadian audience.

Dr. J. G. Rutherford, Dominion Veterinarian, surprises me much in making, at this same meeting, the following statement: "When Scotchmen talk about the injustice done to Canada, it is not sympathy for us so much as their desire to make a few extra shillings for themselves, and it would be a sound, sensible policy for us to finish our product, and take the profit the Scotchmen want to get."

Well, sir, in the first statement, Dr. Rutherford—unwittingly, I am sure—does us "real" injustice, and I send herewith a proof copy report of the Scottish Chamber of Agriculture meeting this autumn, when the snatched decision of 1901—in favor of continuing the embargo—was reversed by an overwhelming majority in support of its removal, and you will see in this report that the mover of the amendment against the motion for raising the embargo said: "I think the arguments of both Mr. Gray and Mr. Henderson (the mover and seconder of the successful motion) are more in favor of the Colonial than in favor of the feeder of the cattle in Scotland, and my opinion is that we should not look

so much to Canada. Canada will look after herself, to all appearance, and let us look after ourselves." Now, it is hard to be blamed both ways, and I should just like to say to Dr. Rutherford, that the advantages accruing from the removal of the embargo would be mutual. So far as I see, Canada would not reap less than an equal share. And suppose the embargo were removed to-morrow, that would not prevent Canadians from adopting Dr. Rutherford's policy of "finishing their own product," nor would it give to Scotchmen any power to dictate in what shape their cattle should be exported, but it would give Canadian farmers freedom to sell their cattle whenever they could get the best price for them "in an open market" in Scotland and England.

Since the embargo "was" put on, Canadian cattle have only had one landing port in Scotland—Glasgow—and a few ports in England, at which slaughter is compulsory within ten days, thus confining their purchase entirely to the butchers in the vicinity of these ports; whereas, before the embargo, there was absolute freedom of market, with unrestricted competition from all—butchers, farmers, etc.

Sir, I venture to agree with a view of the Globe, Toronto, recently expressed in an article referring to our meeting in October with Lord Onslow, the present Minister of Agriculture—a view quoted by the press here—namely, "That the removal of the embargo was, at least, as important to Canada as any preferential duty of grain which Britain was likely to concede."

Indeed, it is difficult to fully realize what an increase in the value of your cattle—in any shape, fat or store—would result from the raising of the embargo. Many a time, large cargoes from Canada, the States, or may be the Argentine, simultaneously arriving, with only ten days for slaughter, cause excessive and wasteful depressions, from which your trade suffers. By all accounts, this has been a very unprofitable season for your traders here, and a report, just to hand from Montreal, shows that \$200,000 has been lost on 30,000 ranch cattle, some cargoes of which barely paid the freight charges.

In conclusion, I would direct your attention to the Statistical Yearbook for 1902, issued by the Dominion Department of Agriculture. It is there shown that nearly 70,000 cattle a year have been exported to the United States, valued at from \$14 to \$24.75 a head, in face of a "duty" ranging from 27½% on fat cattle, to \$3.75 and \$2 on stores; while, before the embargo, only a few hundred a year crossed the frontier. Now, I think those cattle would have brought \$10 to \$15 a head more "in an open market" here, over and above the cost of freight, etc.

These statistics further show that the value of your cattle coming here since the passing of the Embargo Act, in 1896, has been \$10 to \$15 a head less than before, and that, "notwithstanding they now come as fat, instead of mixed fat and store animals."

Why, sir, in 1890, when we had open ports, Canada sent us about 67,000 cattle, valued at about \$6,566,000; in 1897, when we had restricted ports, she sent us 120,000 cattle, the value of which is given as \$6,454,000, and these latter were all exported as fat.

Everything goes to show that \$10 to \$15 a head is a reasonable estimate of the increase in the value of your total cattle export that would take place as a result of the removal of the "British Embargo," while we, too, would be great gainers.

Apologising for so trespassing on your space,

Yours faithfully,

WM. HENDERSON,

(Member of the Executive Committee of Canadian Cattle Importation Association.)

Lawton, Coupar-Angus, Scotland, Dec. 24th, 1903.

### Knowledge Needed.

A few bits of knowledge which the thoroughly successful farmer requires:

- (1) Botany enough to enable him to recognize weed enemies, and understand the nature of his crops.
- (2) Geology enough to know different kinds of soil.
- (3) Entomology enough to know which insects are pests and which are friends.
- (4) Ornithology enough to know which of the birds are injurious and which helpful.
- (5) Forestry enough to know how to preserve, extend and harvest his bush lands.
- (6) Horticulture enough to know how to manage his fruit and vegetable gardens.
- (7) Veterinary science enough to understand his horses and cattle and their ailments.
- (8) Mastery of the principles of stock-raising.
- (9) Practical ability and push enough to enable him to apply his knowledge of all these things in actual work.

In addition, he must be a carpenter at times; he must know how to mend harness, file saws, sharpen axes, and care for machinery. He must possess public spirit and manliness enough to make him a valuable member of his community; domesticity enough to make him the indispensable center of his home; common-sense and business methods enough to enable him to guide wisely all the ends of a complicated business. Yet some people, who don't know any better, think any ignoramus can be a farmer!

**The Western Ranges.**

[By E. B. Osborn, Special Correspondent of the Morning Post, London, Eng.]

As the westward-bound traveller on the iron trail of the Canadian Pacific Railway passes out of the great wheat field in the center of which is Regina, the aspect of the vast plain that seems slowly to revolve about him changes considerably. From the busy market town of Moose Jaw to the point where the locomotive charges the seemingly impregnable rampart of the Rockies, grain fields are small, and few and far between, but everywhere horses and cattle and sheep are abundant. In the region of the Chaplin Lakes, which begins a hundred miles or so from Regina, the high prairies are everywhere scored and scarred with buffalo trails and wallows. Over this ancient and many-wrinkled face of earth wander bands of antelope; here and there from a little hill the lean-visaged coyote contemplates the passing of the train. Thence up to Calgary, all the land is pasturage—pasturage which cannot be overstocked until the number of its cattle exceeds that of the vanished northern herd of buffalo.

But the old adventurous rancher's life—the lonesome life of an Ishmael—is passing away. The conditions of ranching have greatly changed during the past few years. The man with the plow is invading the ranges, and cattlemen with large herds are being crowded out of the game, or compelled to curtail their undertakings. . . . Then, the encroachment of the sheepman must be taken into account. Sheep eat the natural pastures of Western Canada to the bone, and cattle would not, if they could, feed after them. They have been called "hoofed locusts," from the cattleman's point of view.

The ranching district of the Canadian Northwest may roughly be said to extend from the third meridian to the mountains, the greater part of it lying between the International boundary and the South Saskatchewan and Red Deer Rivers. The western and more favorable part of this stretch of country is already filling up, and cattlemen with large herds are beginning to find both their range and hay supply inconveniently curtailed. Those portions which are capable of irrigation are also capable of supporting a larger population than parts where the water supply is unattainable, and the ranges adjoining such localities will first be overcrowded. In these places the ranches will be gradually modified into stock farms. In my opinion, a great part of the West will never be capable of irrigation, and in such parts the cultivation of crops within the above-mentioned boundaries must always be something of a lottery. I am not speaking of Northern Alberta, where climatic conditions are different, and where the plow-team already predominates over the saddle horse. Southern Alberta, with the Medicine Hat and Maple Creek districts, with their more moderate temperatures and lighter snowfalls, are the objective point of seventy-five per cent. of the would-be ranchers now moving into the country, and in certain of these localities the supply of natural hay is already unequal to the demand. East, west and south, the boundaries of the rancher's operations are plainly marked. Northward, with limitations and decreased herds, he may still extend his sphere of influence. Nearly all the cattlemen are now alive to the fact that at least some portion of their herds will require feeding in winter, and large quantities of hay are put up every summer. At present the supply comes from natural sloughs and benches; but as the benches will not bear cutting during successive years, in the case of a crowded locality great areas must be gone over, necessitating long hauls to the corrals, and adding to the expense of the work. Where irrigation is practiced a much

larger bulk of feed may be procured from a much smaller acreage, which is generally close at hand.

It is clear from the foregoing that the Albertan ranch of the future will be a stock-farm. Whence it follows that the old methods of handling cattle will become obsolete, since the man with a small herd must send his steers to market in good condition. Already the Albertan rancher understands the market value of mercy to his beasts. There are ranches where the cowboy who asks for a stock-whip asks for his summary discharge. The use of the lariat is also being discouraged. . . . The Albertan rancher of the future will, I think, conduct his business in this wise: He will own an irrigation ditch, and a thousand head of cattle, more or less. He will grow feed on his irrigated lands, and ship stall-fed steers, which will come into the British market about midsummer, when prices reach the climax of the year's curve. He will not grumble at the exclusion from British pastures of Canadian cattle, for his steers—beasts with the white faces of the Hereford—will be a filled and finished product, so that what was formerly money in the pockets of Scottish graziers will be money in his own. His cattle will be mild-mannered—even gentler than the range cattle which I saw in the Winnipeg stockyards. . . . As for the cowboy—a little more of the romantic gilding will be rubbed off his life. "The beggar will have to hoe potatoes," says one who has studied the matter. In conclusion, it may be said that there is room for hundreds of these twentieth century ranchers in Western Assiniboia and Southern Alberta.

On my return from British Columbia I had the opportunity of visiting Macleod and Lethbridge. . . . Macleod is a typical ranching town, where a cowboy of the old style feels at home, and the side-saddle is not regarded as a departmental necessity for a pretty girl. But Lethbridge has a destiny of wider scope. Much of the territory adjoining is irrigated by means of the Galt Canal, the best and cheapest irrigation system on the continent; there is a well-equipped coal mine in the neighborhood, and the construction of the Crow's Nest Pass Railway makes it the natural supply point for mining camps of British Columbia, which are forced at present to import agricultural produce from the State of Washington, despite the high duties levied on farm products entering Canada.

The success of the Galt Canal, whereby the waters of the St. Mary River are distributed over an area, hitherto unsuitable for the raising of cereals, of close on one thousand square miles, shows how profitable will be the establishment of a "Canadian Colorado" in this remote corner of the Northwest Territories. . . . While the artificial application of water to growing crops in-

creases the original cost of farming, and adds to the farmer's labor, it enhances the quantity and quality of the product, and, above all, assures against loss by lack of rainfall or the ill distribution thereof through the season of growth. The admirable crop reports issued by the United States Government show conclusively that the average production of wheat per acre on the irrigated areas of Montana and Colorado is fifty per cent. more than in the States of Illinois, Iowa and Indiana—three of the best natural wheat producers in the Union. And the judges at the shows in the Western States find it necessary to place samples of wheat grown on irrigated land in a separate class, because in nine cases out of ten the grain grown under natural conditions would have no chance whatever in open competition. Furthermore, irrigation provides a fertilizing agent. The alluvial matter carried in suspension by the waters of the western rivers during spring and early summer are deposited on the soil, so that its grain-producing power is annually renewed. So it happens that in countries such as Colorado, where irrigation has been practiced for many years, wheat crop after wheat crop has been taken off the same field without any material reduction in the yield. . . . Finally, it should be remembered that the glacier-fed streams of the Albertan foothills afford an inexhaustible water supply for the irrigation systems of the future, and that since both the land and the water rights are owned by the Federal authority, the working out of comprehensive schemes will be greatly facilitated.

**London, Eng., Comments.**

Since the publication of the names of the gentlemen composing the Chamberlain Tariff Commission, general surprise is expressed by butchers that no one directly interested in the live or dead meat business has been appointed. Of course, I know there is a commission on food supplies now sitting, but I do not think it has powers to investigate and report upon the advisability of taxing imported foodstuffs. The vital importance of the subject is well worthy of a special commission to itself, and no doubt our National Federation of Meat Traders will see to it that the matter is fairly dealt with.

The subject of imported foodstuffs naturally leads to the consideration of Canada's relation to us as a source of continuous supplies, and how changes in our fiscal policy would affect her. Canada's geographical position is such that if a decided preference were given to her produce, as against that of the United States, for five winter months of the year she would be open to severe retaliatory impositions by the Americans. A very large percentage of Canada's exports come here via the United States. To obtain the full benefit of



**King Holt (15673).**

Imported Shire stallion. Third at London, Eng., Shire Horse Show, 1899. First at Peterboro, 1901. Property of Truman's Pioneer Stud Farm, Bushnell, Ill.

preferential tariff Canada must devise free winter ports and an efficient steamer service.

[Note.—Halifax and St. John, two of the safest harbors in the world, are open all the year round, and the former is 600 miles nearer England than is New York harbor.—Editor.]

To farmers, the year that has passed into limbo has been one of the very worst on record. From every quarter comes the cry of harvests ruined by rains. In many parts of England and Scotland, the harvest operations were only finished the week before Christmas, which is the very latest within memory. The wheat area of the country has declined by 45,000 acres, while the estimated produce is nearly nine million bushels less than last year, and barley about 150,000 bushels less. Oats, though sown on an increase of 80,000 acres, show a decrease of 5,700,000 bushels on last year. Potatoes, too, were worse than last year. Disease was rampant, and the occurrence of this pest has led to increased attention being paid to the development and growth of new varieties. In this connection, on Wednesday, 30th ulto., it is interesting to note that the initial steps for the founding of a National Potato Society were taken.

## FARM.

### Destroying Wheat Smut.

Enquiries have been received of late asking for the best method of destroying smut in wheat. It is, perhaps, a little early yet for farmers to undertake this work, but perhaps none too early to give the subject thorough consideration. There are two methods commonly used; one known as the bluestone and the other the formalin treatment, and both have been found fairly effective if properly carried out.

For the former dissolve one pound of bluestone in from three to five gallons of water, the amount depending upon the percentage of smut in the wheat. In dissolving this material, a good plan is to place it in an old sack and suspend it in a barrel just below the surface of the water, the amount of which has been previously measured. In this way the bluestone solution sinks to the bottom and allows the clear water to come in contact with the undissolved material.

With a barrel two-thirds full of this solution, then put the wheat in a close sack and immerse it, moving it up and down until it has become thoroughly wet, after which it should be withdrawn and hung over another barrel placed close by to catch the drippings, which may be used again. When the dripping is over, spread out the wheat on a smooth surface to dry. The idea in having it placed on a smooth surface is that it can be quickly and easily filled with a shovel.

The formalin method is used by adding one pound of formalin, which may be obtained at any drug store, to from 45 to 50 gallons of water. The wheat should be spread out two or three inches thick on the floor and sprinkled with this solution until every part is moistened. The proper time to do this work is really just before seeding, but any one who has wheat in any way affected should have the material on hand and his man made up in good time to carry out the work, as one bushel per acre lost through smut would, on a large acreage, amount to considerable financial loss, as will readily be seen.

### Ontario Millers Dissatisfied.

Speaking in Montreal of the necessity of having the grain standards changed, F. W. Thompson, of the Ogilvie Milling Co., reported the condition in Ontario as follows:

The dissatisfaction among Ontario millers in regard to the confusion and uncertainty regarding the matter of standards has increased, if anything, since the first of the year. One of them used some very strong language to me in discussing the matter. "It is well known," said he, "that Ontario flour ground from the last wheat crop is superior to that of the year previous, the Ontario wheat crop of 1902 being very inferior. A considerable proportion of it was sprouted and otherwise damaged, hence the importance of having the standards changed in order to more fairly represent the better qualities of new crop Ontario flour. Owing also to the number of the different grades of winter wheat flour, millers and dealers in Ontario, Quebec, the Lower Provinces and Newfoundland consider it absolutely necessary to have some fair standard fixed every year in October. I can't understand why the government is throwing obstacles in the way, and is so slow to avoid the confusion and uncertainty now existent, it should announce without any further delay, its definite and final conclusions on this matter. Last year after waiting for several months, and it necessary to fix the standard, it was necessary to have inconvenience and loss to the trade."

### The Oka Agricultural School.

"Farmer's Advocate" readers will be interested in knowing something of this "out-of-the-way" establishment, under the care and direction of the Trappist Fathers, situated about forty miles from Montreal, on the north shore of the Ottawa river, in Two Mountains County. The school and farm are one short league from the little Indian village of Oka, in the midst of very picturesque scenery.

The school itself is a three-story building, provided with all modern accommodations, and capable of containing one hundred pupils. It is surrounded by orchards, vineyards and large maple groves, where nearly 2,000 trees are tapped yearly. About 450 acres of different kinds of soil are under culture, of which 300 are in meadows, field culture, gardens, orchards and nurseries, etc., and 150 in pasture and bush land. The orchard covers 60 acres, where at least 100 species of apple trees are to be found; also different varieties of pears, plums, cherries and smaller fruit. The nursery is about 25 acres, the vineyard 8 acres.

Garden and orchard products are intended especially for the market, but the products of field culture are consumed on the premises by a large and varied stock, of which over 100 are Ayrshire, Canadian, Jersey and Holstein cows. This department in particular is given special attention, the milk of each cow being weighed every morning, and often tested; an accurate account is also kept of what each animal eats and costs daily, so that no parasite is kept in the herd. Any cow not forwarding at least 6,000 pounds of milk in the year is done away with. Several of these cows give from 12,000 to 13,000 pounds of milk; one Holstein is yearly credited with about 17,000.

Feeding, as in every other department, is done on scientific principles, still the food given is not extra costly. The secret all lies in the proportioning and also in the preparation of elements furnished as provender. This year 40 acres of corn silage will be fed in the stables. This corn is all hand sown. Not one drop of the liquid part of the manure is lost; all is put on the manure pile, or directly carried to the garden, meadows, etc.

The piggery contains from 200 to 250 animals—Berkshires, Yorkshires, Tamworths and Chester Whites. Special care is given to bacon breeds. The department where hams and bacon were cured and prepared for the market is not working just now. Agricultural clubs and societies buy, as soon as ready to be sold, the surplus pigs.

Horses, about 25 in number, are mostly Percherons. The sheep are Leicesters and Shropshires. All these animals are registered.

The henhouse is a large three-story building, where numerous Plymouth Rocks and White Leghorns, ducks, geese, turkeys, pigeons, and even rabbits, devour the rubbish of the house, garden and farm—waste vegetables, meat, bones, blood from the slaughter-house, etc.; all this is fed to the poultry.

The farm is provided with all kinds of shops, such as blacksmith's, tinsmith's, carpenter and joiner's, shoemaker's and harnessmaker's; also grist and circular-saw mill, with planer, etc., where the products taken from a couple of hundred acres of forest are converted into timber, etc. There are also other shops of less importance, where, in winter time especially, the students can learn useful petty trades and industries. At school the boys have at least two hours of class a day, a few hours of study, and another few hours of manual training in the different departments, under the care of their respective teachers. Tuition is given partly by the Trappist Fathers and Brothers, partly by lay professors. Field culture, stock-raising, garden, orchard and bee culture; butter, cheese, sugar, wine and cider making; bush-land clearing, fruit and vegetable canning, etc., are taught theoretically and practically. A short distance from the school is the main institution, the Trappist Monastery, where about one hundred monks, voluntarily doomed to very strict silence and rule, live by their manual labor.

Strangers, rich or poor, and of all creeds, are kindly received by the Trappist friars, who always invite them to take a frugal but substantial meal, consisting of products of the monks' industry—homemade bread, butter, cheese, honey, vegetables, fruits, etc.

Numerous tourists, in summer time especially, visit this interesting establishment. The Lac-des-Deux-Montagnes and the surrounding mountains are quite fine, viewed from the eminence on which the school is built; the maple grove alongside of the school conceals a pond, on account of which many a pool, it is said, has had bad marks registered, for catching trout during duty hours in the fall. The unfortunate student is not free even in winter time from this species of temptation, for, as he goes the same bush going to his work, his attention is often diverted by the rise of a partridge or the springing of a hare, which are there still plentiful enough, in spite of all the guns and snares of the French students.

### Farm Implements.

Senator Chas. H. Frost, of Smith's Falls, Ont., contributes to the Queen's (University) Quarterly for January an interesting chapter on "Farm tools and their manufacture." He points out that the outstanding improvement in modern farming has been the employment of labor and time-saving machinery, while in too many or in most cases methods of tilling the soil have improved but little over the ways of our forefathers. This we judge was in the nature of things. As the area of our land under cultivation increased, crops became varied and more extended, and this demanded more and better machinery. We must also bear in mind that the real principles of tillage and plant growth remain the same always, but most men are naturally conservative, and failing to heed the changes wrought by age in soil and other conditions, have not been as quick to vary the application of those principles as the manufacturer was to take advantage of the need for improved and speedier implements. Senator Frost estimates that double the work can now be accomplished with the same number of men and horses compared with 50 years ago.

The Senator discusses at length the plow, which, since the days of Abraham, has developed from a mere point to stir up the ground, into a screw or wedge to lift up and turn over the soil. He points out that some soils require to be turned over completely, and broken or pulverized at the same time, while others, such as soft clay or moist land, should be turned so that the furrows overlap. In this way the air can soften and break up the clay, and the drying of moist soil is hastened. No plow will do the two kinds of work satisfactorily with the same mouldboard and point. That the shape and curve of the mouldboard are important features for efficient service is shown by the great variety of plows in use, one manufacturer alone claiming to make no less than 850 different forms!

Despite all this, are we improving in our methods of plowing? There is a suspicion in many quarters that some modern teachings in regard to cultivation are not working out well in practice. We were reminded of this the other day by an old subscriber who had been reading the "Farmer's Advocate" for 25 or 30 years, that in those good old days, "We were TAUGHT TO PLOW, NOT ROOT." We are bound to confess that in this breathless age there is altogether too much mere skimming and rooting, as our good friend describes it. The "Farmer's Advocate" is inclined to think that our Farmers' Institutes might do worse than take up all over the country the old idea of plowing matches, in which the theory could be discussed and the practice demonstrated of good plowing, prizes being awarded, as is still done in a few localities, to the successful contestants.

The Senator gives us an excellent idea of the infinite care and enterprise displayed in every step of modern manufacture, and he shows the necessity for it when he mentions the fact that there are almost a thousand separate parts in a binder, all put together to stand the tremendous strain of work in the field, and the binding apparatus timed to perform each of its several operations at the exact instant. The manufacturer plans to meet all the varying conditions of agriculture, and to improve his implements in speed and capacity. Senator Frost predicts that in order to overcome the scarcity of farm help the machine that cuts and threshes grain at the same time will eventually supplant the binder. In addition to hard usage, many farmers are neglectful of their implements to a wasteful extent, and Senator Frost condemns also the wasteful systems of long credits. He also observes—and it is well worth bearing in mind by our people—that where agriculture and manufacture flourish together there is a land of law-abiding and highly civilized people.

Before concluding his paper he mentions the fact that Canadian implements are harvesting crops in every corner of the worldwide British Empire, in Russia and in the Argentine Republic. The "Farmer's Advocate" would also add, is it not a remarkable fact to the honor of our Canadian manufacturers that they alone, out of all the Empire, including the wonderful motherland, have been thus able to invade the world. Who ever heard of British or Australian binders appearing on wheat fields of British North America?

### A Satisfactory Silo.

Mr. Hector MacIntyre, of Middlesex County, Ontario, reports to us that his cement silo, which he built last summer, is giving splendid satisfaction. It is circular in shape, twelve and one-half feet in diameter, and thirty feet high. The wall is eighteen inches thick at the bottom, and eight at the top. Steel curbs were used in building the walls. Portland cement was used in the proportion of twelve to one. The contractor furnished all materials, including a shingle cottage roof, and did all the work, except the horse labor, required, for a fee of \$165.

Location of Farm Buildings.

When the necessity of building new houses or new barns, or both, forces itself upon one, considerable enquiry and study is given to the arrangement of the details of the plans. This is right. There is, however, another factor that is often neglected, and the consequences of this neglect often mar the otherwise satisfactory arrangements of the best of plans. We allude to the relative positions of the house and barn to the road, and to each other, and to the use of the yard between house and barn. This question is decided in many instances by some peculiarity of landscape—a hill, stream, valley, etc.—but in the great majority of cases, where the buildings are situated upon fairly level ground, their relative positions seems to have had no consideration whatever.

Before finally deciding upon the exact location of any proposed new building, a definite plan of the grounds and yards should be formed, so that the advantages and disadvantages of any particular location may be weighed. The first consideration should be the nearness of the buildings to water supply, other permanent buildings, the middle of the farm or the main road. After these details are settled, and their settlement will depend upon so many different circumstances that no hard and fast rule can be laid down, comes the arrangement of the general positions of the house and barn. In this connection there are a few principles that should be observed, the first of which is this, that the house should not be situated on the same side of the barn as is the barnyard, chiefly because it makes provision for a grassy plot at the rear of the house, and allows of a clear passage from the house to the barn without the interruption of gates, and insures much cleaner conditions, fewer flies, freedom from offensive odors, dust, etc.

Another consideration is the position of the house with regard to approaches, and the extent of front lawn. For convenience, the approach to the house from the main road should pass by the front door, or very close to it, and also by a side door into kitchen or living room. This arrangement is found convenient, not only for the advantage of entering at the front door, which, by the way, in many houses is merely ornamental, but also for supplying the house with flour, coal, groceries, etc.

The advantages enumerated are of a practical nature. There are still others that might be classed as æsthetic; that is, they appeal to the senses as beautiful, or as harmonizing with their surroundings. Under this head comes the question of the location of the buildings to afford an attractive front lawn. It is well not to attempt too much. A small lawn well kept is infinitely better than a large neglected field. In these days of strenuous living the less care and mowing a lawn requires the more satisfactory it will be. Just how to secure considerable green sward about the house without entailing much labor is the problem of securing the most pleasant home surroundings. Some have solved it in the Old Country, and in old-settled districts, by having planted many years ago evergreen hedges and trees that have grown to a considerable size, and by having sown short growing grasses, and it would seem that to reach the desired end the best way would be to follow the example set by these successful ones. The effect of the shade of the trees is to make the grass still shorter and finer, and, consequently, a fine turf is secured. Before such planting is done, it is well to have the borders of the grounds well defined by rows or clumps of trees of mixed varieties, always being careful in the planting not to entirely exclude the view from the house to the road, or other interesting objects. When the boundaries have been determined then the grounds proper may be arranged. Beginning at the house, have the whole lawn as free from unevenness as possible. Except for the driveway to the side or front door, the whole should be perfectly level and sown with short, fine grasses. Upon this lawn a few of the best shade trees, such as maples, elms, oak, beech, etc., should be set with a studied attempt at indiscriminate arrangement.

With a little attention to these matters, which are so generally termed after considerations, much can be accomplished by way of making farms more convenient and attractive, and, consequently, more valuable, not to mention the elevating influence imparted, where every detail of the home and farm is in the best possible harmony.

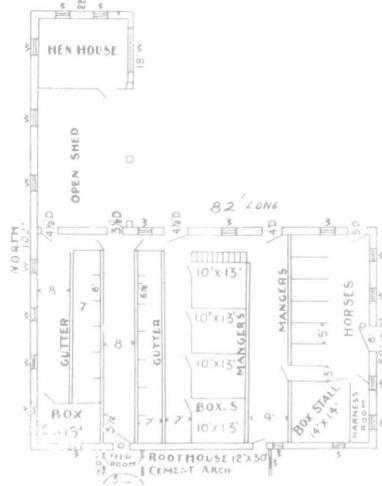
Twice as Valuable.

Please find enclosed one dollar and a half for my subscription to the "Farmer's Advocate" for 1904. I like your paper very much, and think it will surely be twice as valuable since it is to be published weekly. I think there is no other farm paper equal to it. Prince Edward Co. S. T. STEWART.

An Oxford County Barn Plan.

To the Editor "Farmer's Advocate":

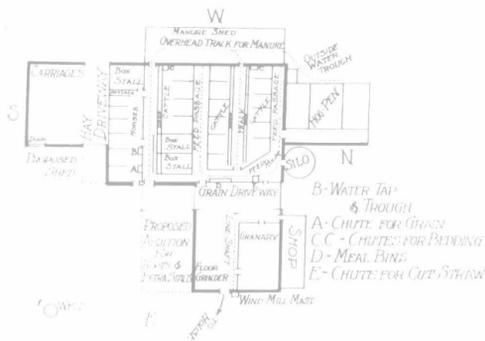
Dear Sir,—Being engaged in the building line in the Counties of Middlesex and Oxford, and most of our work being barns, hogpens and silos for farmers, it is but natural I should take a great interest in the plans which appear from time to time in your valuable farm journal. Am



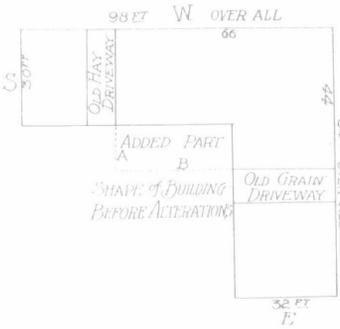
enclosing you a plan which has given good satisfaction, but do not claim that it will suit all farmers, as barn plans must differ according to the class of farming followed. This one is on a 125-acre farm, the owner of which keeps about 12 to 14 dairy cows, 6 to 8 registered Short-horns, quite a number of young store cattle, and raises a few horses each year. I do not think it would be suitable for an extensive dairy farm. Oxford Co. R. O.

Remodelling an Old Barn.

About three years ago, a farm came into my hands that had a barn 98 ft. long by 30 wide, with another running at right angles to this, 84 x 32. The problem was to remodel this at least expense, into a barn with modern stables and modern conveniences. I first lifted the whole structure, and put under a stone wall eight feet high, adding, however, a lintel at A-B to give me more room for stables. I then lowered all the mows to the barn sills; so, except a four-foot space above



the driveways, I have the whole barn, from sills to roof, for mow room. The barns are on level ground, and, as I had a prejudice to hauling everything up bridges into the barn, I have my driveways on the level ground. All grain and hay, etc., are unloaded by hay carriers and slings, so the extra height made no difference. The whole floor of stables, barn and



piggery, is cemented, except the carriage room. I placed a windmill at the east end of the barn, bolted to the end post, and supported also by stay rods. A line shaft runs into the barn, driving floor grinder, cutting-box, pump, and other machinery. After the grain is in, we lower the poles over the grain driveway and set

the cutting-box on this, so that the cut feed may drop right into the feed-room if we so desire. The water is drawn from a well outside, and forced up into tanks overhead, whence it is conducted to each stall, and, also, a tap and trough are placed behind the horses, so they may be watered by simply letting them loose. For summer use, a pipe, regulated by the same float, conveys water to a trough situated in the back lane. I built a silo, moved pigpen, built a manure-shed to the west, where all horse, cow and pig litter are taken and mixed before removing to the field. The door of the hogpen is so placed I can leave it open and give extra heat of stables to them. The silo is so placed that the ensilage falls almost into the feed-room, as does the cut straw. An overhead track runs in front of each line of cattle, and passes through the feed-room. On this runs a car that takes all food to the cattle in boxes, ready measured, if one so desires. Another track of the same kind runs down behind the cattle and horses, and out under the manure-shed, and along the piggery, and carries out all the manure and dumps it under the shed or into wagons or sleighs. The drops run towards the manure-shed, so I lose none of the liquid manure. Chutes drop bedding behind cattle and horses. This I prefer cut. Horses are fed hay through chutes from above. Grain bins are above, with chutes to bring it down behind the horses. I purpose adding two more lintels, where dotted lines indicate, for additional stable room and roots. The south lintel will furnish an open shed for wagons, etc., for protection.

By this method I saved all my roofing, and secured a square for stables 60 x 44. I have 19 windows 3 x 4, so I have plenty of light; and the stables are easily ventilated.

The granary is on the ground floor, but is kept dry by an air-space between floor and cement, and between sides and stone wall.

All the water from the roof is conducted to the tanks, which are situated over the cattle box stalls, so the water never freezes. All the manure is on the west side, on the side opposite to the house, so there is no litter to pass through to reach the barns. Teams can reach their stables without going outside, from either driveway, in case of a storm.

Ontario Co., Ont. LYMAN C. SMITH.

Cement Concrete Silos.

Mr. W. H. Walker, M.P.P., Huntingdon Co., P.Q., writes requesting that information be published from readers who have had experience with cement concrete silos. Will readers who have used such silos write us saying how long, shape, dimensions, cost, what kind of roof, number of tons held, how the silage was preserved, and if satisfactory or defective in any way. If necessary, this information could all be put upon a post card, but if additional facts of value should be stated, describing how built, etc., then use a letter. We request that this information be sent us by an early mail, so that farmers who purpose building silos next season can lay their plans now and secure the materials.

Farm-reared Boys.

The reason why farm-reared boys achieve success in all lines of business and the professions is not far to seek. It is due primarily to the habits of industry and thrift and self-reliance which they acquire in youth and retain through manhood. The farm boy learns to get up early, and if there be any one of those proverbial fat worms around, this bright bird is apt to catch it. He has half a day's work done before the city boy has left his downy couch. As he rises early, so he retires at a seemly hour, healthily wearied with his work, and in condition to enjoy "nature's sweet restorer, balmy sleep," as only a tired country boy knows how. He grows up strong, healthy and energetic, and, best of all, has that best equipment for worldly success, a sound mind in a sound body.—[Ex.

Telephones and Rural Mail.

Free rural mail delivery has extended marvellously throughout the United States during the last two years. Now the Postal Department at Washington is asking for an appropriation to investigate the feasibility of using the telephone in communicating special-delivery letters to those who live along rural routes. In New York City, the sacks of mail are sent whirling through pneumatic pipes direct from the post office to the car, and returned in the same manner. The free-delivery department is said to be expanding more rapidly than any department of the service.

The Best Adviser.

Please find enclosed the sum of one dollar and fifty cents for year's subscription to weekly "Farmer's Advocate." I took the "Advocate" when but a small paper printed once a month, and was well satisfied with a good dollar's worth; then we were treated to two papers a month for the dollar, and now we surely should rejoice to get the best farmers' adviser and instructor printed on this side of the ocean once a week for only \$1.50 per year. Wishing you a prosperous and Happy New Year.

Kent Co., Ont. ROBERT L. JARVIS & BRO.

### Harvesting Ice.

It requires no argument to convince anyone that there are great advantages in having a supply of ice at command during the heated season. Not only is it profitable as an aid to keeping milk and cream in best condition, but it affords a great deal of comfort in making it possible to hold fresh meats, fruit, etc., without deterioration for a reasonable length of time. Whether it will pay or not to store a supply of ice, is more a question of nearness to a suitable body of water from which to secure it than the providing of a place to store the ice, as a cheap shed that will keep out the sun, rain and wind is all that is required in a storehouse. Provision must be allowed, however, for drainage, but that, in general, is easily secured. We find throughout the country many ice-houses consisting simply of sheds of inch lumber, using 2 by 4 inch scantling for frame, constructed at the north side of the house or woodshed, or at the back of a driving-house. Occasionally, a box stall, apart from where stock are stabled, is appropriated, and we have seen a corner of the woodshed binned off so as to answer the purposes of a suitable storage for ice.

In filling the house, the blocks of ice should be cut as nearly even as possible, a convenient size to handle, so that they will pack in close and leave but little space between. It is well to pack in broken ice between the rows, and if the filling is done on a cold day, by pouring water on the broken or chapped ice between the rows the whole mass will freeze together, which is an aid in reducing the waste by melting during the season. Sawdust, where it can be secured, is an excellent packing material; it is convenient to handle, and is a good non-conductor. It is well, after providing for good drainage, to cover the floor of the house, which should be of earth, with several inches of sawdust. This will prevent the warmth of the earth from reaching the ice. The ice should then be laid in tiers, fitted closely and chinked, leaving ten inches or a foot of space between the ice and the walls. Build up the tiers as high as is needed, and fill the spaces outside with dry sawdust, well packed down as each tier of ice is laid. Straw, shaff or shavings will answer well as packing, but they must be well packed down. The top should be covered nine or ten inches deep if sawdust is used. More than this is liable to heat and melt the ice. Straw is sometimes used for covering, and answers a good purpose when from one and a half to two feet deep, as when ice is taken out in summer the straw can be rolled back easily, and after the ice is removed the same cold surface is rolled on again; whereas, when sawdust is used, some of the warm dust may be thrown on the ice, causing more or less waste. Whatever is used, it should be kept well tramped down, so as to fill all spaces, and thus avoid the introduction of air. While it is important to keep wind from blowing into the building, good upper ventilation should be provided, so as to protect the ice from the ordinary atmosphere.

### Comparisons.

The saying that "comparisons are odious" is often applicable, and it is equally true that the person who uses sarcasm invites comparisons not wholly flattering to himself. A schoolmaster in one of the Boston schools occasionally compared the achievements of his pupils with the work of noted Americans in their boyhood days, much to the scholars' disadvantage.

"Now, John, have you solved the problem?" asked the teacher.

"No, sir," replied the boy, "I can't."

"How old are you, John?"

"Sixteen," was the answer.

"Sixteen!" repeated the instructor. "Sixteen, and can't solve a simple problem like that! Why, sir, at your age George Washington was surveying the estate of Lord Fairfax!"

The pupil did not seem to be at all abashed at this reproach, and gave a smiling assent.

After the class was dismissed a classmate inquired of John if Washington ever did anything else remarkable when he was sixteen.

"I don't know," responded the boy. "He was a surveyor when he was as old as I am; and when he was as old as Mr. C—," referring to their teacher, "he was President of the United States."

### Farm Laborers in U. S.

The total number of farm laborers in the United States, according to a report prepared by the Department of Agriculture, is 4,410,910, of whom 2,366,149 are members of families of the farmers, leaving only 2,044,761 persons hired on farms outside the farm families, or less than one hired laborer for every alternate farm. The great number of farmers manifestly do their own work, by aid of their families, with occasional exchange with a neighbor for work requiring more than one person.

### DAIRY.

#### Cold Storage and Kitchen Plan.

We contemplate building a new kitchen, dairy, cold storage, ice-house and wood-shed, and write you for a plan and information. We want a kitchen for a large family, with wash-room, pantry, cistern, etc., and dairy opening off the kitchen, but at the same time entirely separate from it: the dairy to be large enough for from 50 to 100 cans, and cold storage to store dairy produce and meat in. There will be a good cellar under kitchen and dairy. We also want summer kitchen. The kitchen will be put to the



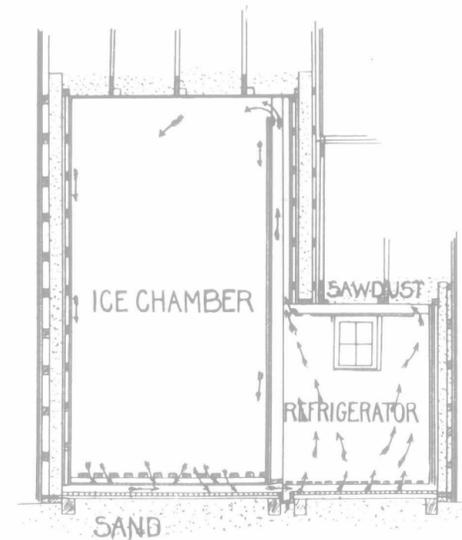
south-west side of a stone house, the front of the kitchen to north and back to south.

Lanark Co., Ont.

J. C. H. S.

Ans.—The problem of cold storage for farm purposes has not as yet been quite satisfactorily solved. In a few years something much more complete may be devised. However, we submit a plan, not as a model, but that it may suggest some ideas to anyone who is about to build an ice-house and cold storage of some kind in the near future. In the plan submitted will be seen the arrangement of the different rooms. Unfortunately, the dairy must be situated on the south side in the case of our inquirer; otherwise it would be best to have the dairy and ice-house to the north. As to having a cellar under the dairy, we doubt the practicability of the plan. By having the floor of the dairy a few inches underground the temperature would more easily be controlled. That detail and the dimensions may be decided by the proprietor, as it is not very clear what this dairy is to be used for besides storing the cans.

It will be seen in the plan that no provision is made for a summer kitchen. As a general rule, we do not recommend one. Where there is a dining-room, as is the case in all modern houses, the kitchen can be used as a kitchen the



year around. A summer kitchen generally means that everything must be carried across the winter kitchen to the dining-room. If the kitchen is too warm in summer a large hood over the stove connected with the flue will be a great benefit in reducing the temperature. In this particular case, if it could be made convenient, we would have a back veranda on the kitchen, where some of the work in summer could be done.

The details of the ice-house and storage-room may require some explanation. The plan here outlined is an example of the Hanrahan system recommended by the Dairy Division at Ot-

tawa. The first essential is to have walls, floors and ceiling well insulated. The necessity of this is evident, as the ice is not packed in sawdust or other material, but is exposed so that the air may circulate around it, as indicated by the arrows in the illustration. To secure properly-insulated walls requires a liberal use of lumber and paper. In the best of cold storage and ice chambers seven thicknesses each of boards and paper are used, and in these walls two or more dead air spaces are made. The studding for the walls should be of 2x10 hemlock, or other rough stuff. These are covered inside and out with close-fitting sheeting, inch or three-quarter inch. In the space between the studding is packed sawdust, asbestos or mica; then a ply of good building paper is put on over the sheeting, and another coat of boards over that again. Over this sheeting more paper and two-inch wooden straps are nailed; paper over these straps, and more sheeting. This makes six ply each of paper and sheeting, and two dead air spaces. The seventh ply of paper and a finishing ply of sheeting is then put on the outside. This wall should enclose both the ice-house and store-room. Whether so much insulation is used may depend upon whether the first cost is more than one cares to incur. The movement of the air in the ice-house and store-room is indicated in the plan, and is briefly this: The air in the store-room is warmed by the products there, and ascends to the ceiling, where it is conducted through a space formed by a false ceiling to a flue running up the side of the ice-house. On coming in contact with the ice the air is cooled down again and settles down. At the bottom of the ice-house it is drawn into the store-room through openings in the side of wall; is warmed up again and circulates as before.

The ice-house in this particular case would be built at the end of the main building, and would be 18 feet high. Its foundation should be solid, and drainage provided for the melting ice. The storage-room floor may be a few inches below that of the ice-house, but this detail can be arranged as desired. Close-fitting double doors should be provided at intervals up the side of the ice-house to take in the ice. The ceiling should be well insulated, and a window in the store-room wall should have three or four sashes of lights, the outer ones being frosted. This whole plan, it should be remembered, is not given as a model, but simply to suggest some ideas on the subject. It has, however, been tried on a large scale, and found quite satisfactory. If any of our readers have had practical experience with a cold storage such as our inquirer asks about, we should be glad to hear from them for the benefit of others.

### Milk Fever Again.

A German correspondent of the London Livestock Journal, writing of the treatment for the cure of milk fever, or, as it is consistently called in England, "dropping after calving," mentions that his veterinary surgeon in applying the Schmidt treatment, or the injection into the udder of a solution of iodide of potassium, found that when air was introduced with the drug the cure was more prompt and effectual than when the iodide was used alone.

Mr. Harold Leeney, M. R. C. V. S., in commenting on this in a late issue of the same journal, says, "It is undoubtedly a fact that the admission of some air when injecting the iodide solution helps to liberate the iodine," and adds: "My own plan is to inject some air with each dose of chinosol and iodide of potassium, which drugs are not chemically incompatible, and to manipulate the udder in all directions, producing a bubbly sound for some minutes, and distributing the medicament pretty equally over the glandular surfaces before leaving it to become absorbed."

The oxygen treatment so often recommended by the "Farmer's Advocate" has been amply proven an improvement on the iodide injection, and it is satisfactory to have the admission made that "some air" is also an improvement. We are not at all ashamed of the belief that "some more air" would be better still, and that with reasonable care in the use of antiseptics the fresh air injection alone, which is over 20 per cent. oxygen, will be found to prove the safest and most effective cure of all. The oxygen treatment is all right, and where a veterinarian has the equipment for administering this, we advise employing him, but in the absence of this there is no good reason why the fresh air treatment may not be used by any farmer. All that is necessary is a bicycle pump, with a couple of feet of rubber hose attached, and a common milking tube at the end for insertion into the teats. Of course, to be sure of preventing the admission of germs, the teat-syphon should be disinfected by being placed in boiling water before being used, or in some antiseptic or disinfecting fluid.

I think your weekly paper a great improvement and I am glad you are enlarging the poultry department very much. C. E. BROWN.

Waterloo Co.

**Maritime Dairy School Course.**

The eleventh session of the New Brunswick Provincial Dairy School will open on March 1st. From the 1st to the 16th the creamery course will be taken up, and from the 18th to the 22nd of April the course will be in the study of cheese-making. The teaching is free to all students from the Maritime Provinces, but the numbers for either course will be limited to thirty. Special attention will be given to instruction in making export saltless butter. The staff of instructors is as follows: J. F. Tilley, separating and cheese-making; Harvey Mitchell, milk testing and factory accounts; L. C. D'aigle, buttermaking and engineering; Robert Robertson, breeding and feeding dairy cattle; Richard Howes, repairing factory utensils. These instructors are all specialists in their different branches, and are the best practical men that can be obtained. For information apply to Harvey Mitchell, Superintendent of Dairy School, Sussex, N.B.

**Diluting Cream.**

In discussing the dilution of heavy cream, a writer in the New York Produce Review and American Creamery, says:

"I should prefer skim milk to either whole milk or water for thinning a heavy cream. The water supply at most creameries is an unknown quantity. A complete chemical analysis might determine whether it was sufficiently pure, but the possible sources of contamination are usually so numerous that it would be rather risky to use it when either whole or skim milk could be obtained, as, though perhaps pure to-day, it might not be a few weeks or months later.

"I prefer skim to whole milk or water, for these reasons—in addition to my reasons for not using water as given above—the process of separation has removed a large amount of objectionable matter that is present in whole milk, and it is, in my opinion, much easier to detect faults in skim milk. Again, although milk is largely composed of water, and although, perhaps, a chemical analysis will show no difference between such water and that drawn from a well, still it seems to me that there is a difference not susceptible of analysis, but which, nevertheless, is potent in its influence, and that influence is for the good of the ultimate product—whether it be butter, cheese, or cream."

**The Functions of the Cow.**

It should be remembered that the useful dairy animal is a very busy member of society, a useful one, and should, therefore, be a highly respected one. She is not only the income maker of the dairy, but also the mother of the dairy—another source of income quite as important as that relating to milk and butter production—for business dairymen more and more each year come to realize that if we would have good cows we must raise them.

A really good cow, writes W. F. Sparran, in Farm and Fireside, is much like an investment that is paying a dividend far beyond the current interest value of money—the man who has it does not care to dispose of it. Ordinary three per cent. securities, like ordinary thirty cent cows, are plentiful and easy to get. The man who has a forty per cent. investment holds on to it. The man who has a seventy-five per cent. cow holds on to her, and takes care of her, so that she not only returns him her best profit in milk, but at the same time yields him a fine bonus coupon, in the shape of a good calf. Now, the cow that is doing these two things, and is maintaining her own strength and bodily vigor, so that her usefulness as a milker and a mother remains unimpaired, except, of course, for such natural wearing out as comes to all life, is doing a prodigious work, and upon her owner as her keeper rests the responsibility of her health and her powers of continued usefulness.

Man found the cow a mother only, and by his direction of her tendencies he has enlarged her into a profit-maker long after the period she in her early state was concerned in supplying sustenance to her offspring. This new life and widened usefulness of the good cow is one of the most beautiful and utilitarian evolutionary accomplishments of man. It is a great privilege for the man who thus develops the possibilities of a fellow creature, and thereby brings a great blessing to his fellow men. He is indeed a wise man who realizes and meets all the new needs of this new creature that has come under his care. In his hands her usefulness enlarges, or, at least, is carefully guarded against diminution. In the hands of the careless or the ignorant the good work is undone, and men complain of poor cows. All honor to our working motherhood, wherever it embellishes and beautifies and refines!

At the Wisconsin Experiment Station it was found that cows given warm water drank eight to ten pounds more per day than when supplied with cold. In one trial cows given warm water produced six per cent. more milk than those given cold, while in another trial the difference was only one per cent. in favor of warm water.

**Breeding the Ayrshire Cow.**

In recent years a good deal has been written about the Ayrshire cow, and various theories have been put forth as to her origin. About that we do not profess to know much. One thing we do know, we have now a distinct dairy breed, which every true breeder and fancier will endeavor to bring to the highest state of perfection, both as regards her appearance and also her rent-paying capacity. In Ayrshire, it is principally on the Ayrshire cow that a great many of the farmers have to depend for paying their

sticking out prominently. The animal, when not milking, should carry a nice thickness of flesh behind the shoulder, and should be well thickened out and deep around the lungs and heart, so that she may have room to do her work properly.

The back should be straight, and the ribs well sprung out from the back.

The hook bones should be fairly wide and prominent, but not too wide and pointed, for that and a high cutting shoulder means extra food to keep the animal in decent condition.

The hind quarters should be long and square, and the tail should lie nicely into same. The thighs should be fairly thick, but not bulged out and beefy, and the hock should have a nice, natural curve. The cow should have fine, flat bones, show good substance, be deep at the flank, and the flank should run well into the thigh.

The skin should be fairly thin and loose, and covered with a nice, silky coat of hair.

The udder, when filled with milk, should be long, broad and level, running well onto the belly and up behind. The teats should set well apart, and hang perpendicularly; be of a good length and a little pointed; have a nice thin skin, and a silky feeling. The milk veins should stand out large and prominent along the belly in front of the udder, with a good-sized hole where they go through the rim of the belly. When the cow is milked the udder should go well away, and hang like a nice, loose skin, and not be bulky.

The animal should be able to move in a free and easy way, having a nice jaunty gait.

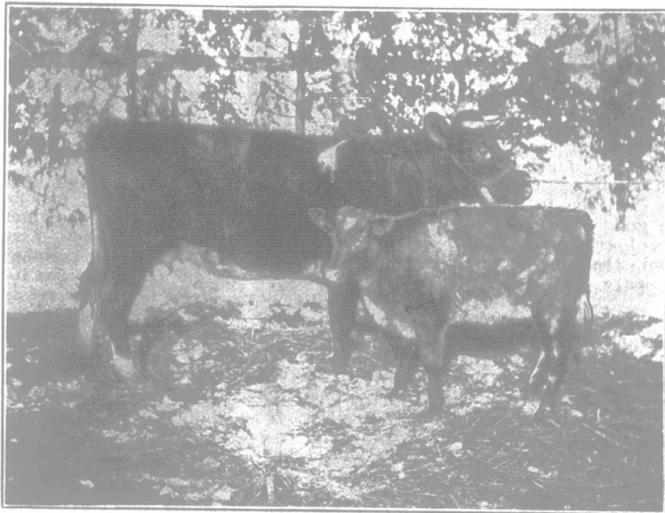
All these points are not necessary for a heavy milking cow. A great milker may be almost any shape. The greater the number of these points combined with a good milker, the greater will be the value of the animal. Cows of that description will command a good price anywhere, and at any time.

Having secured the ideal cow, the next point will be to secure a good bull to mate with her to produce something equal to and better than either, if possible. The selection of a good bull is of the greatest importance, and to that the breeder should pay great attention. The points for a good bull are much the same as those described for a good cow, only have him stronger in all his points, and having a good masculine appearance. In all breeds, and in wild animals and in the human being, it is natural for the male to be stronger and not so finely and evenly shaped as the female. Should you use a fine, evenly-shaped, feminine-looking bull, you are striving against nature, and that is a risky game to play at.

In the selection of a good bull there are two points necessary: (1) He should be of good quality, strong and hardy, and have a good constitution. (2) His dam should be a good healthy cow, giving a good quantity of rich milk, having big teats, and easily milked. Make sure of these two points, then get as many of the other

points already described as possible.

Next we come to the pedigree of the animal. Many people run down pedigree and the herdbook. Should a proper view be taken of it, there would be less said against it. There is no such thing as an unpedigreed animal. Every animal has a pedigree of some sort. Some have their pedigree correctly recorded, others have no record of their pedigree kept. Since animals show a strong tendency to breed back to some of the various strains they are descended from, it is of the



**Missie of Avondale 2nd and Calf.**

Included in dispersion sale of Shorthorn herd of Thos. Mercer, Markdale, Ont., February 21th. (See advt., page 176; Gossip, page 183.)

rent, and it is of the greatest importance that they should have a stock of cows that will produce the greatest amount of rich milk on the smallest amount of feeding. To know thoroughly about breeding, you must serve your time to the trade, watch all the various habits of the cow, and study the different strains.

A great difference of opinion prevails as to what are the proper points of an ideal cow, but almost all thorough, practical breeders are pretty well agreed on that point. The greatest trouble is to produce what you would like to.

The following are what are considered the proper points of a good cow:

The cow should be of good size.



**Broadhocks Golden Fame (Imp.).**

Yearling Scotch-bred bull at head of Shorthorn herd of Thos. Mercer, Markdale, Ont., to be sold by auction, February 21th, as per advertisement, page 176; Gossip, page 183.

The head, a medium size, with the muzzle broad; wide between the eyes, and the eye clear, bright and standing out prominently. The forehead should be wide, and the horns should stand well up, but not too long nor too thick, with a good width between the tips.

The neck should not be over-long, but free from any thick fleshiness.

The shoulder should be firm, with the blades fitting well into the body. The fore shoulder should be well placed into the animal, and not

greatest importance to know all the strains. Should no record of their pedigree be kept, you cannot know the strains.

The fact that an animal is entered in the Ayrshire Herdbook makes that animal no better nor no worse. An animal should not be bought merely because it has a properly-recorded pedigree. Examine that pedigree, and if you there find two or three strains you know to have been good doers, count value on that pedigree. If, on the other hand, you find two or three strains you know to have been bad doers, have nothing to do with that animal. In that case, the animal is the worse of having her pedigree recorded. To anyone who has not been following up or studying the different strains, pedigrees can be of no use, further than showing that the animal is pure-bred as far back as the pedigree goes. It does not give any idea of what sort of an animal he is likely to get, further than that the prizes will be recorded, should she have won any. It is his own lookout to enquire into and learn what sort of blood he has there. In that case, in making a selection, some breeder or fancier should be employed who has been studying the different strains, or who, at least, will be in a position to find out whether it be good or bad blood. The greater the number of crosses of good blood you have in an animal, the greater tendency will that animal have to leave good offspring.

In showing in this country there are two classes, namely, those shown as one and two year olds (termed yield stock), and those shown as cows in milk. Seldom does an animal which can win as a yearling and two-year-old take a prize as a cow in milk.

In judging cows in milk in this country, far too little attention is paid to the size and general appearance of the animal, and the size of its teats. In very many cases a good big, useful dairy cow, with good-sized teats, a fair milk vessel and like giving a good quantity, is beaten by a small, plain cow, having a very neat, tight vessel, not very large teats, and not very milky looking. In that respect, the Canadians are ahead of us in judging cows. They seem to go in more for what we call the yield stock strain, and without doubt these are the more profitable animals in every respect.

Many people count a good deal on the color of the animal, but that is only a matter of taste. The most fashionable color now is white, with distinct dark-brown markings. They take the eye more readily, and look prettier when washed clean. For many foreign countries, brown and white of a distinct fleck is the color wanted.

The feeding and management of the cow is also a very important part in successful breeding, but in this short article I have not space to take it up. ADAM W. MONTGOMIRIE.

Ayrshire, Scotland.

### Water Content of Butter.

The Butter Act passed at the last session of Parliament stipulates that the percentage of water in Canadian butter shall not be higher than sixteen per cent. To determine what factors really affect the water content of butter, the Dairy and Chemical Departments of the Experimental Farm have been experimenting for several months. As a result, considerable interesting data have been secured, which indicate that to no inconsiderable extent is the percentage of water under the control of the maker. Several series of experiments were conducted, and the results are here given under several heads.

1. TEMPERATURE.—(1) It was found that the higher the temperature, within reasonable limits, the higher the water content. (2) A high temperature of wash water tends to a high moisture content, and vice versa, and the difference of temperature of wash water has a greater effect on the butter churned at a high temperature. (3) The effect of a high churning temperature cannot be sufficiently corrected by a wash water of low temperature to reduce the moisture content to a safe percentage.

2. DEGREE OF CHURNING.—Several churnings were made to the size of clover, several to the size of corn, and several to the size of walnuts, and the average percentages were, respectively, 13.59, 14.75, and 20.33. Thus showing that the larger the granules, the more water in the butter.

3. DRIPPING.—The length of time the butter is allowed to drip after washing apparently has no effect on its moisture content.

4. SALTING AND WORKING.—A light salting—one-half ounce per pound of butter—as compared with heavy salting—one ounce per pound—gives a butter with rather less water when worked two hours after salting, but when twenty-four hours elapsed between salting and working there is no perceptible difference. In all the experiments, the percentage of moisture is considerably decreased by salting and working after salting. Several samples salted at once, and worked after twenty-four hours, were somewhat drier than others

slightly worked, and then, after twenty-four hours, salted and worked.

These results are directly in line with those obtained by Rosendorf in Sweden. It might be well to suggest that it is advisable for makers of butter to come as near the sixteen per cent. of water as is consistent with safety under the law, for not only does a butter of this per cent. moisture work and spread more readily, but also yields considerably more than one with two or three per cent. less water. The object of inserting in the Butter Act the clause relating to the per cent. of water was to safeguard our growing export trade in butter, as there had been, in the past, considerable complaint of over sixteen per cent. of water in Canadian butter, and to handle such butter is, in Great Britain, a criminal offence.

### Marketing Butter.

Those who possess the knack of making butter that has that fragrant flavor that distinguishes the product of many farm dairies, often make the mistake of keeping the butter on hand too long after it is made before marketing it. It will be found that however palatable it may be, and however good the flavor it possesses when first made, it will have escaped after too long keeping. Even when transported long distances it loses its distinctiveness while in transit. In fact, it seems that butter which possesses to a large degree this much-desired flavor deteriorates much quicker than that of an inferior kind. As a consequence of this, the farmer's wife who makes a superior article which has a local reputation for excellence should endeavor to dispose of the product to local trade, or, at least, sell it so near home that it will not be but a day or two between the churn and the consumer. This can be easily managed in almost any locality where there is a market for it by securing a list of private customers and furnish it to them direct as they need it. This class of patrons is much more profitable year in and year out than the city hotels or the commission houses or those consumers who buy in the general market.—[Drovers' Journal.]

### Milking Cows by Electricity.

The "World's Work," London, in an article descriptive of scientific farming in France, says: "One has often heard of reaping and chopping dairy food by electric motors, but the latest story, which comes from France, shows that the motor has taken the place of the rosy-cheeked dairymaid herself, and actually draws the milk from the cow's udders in what seems to be a manner perfectly satisfactory to the cow, and certainly more cleanly and more efficient for the dairymaid."

The beauties of rural France pale in significance beside the intricacies and surprises of modern invention installed amongst them. In the cowhouses, with between one and two hundred inmates, consisting of Jersey, Brittany and Normandy breeds, straw, for instance, the immemorial accompaniment of dairy farms, is conspicuous by its absence. The cows sleep on dry sand, this being considered, both from hygienic and economical points of view, preferable to vegetable litter. Each stall, with stone feeding and drinking troughs in front, has a sloping floor with drains, so that it is always kept clean. But all this, interesting as it is, cannot compare with the sight of cows being actually milked by electricity. The apparatus is known as the Lawrence-Kennedy cow-milker, and is said to be the only one in existence worked by electricity. It is designed to imitate the sucking of a calf, and is operated by an ordinary vacuum pump, driven by any motive-power. This power is distributed to the stalls by a range of pipes running through the stable above the cows and descending between each alternate cow into a pulsator on the top of the cone-shaped tail, from which branches out a tube on each side carrying four cups for attachment to the teats of the animal. When the vacuum cock is turned on, the pulsator commences to work, causing the rubber caps to collapse and expand. The number of pulsations to the minute, as well as the strength of each pulsation, can be regulated to a nicety by means of adjusting screws, which allow of the apparatus being adapted to the characteristics of each cow. The milk on its way from the teats to the pail can be seen passing through a glass tap, protected by a wire cage. As soon as the flow of milk ceases, the vacuum tap is turned off, but the cups remain on the teats until they are taken off to be put on another cow, so that during the whole operation the milk is not for a moment exposed to the air. Not only is the milk absolutely protected from the impurities of the air and contact with the hands of the employees, but trials have always shown the yield to be greater than when cows are milked by hand, and the milk is said to keep fresh for a much longer time.

In response to a question as to whether the animals objected to this novel method, the manager of the farm said: "At first it was doubted whether any mechanical system could be safely applied to Jersey cows, which are notoriously of a highly sensitive character, but we have never had any trouble, and they are not only perfectly amenable to this mechanical treatment, but actually take no notice of the apparatus, and continue to feed with less concern than when milked in the ordinary way."

### Thermographs for Creameries.

A thermograph is a recording thermometer, which can be locked up and left to give the actual temperature at any moment during a period of two weeks or less. It would pay every creamery to have one of these instruments. If the owner of any creamery would like to have a thermograph placed in his refrigerator for a week or so next summer, he should apply to Mr. J. A. Ruddick, Chief of the Dairy Division, Ottawa, who has been authorized to comply with such requests as far as possible. Creamery owners should give the matter of temperature in their refrigerators very close attention, and patrons should see that such things are attended to. They have a direct interest in the matter, as the butter belongs to them. Where a thermograph is not available, it is possible for a person to obtain a fairly accurate average temperature by inserting an ordinary dairy thermometer a few inches into a box of butter which has been in a room at least three or four days.

W. A. CLEMONS.

A new volume, recently published under the direction of Mr. F. D. Coburn, Secretary of the Kansas State Board of Agriculture, is devoted to the subject of dairying, and it is one of the best of an excellent series. Although dealing partly with the requirements of Kansas, the matter is of general interest, and covers the ground in an admirable way. The book is divided into three parts: The first, Kansas Dairy Farming; the second, Dairy Improvement; the third, the Creamery Industry. There is a wonderful collection of original and selected articles, and the volume contains much information on the subject. It is profusely illustrated with typical specimens of the various breeds, and will be perused with interest by all connected with the dairy. The motto is as follows: "What a wonderful thing is milk! Born of the mother-love, it nourishes the young of all warm-blooded creatures, whose term of life would quickly end were it wanting. From the lowest mammal to noble man, milk is for all the flesh-builder, the nerve power, the very essence of life. It is the one product all indispensable, universal." There are 288 pages in this report, and on its collection and arrangement Mr. Coburn is to be congratulated. The book is published by the Kansas State Board of Agriculture, Mr. F. D. Coburn, Secretary, Topeka, Kansas.

### APIARY.

#### Swarming.

(Reported from Syracuse Beekeepers' convention, by Morley Pettit.)

At a Beekeepers' convention, held in Syracuse, N.Y., Jan. 14th and 15th, Mr. N. D. West, one of New York's efficient foul-brood inspectors, described his method of controlling swarming.

At his first visit to the yard in the swarming season, Mr. West removes, and, unless very choice, destroys the queens of all those preparing to swarm. At the next visit, nine or ten days later, he breaks down all the cells in all except his choice colonies. From these the cells are saved, and put in other hives, 15 or 16 in a hive, protected by West cell cages. Again, in four or five days, when the colonies are hopelessly queenless, they are given the virgin queens, which will be found in the cell cages. At this time, if the brood-chamber is not full of brood, combs of brood are taken from other hives which are preparing to swarm. To introduce the virgin queens, drop them first into a cup of honey, until they are thoroughly daubed, then put one in each hive, and in nineteen cases out of twenty they are accepted without further trouble.

This method effectually stops swarming without increase, and at the same time gives every hive a young queen. The brood is all hatched out by the time the queen begins to lay, and when she does begin the loose honey which has been stored in the brood-chamber is crowded up into the sections, which causes them to be well-finished at the last.

#### THE PRICE OF HONEY.

Mr. Bettsinger, one of the oldest and most successful beekeepers in New York State, told how he, as Moderator of his Association, was able to largely control the price of honey in Syracuse. He would watch the whole season to keep track of the amount of honey likely to be put on the market, then go to the retail grocers and tell them what the retail price should be. They had learned to know and have confidence in him. The greatest fault he had to find was with beekeepers who put their honey on the market in bad shape. The firm he was now selling his own honey to wanted 100,000 pounds good comb honey. They did not want any of the poorer grades.

To get good comb honey you must only put sections on those that are strong. Run the weak ones for extracted honey. To prevent travel-stain, everything about the hive must be new and clean, new combs in the brood-chamber, and separators not over two or three years old.

With reference to size of section, the 100,000

pounds wanted must be in 4 1/4 in. by 4 1/4 in. sections. That spoke well for the popularity of that size. Others favored a taller section.

**DISEASES OF BEES.**

Address by N. E. France, Foul Brood Inspector for Wisconsin, and the greatest authority on the subject in the United States:

This subject is one that underlies success in New York State. If the bees are diseased, pasture and all other factors count for nothing. The three main diseases are foul brood, black brood, and pickled brood. The two first are somewhat similar, but easily distinguishable. The latter is quite different, and seems to be caused largely by conditions of the season. Last season conditions were so favorable that 80% of the apiaries he inspected had the disease, and it was often as bad as foul brood.

There is a marked difference in symptoms between foul brood and pickled brood. The foul brood disease begins first in the feed of the larva, and in no other way is the disease transmitted. The first effect is in the circulation. The little bee, which is then only a little white grub, becomes restless, moves in agony, then straightens out and lies on its back lengthwise of the cell. It continues to grow, but the disease grows faster. The head turns black, and the tongue is thrown out and often sticks fast to the side wall opposite. If so, it never lets go. When the larva dies and dries down the tongue sticks there, and keeps the head turned up. The ropiness then appears and the odor. Then the larva dries down about where the shoulder of the bee would be, a brown scale glued fast to the cell.

Pickled brood will turn brown the same way, but the head of the bee becomes as hard as a stone and nearly black, and instead of the lower portion of the larva flattening out it becomes like a sack or bag. The bee can be easily drawn out of the cell, and the abdomen is found to be distended with a watery fluid never ropy or odorless. I do not know what causes pickled brood, but it seems to be a shortage of food and heat at the proper time. It is not a contagious disease, and can be prevented by feeding when needed and giving warm covering to hives.

Black brood is a disease similar to foul brood, and is very much dreaded in that State.

doubt, to the better conservation of moisture in the soil of such localities. Such situations, too, afford the bees great advantages in windy weather. There are many days when bees cannot work on the open prairie on account of high winds, but yet can forage quite successfully in the bush.

Now, to return to the point of starting: One should at once procure such a book as the "A B C of Bee-culture," and read it up during the winter evenings. This will assist one greatly in consulting it when the occasion arises—as it certainly shall pretty often.

If the start is made with one colony, this might easily be increased to five or six, or even to ten, during the first season, if so desired, but



Seth Jones, of Sussex, N. B.

Winner of the silver cup donated by the Canadian Barred Rock Club, for the largest and best exhibit of Plymouth Rocks from the Province of New Brunswick at the Maritime Winter Fair.

**POULTRY.**

**"The Chicken Mite."**

One of the most formidable enemies of the poultryman is the chicken mite. Chickens infested with these parasites are exceedingly unprofitable. The cost of keeping is increased, and the revenue from them is greatly reduced; in fact, when badly infested, they are totally incapacitated for performing work. During the past season I found that from a part of my flock the egg production was greatly reduced, and in a few cases, entirely prevented during the spring and summer, when under favorable circumstances it should have been at its best. Hatching hens will often die on the nest or leave before the hatch comes off as the result of the mite infection. In one particular case, where a hen died on the nest, I thoroughly examined her and could find no trouble which would account for death, other than the fact that she was very pale in the comb and wattles, caused by an impoverished condition of the blood, such as would be produced by the sucking of the blood by the mites. Another important feature of the evil effect of mites is the almost fatal injury they do to young chicks. Should the hen survive the ordeal to which she is subjected during hatching, the young chicks are attacked by the mites as soon as they leave the protection of the shell, and, as a rule, a large percentage of them either die or are of comparatively little use. Chickens will become reduced in flesh and lose the energy for hunting and scratching which is so necessary for their welfare. The main peculiarity of these parasites is that most frequently they remain on a fowl only long enough to secure a good meal. During the day they hide in the crevices and nests, and under objects in the henhouse while the chickens are outside, and lie in wait for their return to the perch or nest. They lay their eggs, and the young are hatched on the walls and in the crevices, or wherever they can find a hiding-place. The best and most effective remedy I have yet found to exterminate these pests is the use of kerosene emulsion, made and applied as follows: Take one-half pound of hard soap and dissolve into a gallon of soft water; put on fire and bring to boil. Remove the solution from fire and stir into it while hot two gallons of kerosene. This makes a thick, creamy emulsion, which is made ready for use by diluting with ten times as much soft water, or about thirty gallons, and stir well. This can be placed in a barrel and used with splendid effect by a spray-pump. The spray should be directed with special care into all crevices, holes, joints, or other hiding places of the mites. The first spraying will kill within five minutes all of the mites and eggs with which it comes in contact, but many mites will be left in places where the spray has not reached, hence the operation should be repeated as soon as the first is completed. Three sprayings should be done in one day, and in rapid succession, which will nearly always rid your poultry-house of mites, but a constant watch must be kept and the spraying repeated when mites are seen at any subsequent time. E. W. B.

**Getting Started with Bees.**

By J. J. Gunn, Gonor.

Among those who have begun the new year with resolutions to be better and to do better during the next twelve months, there are some, it would appear, who have decided to make their homes more cheerful and more interesting for the young folks growing up there, and, incidentally, provide an additional way to put money in their purse, by placing a few hives of bees in their dooryards. That this is the case, some enquiries already received go to show. These enquiries also go to show that not all who have made this commendable resolve have a knowledge of bee-keeping, or even know how to begin. They are timely, however, and besides replying privately it seems to me that some discussion of the points raised, through the columns of the "Advocate," could not fail to be of benefit to many others.

**HOW TO START, AND WHERE TO LOCATE.**

"Start small" is good advice to anyone who requires to be advised, and starting in that way it is safe, with certain precautions, to start wherever you may be.

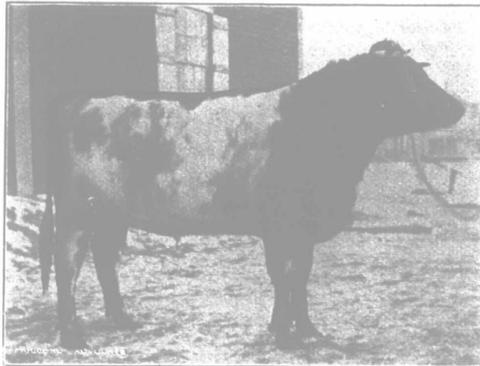
The person who has kept bees before and knows all about their habits and requirements will also know where to locate and how to start, and does not need advice; and this is not for such. I have said "start wherever you may be." Yes, in city, town or country, it would be hard to find a spot where a few hives of bees would not pay well, and in more ways than mere money value, for the room and the care required. In this way one gets a knowledge of the subject, such as can only be gained by experience, without subjecting himself to the risk of a heavy loss in case of failure. He also gets a knowledge of the capabilities of his neighborhood for honey production, and can confine his stock to one colony or increase it to a hundred, as experience warrants. Of course, there are stretches of prairie so bleak and bare that bees cannot be expected to be commercially profitable there; but even in such places, if the homes are being improved as to appearance and comfort by the planting of shelter belts and shade trees, as they should be, there is no reason why those homes should lack the cheerful and companionable hum of bees about the door, or their wholesome and delicious product on the table.

Shelter from north and west winds can easily be provided for a few hives by trees and shrubs, or even a close board fence, and also some shade from the meridian sun. These are necessary, and if provided the little workers are sure to give a good account of themselves; though it is not to be expected that even then such results can be obtained as in localities where bush is plentiful. Here the honey-bearing flora is more abundant, and, apparently, more rich in nectar, owing, no

it would be a risky thing for a beginner to undertake, and one very apt to result in loss. On the other hand, by providing lots of room it might be kept from swarming altogether, and a yield of honey procured which would pay not only for the bees but go a good way towards paying for the small outfit necessary for such a start. The best way of all, and perhaps the most convenient, would be to allow it to swarm once. This would increase the beginner's range of experience and his stock as well, without to any great extent lessening his honey harvest.

**WHAT IS NECESSARY FOR A START.**

Starting with one colony, at least two spare hives, complete with frames and comb foundation, should be provided. If extracted honey only is to be the object, a complete hive will mean a hive of two equal-sized bodies, with movable bot-



Shorthorn Steer, Gracie.

Owned by Harold Vernon, of Minudie, N. S. Winner of the \$50 cup donated by G. H. Giles, of Fredericton, N. B., for the best beef animal under two years old exhibited at the Maritime Winter Fair, also the \$25 special donated by Frost & Wood, and the \$20 sweepstakes given by Rhodes, Curvey & Co., Amherst, N. S.

toms, so that one may be set on top of the other and both accommodate the same size of frames. If comb honey is to be sought, half-stories, or "supers," with their necessary complement of sections, section holders and separators should be provided. In this case a complete hive will mean one full-sized body or brood chamber, and at least two supers. For extracting, of course an extractor is needed, and a knife for cutting the cappings off the combs. A veil, gloves, and a good smoker are also things that beginners ought to have, though with experience these are liable to fall into disuse.

**The Farmer's Poultry House.**

A writer, in a recent issue of the Reliable Poultry Journal, describes his ideal of a poultry-house for thirty hens, put up at a cost of about \$30, and requiring 700 feet of inch boards and 200 feet of 2 x 4 studding. For thirty pullets, he says, you want a house of just 12 x 16 feet, no larger. That gives every hen an area of six square feet in which to live and move, and have her being—and scratch. Make the house four feet high at the rear, and six feet high at the front, with a joint in the roof near the front. It should be airtight everywhere, except in front. The hens at night will be as far back as possible on their perches at the rear of the house. You may have the entire front open wire-work from May 1st to November 1st, if you wish, but the back must be absolutely tight, so there can be no drafts of air on the backs of the hens or under them. Have at least the front boards planed so as to be painted. The dropping boards should be the smoothest of flooring, so they can be made both smooth and tight. All other siding may be hemlock boards, and, generally, they cost no more if surfaced on one side. Put the smooth side in. It looks better, for you must cover the roof, ends and back with three-ply tarred paper. This must be carefully put on. Coat it with tar twice the first year, once every year after that.

The hens at night are on their perches in the rear of the building, the roof, siding and droppings-board being absolutely tight. They have no drafts of air, and they have but a small volume of air about them to be heated by their bodies. In crowded quarters like this, it is, of course, of great importance to give to the fowls the required exercise. Every hen should scratch thoroughly over her six square feet of space every morning for her breakfast. If she does this, she does enough. Grain scattered through the litter (leaves, straw, etc.) covering the floor of the house will be a never-failing inducement.

### Poultry Short Course.

The short course at the Ontario Agricultural College, in progress for several weeks, is easily the best of those which have so far been given free for the benefit of the farmers of the Province. Lasting for four weeks, it gives those in attendance the training of the best talent of Canada. Though this year the attendance is only 22, and very much smaller than that at the live-stock course, the same care has been taken to secure competent men to carry on the special work.

Mr. Baldwin, of Toronto, on artificial incubation; Mr. Cosh, of London, on mating and breeding; Mr. W. Bell, of Angus, on turkey-raising; have given lectures. Mr. Cosh has also conducted classes in judging. Mr. Hare, Chief of the Dominion Poultry Division, Ottawa, has taken charge of the whole course, in the absence of Mr. Graham, who has been ill for a week. Mr. R. N. Crane, of Athens, has had charge of the practical work during the course. Mr. McNeill, of London, gives a lecture on breeding and mating, and takes the class in judging this week. The illness of Mr. Graham is generally regretted, as his knowledge of poultry is well appreciated.

### Raise Your Own Fresh Eggs.

The Canadian Poultry Review for December, 1903, contains the following:

"Lord Aylmer, Ottawa, is probably the one Canadian who is extensively breeding that French utility breed, the Faverolle. He now has quite a nice flock, and intends sending across the water for some first-class additional specimens."

We are pleased to notice that it is becoming the fashion in the East for the society people to raise their own eggs and poultry, and further indulge their taste in the beautiful in nature, provide a healthful pastime, and relaxation from the worries and cares of their various avocations.

For the above, and other reasons, a similar course could be adopted by many people in "society" and out of "society," to the benefit of pocket, health and intellect. Suppose YOU try it!"

## GARDEN AND ORCHARD.

### The Storage of Apples.

The high prices now prevailing in the British market for apples of good quality shows the advantage of storing a quantity of the apple crop to be repacked and shipped during the winter. While this plan involves extra expense, it spreads the marketing of the crop over a longer period, and in this way helps to maintain prices; whereas, if all were placed on the market at the time of harvesting the crop the result would be glutted markets and low prices. And this is a strong reason why the greater part of the crop should consist of varieties that have good keeping and shipping qualities. In any scheme for the successful carrying out of co-operative shipping and marketing, the question of adequate winter storage would have to be considered. The building for such a purpose would require to be large enough for the purpose, but not necessarily expensive. A basement of stone or concrete, and the upper story made warm by walls of lumber and building paper with air spaces between, and dry sawdust over the ceiling a foot or so of depth. Provision would have to be made for slightly raising the temperature during severe cold waves. The building would have to be located on a railway, and if possible, a siding at the door for convenient loading of cars. In some years the advance in prices would go far towards defraying the cost of the building. It would be a great advantage if in connection with or contiguous to the building there were an evaporator to work up the culls left from the repacking, and it would be a decided advantage if a far larger percentage were worked up in this way, and only the prime stuff shipped to foreign markets.

The season for handling the apple crop is so short there is an advantage in the saving of time in favor of the storage system, as fruit that is to be stored can be handled more rapidly; there is not the necessity for close culling and grading as in the case of that intended for immediate sale. That can be done when there is more time after the fruit has been secured from frost in the store-house, where it is to be repacked. The barrels need not be nailed or pressed very tightly, only sufficient to keep it tight until placed in storage. In repacking, the fruit is likely to be graded and packed better than it would be in the orchard during the hurried season of the apple harvest. Then the late fall or early winter varieties can be marketed first, and the long-keeping varieties kept back until well on in the winter or early spring, thus realizing better prices than if all were dumped on the market at once.

The advantages of this system may be summed up as follows: The time in view the necessarily close culling and grading; the more rapid handling and marketing of the crop; better grading and packing; and, most important of all, the

placing of each variety on the market at its proper season; the prevention of glutted markets, and securing better prices all round. The advantages of the storage system is so obvious that it must necessarily be considered in any system of co-operative marketing of the product of our orchards.

### Canadian Apples Best.

The Glasgow Herald of January 5th has an interesting article on the "Fruit Imports in 1903." In reference to apples, the following statement is made: "The apple trade was unique, 1903 being a bumper year for this fruit. The total weight was 4,550,000 cwt., valued at £2,870,000. In ten years the imports have been nearly doubled, 1903 even surpassing 1896, which was the most prolific season of recent years. The imports in 1903, against 1896, are 3,000,000 bushels. We got the largest parcels from the United States and Canada. These places send us more than 2,500,000 cwt. annually. "Of course, the Canadian apples are much superior to those of the U. S." The careful surveillance of the Dominion Fruit Inspectors has, evidently, done much to prevent our export apple trade from being ruined by a few unscrupulous dealers, a consummation which seemed probable some three or four years ago. W. A. CLEMONS.

### The Trees Grew Rapidly.

The large avenue trees portrayed on next page were planted in 1899. They were slightly larger than whip-stocks at that time, writes S. A. Bedford. All were nursery-grown from seed. The evergreen spruce in the same avenue were obtained from low land in the sand hills south-west of Carberry, and planted in 1891. The land has been kept thoroughly cultivated, and the maples pruned from time to time as needed. So far, only one maple has died, and since the first two years of planting only two spruce have died. The spruce were obtained from strong soil on the edges of sloughs, and a block of soil was brought with each tree.

The spruce were planted about six inches deeper than they were growing naturally. This gives firmness to the tree, and prevents the roots from shaking free of the soil. They have not been watered since they were planted.

The maples have been subject to slight attacks from the green aphid, and the spruce, on two separate occasions, were attacked somewhat similarly by a red spider, but it was not found necessary to spray to any great extent. One or two trees were treated just for an experiment.

We think that the best remedy for either of these two attacks is to keep the trees in full vigor.

**IMPORTANT.—Please take notice to the date of the address label on your paper. We do not send receipt unless specially requested. Changing of the date on label serves as your receipt. After remitting be sure and observe as to whether your label has been changed. If not, advise us, giving full particulars as to date and how money was sent.**

## EVENTS OF THE WORLD.

Henceforth, consumption will be treated as a very infectious disease in Victoria, Australia. Patients will all be sent to isolated hospitals.

Word was received at Quebec last week that Mr. Hubbard, of the exploring party sent out by "Outing," has died of starvation in the wilds of Labrador.

From the latest measurements by Curie, the discoverer of radium, it is estimated that the energy of fifteen pounds of the substance, fully utilized, would run a one-horse-power engine many centuries.

A little war is going on in Uruguay, S. A., where a rebellion has broken out against the Government. Three battles have been fought, all of which were won by the Government. The total loss amounted to 500 killed and wounded.

Hall Gaine, the noted novelist, author of *The Manxman*, *The Deemster*, *The Bondsman*, *The Christian*, and *The Eternal City*, is quite broken down in health, and will, in all probability, be able to write no more. He has gone to Switzerland to try the mineral baths at St. Moritz.

The town of Oalesund, Norway, with a population of 11,000, has been completely destroyed by fire, most of the inhabitants losing everything they owned. Thousands were compelled to spend twenty-four hours in the open fields, without food, and exposed to a bitterly cold rain-storm.

A monster octopus which lodged in the intake pipe of the Treadwell coal mines, on Douglas Island, Alaska, stopped the operation of the mines recently. When the octopus was extricated, the Indians had a great feast on the beast. They look on the devil-fish as an epicurean dish of high order.

Dr. F. B. Turck, of Chicago, has invented an appliance by which the whole of the inside of the human stomach and other internal organs may be seen and examined for disease. The apparatus consists of a system of tubes, lenses, and an electric lamp. The tube is to be inserted somewhat in the same way as that of an ordinary stomach-pump.

Col. Lynch, who was sentenced to life imprisonment for high treason at the time of the Boer War, has been released, after spending just one year in prison. He has been given full liberty, but will not be permitted to sit in Parliament again, or hold any position of trust. The King, it is said, on account of the friendly reception which met him in Ireland, favored Col. Lynch's release.

As a result of Dr. G. R. Parkin's recent tour of South Africa, New Zealand and Australia, where he has been distributing the Cecil Rhodes scholarships, seventy-five students will attend the University at Oxford, England, next year. The total number who will receive scholarships will be one hundred and seventy-five, taken from the above colonies, Canada, Germany and the United States.

According to the latest despatches from Thibet, the British force has been met by a deputation, consisting of a general from Lhasa and a number of lamas, who offered terms upon which the British were requested to retire. Col. Younghusband refused to consider these terms, and was given to understand that his further advance will be opposed. The lamas are threatening to appeal to Russia.

A terrific explosion in the Harwick Mine of the Allegheny Coal Co., near Pittsburg, Pa., occurred on January 25th. The death list is supposed to amount to nearly 200. None have been extricated, at the time of writing, except one unconscious man. Mr. Selwyn Taylor, the first to descend the shaft in an attempt to reach the imprisoned miners, was also overcome by poisonous gas, and is dead.

A petition signed by 45,100 white voters in the Transvaal, or about seventy per cent. of the white residents, has been presented to the Legislature, requesting the passage of a law which shall provide for the importation of Asiatic laborers into the Colony. The Government has intimated to the Premiers of New Zealand and Australia, who objected to the step, that, under the circumstances, the importation of Chinese workmen is considered quite justifiable.

An agricultural experiment station, the first of its kind in Mexico, is to be established in the near future, on the Isthmus of Tehuantepec. The undertaking will be carried out by the Ubero Plantation Co., which is composed principally of Boston capitalists, and the first expenditure will be the sum of \$7,000, which will be utilized in the erection of buildings. In return for this, the Government will make an appropriation of \$10,000 annually for the maintenance of the institution for the first five years. During this time the station will be under complete control of the Americans, but at the expiration of the period it will be turned over to the Mexican Government. This step promises to be one of great importance to Mexico.

Scarcely any new developments have occurred in the Russo-Japanese situation. The hopes of peace, however, which were high last week, have sunk again to the lowest ebb, and the general attitude now is simply that of waiting. The Russians have not yet made any response to Japan's last note, which was despatched so as to reach the Russian Cabinet on January 16th, and was prepared by the Government with such secrecy that even the people of Japan do not know the exact nature of its demands. This long postponement, which is looked upon as a manoeuvre to gain time, is making the Japanese extremely uneasy. In the meantime, however, they can do little except forward the construction of the railway between Fusan and Seoul. A despatch from Warsaw states that arrangements have been made for calling out 86,000 more Russian reserves from the south of Russia, if required. Recent despatches also state that the Koreans are beginning to show sympathy toward Russia and hostility toward Japan.

### Some Valuable Potatoes.

Some potatoes of extraordinary value have been received by Mr. A. Gowler, of Richmond Hill, from Mr. Jos. Wilson, editor of the *Spalding* (England) *Free Press*. There were only four tubers in the collection, but they represented considerable money, and comprised varieties of the new English potatoes, said to be rot-proof. One was a specimen of the "Northern Star," worth £2,240 (\$11,200) a ton, while the others, representing the new King Edward, Sir John Llewellyn and Evergood varieties, were almost as valuable. Mr. Gowler tried to secure a sample of the famous "El Dorado," which sold in Great Britain at \$800 a pound, but did not succeed. He will probably present these valuable tubers to the Ontario Agricultural Department for experimental farm purposes.

NOTES AND NEWS.

Questions and Answers.

Readers will notice the change of position of the Questions and Answers Department. In this number it will be found on pages 175 to 182. This department will occupy a similar position in future issues.

"Everything in the line of poultry is always salable." So say the poultry-raisers.

Hon. Mr. Chamberlain says he will visit Canada if the British elections are not held this fall.

Some people who don't know any better think that any ignoramus can be a farmer!

"Great souls have wills, feeble ones have only wishes."—Chinese Proverb.

New natural gas fields are being developed in Wainfleet and Crowland Townships, Welland Co., Ont.

Two thousand more Englishmen are reported coming out to the Northwest in the spring to augment the Barr contingent.

Experiments in making cloth out of pine wood are being made in Bavaria, Germany. The cloth will resemble cotton.

A great fire occurred at Dawson City, on the morning of January 21st, when the thermometer was 35 degrees below zero. The loss amounts to \$105,000.

Shipments of flour from the Pacific Coast (United States and Canada) increased 360,000 barrels during the past year.

Mr. D. O. Bull, of Brampton, Ont., has purchased 40,000 acres west of Yorkton from the Canadian Northern Railway for a cattle ranch.

One of the two great steamships built by J. J. Hill for the Oriental trade, by name the "Dakota," will be launched February 6th at New London, Conn.

Exports of wheat from Argentina from January 1st to December 24th, 1903, amounted to 62,811,000 bushels, against 19,695,000 bushels for the corresponding period in the preceding year.

The Lady—I gave you a piece of pie last week, and you've been sending your friends here ever since.

The Tramp—You're mistaken, lady. Them was my enemies.

Spring will soon be here. Are all the implements in order? Is the harness in good condition? Are all the necessary gates, etc., made ready for use when the snow goes?

A number of Scotch herring-curers will be brought to Nova Scotia in the spring, by the Government, to teach Canadians the improved Scotch methods of curing herring.

About 1,000 acres of sugar beets are frozen in the ground in the vicinity of Lyons, N. Y. The Empire Sugar Beet Co., however, claims that they have not been injured by the frost, and that they will be taken at the beet-sugar factory in the spring.

Hens will not lay during cold weather unless given the warmth they require, plenty of water or milk to drink, and proper food. Proper food for hens approaches, as nearly as possible, the sort they are able to get in summer time.

The advisability of keeping cattle growing right along is not nearly as well understood or as carefully practised by farmers generally as it ought to be. There is great difficulty in putting a fine finish on animals that have been stunted while young.

The famous "Black Watch" band, fifty strong, with twelve pipers, will make a tour through Canada in the fall. This is the band which accompanied the Black Watch Regiment during its stirring experiences in South Africa.

"Some people talk about putting life into a horse with a whip. How absurd!" says a contemporary. "All that a whip can possibly do is to bring out the life that is in him already. It takes out energy, but adds none."

The girls in the Roquefort cheese factories, France, where the famous Roquefort cheeses are made, have resolved to go on strike unless they get better pay. These girls spend their lives, practically, in underground cellars, where the temperature is never above 48 degrees.

According to a bulletin just issued by the Bureau of Provincial information for British Columbia, the total value of the mining output for the past year was \$19,200,000, an increase of nearly \$2,000,000 over the preceding year. All other industries, except the salmon pack, also show large increases.

W. M. writes: "I have taken hundreds of warts off horses' noses with lard, some of them larger than my two thumbs, with one rubbing. Use clean, fresh hog's lard. Just give the warty parts a good rubbing, and don't look at it for a week, and there won't be any wart."

One great reason for the influx of American settlers into the Northwest is the occupation of nearly all the available Western lands of the United States. Practically all that remains for settlers is too arid to be of much use without irrigation, or too swampy to be of any value, so it is little wonder that the surplus

American population is turning eagerly to the fertile wheat lands of the West.

As a means of stopping Chinese from crossing over from Canada to the United States, Representative Dickson, of Montana, lately introduced a resolution at Washington with a view to estimating the cost of erecting a wire fence along the boundary from Lake of the Woods to Point Roberts, and suggesting that the fence be equipped with telegraphs and telephones for aiding officers entrusted with the execution of the law.

The Other County Heard From.

To the Editor "Farmer's Advocate":

Sir,—In your issue of January 21st there appeared an article under the caption of "Oxford versus Kent" that I wish without preamble or preface to stigmatize as a libel on the county of Kent and on the farmers of that county. It is not my intention to make any comparisons, but I wish, for the benefit of those who do not know Kent County, to correct the statement of your Oxford correspondent. At the very outset he exposes his ignorance to the thousands of your readers by saying "corn seems to be the principal crop, and little or no attention is paid to the comfort of cattle or pigs." If the gentleman knew Kent, or had taken the trouble to look up statistics, he would not have made the statement. While it is true Kent produces large quantities of corn, it leads, by long odds, all other counties in the production of beans, is well up in the production of wheat and oats, and, on the whole, holds an enviable position among the counties of the Province. When the man from Oxford tells your many readers that the farmers of Kent pay little or no attention to the comforts of cattle or hogs, he states what is not a fact, and again makes an exposition of his ignorance of the condition of the Kent Co. farmers. I venture the statement that the gentleman did not go over any one township in the county, to say nothing of the other ten, and, for his benefit and for the benefit of those who might be deluded by his article, I wish to state that the live stock of Kent is as well cared for, and as well stabled on the whole, as in any county in the Province, and in some of the townships over eighty per cent. of the barns have either stone, brick or cement basements, and I can show your correspondent townships in Kent where he can go concession after concession and it is an exception to find any but bank barns. And I wish to say further that he will find the farmers as wide awake, as well posted in the feeding value of the different foodstuffs, and capable of making as many pounds of beef or pork in as short a time as any farmers in this Province or any other.

Your correspondent, apparently, has not been often from home, and imagines there is only one thing for a farmer to do, that is to keep dairy cows. There is no doubt dairy cattle are all right, but they are not the only class, and the farmers of Kent feel quite content with the kind that satisfies the appetites of millions of hungry Englishmen, and the farmers of the county feel it quite unnecessary for your correspondent to tell them how many cows they should keep on a 100 acres, what they should do with their milk, or how many calves should be put on a cow.

I am sorry to have taken up so much of your valuable space, but I could not, and it would be altogether wrong to let go unchallenged the statements of your Oxford correspondent regarding one of the most fertile, best cultivated and fairest counties in this grand Dominion of ours. GEO. E. LEE. Kent Co., Ont.

South Perth, Ont.

While the roads are not yet impassable for light loads, all heavy traffic is suspended, and this being also largely the case with freight traffic on the railroads, trade and industry generally is almost at a standstill. The up-to-date farmer is in this respect, perhaps, most independent. Provided with a large stock comfortably housed in warm, well-ventilated stables, he can continue his work unaffected by the elements, and postpone all his heavy teaming.

The annual meeting of the St. Mary's Co-operative Creamery Company was held on the 14th inst., and, for the first time, the report of the President showed that the creamery had not made that steady and substantial progress which characterized it in former years. The chief cause assigned is the unprecedentedly high price of cheese, and the reluctance of dealers to lay in large stocks of butter. But there were, doubtless, other local causes, or we would not see the farmers co-operating and putting in butter and cheese plants (combined) on or near the site of a separator station belonging to the creamery, as has been done in two or three places. Whether the co-operative principle applied in this way, by inexperienced men, will succeed remains to be seen. It is, however, hardly possible that this idea could have gained such favor, unless considerable distrust, and perhaps jealousy, of the creamery management had previously existed. We know there is great dissatisfaction with the results of the test. Farmers have not informed themselves as thoroughly as they should have done as to the extreme variability of the percentage of fat in milk under different conditions, or they would not have been so hasty to condemn the creamery test. On the other hand, we fear the management have not kept that close sympathetic touch with the patrons which it behooves any concern catering to the trade in any commodity to do. The example of the fruit-growers and dealers might well be imitated in this respect. By means of orchard meetings, and other social intercourse, they come in close touch with the small producers, and thereby instruct and interest them, and win their confidence in the success of the business. The small milk-producer needs instruction in the care and handling of milk. He wants to understand the accurate working of the Babcock test, and with this understanding will come interest and confidence and a determination to stick to the creamery through thick and thin. The decadence of the creamery is a serious matter, not only to the farmers (patron and non-patron), but also to the town which, indirectly, but none the less surely, benefits by the increased wealth accruing to the farmers surrounding it.

Jan. 22nd, 1904.

J. H. H.

Rural Mail Delivery.

At a recent meeting of the East Middlesex Farmers' Institute, the following resolution was unanimously adopted, on motion of Mr. J. A. James, seconded by Mr. L. Shaw:

"That, in our opinion, the time has come when the farmers of this part of Canada should have rural mail delivery, and we would express our urgent request that the Honorable Postmaster-General of Canada would speedily take the necessary steps to bring this about."

All Farmers' Institute meetings should pass similar resolutions, and send copies to the local press, the local M. P., and the Postmaster-General at Ottawa.



A Beautiful Driveway at Brandon Experimental Farm.

(See article, page 166.)

### Peel County, Ontario.

Business is quiet on the farm at this season. Such need not be the case, however, as there are various things that can be done in the winter months that will save time in spring and summer, such as getting a good supply of wood ready for summer use, seeing that the implements are in good repair for the spring work, and the harness oiled and mended.

Horses are selling at good prices at present. There is no trouble in getting \$200 for a sound general-purpose horse, and they will probably be higher in the spring. Milch cows are away up, good fresh ones fetching \$50 and \$60, according to quality.

The ice harvest is well advanced. Consumers are getting in a larger quantity than usual, a greater number of farmers going more extensively into the milk business. Ice is much thicker than in former years, being eighteen to twenty inches in thickness. The price hasn't raised, being two cents a block.

There is plenty of feed on the farm, and, as yet, there is no cry of hard times. Auction sales are not numerous this winter, but in the course of a few weeks they will be more plentiful, as things sell well towards spring. Some farmers complain of a shortage in the water supply. It is not uncommon to see them driving their stock a mile or two to the river or a pond.

We have had a fair share of snow this winter, but no blockades as yet to interfere with traffic. Good sleighing has continued ever since November 25th—a month earlier than usual. Some farmers who were not successful in getting their clover and alsike threshed in the fall are now busy threshing. They say it threshes much cleaner and faster in frosty weather, and is yielding well. According to reports there will be an increased number of basement barns built next summer, as many are busy getting out stone, sand and other materials for that purpose. Few farmers finished plowing last fall, as the frost came sooner than expected, and this will tend to leave more work when spring opens.

Jan. 19th, 1904.

### Oxford County.

Last fall we had a cold, chilling rain one night, and we had a sow that had a litter of pigs in the fence corner, and when I found them the next day there was only one alive. I did not expect the sow to come in for a few days, but should have had her shut in a week before. This was neglect. Two or three weeks ago, on a bitterly cold night, we had another sow farrow. We had her in a good place, and I attended to her, dried the pigs off, and kept them together, and kept the lantern beside them with a blanket held over it to keep in the heat. The pigs were saved, and are doing splendidly. This is what can be accomplished by care and attention under adverse circumstances.

Last fall we pitted about twelve or thirteen loads of turnips, gave them a good coating of straw and four or five inches of earth. We left it mostly free from earth along the top, except a short distance from each end, where I thought the turnips would be more apt to freeze. After the cold weather came, we put on a coating of horse manure. Latterly, there were indications that the turnips were too warm, and we commenced to draw them in, and found them considerably spoiled near the ends of the pit, where we thought the turnips would be most apt to freeze, and very good in the center of the pit, where we left it more open. Turnips in the pit should be left with plenty of ventilation, even in cold weather.

We have had a very peculiar winter so far. A good deal of cold weather, the thermometer going down to eighteen degrees below zero on one or two occasions, and we have had very little wind, and great scarcity of water. Many farmers have had to drive their cattle to water. The drilled wells seem to be the best and most reliable, for many of the dug wells that were never known to fail have been dry or have only yielded a very limited supply of water. A good supply of pure water is a very great necessity to a farm. In some parts of our county it is necessary to go down three hundred feet to the rock, where an abundant supply of good water has been obtained. In other localities water is obtained at a much less depth and a much smaller expenditure of money.

Very many of the farmers here have commenced to burn coal, even some of those whose supply of wood is not quite exhausted. Now that help is scarce and hard to get, and wages high, the burning of coal is a great relief, as there is no labor connected with it, and then we have a very steady heat with very little attention, and a warm house in the morning. Of course, those who have plenty of wood, and help to cut it, should burn wood, but otherwise I believe that coal is the best.

The prices of live hogs and cheese have been very fluctuating. Our November and December makes have been very low. Some have got more and some less. Some factories have some Septembers, and all Septembers in November in the curing-room. This is certainly a mistake, when good prices could have been obtained for the hogs. When we consider the fact that the price of hogs is so low, it is unwise to try to get a high price for them.

J. L.

### Bacon-Hog Problem.

I took out a load of ten hogs to the pork factory this week. They weighed 2,150, were from York boar and Tamworth sow, and were just about what the pork-packers want. At the scales, there was a load of short, chunky, woolly hogs. I said, "My hogs are surely worth a cent per pound more than these?" He said, "Yes; yours are easily worth two cents a pound more than these short ones—in fact, we don't want them at any price; while your hogs are just what we want." If the pork-packers really don't want these short, chunky pigs, why do they continue to pay as high a price for them as they do for the sort of pigs they do want? Why do they not give us who raise the sort of pigs they find most profitable, a premium to encourage us in our good work? I wish the Farmers' Institutes would take up this subject and thresh it out, until some redress has been obtained. Hon. Mr. Dryden, the Minister of Agriculture, at Woodstock, said that the Agricultural Department had demonstrated to the farmers at the winter fairs and other places on the points of the bacon hog, until now the hogs delivered at the factories were so uniform that they looked as if they had all been raised by one farmer. We believe the Agricultural Department has done its duty; but what about the pork-packers? Are they afraid to offend the few men who raise the unsuitable class of hog? We miss the peas very much. I think I can finish off a bunch of pigs much better and quicker when I have plenty of good peas, but peas are out of the question since the bug came. We have been feeding chop composed of barley, oats, corn and spelt, which makes good chop.

We have just about enough work for the team this winter for exercise, and we feed mostly wheat straw and roots, and two feeds of oat chop and a little bran twice a day, and they are keeping very healthy. I believe that clean wheat straw is a healthier fodder for idle horses than hay. But horses, to be healthy, must have exercise. We are wintering a span of Clydesdale colts in a box stall, and feeding clover hay with oat chop and a little bran and roots three times a day. They get out in the yard for exercise in moderate weather.

Oxford Co.

### Peterboro Co., Ont.

This section of the country seems to have escaped the heavy falls of snow we hear of in the western part of the Province. We have a good quantity of snow, but it has come gradually, and very little went away at any time, the thermometer staying often for days on the cold side of zero, and once in our city recording thirty below. The market for all kinds of live stock is brisk, but, with the exception of horses, not high. Good heavy horses sell for \$140 to \$180; milch cows, \$25 to \$40; beef cattle, butchers', 8½c. to 4c. Hogs, owing to local competition, have been about same as the Toronto market, and in some cases better. The potato crop of 1903 was, we believe, as good in this and adjoining counties as ever we had. The acreage, however, owing to the scarcity of help last spring, was not as large as usual. A few shipments have been lately made from Peterboro, the buyers paying fifty cents per bag. The ice harvest is now in full swing, and is No. 1, hard and thick.

Springville, Ont.

### Farm Laborers.

Mr. Thos. Southworth, Director of Colonization, Parliament Buildings, Toronto, announces, elsewhere in this issue, that farm laborers are now arriving at Toronto weekly from England, Ireland, Scotland, Wales and the Channel Islands, and anyone requiring help should send him, at once, a post card, asking for an application form. Immigrants are coming earlier in this season than usual, and Mr. Southworth distributes them as expeditiously as possible. Mention the "Farmer's Advocate" in writing him.

### To Break the Beef Trust.

There is a powerful movement on foot among stockmen of the United States to establish a gigantic meat-packing plant, sufficient to loosen the grasp of the great beef trust. At the National Convention, held at Portland, Oregon, recently, it was strongly endorsed, and energetic projectors now have the proposition in hand.

An Irishman was filling barrels with water from a small river to supply a village which was not provided with waterworks. As he halted to give his horse a rest, a gentleman rode up and asked:

"How long have you been hauling water, my good man?"

"Tin years or more, sor."

"Ah! And how many loads do you make in a day?"

"From tin to fifteen, accordin' to the weather, sor."

"Well, Pat," said the gentleman, laughing, "how much water have you hauled all together?"

The Irishman jerked his thumb in the direction of the river, at the same time giving his horse the hint to start, and replied: "All the wather yez don't see there now, sor."

## MARKETS.

### Toronto Markets.

The storms and consequent blockade of the railroads during the past week have interfered seriously with the movement of all kinds of produce. As a result, some quotations are a little abnormal. Butchers' cattle, for instance, were in good demand, which kept the price up to \$4.50. Cattle of all kinds depreciated a great deal en route to market, owing to the length of time on cars, and, in some instances, to the distances driven before reaching an open railway line. Grain trade continues slow. Offerings are light, and the demand quiet. Bids for Manitoba flour from Britain have been desultory, but prices are unchanged. Deliveries of hogs have been light with no improvement in values. Packers say the British market is weak, and are lowering prices. With improvement in transportation, it is expected deliveries will be much heavier, and unless something intervenes, the market will go still lower. A sharp demand from Old Country points would mend matters.

Quotations on this market are:

Cattle.—Exporters, \$4.50 to \$4.80 per cwt.; medium, \$4.25 to \$4.50.

Export Bulls—Choice quality bulls are worth \$3.75 to \$4; medium to good, \$3.25 to \$3.50.

Export cows, \$3.50 to \$3.75.

Butchers' Cattle—Choice picked lots of butchers', 1,100 to 1,175 lbs. each, equal in quality to best exporters, \$4.30 to \$4.50; good, \$4 to \$4.25; fair to good, \$3.60 to \$3.85; common, \$3.15 to \$3.30; canners, at \$2.20 to \$2.50.

Feeders—Steers of good quality, 1,050 to 1,150 lbs. each, \$3.50 to \$3.80 per cwt.

Stockers—One-year to two-year-old steers, 400 to 700 lbs. each, \$3 to \$3.50; off-colors and of poor breeding quality, of same weights, \$2.50 to \$3 per cwt.

Milch Cows—Milch cows and springers are worth \$30 to \$40.

Sheep—Prices, \$3.75 to \$4 per cwt. for ewes, and bucks at \$3 to \$3.25.

Lambs—Prices ranged from \$4.60 to \$5 per cwt., and \$5.25 to \$5.65 for choice ewes and wethers for export.

Hogs—Best select bacon hogs, not less than 160 lbs., nor more than 200 lbs. each, fed and watered, \$5 per cwt.; lights and fats, \$4.87½; sows, \$3.50 to \$3.75 per cwt.; and stags, at \$2 to \$2.50 per cwt.

### PRODUCE.

#### Wholesale Prices.

Wheat.—Ontario—No. 2 red, white and mixed are steadier, 81c. to 82c. for milling. Spring is steady at 76c. for No. 1, east. Goose is quiet, but firm, at 72c. for No. 2, east.

Wheat.—Manitoba—No. 1 hard, 93c.; No. 1 northern, 91c.; No. 2 northern, 88c., and No. 3 northern at 85c., on track, lake ports. Milling-in-transit price for each grade is 6c. extra.

Corn—Canadian is dull; 38c. for yellow, and 37½c. for mixed, cars west. Old American, No. 2 yellow, 56c.; No. 3 yellow, 55½c., and No. 3 mixed, 54½c., in car lots, on the track at Toronto. New is unchanged; 51c. for No. 3 yellow, and 50c. for No. 3 mixed, in cars, on track here.

Oats—No. 1 white, 31c., low freights, 30½c. middle freights, and 29½c. high freights. No. 2 white are quoted at 1c. less.

Barley—No. 2, 43c., middle freights; No. 3 extra, 41c., middle freights, and No. 3 at 38c., east or middle.

Rye—No. 2 is quoted at 53c. low, middle or high freights.

Peas are unchanged; No. 2, 62c., any freights.

Buckwheat—No. 2 at 48c. low freights, 47c. middle, and 46c. high freights.

Mill Feed—Ontario shorts are unchanged at \$16.50 to \$17, and bran is steady at \$14.50 to \$15, in bulk, cars west. Manitoba mill feed is unchanged at \$20 for shorts and \$18 for bran, in car lots, bags included, on the track Toronto.

Oatmeal—Steady, with prices unchanged. Bags are selling at \$4.10, and barrels at \$4.35, in car lots, on the track, Toronto. Broken lots are quoted at 30c. more.

Flour—Dealers say that there are no offerings of 90-per-cent. patents. Exporters quote \$3.15, buyers' bags, f. o. b., main lines west. Manitoba Flour.—First patents, \$4.65 to \$4.90; second patents, \$4.35 to \$4.60; and strong bakers', \$4.25 to \$4.50, bags included, on the track Toronto.

Seeds—The market is somewhat quiet, and prices are unchanged at \$4 to \$5.50 for alsike, \$5.50 to \$6 for red clover per bushel, and \$2 to \$3 for timothy per 100 lbs., at outside points, and a little more would be paid for extra choice lots.

Hay ..... \$10.00 to \$11.00

Hay, mixed or clover ..... 7.00 to 8.50

Straw, sheaf ..... 9.00 to 10.00

Straw, loose ..... 6.00

Dressed hogs, light, cwt. .... 7.25

Dressed hogs, heavy ..... 6.50

Butter ..... 20 to 22

Eggs, new-laid ..... 35 to 40

Fowls, per pound ..... 06 to 08

Spring chickens, per pair ..... 75 to 1.25

Spring chickens, per pound ..... 11 to 12

Geese, per lb. .... 10 to 12

Turkeys, per lb. .... 14 to 16

Apples, per barrel ..... 1.00 to 2.00

Potatoes, per bag ..... 90 to 1.00

Beans—There is a fair demand, and the market is steady at \$1.50 to \$1.65 for hand-picked, and \$1.25 to \$1.50 for prime.

Beans—Choice primes, \$1.55 to \$1.60 per bushel; \$1.50 to \$1.52 in car lots.

Posted on Hog Prices.

Enclosed find \$1.50 to renew my subscription. I have just received the first issue of the weekly "Farmer's Advocate." It is fine. I am pleased to know we are going to receive it weekly in the future.

PRODUCE.

Retail prices, Toronto street market:

Table listing various agricultural products and their prices, including Grain (Wheat, Barley, Beans, etc.), Seeds (Alsike, Red, etc.), Hay and Straw, Fruits and Vegetables (Potatoes, Apples, etc.), Poultry (Spring chickens, etc.), Dairy Produce (Butter, Eggs, etc.), and Fresh Meats (Mutton, Spring lambs, etc.).

MONTREAL PRICES.

Table listing Montreal prices for various goods, including Wholesale (No. 2 oats, No. 2 peas, etc.), Flour (Patents, straight rollers, etc.), Feed (Manitoba bran, Ontario bran, etc.), and Rolled Oats.

Eggs—Candled, selected, 30c.; Montreal, limed, 26c.; western, limed, 22c. to 23c.; refrigerator, late fall stock, 23c. to 24c.; summer stock, 20c. to 21c.

FRUIT.

Woodall & Co., Liverpool, cabled the following report of the apple market there: "Market very active. Greenings, 17s. to 20s.; Baldwins, 17s. to 22s. 6d.;

The following Liverpool quotations show the relative value of Canadian butter in that market: Choicest Canadian creamery, in 56-lb. boxes, 96s. to 100s. per cwt.;

Montreal Markets.

Prime heaves, \$4.75 to \$5.00; good to medium, \$4.25 to \$4.50; ordinary mediums, \$3.75 to \$4.00; common, \$2.50 to \$3.50.

Chicago Markets.

Chicago.—Cattle—Good to prime steers, \$4.75 to \$5.50; poor to medium, \$3.75 to \$4.50; stockers and feeders, \$2.25 to \$4; cows and heifers, \$1.50 to \$4.50;

Buffalo Markets.

East Buffalo.—Veals, \$6.50 to \$8.75. Sheep and lambs, \$6.00 to \$6.25; yearlings, \$5.25 to \$5.50; wethers, \$4.50 to \$4.75;

Mr. H. B. Cowan, of Springfield, Mass., formerly engaged in newspaper work in Ottawa, where he aided in the work of local fair improvement, has been assigned the Superintendency of Fall Fairs and the Secretaryship of the Ontario Fruit-growers' Association.

British Cattle Markets.

London.—Live cattle steady at 11c. to 11½c. per lb. for American steers, dressed weight; Canadian steers, 10½c. to 11½c. per lb.;

Canadian Live-stock Shipments.

Statement of live stock shipped from the ports of St. John, N. B., and Portland, Maine, for the week ending January 24th, 1904, as compiled by Robert Bickerdike & Co., Ltd., Dominion Live-stock Exchange, Montreal: Cattle, 2,716; sheep, 372.

The New Superintendent.

Mr. Geo. A. Putnam, B. S. A., latterly secretary of the Toronto City Dairy, but formerly private secretary to Dr. James Mills, late president of the Ontario Agricultural College, has been appointed Superintendent of Farmers' Institutes for Ontario, as successor to Mr. Creelman.

Presentation to Dr. Mills.

Prior to leaving Guelph for Ottawa, Dr. James Mills was made the recipient of a signet ring by the demonstrators and assistants of the college, and an address and complete set of library furniture by the whole college staff and their wives, who called upon him at his house.

Ottawa Winter Fair.

Arrangements have been made to hold the Eastern Ontario Winter Fair at Ottawa, on dates as previously announced, March 8th to 11th. Good accommodation is promised to exhibitors.

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If you're going to do a kindly deed,  
 'Tis never too soon to begin,  
 Make haste, make haste, for the moments speed,  
 And the world, my dear one, has pressing need  
 Of your tender thought, and your kindly deed,  
 'Tis never too soon to begin.

### A FAIR BARBARIAN.

BY FRANCES HODGSON BURNETT.

#### CHAPTER VIII.—Continued.

"I would wear something rather quiet and—simple, my dear Octavia," she said. "A white muslin perhaps, with blue ribbons."

"Would you?" answered Octavia. Then, after appearing to reflect upon the matter a few seconds, "I've got one that would do, if its warm enough to wear it. I bought it in New York, but it came from Paris. I've never worn it yet."

"It would be nicer than anything else, my love," said Miss Belinda, delighted to find her difficulty so easily disposed of. "Nothing is so charming in the dress of a young girl as pure simplicity. Our Slowbridge young ladies rarely wear anything but white for evening. Miss Chickie assured me, a few weeks ago, that she had made fifteen white-muslin dresses, all after one simple design of her own."

"I shouldn't think that was particularly nice, myself," remarked Octavia impartially. "I should be glad one of the fifteen didn't belong to me. I should feel as if people might say, when I came into a room, 'Good gracious, there's another!'"

"The first was made for Miss Lucia Gaston, who is Lady Theobald's niece," replied Miss Belinda, mildly. "And there are few young ladies in Slowbridge who would not emulate her example."

"Oh!" said Octavia, "I dare say she is very nice, and all that; but I don't believe I should care to copy her dresses. I think I should draw the line there."

But she said it without any ill-nature; and, sensitive as Miss Belinda was upon the subject of her cherished deals, she could not take offence.

When the eventful evening arrived, there was excitement in more than one establishment upon High Street and the streets in its vicinity. The stories of the diamonds, the gold-diggers, and the silver-mines, had been added to, and embellished, in the most ornate and startling manner. It was well known that only Lady Theobald's fine appreciation of Miss Belinda Bassett's feelings had induced her to extend her hospitalities to that lady's niece.

"I would prefer, my dear," said more than one discreet matron to her daughter, as they attired themselves,—"I would much prefer that you would remain near me during the early part of the evening, before we know how this young lady may turn out. Let your manner toward her be kind, but not familiar. It is well to be upon the safe side."

What precise line of conduct it was generally anticipated that this gold-digging and silver-mining young person would adopt, it would be difficult to say. It is sufficient that the general opinion regarding her were of a distinctly unfavourable nature.

When she felt all this in her ears, the girl's indignation at the matter of affairs was not lessened. With all her indignation, however, she had not time to

please, and had quite awakened to an interest in the impending social event. She seemed in good spirits, and talked more than was her custom, giving Miss Belinda graphic descriptions of various festal gatherings she had attended in New York when she seemed to have been very gay indeed, and to have worn very beautiful dresses, and also to have had rather more than her share of partners. The phrases she used, and the dances she described, were all strange to Miss Belinda, and tended to reducing her to a bewildered condition, in which she felt much timid amazement at the intrepidity of the New-York young ladies, and no slight suspicion of the "German"—as a theatrical kind of dance, involving extraordinary amount of attention from partners of the stronger sex.

It must be admitted, however, that by this time, notwithstanding the various shocks she had received, Miss Belinda had begun to discover in her young guest divers good qualities which appealed to her affectionate and susceptible old heart. In the first place, the girl had no small affectations; indeed, if she had been less unaffected she might have been less subject to severe comment. She was good-natured, and generous to extravagance. Her manner toward Mary Anne never ceased to arouse Miss Belinda to interest. There was not any condescension whatever in it, and yet it could not be called a vulgarly familiar manner; it was rather an astonishingly simple manner, somehow suggestive of a subtle recognition of Mary Anne's youth, and ill-luck in not having before her more lively prospects. She gave Mary Anne presents in the shape of articles of clothing at which Slowbridge would have exclaimed in horror if the recipient had dared to wear them; but, when Miss Belinda expressed her regret at these indiscretions, Octavia was quite willing to rectify her mistakes.

"Ah, well!" she said, "I can give her some money, and she can buy some things for herself." Which she proceeded to do; and when, under her mistress's direction, Mary Anne purchased a stout brown merino, she took quite an interest in her struggles at making it.

"I wouldn't make it so short in the waist and so full in the skirt, if I were you," she said. "There's no reason why it shouldn't fit, you know," thereby winning the housemaid's undying adoration, and adding much to the shapeliness of the garment.

"I am sure she has a good heart," Miss Belinda said to herself, as the days went by. "She is like Martin in that, I dare say she finds me very ignorant and silly. I often see in her face that she is unable to understand my feeling about things; but she never seems to laugh at me, nor think of me unkindly. And she is very, very pretty, though perhaps I ought not to think of that at all."

#### CHAPTER IX.

##### White Muslin.

As the good little spinster was arraying herself on this particular evening, having laid upon the bed the greater portion of her modest splendor, she went to her wardrobe, and took therefrom the sacred bandbox containing her best cap. All the ladies of Slowbridge wore caps; and all being respectfully plagiarized from Lady Theobald, without any reference to age, size, complexion, or demeanor, the result was sometimes a little trying. Lady Theobald's head-dresses were of a severe and fastidious order. The lace of which they were composed was induced by some ingenious device to form itself into aggressive

quillings, the bows seemed lined with buckram, the strings neither floated nor fluttered.

"To a majestic person the style is very appropriate," Miss Belinda had said to Octavia that very day; "but to one who is not so, it is rather trying. Sometimes, indeed, I have almost wished that Miss Chickie would vary a little more in her designs."

Perhaps the sight of the various articles contained in two of the five trunks had inspired these doubts in the dear old lady's breast: it is certain, at least, that, as she took the best cap up, a faint sigh fluttered upon her lips.

"It is very large for a small person," she said. "And I am not at all sure that amber is becoming to me."

And just at that moment there came a tap at the door, which she knew was from Octavia.

She laid the cap back, in some confusion at being surprised in a moment of weakness.

"Come in, my love," she said.

Octavia pushed the door open, and came in. She had not dressed yet, and had on her wrapper and slippers, which were both of quilted gray silk, gayly embroidered with carnations. But Miss Belinda had seen both wrapper and slippers before, and had become used to their sumptuousness: what she had not seen was the trifle the girl held in her hand.

"See here," she said. "See what I have been making for you!"

She looked quite elated, and laughed triumphantly.

"I did not know I could do it until I tried," she said. "I had seen some in New York, and I had the lace by me. And I have enough left to make ruffles for your neck and wrists. It's Mechlin."

"My dear!" exclaimed Miss Belinda. "My dear!"

Octavia laughed again.

"Don't you know what it is?" she said. "It isn't like a Slowbridge cap; but it's a cap, nevertheless. They wear them like this in New York, and I think they are ever so much prettier."

It was true that it was not like a Slowbridge cap, and was also true that it was prettier. It was a delicate affair of softly quilted lace, adorned here and there with loops of pale satin ribbon.

"Let me try it on," said Octavia, advancing; and in a minute she had done so, and turned Miss Bassett about to face herself in the glass. "There!" she said. "Isn't that better than—well, than emulating Lady Theobald!"

It was so pretty and so becoming, and Miss Belinda was so touched by the girl's innocent enjoyment, that the tears came into her eyes.

"My—my love," she faltered, "it is so beautiful, and so expensive, that—though indeed I don't know how to thank you—I am afraid I should not dare to wear it."

"Oh!" answered Octavia, "that's nonsense, you know. I'm sure there's no reason why people shouldn't wear becoming things. Besides, I should be awfully disappointed. I didn't think I could make it, and I'm real proud of it. You don't know how becoming it is!"

Miss Belinda looked at her reflection, and faltered. It was becoming.

"My love," she protested faintly, "real Mechlin! There is really no such lace in Slowbridge."

"All the better," said Octavia, cheerfully. "I'm glad to hear that. It isn't one bit too nice for you."

To Miss Belinda's astonishment, she drew a step nearer to her, and gave one of the satin loops a queer, caressing little touch, which actually seemed to

mean something. And then suddenly the girl stooped, with a little laugh, and gave her aunt a light kiss on her cheek.

"There!" she said. "You must take it from me for a present. I'll go and make the ruffles this minute; and you must wear those too, and let the people see how stylish you can be."

And, without giving Miss Bassett time to speak, she ran out of the room, and left the dear old lady warmed to the heart, tearful, delighted, frightened.

A coach from the Blue Lion had been ordered to present itself at a quarter past five, promptly; and at the time specified it rattled up to the door with much spirit,—with so much spirit, indeed, that Miss Belinda was a little alarmed.

"Dear, dear!" she said. "I hope the driver will be able to control the horse, and will not allow him to go too fast. One hears of such terrible accidents."

Then Mary Anne was sent to announce the arrival of the equipage to Miss Octavia, and, having performed the errand, came back leaning with smiles.

"Oh, mum," she exclaimed, "you never see nothin' like her! Her gown'd s'ev'ingly. An' lor! how you do look yourself, to be sure!"

Indeed, the lace ruffles on her "best" black silk, and the little cap on her smooth hair, had done a great deal for Miss Bassett; and she had only just been reproaching herself for her vanity in recognizing this fact. But Mary Anne's words awakened a new train of thought.

"Is—Miss Octavia's dress a showy one, Mary Anne?" she inquired. "Dear me, I do hope it is not a showy dress!"

"I never see nothin' no eleganter, mum," said Mary Anne: "she wants nothin' but a veil to make a bride out of her—an' a becomin' thing she never has wore."

They heard the soft sweep of skirts at that moment, and Octavia came in.

"There!" she said, stopping when she had reached the middle of the room. "Is that simple enough?"

Miss Belinda could only look at her helplessly. The "white muslin" was composed almost entirely of Valenciennes lace; the blue ribbons were embroidered with field-daisies; the air of delicate elaborateness about the whole was something which her innocent mind could not have believed possible in orthodox white and blue.

"I don't think I should call it exactly simple," she said. "My love, what a quantity of lace!"

Octavia glanced down at her jabots and frills complacently.

"There is a good deal of it," she remarked; "but then, it is nice, and one can stand a good deal of nice Valenciennes on white. They said Worth made the dress. I hope he did. It cost enough. The ribbon was embroidered by hand, I suppose. And there is plenty of it cut up into these bows."

There was no more to be said. Miss Belinda led the way to the coach, which they entered under admiring or critical eyes of several respectable families, who had been lying in wait behind their window-curtains since they had been summoned there by the sound of the wheels.

As the vehicle rattled past the boarding-school, all the young ladies in the first class rushed to the window. They were rewarded for their zeal by a glimpse of a cloud of muslin and lace, a charmingly-dressed yellow-brown head, and a pretty face, whose eyes favored them with a frank stare of interest.

(To be continued.)

The Twins of Culleston Manor in 1685.

(Continued.)

But alarming indeed was the news which Madam Culleston sprang up to receive as she dropped her pen at the last entry. How could she carry it to her wounded husband lying concealed in the secret chamber of the old Manor House, and whose place of retreat might be found at any moment? "No," she concluded, "he shall know nothing of it until the fever of his wound abates, and his mind becomes clear enough to advise. Her one gleam of comfort had faded her! Her bonnie daughters too were to be sacrificed, and she, helpless mother that she was, could not raise a finger to help them. Their youth would be no protection to them; their names, with those other ones, some mere babes, who had walked in the maids' procession, were already entered upon the list of prisoners to be tried as rebels before that cruel judge, whose name had become already a terror in the land. Who could have foreseen that the mad enthusiasm which had wrecked so many lives should have so upset the judgment and blinded the eyes of the instructress in whom the parents had placed such implicit trust, that she not only had not held them back, but had led her pupils onwards to their fate.

Just then there was a quiet tap at the door, followed by the gentle voice of her handmaiden, saying, "There is one who would have speech of you, madam. Is it your pleasure that I may admit him?" "Yes! admit him," she answered wearily. "God grant it may be words of hope he brings. Of evil tidings I have had more than I will can bear." "Ned Halliday, dear lad, is it you. I had not at first known you under that disguise. I suppose there is a price upon your head too? Have you heard the news from Taunton?" "Yes, dear madam, I have. Nay, more, I have spoken with Mistress Dorothy herself, and she bade me tell you that they are both of good courage, and have friends outside who are working for their escape. They are not committed to the common jail as yet, though Madam Tredgood is, and with her Mistress Letitia Lamorne, who, as the bearer of the golden standard to Monmouth, is also marked out for greater punishment. The school is surrounded by troops, and closely guarded, but nevertheless, dear madam, if you will but send by me a token, telling my dear playmates to trust themselves to me and those who will help me in their release, I pledge you my word that I will defend them with my life as we bring them back to Culleston once more."

What could the mother say but "yes," making on her side every possible provision to further the project which, as presented to her, seemed almost feasible, in spite of the risks which must be incurred.

HOW THEY ESCAPED.

It would take too much space to describe the several incidents and hairbreadth escapes of that perilous journey homewards of the two little maids of Culleston. But, staunchly guarded by Ned Halliday and his faithful henchman, sometimes covered by dried heather and fern in the donkey-cart of the Broom-Squire, who had a shanty in the coppice behind Culleston church, and sometimes in linen smocks and with broad flapping hats covering their bonnie laces, which were dyed a rich brown to make them look like gypsies, carrying faggots for the camp fire, at last, at last, they stood at the postern door of their home awaiting admittance. Behind them were what appeared to be two rough-looking country lads offering big besoms for sale, whilst Dorothea and Bettina each held up a bunch of lighter ones, saying, "Please buy our brooms! do buy our cheap brooms; they are strong, good brooms; oh! do buy our brooms!" The farce of buying

their brooms was kept up to deceive any prying eyes, until the glad news of their safety was brought to madam.

BY WAY OF INTERPOLATION.

I, as the compiler of this series, feel as if I should just here tell how it came about that I was enabled to follow almost step by step a great part of the very ground covered by the weary feet of the poor little rebel girls of Culleston Manor. Just one short summer ago I spent a month at a farm house upon the Quantocks overlooking the Vale of

stood the "linhay," under the eaves of which they crouched afraid to whisper least a sound should betray them.

Of this moment of terror, Bettina writes: "To our dying day, methinks, neither Dorry nor I will ever hear the dismal croaking of a frog, nor smell the vile odor from a stagnant weed-covered pond without living it all over again. As swords were thrust through the tangle of coarse grass, which alone formed the walls of our hiding place, we hardly dared to breathe. Even though we lay under the loose bundles of un-

crust, wherewith to eke out the supplies in the fast-emptying wallet, but they won home at last. Each night before they started they had knelt amongst the bracken on the moor, or the gorse in the hedge, and had asked the Father who would not that even "one of His little ones should perish," to guide their wandering footsteps into safe pathways, and again, at day dawn, when they had once more to shrink into some new hiding-place, they had thanked Him for his protecting mercy, and knowing that either Robin or his master were in turn keeping watch and ward, the two brave little women had slept peacefully in one another's arms, until the signal agreed upon, the soft cooing of the wood pigeon, as if from the sheltering branches above them, would arouse them from their slumbers, and the weary tramp had begun all over again. True, they had reached their home at last, but it will take at least another chapter before the story of Dolly and Betty's "little great-grandmothers" is all told. A sad little tale you will perhaps say, but not half so sad, after all, as that of many others which have been or could have been told during the reign of terror which followed upon the great rebellion of 1685.

H. A. B.

Uncle Tom and His Wife for Sale.

Another of Landseer's stories, told by the brush, instead of the pen. This time it is a story of dumb despair and wifely sympathy, not the less felt because both husband and wife have four legs, instead of only two! Yet, to the human eye, there hardly seems to be cause for either sentiment. The heavy chain, the cruel whip upon the nail, tell their own tale—a change of masters could hardly be for the worse. Let us hope, for the sake of Uncle Tom and his faithful mate, that it may be for the better.

H. A. B.

A Song for the New Year.

A song for the New Year! Exultant its hours—  
The dust of defeat hath not sullied its flowers,  
But Fancy hath dipped them in roseate dew,  
And brought them—all blooming in beauty—to you!

A song for the New Year! A clarion strong;  
Achievement—thro' service—refreshment thro' song!  
Not mountain too mighty for faith to remove;  
No labor too lowly, transfigured by Love!

A song for the New Year! A message of Joy,  
May never a discord its music alloy!  
But, growing in sweetness and melody clear,  
May it ever inspirit, and strengthen, and cheer!

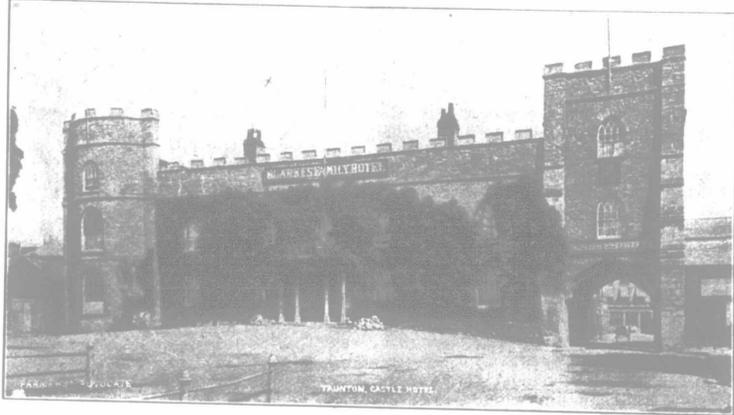
—[Ernest Neal Lyon, in The Reader Magazine for January.

Good-bye

We say it for an hour or for years;  
We say it smiling, say it choked with tears;  
We say it coldly, say it with a kiss;  
And yet we have no other word than this— "Good-bye."

We have no dearer word for our heart's friend,  
For him who journeys to the world's far end,  
And scars our soul with going; thus we say,  
As unto him who steps but o'er the way— "Good-bye."

Alike to those we love and those we hate,  
We say no more in parting. At life's gate,  
To him who passes out beyond earth's sight,  
We cry, as to the wanderer for a night— "Good-bye."



On Castle Green, 1903.

H. A. B.'s bedroom window below "X."

Taunton Deane. From my bedroom window I had a forty-mile view across to the Blackdowns and other ranges, so with that for my central point I was able to check off, as it were, every incident of what the scant records from the old oak chest revealed. Every spot from the still-standing archway, under which one can pass to Castle Green, to that grimmer archway, which even now mounts guard over the courtyard of Culleston, had its tale of absorbing interest to tell. At one place I would say to myself, "Ah! this is where they hid themselves, when their

used furze, over which Ned Halliday and Robin his man stood with sickle and withes in hand, as if they were but the hedgers and ditchers they pretended to be. Ah! gallant Ned, and kindly Robin, what do we not owe you? And, well, I wot, will one of us repay you some day, if our lives are spared to us."

Dorothea will, I know, pay Ned in the only coin which could ever pass current with him, and I will see that faithful Robin has his reward when Nannie, who has flouted him so long as a stay-at-home and a mere country bumpkin, learns not only of his



"Uncle Tom and His Wife for Sale." (Landseer.)

initial and perhaps greatest peril of all was passed, that of getting clear of the guards within and without the castle walls. Here they must have crouched "under the hedge in Cann's fields until they heard die away in the distance the sound of the hoof beats of a set of troopers." About here must have "swung-to the clapping-gate over which they had to climb to pass by the footpath into the Bishop's Hall road; perhaps on this corner, where now stands that big modern mansion, with its gay flower-beds and wide carriage drive,

frequent acts of unselfish heroism, but also of the many times his sharpness of wit and readiness of resource have saved her little mistresses from cruel disaster.

It took the fugitives many days of hiding in the big dips of the Somersetshire Coombs, many long marches by night through long, unfrequented and circuitous byways to cover what would have been by direct route but seven miles in all. They had to avoid the intervening villages, leaving it to Robin to beg at nightfall a pannikin of milk or an occasional



### "Some Things Hard to be Understood."

St. Peter tells us that his beloved brother, Paul, has written "some things hard to be understood, which they that are unlearned and unstable wrest, as they do also the other Scriptures unto their own destruction."

There is no doubt about the truth of his statement. The Bible, from Genesis to Revelation, contains many things "hard to be understood." Would you be better pleased if you could understand everything in it? In that case, it would soon lose its interest for men. The Bible is able to interest and instruct everybody. There are stories for the children, battles and adventures for the boys, love-stories for the young people, wise advice for the man of business and the farmer, high aims and heroic deeds for the idealist, problems for the student, words of peace and comfort for the old, and, as Ian Maclaren has pointed out, even the agnostic who doubts the very existence of God, may study Ecclesiastes and feel as though it were written for him alone. As for the sick, the sorrowful and the sinful, who can measure the inspiration and power of its mighty words?

Just because there are so many difficulties in the Bible, men of every age have studied it with eager and never-failing interest. It is a great mine from which each generation digs out some treasure and passes it on to those who come after. There is still much to explain, and there are still plenty of students and men of science doing their very best to throw light on difficult passages.

A short time ago, while preparing a Bible lesson, I came across a possible explanation of one of these difficulties. You remember that Hezekiah, King of Judah, was given a marvellous sign of his recovery from illness. "Isaiah the prophet cried unto the Lord: and He brought the shadow ten degrees backward, by which it had gone down in the dial of Ahaz." It seems unlikely that God should turn back the hands of the great clock of the universe for what seems to us such an insufficient reason. Of course He could do it. He who "hangeh the earth upon nothing," and upholds all the other great worlds which sweep so marvellously through infinite space, could, if He pleased, stop the motion or reverse it. But has He ever done such a thing since the sun, moon and stars were created and started on their majestic march? At first sight the Bible seems to teach this, but new light has been thrown on the subject. It was not the sun but the "shadow" that went back. Benjamin Scott, F.R.A.S., says—and a man with all those letters after his name ought to know what he is talking about—that the going back of the shadow is not of itself miraculous, and has several times been noticed during the 19th century. "The shadow is not invariably dependent on the position of the sun, but upon the brightest point of light in the sky. If when the sun nears the western horizon a dark impenetrable cloud covers that orb, the shadow will be cast by the bright silver lining of the cloud, which may be near the zenith, and the shadow will repeat nearly a quarter of the circle. In the present century an instance is recorded by the Canon of St. Catharine's."

Very much the same explanation may be given for the wonderful phenomenon described in the book of Joshua. When the sun apparently stood still, the Jewish leader's command, "Stand, O Sun, and thou shalt stand still, O Moon, until I have taken vengeance on mine enemies, and the shadow of the mountain shall be cast into the valley."

hailstorm of that long day must have been caused by a wave of intense cold, which is not uncommon even now in Syria. "It is always at a time of intense cold that refraction of the sun occurs. Travelers in the Polar regions give many instances when the sun is seen for several days, when they know the orb is one degree below the horizon. This refraction of the sun is quite a common thing."

As for the captious critics who say that Joshua's language was unscientific because he spoke of the "sun" standing still, when really it is the motion of the "earth" which causes day and night, that hardly deserves consideration. Even these learned critics themselves would probably speak of the sun as "rising" in the east and "setting" in the west, and no one in this critical 20th century would think of objecting to such a form of expression.

Wonderful and miraculous indeed both these events must have been, because the sun and clouds are usually anything but obedient to man.

As I walked to the station a few weeks ago to catch an early train, I realized more than ever before the mighty power of the daylight. The moon was shining brightly when I started, but in a few minutes it faded out before the irresistible march of the dawn. If all the boasted strength and wisdom of men could have been concentrated, how powerless it would have been to stop that onward march for the millionth part of a second.

The daily miracle of the dawn seems to me as wonderful as the occasional miracles spoken of above; just as the yearly miracle of the fruit which appears so marvellously on the trees, now bare and leafless, and the mysterious increase of the buried grain every summer, seems as incomprehensible as the multiplication of the loaves and fishes beside the Sea of Galilee. As a little boy once said while he watched the chickens hatching in an incubator, "I see how they get out, but I don't see how they got in." Is not "how they got in" one of the many mysteries which we are almost too familiar with to wonder at? I have not space to-day to mention any more things "hard to be understood," but as puzzling things in the Bible record are constantly being explained, may we not trust God to make everything plain some day? Fresh proofs of the truth and accuracy of Bible history are still being found. For example, ancient historians seem to contradict Daniel's statement that Belshazzar was king of Babylon, and was killed when the city was taken by the Medes and Persians. Berosus says that "Nabonadius" was king of Babylon, and that he was not in the city at that time, but lived to fight several battles after Babylon was captured. Of course, many people at once concluded that the Bible account must be untrue. But wait! Pierson says that twenty or thirty years ago a great cylinder was dug up among the heaps of ruins there. It was covered with inscriptions, and when these were translated it was found that "Belshazzar was the son of Nabonadius, and a regent under him," so the Bible spoke the truth after all—Belshazzar was reigning in Babylon and was killed there. Often a seeming contradiction may be reconciled by a little more information. Can we not trust God a little? We don't know everything yet.

"Faith alone is the master key  
To the straight gate and narrow road;  
The others but skeleton pick-picks be,  
And you never shall peek the backs of God."  
HOPE.

### The Golden Rule.

"Are you almost disgusted with life, little man?  
I will tell you a wonderful trick,  
That will bring you contentment, if anything can—  
Do something for somebody, quick?"

"Are you awfully tired with play, little girl?  
Weary, discouraged and sick?  
I'll tell you the loveliest game in the world—  
Do something for somebody, quick!"

"Though it rains like the rain of the flood, little man,  
And the clouds are forbidding and thick,  
You can make the sun shine in your soul, little man—  
Do something for somebody, quick!"

"Though the skies are like brass overhead, little girl,  
And the road like a heated brick;  
And all earthly affairs in a terrible whirl;  
Do something for somebody, quick!"

### The Old Days.

The old days!—the far days!  
The ever-dear and fair!  
The old days—the lost days—  
How lovely they were!  
The old days of Morning,  
With the dew-drench on the flowers,  
And apple-buds and blossoms  
Of those old days of ours.

Then was the real gold  
Spendthrift Summer flung;  
Then was the real song  
Thrush and robin sung!  
There was never censure then,—  
Only honest praise—  
And all things were worthy of it  
In the olden days.

There bide the true friends—  
The first and the best;  
There clings the green grass  
Close where they rest;  
Would they were here? No;—  
Would we were there!  
The old days—the lost days—  
How lovely they were!  
—James Whitcomb Riley



How to amuse children during the cold winter months is a problem to many mothers. The little ones cannot play out of doors as much as in the summer, and there is so much less to take up their attention that they are apt to get into mischief. A host of harmless devices is necessary to provide them with occupation, and one of these is having them "grow" things. Few mothers, perhaps, have any idea of the interest the majority of children take in seeing how the different seeds sprout and send forth roots, and develop; or of the valuable educational training such observation is to the child-mind. But the child must do all the work, from the very beginning. Half of the interest is lost if even mother sows the seeds or waters the growing plants.

The pupils in a schoolroom, which I once had the privilege of visiting in a Chicago suburb, were very much interested in the growing of seeds in eggshells. The eggshells were nearly filled with sawdust, which was kept moist, and peas, corn, cucumbers, oats, etc., were planted in them. Some of the shells were placed in little bags of netting, and suspended, like little hanging baskets; others were placed side by side in very shallow boxes, so that they could not topple over. At different stages in the growth of the seedlings, they were pulled up, and the children observed the development, and made drawings of the tiny plants. These drawings were kept in books used especially for that purpose, and were supplemented by a few remarks neatly written beneath, stating the number of days after planting, etc., etc.

Another plan, if the house be warm enough, is to stretch mosquito netting across the tops of any old clear glass vessels, then fill the vessel with water, and place seeds upon the netting, so that the children may watch the development of both root and shoot at the same time. Of course the water should be warm when put in, and the vessel kept in a warm place.

The children may wish to watch other plants grow on and on. If so, let them try a few morning-glories, or sweet alyssum in pots. Parsley, too, makes a pretty fern-like growth, and is very hardy, but its seed germinates so very slowly that it should be soaked in lukewarm water before planting. I have heard that a very pretty hanging-basket for the children may be made by moistening a sponge, sprinkling it with flaxseed, and hanging it up in a warm window, taking care that

it is kept damp by frequent sprinkling with warm water.

Last of all, I shall add just one more plan, which has been clipped from a contemporary newspaper: "Take a large carrot and cut off the end of the root, leaving a piece about three inches and a half long adhering to the portion where the leaves grow. Now hollow out this piece, and in the edge of it make three little holes by which wire or string may be inserted to hang it up with. You will now have what will look very much like a little terracotta pot. Keep this filled with water, and you will soon find the green growing up round it, and without expense you will have a feathery, fern-like plant for your window."

It may be objected that all of these things make a "muss." After all, they do not take up so much room, just one of the kitchen windows will do. There are few mothers who will object to giving up just one window for the interest and instruction of the little ones.

FLORA FERNLEAF.

"Farmer's Advocate" office, London, Ont.

The following contribution from Miss Agnes D. C. Hisey is gratefully acknowledged: F. F.

### Primulas.

"Any one who sows a packet of primula sinensis will not regret it. Use a large, shallow box and good, loamy soil, free of vermin. This precaution is worth while heeding, as I have had several dozen of the tiny plants destroyed as soon as they came above the soil by troops of almost invisible white lice. I saved two plants out of one packet. I have since learned to heat the soil before sowing the seed.

"After the plants show four leaves, they should be transplanted to pots or cans, and when the weather is warm enough, set in some cool, shady place, and watered freely all summer. In September give them a north or east window, and by Christmas, one has the pleasure of seeing the softly-frilled flowers of delicate mauve, rose, white or purple. The foliage is quite ornamental and no vermin ever bother it."

One of our readers says of our trained nurse's articles: "Miss Owen's papers are excellent. When I read her advice on ventilation, I at once went and opened my bedroom window."

Another speaks: "I wish to congratulate you on giving the reading public a weekly agricultural paper of such excellence, and trust that your venture will be as great a success financially as it deserves to be."

"Yours, etc., R. M., Manion."



**Why Some Boys Succeed.**

"Ho, boys, I'd like to say to you,  
As if I were you father,  
With earnest mind and good intent,  
A word—or three words rather.

"Pluck, Purpose, Perseverance they;  
I call them simply glorious,  
For they who have and use them well  
Shall surely be victorious.

"Purpose sees something to be done  
For our own good or neighbor's;  
Pluck dares to do it and in faith  
For the great object labors.

"But Pluck and Purpose both are vain,  
As teaches many a story;  
'Tis Perseverance wins the day,  
And leads the boy to glory."

Yes, boys, if you want to get on in life—as, of course, you do—begin at once to cultivate Pluck, Purpose and Perseverance. The three P.'s can't be won in a day, or a year, so you have no time to lose. Several years ago, a ragged little newsboy was standing looking up at a handsome house in New York. His bare hands were red with cold, and the blinding snow nearly lifted him off his feet. A gentleman was looking out of a window across the street, and noticed that the little fellow was often in the same place on stormy days, but never in fine weather. At last he grew curious, and beckoned the boy, who hurried over with a cheerful shout of, "Here you are! A Record, did you say?"

The gentleman called him in, and told him to warm his stiff fingers. "Don't you find it hard selling papers this weather?" he asked.

"Ye-es, sometimes. Then I hustle over there as fast as I can," and he pointed to the millionaire's house. Then he explained that about a year before, when he was terribly cold and couldn't sell any papers, two fellows passed him, and one said that the man who lived in that grand house was a beggar once. "Yes, or what amounts to nearly the same thing—a newsboy," said the other. "I've heard him say dozens of times that nothing but pluck and the grace of God would ever have brought him through." "Then," said the little lad, "I made up my mind I'd got the pluck all right, and I'd ask over and over for the grace of God. I didn't know just what that was, but every day I said all I could remember of the Lord's Prayer, and finished up with, 'and give me the grace of God,' and I begun to get along right away. I'm saving money now to go to school with, and on stormy days when I have bad luck I come and take a look at that big house, and say, 'Pluck and the grace of God,' over and over again. After that the papers always sell like hot cakes. I call that house my bank, and I draw on it when I'm hard up. I 'spect it's a deal more comfort to me than to the man who built it."

Then he dashed off, shouting, "Hyers yer mornin' papers! Year-ald! Tribune! Record!"

I haven't heard whether that boy ever became a millionaire or not, but he was pretty sure to succeed, for he encouraged his luck, never grumbling at hardships, and stuck to his purpose perseveringly, like the plucky little chap he was.

I once heard of another little fellow who was selling papers in a crowded car, when the train started. "Caught this time, Joe!" laughed the conductor. "You will have to run to Fourteenth street."

"Don't care!" was the cheerful answer. "I can sell all the way back again."

An old gentleman got interested in the boy who faced a difficulty so pluckily, and asked him some questions about his home and family. It

turned out that Joe supported himself and a small brother called Jimmy, who was lame and "couldn't earn much himself."

"Oh, I see," said the gentleman, "that makes it hard. You could do better alone?"

This time Joe's answer was more defiant than merry.

"No, I couldn't!" he exclaimed, indignantly, "Jim's somebody to go home to. He's lots of help. What would be the good of having luck if nobody was glad, or of getting things if there was nobody to divide with?"

And Joe was quite right, boys, for the richest people are often the people who have big families and cannot spend thousands of dollars on automobiles and steam yachts. Get rich by all means, if you honestly can, but never imagine that riches can make you happy, or that people who have millions are better off than the people who have enough to live comfortably rather than expensively. A boy whose highest ambition is only to make money will never be worth much. I don't believe, either, that the boy who always has to dress for dinner, and sit patiently through seven or eight courses, behaving in a dignified way, so as not to shock the waiter who stands behind his chair, enjoys his food half as much as you do, although you may act more like this:

"When Jimmy comes from school at four  
And rushes home, how things begin  
To whirl and buzz and bound and spin,  
And brighten up from roof to floor.  
The dog that all day long has lain  
Upon the back porch, wags his tail,  
And leaps and barks and begs again  
The last scrap in the dinner pail,  
When Jimmy comes from school.

"The cupboard latches click a tune  
And mother from her knitting stirs  
To tell that hungry boy of hers  
That supper will be ready soon;  
And then a slab of pie he takes,  
A cookie and a quince or two,  
And for the breezy barnyard breaks,  
Where all things cry, "How do you do?"

When Jimmy comes from school.  
"The rooster on the garden fence  
Struts up and down, and crows and crows

As if he knows or thinks he knows,  
He, too, is of some consequence;  
The guineas join the chorus, too,  
And, just beside the window-sill,  
The catbird swinging out of view,  
On his light perch begins to trill,  
When Jimmy comes from school."

—COUSIN DOROTHY.

**Let Something Good be Said.**

By James Whitcomb Riley.

When over the fair fame of friend or foe  
The shadows of disgrace shall fall, in-  
stead  
Of words of blame, or proof, of thus and  
so,  
Let something good be said.

Forget not that no fellow-being yet  
May fall so low but love may lift his  
head;  
Even the cheek of shame with tears is  
wet,  
If something good be said.

No generous heart may vainly turn  
aside  
In ways of sympathy; no soul so  
dead  
But may awaken strong and glorified  
If something good be said.

And so I charge ye; by the thorny  
crown,  
And by the cross on which the Saviour  
bled,  
And by your own soul's hope of fair re-  
nown.  
Let something good be said.

**A Willing Slave.**

Helen and Dick pulled their grandpa  
down,  
Right down on his knees by the door,  
And Dick got astride, demanding a ride  
Across the wide kitchen floor.

Then they cried "Gee up! whoa! haw!  
and back!"—

How could the poor horse under-  
stand?—

But he plunged and pranced while wee  
Helen danced

And Dick exclaimed, "This is grand!"

"You're the dearest and nicest grandpa  
That ever was known," they cry.  
"You've said that before and it's rather  
a bore,"  
He says with a patient sigh.

But he laughs as they pull his whiskers—  
And they get their story too,  
A tale of his youth—for to tell the  
truth,  
He does what he's told to do.

COUSIN DOROTHY.

**Humorous.**

The mother of a little girl named Mar-  
jorie had become greatly in-  
terested in domestic econ-  
omy. Several courses at a  
fashionable cooking school  
had opened her eyes to the  
fact that nothing should be  
wasted. The servants were  
almost daily admonished  
not to throw away any  
material that could be re-  
cooked or hashed or served  
up in some new form. Of  
course, much advice reached  
the child's ears.

Not long afterwards a  
kitten belonging to the  
next-door neighbor died sud-  
denly. Half an hour later,  
Marjorie appeared before  
her mother, carrying the  
sad and drooping remains.

"Mamma," she said,  
"just see what I've found  
thrown away now! A per-  
fectly good kitten."

Willie, a little five-year-  
old, who felt his manhood  
greatly minimized in a  
bodice and kilt, was very  
ambitious to put on trous-  
ers, and never missed an  
opportunity to examine and  
discuss those worn by his  
little associates. "Oh,  
when may I wear breeches?"  
was his daily cry. One  
Sunday afternoon he was  
taken to a gathering of  
children, to whom the  
rector, who appeared in his  
cassock, talked of Bible  
characters in language  
which could be comprehended by his  
audience, and concluded his remarks by  
saying in a very kindly tone, "Now, if  
any little boy or girl wants to ask me  
a question, I shall be glad to answer it.  
Don't be afraid, little children, speak  
right out. Raise your hand and I will  
see you."

To the surprise of all, it was Willie's  
hand which responded to this encourage-  
ment. His face was radiant with delight  
and expectation as the rector discovered  
the little hand and said, "Well, Willie,  
what do you want to know?  
Speak out."

"Oh, mister—oh! oh!"  
exclaimed Willie, fairly chok-  
ing with eagerness and the  
burden of his enquiry, "oh,  
sir, do—do—please tell me—  
do you wear your breeches  
under your gown?"

In some parts of Canada  
it is customary to call a  
justice of the peace, or local  
magistrate, "The Squire." One  
of these worthies, a  
very estimable man, who al-  
ways enjoyed a good story,  
even if it was at his own  
expense, used to be fond of  
relating an experience he  
once had with an unedu-  
cated English farmer. After  
transacting some business,  
the squire and the English-  
man sat down to enjoy a  
smoke together. When they  
had lighted their pipes, the  
stolid Britisher started the  
conversation by remarking:  
"Hi notice as 'ow volks  
call you 'The Squire,'"

"That's because I am a  
justice of the peace," re-  
plied the Canadian.  
"Things is so different hat  
'ome."  
"Indeed!"  
"Yes; in Hingland a  
squire—W'y, bless your 'eart,  
a squire 'e's a gen'l'man!"—  
[Harper's Monthly.



"Won't you give me a ride now, grand-  
pa?"

"It's my turn!" cries little Nell.  
But poor grandpa groans, "Oh, my  
poor old bones.  
Just wait while I rest a spell!"

"Then you'll tell us a story, grandpa,  
A story of long ago."  
So they climb on his knee though tired  
is he,  
Dead tired, yet happy, you know.





Dear Friends,—So great has been the interest shown by the friends of the Ingle Nook in the art of bread-making, that I have determined to devote one whole "nook" solely to that subject. In writing on the "Why of Bread," I do not mean to imply that I am capable of making any better bread, or perhaps even as good as that which hosts of our correspondents can make. I have simply had an opportunity, denied, possibly, to thousands of our readers, of studying a few things which were very interesting to me, and which I am glad to give for the benefit of those who like to get at the bottom of things, and to know why they do what they do. The more we know of the scientific reason for things, the more we want to know. No fiction can possibly be as fascinating as the revelations of science to the science-lover. But now we must go back to our bread again.

### "The Why" of Bread.

Perhaps no operation in house-keeping is more interesting, when one understands the "why" of it, than the making of bread. An understanding of the principles underlying the process also helps wonderfully in obtaining "good" bread, the light, finely-porous kind, which is so much more digestible as well as more palatable than the dark, heavy article. In making bread, the first thing, as everyone knows, is to prepare the "yeast," by dissolving yeast cake (now almost universally used) and incorporating it with "lukewarm" water, potatoes and flour mixed. If the mixture be too cold, as everyone also knows, the "rising" will take place very slowly; if too warm, it will rise quickly, but is apt to sour.

Now, the reason of these vagaries is simply this: The yeast cake contains, in a dry, dormant state, the requisites for the production of the "yeast plant," one of the very lowest orders of plants, to be sure, and of microscopic size, yet a plant which grows by multiplication of its cells, as other larger ones do. Moisture and heat only are necessary for its development; hence, when we dissolve the cake and put it with the warm water and flour, it immediately begins to grow, and this growth causes alcoholic fermentation. If sugar is added the yeast acts more quickly, especially if the mixture be semi-fluid. Whether sugar is added or not, a certain sort of sugar is formed, for the starchy substance in the flour and potatoes becomes changed, chemically, into it. Here, then, is a cue for making bread rise in cold weather. Add a little sugar, do not make the "yeast" or sponge too stiff in the first place, and, of course, do not let it become chilled. Salt keeps back the growth of the yeast plant, hence in cold weather, if the house be not very warm, salt should not be added until the last possible minute. As soon as the sugary part is decomposed by the yeast plant into alcohol and a sort of gas called carbon dioxide, the latter shows itself by bubbles, and the swelling of the whole mass.

Most people make this "yeast" in the afternoon, then at bedtime add more "lukewarm" water and a little more flour, cover the whole up, and let it stand over night. In the morning this "sponge" should be very light and porous. It is then kneaded and kneaded down. This kneading is done mainly to break up the mass of gas into as small bubbles as possible, and to distribute them evenly throughout the dough. Very thorough kneading, therefore, is necessary in order that the

bread may not be hole-y. Most people just let this dough rise once, then make it into loaves and put it in the pans.

If kept too warm at any of these stages the embryo bread will sour, the reason of this being that it invariably contains the bacteria or germs of acetic acid or vinegar. If the temperature rises above 90 degrees, these bacteria immediately begin to multiply very, very quickly, forming a sort of vinegar right in the bread. At such a high temperature, too, the yeast plant does not grow well; hence, the bread simply stops rising, and sours. If kept at a temperature of about 60 degrees, there is no danger of the dough becoming charged with acetic acid, but, of course, at this low temperature it will take quite a long time to rise, and must not be hurried.

When the loaf is baked, the ferment is at once killed. At the same time, the starch of the flour becomes very much more digestible through being heated, while the little bubbles of gas all through the loaf expand with the heat, and thus make it light. If baked too slowly, the loaf will be heavy, because the gas has had time to burst away from it before being imprisoned in the stiffening walls of the loaf, and possibly sour, because the oven has not been hot enough to prevent fermentation from still going on. On the other hand, if baked too quickly the loaf will be very white, because the starch has not had time in which to undergo much change, but it will not be so digestible as that which has been baked at the right temperature, and for the right length of time.

"Good" bread should be of a slightly yellowish tint, evenly and finely porous, and of an agreeable flavor. It should never be eaten until about twenty-four hours old. Bread is much more digestible than biscuits, pastry, or crackers. It is, in fact, the best form in which starchy food can be presented to the digestive organs; hence, has been well named the "staff of life."

The following contributions are very gratefully acknowledged:

"Dear Dame Durden,—Seeing that one of your readers wished for a quick way to make bread, I send my recipe, which is not only quick but good. I have made my bread by it for twelve years and always have thorough success. Formerly I used to set sponge one day and make bread next, etc., three times the trouble and labor, and no better result. Trusting others may be helped by this, and wishing the 'Advocate' every success, I am, Sincerely yours, S. A. W."

### The Method of Making Quick Bread.

"On the noon of the preceding day, on which I bake, I take the water in which the potatoes have been boiled for dinner and when lukewarm, put in a medium-sized covered pail or saucepan with a half cup of white sugar, 1½ Royal yeast cakes and enough flour to make a batter. Set it in a warm (not a hot) place until evening, about eight o'clock. During the afternoon, put 8 quarts of flour in a kneading-pan and let it get warm by the stove. Then, at eight o'clock, add to the flour scant a half cup of salt, and rub in a lump of butter the size of a small egg. Make a hole in the center of flour and empty into it just enough lukewarm water to make a moderately stiff dough. Knead for twenty minutes, until it will not stick to hands, then cover, and wrap up warm, and next morning after breakfast, put into loaves, and only handle it to get it cold for the baking tins. Let it rise in warm (not hot) place, until loaves are half as big again; then bake in moderate oven from fifty to seventy minutes, according to

"Who has the right time?"  
The man who has  
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size of loaves. The above quantity should make ten good-sized loaves."  
Souris, Manitoba. S. A. W.

"Dear Dame Durden,—I read with much interest in your issue of the 7th, the letters of New Ontario Boy and Tenderfoot. In my early married life I baked up a barrel of flour every month. I tried many ways of breadmaking. The last was the easiest and best. I send it for Ontario Boy and Tenderfoot's benefit, and any other busy house-keeper, either bachelor or maid, who may care to try it."

### An Easy Recipe for Bread.

"Save the water the potatoes have been boiled in for dinner. Mash two or three potatoes and put to it. Set it away until after tea. A yeast cake will make six or eight two-pound loaves. After tea, or when convenient before going to bed, get the flour you need for a batch of bread, scak the yeast cake in a cupful of warm water, warm the potato water like new milk or 'lukewarm,' it needs to be warmer in winter than summer, make a hollow in the middle of the flour and pour in the potato water, and stir in flour to make a batter. Stir up the yeast cake until dissolved and pour into the batter. Have ready a jug of warm water, as more may be needed. Work all the flour into a stiff dough, and knead about fifteen or twenty minutes. At least turn the dough that is on the bottom of the pan up; it ought to have a nice, smooth round surface. Then cover with a cloth and lid. Set in a warm place and cover well to keep the cold from it. Throw an overcoat, if you have nothing better, over the pan. In the morning you ought to have a nice light dough. While the kettle is boiling for breakfast, get the pans ready, knead and work the dough for five or ten minutes; then cut off the loaves and mold them on the floured baking-board, and set to rise until light. Then bake in a moderate, steady oven for an hour. When done wrap in a cloth, an old white tablecloth can be kept for a breadcloth. This will steam the crust and make it tender and much nicer to cut, and cause far less waste than when the crust is hard and brittle. If you are short of bread, you can first make a pan of rolls out of some of the dough. Set them to rise in a warm place near the stove, and bake them for breakfast. This plan gets the bread made and baked and out of the way before you begin to cook the dinner. I proved it for years."  
Humber Bay. MRS. J. R.

It may just be necessary to add that in a cold house, during the winter, the flour may become like ice. In their case it should be warmed before incorporation with the yeast, in order that the growth of the little plant may be in no wise hindered. We are sure that many friends of the Ingle Nook will be thankful for these "tried" recipes from Mrs. S. A. W. and Mrs. J. R.

### About the Competition!

Will those who are writing on the competition, "The most amusing thing I ever heard of," kindly send in their essays as soon as possible? As the boys at school used to say, "Tempus is fugitin'," and the last of February will soon be here. Get

your essays written; address them to Dame Durden, and win one of our prizes if you can.

DAME DURDEN.

"Farmer's Advocate" office, London, Ont.

### Cuddle Doon.

By Alexander Anderson.

The bairnies cuddle doon at nicht  
Wi' muckle faucht an' din.  
"Oh, try and sleep, ye waukrife rogues;  
Your feyther's comin' in."  
They never heed a word I speak,  
I try to gie a frown;  
But aye I hap them up, an' cry,  
"Oh, bairnies, cuddle doon!"

Wee Jamie wi' the curly heid—  
He aye sleeps next the wa'—  
Bangs up an' cries, "I want a piece"—  
The rascal start them a'—  
I rin an' fetch them pieces, drinks—  
They stop awee the soun'—  
Then draw the blankets up, and cry,  
"Noo, weanies, cuddle doon!"

But ere five minutes gang, wee Rab  
Cries out, frae 'neath the claes,  
"Mither, mak' Tam gie ower at ance;  
He's kittin' wi' his taes."  
The mischief's in that Tam for tricks;  
He'd bother half the toon.  
But aye I hap them up, and cry,  
"Oh, bairnies, cuddle doon!"

At length they hear their feyther's fit;  
An' as he nears the door,  
They turn their faces to the wa'  
While Tam pretends to snore.  
"Hae a' the weans been gude?" he asks,  
"As he pits off his shoon.  
"The bairnies, John, are in their beds,  
An' lang since cuddled doon."

An' just afore we hed oorsels  
We look at oor wee lambs:  
Tam has his airm roun' wee Rab's neck,  
An' Rab his airm roun' Tam's.  
I lift wee Jamie up the bed,  
An' as I straik each croon,  
I whisper, till my heart fills up,  
"Oh, bairnies, cuddle doon!"

The bairnies cuddle doon at nicht  
Wi' mirth that's dear to me;  
But soon the big wari's cark an' care  
Will quarter doon their glee.  
Yet come what will to ilka ane,  
May He who sits aboon  
Aye whisper, though their paws be  
bould,  
"Oh, bairnies, cuddle doon!"

### LIQUOR AND TOBACCO HABITS.

A McTAGGART, M. D., C. M.,  
75 Yonge Street, Toronto.

References as to Dr. McTaggart's professional standing and personal integrity permitted by:  
Sir W. R. Meredith, Chief Justice.  
Hon. G. W. Ross, Premier of Ontario.  
Rev. John Potts, D. D., Victoria College.  
Rev. William Caven, D. D., Knox College.  
Rev. Father Teefy, President of St. Michael's College, Toronto.  
Right Rev. A. Sweatman, Bishop of Toronto.

Dr. McTaggart's vegetable remedies for the liquor and tobacco habits are healthful, safe, inexpensive home treatments. No hypodermic injections; no publicity; no loss of time from business, and a certainty of cure. Consultation or correspondence invited.

Apples.

The apple is such a common fruit that very few persons are familiar with its efficacious medicinal properties. Everybody ought to know that the very best thing they can do is to eat apples just before retiring for the night. Persons uninitiated in the mysteries of the fruit are liable to throw up their hands in horror at the visions of dyspepsia which such a suggestion may summon up, but no harm can come to even a delicate system by the eating of ripe and juicy apples just before going to bed. The apple is excellent brain food, because it has more phosphoric acid in easily digested shape than other fruits. It excites the action of the liver, promotes sound and healthy sleep, and thoroughly disinfects the mouth. This is not all. The apple helps the kidney secretions and prevents calculous growth, while it obviates indigestion and is one of the best known preventives of diseases of the throat.

Beyond Endurance.

The slender woman faced the burly burglar's revolver without a tremor of terror, for as it is well known, the weakest are the bravest. "Tell me where the money is hid," he hissed most truculently, or I'll fire!" "Never!" she answered, determinedly, and with a marked accent on the "r." "Kill me if you will, but I will never reveal the hiding place of my husband's hard-earned hoard! Villain, do your worst!" "I will!" snarled the scoundrel, baffled for the moment, but not beaten. "Tell me instantly, or I'll drop this big, woolly caterpillar down your neck!" In three minutes he had bagged the hoodie, and was spitting the midnight darkness in a north-easterly direction.

Trust.

"I am glad to think I am not bound to make the wrong go right. But only to discover and to do. With cheerful heart the work that God appoints. I will trust in Him That he can hold His own; and I will take His will, above the work He sendeth me To be my chiefest good." —Jean Ingelow.

The Canny Scot.

Mr. Andrew Carnegie tells this story: A Scotchman and an Englishman went to see "Douglas," and after Norval's great speech, the Scotchman asked his companion: "What do you think of your Willie Shakespeare the noo?" "Well," was the answer, "you have claimed Chaucer, Milton, Spencer, Wordsworth, Byron, and most of the others; I suppose you'll be claiming Shakespeare as Scotch." "Weel," said the Scot, "ye'll allow there's a prima facie case for that; ye'll allow he had intellect enough!" Another told of the theological disputes of some shepherds, who could not agree on the characteristics of Paradise, until finally one old fellow said: "O, ay—that's easy—it maun be just like the Hielan's."

There is nothing so good as turpentine for a bruise or cut. It will smart for a moment, but takes out every particle of soreness in an incredibly short time. Wet a cloth and bind on and keep it wet. Witch hazel is good also, but the turpentine is best.

Humorous.

"Did you have mal-de-mer on your way over to Europe?" asked Mrs. Oldcastle. "No. Josh took a bottle or two of it along, but when I'm seasick none of them kind of things ever does me a bit of good." A dealer in faggots, in Aberdeen, was asked how his wife was: "Oh, she's fine; they've ta'en her to Bauchory;" and on its being remarked that the change of air might do her good, he looked up, and, with a half smile, said: "Hoot, she's i' the kirk-yard."

A philanthropic old lady in Exeter, England, very keen on the drink question, got hold of a very bibulous old sailor, whom everybody had given up as a bad job. He had lost a leg and one eye, and used to do odd jobs about the market-place. He told the lady that if he could once get a fair start on his own account he would try to reform; many of the jobs he now did being paid for in drink. The old lady after much thought, purchased for him a tray to hang round his neck with a broad strap, and a supply of nice gingerbread, and she taught him the following sentence to repeat at intervals: "Will any good, kind Christian buy some fine spicy gingerbread from a poor, afflicted old man?" When he had sold a shilling's worth he congratulated himself on his strength of abstinence, and thought he would treat resolution to just one-half pint of beer. This, needless to say, led to one or two more, and when he resumed his station on the pavement, his cry became a little mixed, and in a loud voice he appealed to passers-by with: "Will any poor, afflicted Christian, buy some good, kind gingerbread from a fine, spicy old man?" Trade became very good, and he again treated the resolution with the result that his cry became: "Will any fine, spicy Christian buy some poor, afflicted gingerbread from a good, kind old man?"

Lost Himself.

An absent-minded professor was much annoyed by the troubles he experienced every morning in hunting for his clothes, for he never could remember where he had put them the night before when he undressed. So he devised the plan of writing down on a piece of paper where each article of clothing was placed as he took it off, and this is what he wrote: "Coat on third peg, left-hand corner of room, waistcoat and trousers on chair by bed, collar on door-handle, tie through key of door, vest on floor by window, cuffs on knobs of bedstead, shirt on portmanteau, socks on gas bracket, boots outside door, professor in bed."

Next morning this plan seemed to work admirably; he collected his garments rapidly, but when he came to the last item on the list he went over to the bed, and, to his great disgust, found it empty. "Ah!" he cried, in bewilderment, "now the professor is lost; this plan is no good. What shall I do now!"

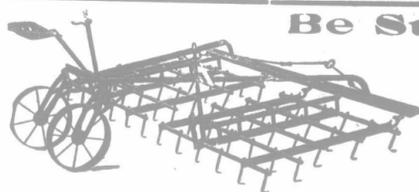
Color and Temperament.

Few people seem to realize the really strong effect that their color surroundings have on their temperament. It is a great mistake to live in rooms papered with dark wall papers. They may be economical from the point of view of not showing the dirt, but they are really most disastrous to the spirits. A warm yellow or a good rose pink looks cheerful, and reminds one of sunny days, while a pretty green, not too vivid in tint, suggests the delicate lines of spring. A paper covered with a large pattern in dark colorings somehow seems to lend a gloomy effect to even the largest room, while there are certain schemes of coloring that hurt the eyes and tire one to look at. It may interest readers to know that green papers have the reputation of fading sooner than others, while blue becomes a dirty sort of green if exposed to the sun, pink a terra cotta, and yellow a sort of whitey brown, none of them very attractive perhaps in this stage, but, on the whole, a faded pink is the least depressing shade.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

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For many years that old thief, Father Time, has been tracing lines and wrinkles and robbing complexions of youth; stealing color from the hair, leaving grayness behind. Have you been despoiled? Use Princess Skin Food and Hair Restorer. Defy the old chap and grow old beautifully. Nothing better, nicer or cleaner. Described in our handsome books; send 10c. for them and sample of Cream, Superfluous Hair, Moles, etc., eradicated forever by Electrolysis. Satisfaction assured. Graham Dermatological Institute Dept. F., 502 Church St., Toronto.

GOSSIP.

Remember the auction sale of the herd of Shorthorn cattle belonging to Mr. C. N. Blanshard, Appleby, Ont., which takes place at his farm near Burlington, Ont., on Thursday, Feb. 11th.

TRADE TOPIC.

THE CATALOGUE issued by Mr. Isaac Usher, of the Queenston Cement Works, is certainly a credit to the enterprise of that firm. It is profusely illustrated with engravings of houses, barn walls, silos, etc., built of "rock" cement; contains a great number of enthusiastic testimonials, and gives instructions for building cement edifices of various kinds, also for the laying of floors. Prospective builders should certainly send for one of these pamphlets, which will be supplied, on application, by Isaac Usher, Queenston Cement Works, Queenston, Ont.

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to the "Farmer's Advocate" are answered in this department free. 2nd.—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. 3rd.—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given. 4th.—When a reply by mail is required to urgent veterinary or legal enquiries, \$1 must be enclosed.

Veterinary.

PINWORMS.

I have a sucking colt that is troubled with pinworms. SUBSCRIBER. Ans.—Give half ounce of turpentine and four ounces raw linseed oil first thing in the morning, follow with a bran mash; in one hour afterwards repeat this for three mornings, then give sufficient oil to purge, if the bowels are not already purged, then give: Sulph. iron, three drams; quassia, three drams; gentian, three drams. Mix, and, make into twelve powders. Give a powder night and morning. An enema of quassia may be given. Take two ounces quassia chips and steep in one quart of boiling water, when cooled to blood heat, may be injected. This may be done once or twice daily.

HOGS WITH COUGH.

1. A pig about eight months old has a very severe cough, has been troubled with it for some time. One affected same way died some time ago. Might it be tuberculosis; are pigs affected with that disease? 2. When left standing in stable any length of time, mare's udder becomes swollen in a very hard lump. After exercise, it disappears, but returns again after standing. A. E. Hazeldean. Ans.—1. See treatment prescribed elsewhere in these columns for similar complaint. 2. See treatment for mare with active milk glands.

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THOROUGHbred GLYDESDALE STALLION FOR SALE. For sale, the Pure-bred Clydesdale stallion, Royal Scotchman 1199. Sire Joe Anderson, B. C. S. B. 8710; dam Imported Keepsake. A sure stock-getter. Seven years old. Can be seen at Dublin, Ontario. For pedigree and further particulars, apply to MARTIN & MCCONNELL, Dublin, Ontario. Bacon is much better flavored and more digestible when cooked in the oven. Lay the thin slices, with rind removed, on a toasting rack, and place the rack over a deep tin dripping pan. Set in a hot oven for from three to five minutes, according to the thickness of the slices. When brown and crisp, slide onto a platter, pour off the grease and use for frying bacon, or make a thickened milk gravy in the pan. DATES OF EASTERN SPRING SHOWS. Toronto—Spring Stallion Show, March 2nd, 3rd and 4th.

QUESTIONS AND ANSWERS.

Miscellaneous.

A PADDLING GAIT—LONG PASTERNS.

Have a mare four years old, which, in travelling, swings her fore feet outwards, and does not reach out far enough. She also travels wide behind. Her mother had much the same gait.

2. A three-year-old has very long pasterns. After driving, they will swell as if strained.

3. Is it a fault in a horse to have very straight hock joints? W. J.

Ans.—Your mare has inherited a tendency to a faulty gait from her dam, and probably her sire had the same defect. Shoeing is the treatment to modify it. Put a light pair on behind. In front, put on a fairly heavy shoe, with weight at toe. Square the front or top of the shoe. Set the toe-calk back slightly and a little to the outside. Set the outside of the shoe just a little higher. The object of this kind of shoe being to make her bend or break over squarely.

2. This is quite a common defect. All that can be done is to keep the toe rather short and the heels a little high, in order to bring the pasterns nearer the perpendicular.

3. Hocks should have a certain amount of obliquity, as then they do not suffer so much from concussion, and are less liable to the diseases common to that joint.

PARASITES IN BRONCHIAL TUBES.

In our locality a number of farmers have had trouble with their swine. The pigs seem to catch a cough. They eat well, but do not gain a pound. Pigs cough and run backwards till they strike the wall, and then they either fall, or stop coughing. This happens at feeding time. One farmer thought there was mustard in the middlings he fed, but I feed barley that is one-third mustard, and am not troubled with the complaint. W. E. W.

Ans.—Judging from your description, your pigs are affected with parasites or worms in bronchial tubes (Strongylus paradoxus), from 1 to 1½ inches in length, threadlike. The severity of the symptoms depend on number of worms. Produce cough, difficult breathing, weakness, unthrifty appearance may last for three and four months, and death. Give from one to four drachms of turpentine, according to size of pig, in oil or gruel, once daily for three days, then omit for a few days, and repeat again and so on. Burn sulphur in pen. Stay in yourself so that you may be able to judge the strength of the fumes; when you think it is about all you can stand remove kettle, open doors and windows. Repeat this twice a week.

APHTHA—INDIGESTION.

1. Kindly give symptoms of disease known as aphtha. What is the best treatment to follow, and what are the chances of cure? Is it contagious?  
2. Have a steer that was treated by a

"NEW UNIVERSAL" LINE OF GARDEN TOOLS

6 STYLES SEEDERS Double or Single Wheel Hoe, 6 Tools in 1.



Opens furrow, drops in plain sight, covers, marks. Models of Accuracy. Cultivator, Plow, Rake. Changes quickly made. Cultivate between or astride the rows. Any depth, any width. Combined seeder, marker, hoe, rake, plow, cultivator. Single or double wheel. Every adjustment easily made. For planting and all kinds of cultivation.

Wheel Plows with cultivator, rake and hoe attachments. For garden and poultry yards.

Details on full line tools in 2004 free catalogue. Write for it. AMES PLOW COMPANY, 93 MARKET STREET, BOSTON, MASS. For Sale by DARCH & HUNTER, London, Ontario.

Unreserved Auction Sale

of high-class SCOTCH-BRED SHORTHORNS. At his farm at Markdale (on Owen Sound branch of C. P. R.), in the County of Grey, Ontario, on

WEDNESDAY, FEBRUARY 24,

Mr. Thos. Mercer will sell his entire herd of

54 HEAD SCOTCH-BRED SHORTHORN CATTLE

including 3 imported bulls, 4 Canadian-bred bulls, 19 heifers, from 8 to 15 months old; balance breeding cows in calf and calves at foot. In this herd are a number of show animals.



The whole will positively be sold, as Mr. Mercer is going west. At the same time and place will be sold his choice 200-acre farm, without doubt the best-equipped stock farm in the County of Grey; is in first-class state of cultivation; buildings A1; water in stable; first-class orchard, etc. For fuller particulars see Gossip and catalogues, for which apply to

AUCTIONEERS: CAPT. T. E. ROBSON, THOS. MERCER, Markdale, Ont. GEO. NOBLE, WM. SHEPARDSON.

slightly increased; mucous membrane of mouth becomes hot and red; vesicles are plainly seen; profuse discharge of saliva; mastication is interfered with; the average duration of an attack is from two to three weeks; is contagious, but is a disease of a benign nature. Treatment: Soft nourishing diet; the patient to receive the best of care; the mouth washed with a weak solution of creolin (1 to 100), or alum, chlorate of potash, or sulphate of iron, 1 ounce to a pint of water.

2. Give small quantities of whatever he will eat, taking care not to overdo him; change food often, and give Sod. Bicarb., 2 czs.; gentian, 2 ozs.; ginger, 2 ozs.; nux vomica, 1½ ozs. Mix and make into 12 powders. Give a powder night and morning.

3. One to two ounces two or three times a week.

MILK GLANDS ACTIVE.

A Percheron mare, twelve years old, in foal, due the 2nd of May. About a week ago her udder became full, and the milk will drop freely and sometimes will run in a stream from both teats.

A. M.

Ans.—It is quite possible that your mare will abort. If she appears healthy and all right, with the exception of the premature activity of the milk glands, I would give regular exercise every day. Shorten grain allowance for a short time, and give potassium nitrate, one dram, in feed, once a day for a week.

TRADE TOPIC.

CANADIAN PORTLAND CEMENT CO. —We are in receipt of a pamphlet, issued by the Canadian Portland Cement Co., of Deseronto, Ont., which is elaborately illustrated by photogravures of houses, barn walls, silos, etc., built of Portland cement. The pamphlet also gives explicit directions for mixing cement, mortar and concrete; it also specifies the quantities required, and gives the most modern methods of laying cement stable floors, cellar floors and sidewalks. Those who contemplate constructing any of these things would do well to send for one of these pamphlets, which will be supplied, on request, by the Rathbun Co., 310 to 312 Front St. West, Toronto, Ont.

Old Men and Women Do Bless Him.

Thousands of people come or send every year to Dr. D. M. Bye for his Balm Oil to cure them of cancer and other malignant diseases. Out of this number a great many very old people, whose ages range from seventy to one hundred years, on account of distance and infirmities of age, send for home treatment. A free book is sent, telling what they say of the treatment. Address Dr. D. M. Bye Co., Drawer 505, Indianapolis, Ind. (If not afflicted, cut this out and send it to some suffering one.)

veterinary surgeon for indigestion. He is apparently better, but has no appetite. Am giving half a pint of raw linseed oil daily.

phur for two- or three-year-old steers, and how often? A. W. S.

Ans.—1. The lining membrane of mouth and tongue are covered with small vesicles or even pustules; temperature

Built With the Old Reliable Thorold Cement.



HOUSE AND BARN OF MR. J. E. REAVEY, AT MARSHVILLE, ONT. (Size of house, 28x40x22 high. Size of barn walls, 40x80x10.)

MATERIAL AND LABOR FOR HOUSE.		MATERIAL AND LABOR FOR BARN.	
Thorold cement	110 barrels	Wall—Thorold cement	96 barrels
Gravel	80 cubic yards	Gravel	71 cubic yards
Stone	20 cubic yards	Stone	17 cubic yards
Labor	6 men 12 days	Labor	6 men 10 days
FLOORS OF BARN—Thorold cement, 64 barrels; gravel, 40 cubic yards; labor, 6 men 5 days.			

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

CEMENT

OUR BRANDS:

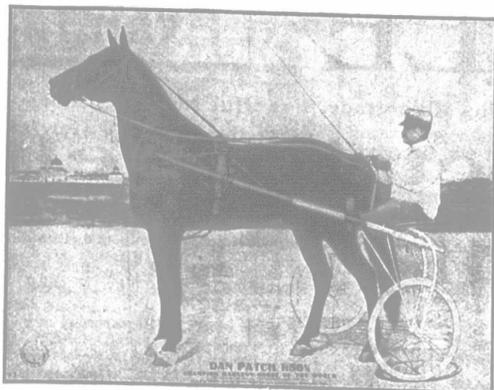
- "THOROLD," Hydraulic.
- "CROWN," Portland.
- "WHITEHALL," Portland.

We recommend "THOROLD" for WALLS, "CROWN" for FLOORS, and "WHITEHALL" for GRANOLITHIC SIDEWALKS or cement work of any kind.

We have given up our RETAIL TRADE and now make sales or shipments of not less than CAR LOADS, which is 146 barrels Thorold or 100 barrels Portland.

ESTATE OF JOHN BATTLE THOROLD, - - ONT.

WORLD'S CHAMPION HARNESS HORSE.



## DOES IT PAY?

Copper Cliff, Ont., Oct. 14th, 1903.  
International Stock Food Co., 4 Bay St., Toronto:  
Gentlemen,—I received your letter to-day, and contents noted. I shall be glad to handle your goods in the future, as I have been doing in the past. I find them O. K. I may say that I bought a saddle horse for \$50, started him on International Stock Food, and he gained every day. I showed him at the Fair this fall, and sold him for \$205. I bought another work horse, just six weeks ago, sold him last week for \$135. I bought him for \$50, so you may be sure I think your Stock Food is all that you claim it to be.

I am sincerely yours,  
GEO. SOUTER.

We have Hundreds of Thousands of Similar Testimonials and Will Pay You \$1,000 Cash to Prove That They Are Not Genuine and Unsolicited.

EATS INTERNATIONAL STOCK FOOD EVERY DAY.

We feed International Stock Food every day to Dan Patch, 1,561, and also to the other famous stallions and brood mares owned on our International Stock Food Farm. This farm is located on the banks of the Minnesota River, 12 miles from Minneapolis, and is considered one of the finest stock farms in the country.

International Stock Food, Three Feeds for One Cent, is prepared from roots, herbs, barks, seeds, etc., and won the highest award at the Paris Exposition as a high-class vegetable medicinal preparation to be fed to stock in small amounts in addition to the regular feed.

It is a great aid to digestion and assimilation,

enabling each animal to obtain more nutrition from the grain fed, and we positively guarantee that the Use of International Stock Food Will Make You Extra Money Over the Ordinary Way of Feeding. It can be fed with perfect safety to Horses, Cattle, Sheep, Goats, Hogs, Colts, Calves, Lambs or Pigs. We will pay you \$1,000 cash if International Stock Food contains one ingredient that is in any way harmful to stock. It will make your colts, calves and pigs grow amazingly and keep them healthy. You insist on eating the following medicinal ingredients with your own food at every meal: Table salt is a stomach tonic and worm medicine; table pepper is a powerful stimulating tonic, and mustard is a remedy for dyspepsia. You eat these medicinal ingredients

almost with every mouthful of your food, and it is proven that these medicines promote health and strength for people and improve their digestion. International Stock Food is just as necessary an addition to the regular grain feed of your stock. It is sold on a spot cash guarantee, which is backed by a paid in capital of \$2,000,000. We refer you to any commercial agency in Canada. Beware of the many cheap and inferior imitations now on the market. No chemist can separate and name all the different powders, roots, herbs, barks and seeds we use in our preparation. Any chemist or manufacturer claiming to do so must be an ignoramus or falsifier. Imitations are always inferior. Insist on having the genuine and you will always obtain paying results.

# A \$3,000<sup>00</sup> STOCK BOOK FREE

THIS BOOK 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, Without Any Advertising on it. The size of the book is 6 1/2 by 9 1/2 inches. The engravings of Horses, Cattle, Sheep, Hogs and Poultry are the finest you ever saw, and cost us over \$3,000 to produce. It gives Descriptions, History and Illustrations of the Different Breeds of Horses, Cattle, Sheep, Goats and Poultry, and also contains Life Engravings of many noted Animals. The Finely-illustrated Veterinary Department Will Save You Hundreds of Dollars, because it describes all the common diseases and tells you how to treat them.

WE WILL PAY YOU \$10.00 CASH IF THIS BOOK IS NOT AS REPRESENTED.

We Will Mail One Copy of this Book to You ABSOLUTELY FREE, Postage Prepaid, if You Will Write Us at Once and ANSWER THESE TWO QUESTIONS:

1st—NAME THIS PAPER.

2nd—HOW MUCH STOCK HAVE YOU.

INTERNATIONAL STOCK FOOD CO., MINNEAPOLIS, MINN., AND TORONTO, CAN.

Write at once to the Canadian Factory, No. 4 Bay Street, Toronto.

## Farm Laborers

from England, Ireland, Scotland, Wales and and Channel Islands arriving at Toronto weekly. If you desire to secure help for your farm, write for application form to

Thos. Southworth,  
Director of Colonization, TORONTO.

Catalogue Printing Our Specialty.

Many of the best Catalogues in Canada are produced by us. Latest type faces, designs, ornaments, and modern machinery. Best in America. Up-to-date covers designed by special artists without extra charge.

London Printing & Litho. Company, Ltd., LONDON, ONTARIO

DISPERSION SALE

In order to close up the estate the Standard-bred horses and Shorthorn cattle of the Lorne Stock Farm will be offered for sale THURSDAY, MARCH 3rd, at the

LORNE STOCK FARM,

Three miles north West Lorne, Ont. Send for catalogue.

ARCH. McKILLOP, } Executors of A.  
JNO. A. McKILLOP, } McKillop.

## UNRESERVED DISPERSION SALE



30 High-class Scotch Shorthorns,  
50 High-class Shropshire Sheep.  
Also some Clydesdale Mares

Bred to Royal Keir (Imp.). Mr Leonard Burnett, Hillside Farm, Greenbank, Ont., having leased his farm, is selling his entire stock of high-class animals at auction at his farm on

WEDNESDAY, FEB. 24th, 1904.

TERMS.—Ten months' credit, 5% per annum discount for cash. Morning trains met at

Port Perry and Uxbridge. Catalogues mailed on application.  
MR. GEO. JACKSON, Auctioneer,  
Port Perry, Ont., will conduct the sale.

LEONARD BURNETT, Greenbank, Ont.

## 2nd ANNUAL SALE

## Registered Shropshire Sheep

by auction at Hill Home Farm, 3 miles west of the City of Brantford, Ont., on Wednesday, Feb. 17, 1904

200 REGISTERED SHROPSHIRE OF THE 200 BEST BREEDING AND QUALITY.



75 Breeding Ewes (in lamb to Imp Harding ram 282, E. F. B. 0206, R. A. S. A., No. 191934, winner at Toronto and Chicago, 1903), 50 of which are yearlings and 25 imported, from 2 to 5 years old.

75 Ewe Lambs, a number of which are imported from England. The 2nd-prize pen of lambs at Chicago, and also my winners at Toronto are included in this sale.

50 Rams, including a fine stock ram three years old; 3 shearling rams, one of which was the choice of 1st-prize pen at the Royal in England, bred by R. P. Cooper, weight 275 lbs., and my best pen of ram lambs exhibited at Chicago, 2nd prize winner included.

These are nearly all my own breeding or imported from England, and this is undoubtedly the best public sale of Shropshires ever offered on this continent. Will also sell 5 Jersey cows, from two to five years old; 1 yearling heifer and 2 heifer calves, all recorded in A. J. C. C. Sale to commence at 1 o'clock. Terms—Eight months' credit on approved security. Five per cent. off for cash.

W. ALMAS, AUCTIONEER.

J. G. HANMER, Proprietor, BOX 278, BRANTFORD, ONT.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

## QUESTIONS AND ANSWERS.

Veterinary.

### COWS CHEW BONES, WOOD, ETC.

Three heifers with calves two weeks old do not eat well. I feed Dr. Hess' food, cornstalks, wheat chaff and turnips and three quarts to each of chop, of one part each rye and barley, half part buckwheat and two parts oats. When let out they chew bones, wood, etc.

B. G.

Ans.—The liking for bones, etc., is due to a lack of phosphates in the system. Give one drachm each sulphate of iron, nux vomica and gentian, and two drachms phosphate of lime, three times daily as long as necessary. Discontinue the use of all patent foods, and feed the same as usual.

V.

### ABSCESSSES.

1. A large lump appeared on heifer's dewlap, shortly after being stabled.

2. Cow has lump on belly, when opened a milky-locking matter escaped. Will this effect the milk?

N. R. S.

Ans.—1. This is probably an abscess, lance it, and if pus escapes, inject the cavity, twice daily, with a five-per-cent. solution carbolic acid. If no matter be present, it is a tumor, and must be dissected out and treated the same as if an abscess after the skin is stitched.

2. Treat as recommended for No. 1. There is a danger of milk infection in any eruptive disease, but it is not probable it will be dangerous to use the milk, although few would care to do so.

V.

### BULL REFUSES TO SERVE.

Three-year-old Ayrshire bull refuses to serve. He was sick a month ago, but is all right again.

J. D.

Ans.—Some male animals act this way from some unexplained reasons, probably from a congenital weakness of the generative organs. Medical treatment proves injurious. Medicines which irritate the generative organs will cause them to apparently perform the functions of a sire, but they will not reproduce under such circumstances, hence reputable veterinarians refuse to prescribe such drugs. All you can do is feed him well, and see that he gets regular exercise. Give him a walk of two or three miles daily, and do not try to breed him for three or four weeks.

V.

### LUMP JAW.

Heifer had lump under side of her throat. It broke, healed, broke again, etc. Lump size of goose egg, but not attached to the bone. Another heifer now has the same trouble. Is it contagious?

B. J. S.

Ans.—This is lump jaw. If the discharge were taken into the mouth of a healthy animal, there is a danger of infection. When, as in your cases, the bone is not involved, the better way of treatment is to get a veterinarian to dissect the tumor out. The iodide of potassium treatment has given good results. It consists in giving 1 dr., three times daily, and gradually increasing the dose until appetite fails, she refuses water, slavers, and tears run from her eyes. When any of these symptoms appear, discontinue the use of the drug for three weeks, and then repeat treatment, if necessary.

V.

### Miscellaneous.

#### CATTLE WITH ABNORMAL THIRST.

I have two cattle, coming three years old, which have a mania for drinking water. Will not eat their feed unless given all the water they will drink—eight pails of water each per day, besides one-half bushel of roots three times a day. After they get all the water they will drink, they bloat up as hard as a barrel. As soon as tied in, they urinate very freely.

C. J. S.

Ans.—Although it would take a careful examination to decide the exact disease to which the steers are subject, still, it is reasonably certain that it is some form of kidney complaint. Treatment would be very expensive, and require a long time to effect a cure. The best that can be done is to feed liberally on good clean clover or mixed hay, ground oats and bran. Avoid sugar beets, corn and peas. If at all practicable, take the chill off their drinking water. It is hardly possible that they will ever be very high in flesh.

For Pruning, Cleaning Eaves-troughs, Repairing, Painting, Storm Fashes, General Use, you need a

### WAGGONER EXTENSION LADDER.

The **LIGHTEST, HANDIEST, SAFEST.** Take no other. Made in all lengths. Over 5,000 in use. Also high-class Step Ladders, Lawn Swings, Clothes Reels, and Painters' Planks, Scaffolds, etc. Illustrated circulars free. Ask your local dealer or write

The Waggoner Ladder Co., Ltd.  
LONDON, ONT.

TRY THE **Central Nurseries**  
FOR RELIABLE, WELL-GROWN

**TREES FRUIT AND ORNAMENTAL SHRUBS, ROSES, GRAPEVINES, BERRY PLANTS, Etc.**

True to name, and O. K. Send for our price list if interested, and order direct. Our stock is freshly dug, and extra good roots. Sure to please you. **SEED POTATOES. EGGS FOR HATCHING.**

A. G. HULL & SON, ST. CATHARINES, ONT.

### FAMILY KNITTER.

Plain, \$8; Plain and Rib, \$12.



DUNDAS KNITTING MACHINE CO.,  
DUNDAS, ONTARIO.

WRITE FOR CIRCULAR.

### Rheumatism Cured.

Why do you suffer—Starr's Rheumatism Cure will relieve the worst cases of acute, chronic, or inflammatory rheumatism in 24 hours. Every bottle has a positive guarantee to cure. Hundreds of marvelous cures have been made in all parts of Canada. If your druggist cannot give you Starr's, send your name to us.

OSBORNE'S REMEDY CO., 175 Yonge St., Toronto, Ont.

### FRUIT AND STOCK FARM DESIRES

arrangement with country hay dealer for **CLOVER HAY, OAT STRAW, ETC.**

Few tons now, and car load each summer. Must be cheap. Spot cash. Delivery at Hudson station, on C. P. R. short line, between Ottawa and Montreal, or Hudson wharf, on Ottawa River. Address

M, Box 2407, Montreal

### Poultry Wanted.

There is money in poultry-raising. One firm lately advertised for 400 tons of poultry for export. Were you able to supply part of this enormous demand? We can teach you **BY MAIL** how to make a poultry yard of 300 fowls yield a profit of from \$600 to \$900 a year. Our instructors are experts. Write for information about our poultry course.

Canadian Correspondence College, Ltd.,  
TORONTO, CANADA.

WALTER JAMES BROWN, B.S.A.,  
PRINCIPAL.

### LIDLAW PRODUCE COMPANY

169 1/2 SPADINA AVENUE.

OUR SPECIALTIES:  
**Butter, Eggs, Potatoes, Dressed Poultry . . . . .**

Correspondence Invited. TORONTO.

### Mammoth Bronze Turkeys

A choice set of young birds sired by an imported tom. Chester White swine, good bacon type, either sex. Write for prices. **W. E. WRIGHT,**  
Glanworth P. O., Ont.

I (J. P. Stone) will endeavor to know all about the **NATURAL HEN INCUBATOR** you desire. It is the best and most reliable. Agents Wanted. Write for literature. J. P. Stone, 1500 E. 1st St., Regina, Sask.

### QUESTIONS AND ANSWERS.

Miscellaneous.

**RINGBONE.**  
Have a mare thirteen years old, has been lame since last spring with bony enlargement on right hind foot just above the hoof, similar to ringbone, but does not meet in front.

Que. **OLD SUBSCRIBER.**  
Ans.—This is a case of ringbone, and the remedy is to fire and blister. Have a competent man do the job.

**A LANE.**  
A has a farm, and B has one along side A's, and B has been driving through A's lane to the road for a number of years. B has a lane to his property off another road, but, for convenience, he uses A's lane. B uses his own lane part of the year. B has a gate in line fence, and closes it when he wishes to only. Can A stop B from going through A's property?  
**SUBSCRIBER.**

Ans.—Yes.  
**PER CENT. FAT IN BUTTER.**  
In the "Advocate," of Jan. 21st, I notice that you state that butter-fat composes 84 per cent. of butter. If said statement be correct, then I lose, annually, several times my subscription to the "Farmer's Advocate." Please give authority for your statement.  
**SUBSCRIBER.**

Ans.—Prof. Dean says distinctly in his book, Canadian Dairying, page 92, good butter has about 84 per cent. fat.

**WONDERFUL LAD.**  
Can you give me the studbook number of a horse named Wonderful Lad, imported a long time ago. I think he was owned near Bowmanville, Ont. Is he a Shire or a Scotch horse?

Ans.—We find in the Canadian Clydesdale Studbook, Vol. I., Wonderful Lad [121], foaled in 1860, imported in 1862, by John Sanderson, Markham. His sire, Hobby Nobby, was bred in Dumfries, Scotland, and his dam was by Glenelg, bred in Cumberland.

**IMPORTED PORK—CARE OF STALLIONS.**  
1. Is there any pork imported into Canada from the U. S., and what duty does it pay?  
2. Would like you to answer a question I put to you last autumn re care of stallions.  
F. T.

Ans.—1. The imports of pork in brine from the U. S. for the last statistical year was 6,946,813 lbs., valued at \$561,414; bacon and hams, including shoulders and sides, 5,320,605 lbs., valued at \$635,483, a total of 12,267,418 lbs., or \$1,196,897 worth, while we export to the U. S. \$42,711 worth. The Canadian import duty on these imports is 2c. per pound, and the American duty on similar goods going into that country 5c. per pound.

2. This question was discussed in our Oct. 15th issue, in the Horse Department, under the caption care of stallions between seasons.

**TELEPHONE MONOPOLY.**  
I have been told that in one of your issues, within a year or so, you told of the successful suit of a farmers' or other independent telephone company against a railway company, forcing the railway company to allow the independent company to place a 'phone in its station at a certain place. The company have 'phones in the railway stations, and do not allow other companies to put any 'phones in. Do you know of any decisions bearing on such a case. Down here there is a town where an independent company have 100 subscribers, but the C. P. R. will not allow one in their station, and say their agreement does not allow them to do so. If you know of any court decisions, please send us information. It is a great advantage to farmers generally to have access to stations for their 'phone line.  
D. W. R.

Ans.—We are not aware of any judicial decisions directly in point. The case you refer to as having been mentioned in the "Advocate" was probably one in which the railway company in question were prosecuted before magistrates. The result of the trial was a disagreement. Principles of law have been laid down in decided cases in the higher court that might, perhaps, be invoked and be useful in dealing with cases such as the one stated; but we are unable to find any reported Canadian case in which the subject has been at all directly discussed.

# FREE to Examine

This High-grade, Powerful No. 7

## Electric Belt



Is the quickest and cheapest cure for Weak Men, Varicocele, Stricture, Rheumatism, Lumbago, Urinary Diseases, Lameness, Neuralgia, Sciatica, Kidney Trouble, and is a general invigorator for all Weak, Worn-out and Run-down People. Cut out this advertisement and send to us, and we will send this elegant Electric Belt with Suspensory Attachment. If you find it just as represented and equal to belts that are being sold as high as \$40.00 by

Medical sharks, then pay the express agent our special cut price for 60 days, \$5.00, and the belt is yours. Use it for ten days, and if you are not fully satisfied that it is worth four times what you paid, return it to us and we will refund your \$5.00. We guarantee this Belt to be as good as any on the market at any price, and is our very best Belt. We have belts as low as 98 cents, but it is always best to buy a good article. Lowest prices quoted on other electrical goods. **AGENTS WANTED.** Send to-day and your order will have prompt and careful attention. Address your letter plainly to the

**F. E. KARN CO., 132 Victoria St., Toronto, Ont., N. B.—We are the largest Electrical Supply House in Canada. Send for our Catalogue of Electrical Appliances. It's Free.**

## 2nd Canadian Spring Stallion Show

FOR CLYDESDALES AND SHIRES

With Mares of same breeds, to be held in **GRAND'S REPOSITORY, TORONTO,** Can., cor. Simcoe and Nelson Sts., Wednesday, Thursday, Friday, **MARCH 2nd, 3rd and 4th, 1904.**

This show is held under the auspices of the Canadian Horse Breeders' Association, with committees from the Clydesdale and Shire Horse Associations. Entries to be made on or before Feb. 17th, 1904, addressed to **HENRY WADE, Secretary, Parliament Buildings, Toronto, Can.**, to enable catalogues to be issued in time for the show. Horses to be stabled at Grand's Repository, and other places, at the expense of the exhibitor. One fare both ways by asking for certificate at starting point.

Send for Catalogue **A MONEY-MAKER THAT SHOULD BE IN EVERY HOUSE.** No. 4 A.

## The 20th-Century Knitting Machine



will clothe the family with Shirts, Drawers, Hosiery, Mitts, Gloves, etc.; is simple in construction, substantially made, and easily operated. Our machines have held the highest place among knitters for over 30 years. Send for our illustrated catalogue; it is brimful of information and valuable suggestions for making money by knitting, or for those who want a thoroughly practical and serviceable machine for family use.

**CREELMAN BROS., GEORGETOWN, ONT.,**  
Box 533.

### DISPERSION AUCTION SALE

Of Maple Cliff Dairy Herd of Imported and Canadian-bred **AYRSHIRE CATTLE.**

Also 15 choice dairy-grade cows, at the cattle barns, Exhibition Grounds, **OTTAWA,** on **THURSDAY, MARCH 10th, 1904.**

This has been considered for a number of years one of the best dairy herds in Eastern Ontario, and consists of 32 pure-bred cows, 17 heifers (several in calf), 1 three-year-old bull, 5 yearling bulls, 5 bull calves. There should be about 10 more calves before the sale. They will all be sold without reserve to the highest bidder. Sale at 10 a.m. Catalogues sent on application.

**W. A. COLE, AUCTIONEER.** **R. REID & CO, PROPS., HINTONBURG, ONT.**

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

**SHARPLES TUBULAR CREAM SEPARATORS**

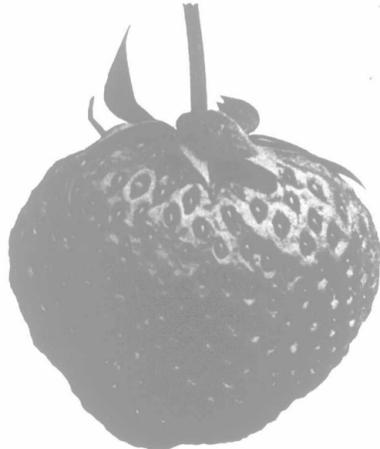
A dozen bucket bowls but only one Tubular.

We alone make the Tubular, all competitors make the old style bucket bowls. They cannot make tubular bowls because of our patents. The Tubular is worth fifty per cent more than any of the old style bucket bowl separators, as thousands of dairymen will testify. Write for Catalogue No. 193

THE SHARPLES CO., Chicago, Illinois. P. M. SHARPLES, West Chester, Pa.



FREE—GREAT CROPS OF STRAWBERRIES AND HOW TO GROW THEM.



A strawberry book written by the "STRAWBERRY KING," so called because he discovered the way to develop the fruit organs in a plant and make it grow two big berries where one little one grew before. He grows the biggest crops of the biggest berries ever produced and the book tells all about how he does it. It is a treatise on PLANT PHYSIOLOGY and explains correct principles in fruit-growing. It is worth its weight in gold to any fruit-grower. Will be sent free to all readers of The Advocate. Send your address now. The finest THOROUGHBRED PEDIGREE PLANTS in the world. R. M. KELLOGG, THREE RIVERS, MICH.



Unless the soap you use has this brand you are not getting the best

Ask for the Octagon Bar.

QUESTIONS AND ANSWERS. Veterinary.

DEFECTIVE TEETH.

I have a good young cow that drops her fodder after chewing it. Will swallow roots and chop, or a corn cob. Seems hungry all the time. Can you advise any cure?

SUBSCRIBER.

Ans.—The cow probably has some trouble with her teeth or gums. Have a veterinary examine her mouth.

HOG HAS INDIGESTION.

I have a pig that has become badly stiffened up. Was feeding heavy feed. He eats very well now, but would neither eat nor drink for about a week after taking sick. Have been giving him salts, and also sulphur.

F. W.

Ans.—See answer to query. "Indigestion in hogs."

MARE FAILS TO CONCEIVE.

Have bred my mare regularly since November, without success.

L. H. P.

Ans.—Mares generally do not conceive readily in cold weather, and it is probable yours will in the spring. If she is very fat, reduce her in flesh and give regular exercise. If she is quite thin, endeavor to get her in fair condition, but in all cases give regular exercise. Get a veterinarian, or a groom who understands the operation, to examine the neck of the womb, and if the os is closed, open it with his fingers or a sound, and breed her two or three hours after the operation.

V.

IRREGULAR TEETH OR TUMORS.

Four-year-old sheep was in good condition, but now, although hungry, he cannot eat. He does not chew well, or make the ordinary grinding sound when ruminating. He tries to eat, but succeeds very poorly. I examined his mouth, but could see nothing.

A. M.

Ans.—The trouble is in the mouth. Get your veterinarian to examine him, and, if necessary, dress his teeth. There may be a tumor or abscess. It requires a personal examination by an expert to determine and remove the trouble. It is possible the throat is sore and he cannot swallow.

V.

INDIGESTION IN MARE—TROUBLE WITH SOWS.

1. Mare took sick in the night, and in the morning would not eat or drink. Did not appear to be in any pain, would paw some, and would lie down most of the time; would get up and always shake herself, look at her sides, stand a while, and lie down again. Gave her oil and turpentine, which relieved her.

2. Have a sow 1 1/2 years old, that fails to get with pig.

3. Have a sow nine months old that aborted at two months. Should I breed her again?

A. E. S.

Ans.—1. The mare had some irritant in her stomach or bowels. The oil and turpentine relieved her. This is the treatment she should have had when first noticed; or, better, from six to eight drachms of aloes and two drachms of ginger, made into a ball.

2. Would try another hog, and if not successful would market her.

3. The probability is she would do better next time. She may have had some accident.

Small Potatoes

result from a lack of

Potash

in the soil. Potash produces size and quality.

We have valuable books which explain more fully the fertilizing value of Potash.

We will send them free to any farmer who writes for them.



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

\$15--PRIZES--\$15 FOR IDEAS.

How to make a one-cent post card earn one or two dollars.

On the back of the card write your name and post-office address, and under that say something, in your own style, in answer to the question: "In what way is the Massey-Harris Cushion-frame bicycle useful about the farm?"

\$2 each will be paid for the five best answers to this question.

\$1 each will be paid for the five next answers.

NOTE.—The Cushion-frame "Massey-Harris" bicycle is the latest thing in Bicycledom. There's a spring in the frame that absorbs all the jar that a rider gets when riding over a rough road on any other bicycle.

ADDRESS POSTAL CARD TO

The Canada Cycle & Motor Co., Ltd. TORONTO, ONT.

Go West

and settle on the line of the Canadian Pacific Railway, and profit by the good markets, large towns and best shipping facilities. Write

ROBT. KERR, Montreal.

Pass. Traf. Mgr. Can. Pac. Ry.,

HOUSE PLAN.

N. C., Perth County.—See our January 28th issue.

Miscellaneous.

ROADWORK.

1. Has a pathmaster a right to look after the roads in winter to see that they are passable, without any notice from ratepayers, or have the ratepayers to give notice to him?

2. If a farmer lives on a sideroad, and it blocks up with snow so that he can't get out, and he goes to work with his team and tries to get it open, and hurts horses, is the township liable for damages, or has he to bear the loss?

3. Has a farmer any right to claim labor as roadwork working on the roads this time of the year, as it is a great deal harder on his team than it is in summer?

4. What is the amount of a day's statute labor of the road when a man is warned to do roadwork in summer, if he pays his work in money?

5. If a man lives on the sideroad, and the roadmaster lives on the concession, can he compel the man to go on the concession to do his work when the sideroad is the worst of the two roads, or can he do his work on the sideroad?

C. R.

Ans.—1, 3, 4, 5. The Consolidated Municipal Act, 1903, section 537, subsection 3, provides that by-laws may be passed by township councils for appointing overseers of highways, or pathmasters, to perform the duty of making and keeping open township roads during the sleighing season in each year. Such overseers and pathmasters are given full power to call out persons liable to perform statute labor within their respective municipalities, to assist in keeping open such roads, and they are empowered to give to persons so employed certificates of having performed statute labor to the amount of the days' work done; and such persons are to be allowed for such work in their next season's statute labor. You should see the township clerk, and have him show you such by-laws as have been passed pursuant to this subsection, and also in pursuance of section 561 of the Act, subsections 1 to 9, inclusive.

2. We think not.

BREEDING MARES.

I have a pair of French mares, weighing 2,650 pounds. I want to raise a young team for general-purpose use on sandy soil. What would you advise breeding to?

NEW SUBSCRIBER.

Ans.—That is a question that is not easily answered. No doubt, the mares themselves are a very good general-purpose team, and we have seen such mares raise splendid carriage horses when bred to a solid, low-set Hackney. But, in crossing breeds that way, one is not certain just what the outcome will be. If a Hackney were used, we would advise one that is something the same type as the mares, rather than the more rangy horse that frequently wins at the shows. Another cross that might be useful, would be that with a rather fine-boned, active Clyde. Such a cross, however, would probably get a horse of quite a different type to that of the Hackney cross, but, no doubt, a very serviceable and salable horse. The use of a good, big road stallion might also result well, but be sure he is of the solid type and heavy, no matter if he has never won a race.

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where it will do the most good.

Regina City Property.

Regina Wheat Lands.

REGINA is the Commercial center, the Railroad center, the Educational center, and the Capital of the Northwest Territories—just far enough west of Winnipeg to make the next best city in Western Canada.

Come West and grow up with the country—a step you will never regret. Call and see me, as I have all kinds of property, both in the city and country, and the country offers better opportunities for good investments.

J. M. YOUNG,

Regina, N.-W.T.

Dealer in Farm Lands and City Property.

President of the Board of Trade.



In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

# C. P. R. LANDS

The Canadian Pacific Railway Company have 14,000,000 acres of choice farming lands for sale in Manitoba, Assiniboia, Saskatchewan and Alberta. Manitoba lands and Assiniboia lands east of third meridian, \$4 to \$10 per acre. Lands west of third meridian, \$3.50 to \$7 per acre.



Hereford Cattle, Crane Lake, Assiniboia, Main Line Canadian Pacific Railway.

**\$6 LANDS:** 160 acres, or one-quarter section, of \$6 lands may be bought for settlement with a cash payment of \$143.80 and nine equal annual instalments of \$120 each, which include interest at 6 per cent. Purchasers who do not undertake to go into residence on the land within one year from date of purchase are required to pay one-sixth of the purchase money down, and the balance in five equal annual instalments, with interest at the rate of six per cent. per annum.

**DISCOUNT FOR CASH:** If land is paid for in full at time of purchase a reduction in price will be allowed equal to 10 per cent. on the amount paid in excess of the usual cash installment of one-sixth. Interest of 6 per cent. will be charged on overdue instalments.

FOR MAPS AND FULL PARTICULARS APPLY TO

**F. T. GRIFFIN,** Land Commissioner, WINNIPEG.

**QUESTIONS AND ANSWERS.**  
Veterinary.

**LUMP ON LEG AND PARTIAL PARALYSIS.**

1. Colt has a fleshy, hard lump a little above the knee. It appeared three weeks ago.
2. Colt became paralyzed two months ago. Had it treated by a veterinarian, who kept it in slings for two weeks. It can stand and walk around a little now, but seems weak across the kidneys, and hind legs seem weak. D. J.

Ans.—1. This is a tumor, and must be carefully dissected out, the skin sewed up, and the wound dressed with a five-per-cent. solution of carbolic acid until healed.

2. The veterinarian in attendance is in much the better position to treat. We advise you to allow him to continue the treatment. The colt may become all right, but it is very doubtful. If you do not care to go to further expense with your veterinarian, we advise a laxative of about a half pint of raw linseed oil, once every two weeks, and nux vomica in 20-gr. doses night and morning. Put her in a nice box stall, and give perfect rest until you can turn her out on pasture. V.

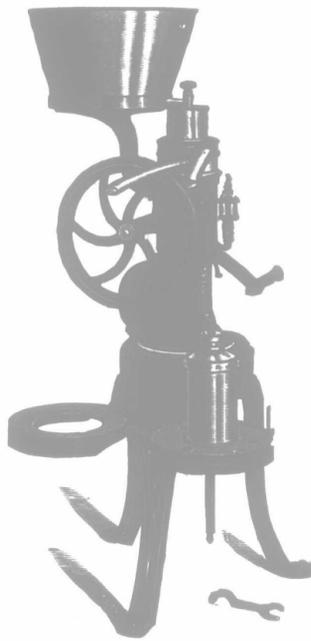
**PERIODIC OPHTHALMIA.**

For six months my mare has had tender eyes, and is occasionally totally blind. E. S.

Ans.—She has a constitutional disease, called Periodic ophthalmia, and will, in all probability, eventually become blind from the same cause. Keep her eyes carefully washed with warm water, three times a day, and with white wash, and put a small amount of the benzoic solution into the eyes. Also give her a daily dose of zinc sulphate, and a course of iron and quinine. If the disease is not cured, it is best to put her to rest.

## The National Cream Separator.

**T**HE NATIONAL is free from complicated parts.  
**A**nd is a close Skimmer.  
**T**urns with the least effort.  
**I**ts construction and its  
**O**peration is perfection.  
**N**one more durable, and  
**A**n up-to-date machine.  
**L**EADING THE MARKET.



Send for Catalogue and Prices to  
The Creamery Supply Co., Guelph, for  
Southern and Western Ontario.  
The T. C. Rogers Co., Guelph, for Northern  
and Eastern Ontario.  
Jos. A. Merrick, Winnipeg, Manitoba, for  
Manitoba, N.-W. T. and B. C.  
H. E. Nunn, Truro, N. S., for Maritime  
Provinces; or to the well-known  
manufacturers.

**NATIONAL.**  
STYLE "B"—Capacity 250 lbs. per hour.  
No. 1 —330 to 350 lbs. per hour.  
No. 1 A—450 to 500 lbs. per hour.

**The Raymond Mfg. Co., of Guelph,**  
GUELPH, ONTARIO. LIMITED.

**INFECTIOUS MAMMITIS.**

Several of my cows have one-quarter of the udder more or less caked, and some quarters are becoming inactive. Sometimes the milk is ropy, then the quarter becomes hard. C. H. B.

Ans.—You have a form of mammitis that appears to be infectious in your herd. Do not allow the person who milks the affected to milk the healthy. Purge each diseased one with Epsom salts, bathe the quarter with warm water, long and often; draw the milk four or five times daily, and rub well with camphorated oil each time after milking. V.

**CHRONIC COUGH.**

Mare has had a cough for over a year. Her wind is all right, but I am afraid of heaves. J. S.

Ans.—If heaves have not already developed, benefit will be derived from the following treatment: Take of powdered opium, 1 dr.; digitalis, 20 grs.; camphor, 1½ drs.; solid extract of belladonna, 2 drs. Mix with vaseline to make moist, roll in tissue paper, and give as a ball, every night and morning. Moisten both hay and grain with lime-water. V.

**Miscellaneous.**

**ARTICHOKES.**

Would you inform me how much, when to plant, and how to cultivate artichokes? Are they difficult to clear out of the soil when they become established in it? F. G. S.

Ans.—Plant the tubers much the same way as potatoes are planted, about four inches deep, every twelve inches in rows three feet apart. Cultivate to keep down weeds, and turn the hogs into the patch when the crop has matured. The following year the crop will grow without planting, and will be so irregular that it will hardly be possible to cultivate it. It is not particularly hard to clean the land of them after they are once established. A large drove of hogs will find nearly all the tubers, and cultivation will destroy the rest.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

**QUESTIONS AND ANSWERS.**  
Veterinary.

**MISCELLANEOUS.**

1. Mare took sick at 6 p. m., and died next morning at 6.30 p. m. She suffered greatly, would be down, roll, turn head to either side, get up again, etc. I had my veterinarian to see her. He gave her medicine and punctured her three times and gass escaped. My neighbor opened her and said two or three pails of blood escaped.

2. Colt has had distemper for three weeks. Several abscesses have formed between jaws and sides of head. There is a sore on the throat as large as a saucer.

3. Aged horse nuckles on left hind foot, and his legs stock when standing.

Ans.—1. The mare suffered from acute indigestion, which resulted in inflammation of the bowels and death. Your neighbor was mistaken, the fluid that escaped was not blood but serum, which was the result of the inflammation. No doubt your veterinarian did all that could be done.

2. This is a case of irregular strangles. I would advise you to put him in charge of your veterinarian. Carbolic acid, one part, and sweet oil, twenty parts, makes a good dressing.

3. Purge him with eight drachms aloes and two drachms ginger. Blister the fetlock joint every month and give him a long rest.

**REPEATED BLOATING IN COW.**

Within three weeks my cow has been bloated three times. I gave salts and punctured her each time. She has a slight cough, and is growing weaker. breathes hard, and has a sore throat. Blisters appear to be rising on her skin.

Ans.—We fear she will not recover. The original trouble was in the rumen. It is probable there is some foreign body that can be removed only by an operation, called rumenotomy, which can be performed only by a veterinarian, but it is probably now too late to operate.

It is likely some of the fluid you drenched her with has passed down the windpipe and caused bronchitis. All you can do is to give her one drachm each nux vomica, gentian and sulphate of iron; one ounce bicarbonate of soda in a quart of cold water, three times daily. Drench her with boiled flaxseed and old ale to nourish her, and apply mustard mixed with oil of turpentine to her breast and sides. If necessary, give about one pound Epsom salts and two ounces ginger.

**INDIGESTION IN HOGS.**

1. I have five pigs about four months old. They have not done well for the last six weeks, as they appear to be crippled in the hind legs and humped in the back. I have fed them on shorts mixed with water and skim milk, with an occasional feed of corn, and sometimes a feed of clover hay. I have also given them wood ashes once every week during the last three or four weeks. They always seem hungry for their food and are quite fat.

2. What is the proper food for brood sows for the last two months before farrowing, and immediately after farrowing?

Ans.—The hogs are suffering from indigestion, due to their feed being too rich and to lack of exercise. Change from shorts to ground oats and barley and a little bran, or mix some of these grains with the shorts. Also give about one and one-half teacupfuls of Epsom salts in the feed. If convenient give some roots and earth, or rotten wood, or charcoal. Feed lightly for a while.

2. Before farrowing, a mixture of grains with some bran, an occasional pangold, buttermilk or skim milk with their slops, and occasionally some kind of waste meat scraps. After farrowing, give the grain, with some kind of milk. Feed very little kitchen slops for awhile.

**PARALYZED CALF.**

Calf was all-right at night, next morning could not get up. It is getting worse. Eats and drinks well.

Ans.—The calf has paralysis, and it is doubtful if it will recover. It may have been injured, or the ailment may have been caused by digestive trouble. Purge with 6 ozs. Epsom salts and 2 drs. ginger. Follow up with 20 grs. nux vomica, three times daily. Apply mustard mixed with oil of turpentine all along the spine.

**Deranged Nerves**

AND

**Weak Spells.**

Mr. R. H. Sampson's, Sydney, N. S.,  
Advice to all Sufferers from  
Nerve Trouble is

**"GET A BOX OF  
MILBURN'S  
HEART AND NERVE  
PILLS."**

He says: "I have been ailing for about a year from deranged nerves, and very often weak spells would come over me and be so bad that I sometimes thought I would be unable to survive them. I have been treated by doctors and have taken numerous preparations but none of them helped me in the least. I finally got a box of Milburn's Heart and Nerve Pills. Before taking them I did not feel able to do any work, but now I can work as well as ever, thanks to one box of your pills. They have made a new man of me, and my advice to any person troubled as I was, is to get a box of Milburn's Heart and Nerve Pills."

Price 50 cts. per box, or 3 for \$1.25, all dealers, or  
**THE T. MILBURN CO., Limited,**  
TORONTO, ONT.

**FOR SALE.**

**122½ ACRES**

less 3 acres taken by railroad.

**DWELLING, BARN  
AND DAIRY,**

old, but of say \$750 value. 60 acres under cultivation, 30 acres grazing, 12 acres alder, easily cleared; balance valuable cedar. Land cannot be surpassed for value. Railway station, steamboat landing, post office and schoolhouse close to this property.

**Price \$9,000**

On any reasonable terms. Best of reasons given for selling. Lands at all prices, according to state of improvement and location.

**T. R. PEARSON,**  
NEW WESTMINSTER, B. C.

**TREES**

**Fruit and  
Ornamental**

**SPLENDID ASSORTMENT**

Actually first hand. Why pay intermediate profits when you can buy direct from the growers? Send for price list and catalogue at once to

**Winona Nursery Co.**  
WINONA, ONTARIO.

**WANTED**—Single man to take charge of small herd of Shorthorns and do general farm work. Must be able to milk. Give references and state wages wanted.  
**N. S. ROBERTSON, Arnprior, Ont.**

**Good News to Stock Owners**  
Just the information that you must have to successfully treat Floula, Poll Evil, Sweeny, Knee-Sprung, Curb, Splink, Spavin, Ringbone and all blemishes hard or soft, also Lump Jaw in cattle.

**Bone Spavin  
Ringbone  
Lump Jaw**

Certain and inexpensive methods fully described in our two big booklets, which we send free if you have a case to treat. Over 140,000 farmers rely upon these same methods. Write for the books.  
**FLEMING BROS., Chemists,**  
46 Front St., West, Toronto, Ont.

**THE ART OF FEEDING.**

It is not what an animal eats, but what he thoroughly digests and assimilates that goes to make the profit in feeding. Undigested food is the rock that feeders most often come to grief on, and undigested food is the origin of almost all stock ailments. The successful feeder is the feeder who can most rapidly manufacture animal products from the raw material at the least cost, and one case of indigestion often spoils the record of a whole herd. By many of the most successful feeders, Herbageum has come to be recognized as the greatest and most economical means of ensuring perfect digestion and assimilation of foods. It enables feeders to utilize coarser and cheaper foods without retarding the growth or the fattening process.

We give here a report of a test made by a practical feeder. The test was made on stall-fed cattle, but the argument applies to all classes of stock. The report is as follows: "Last winter I fed 18 steers. I had previously used Herbageum, and was satisfied that there was a good profit in its regular use. However, in order that there should be no possible doubt about the matter, I fed 17 of the steers Herbageum in addition to their regular food, and to the one remaining steer, which was a good one, I gave exactly the same food without addition of Herbageum. The 17 steers gained rapidly, and at the end of two months' feeding were greatly in advance of the one steer that had been getting no Herbageum. I then began giving him Herbageum also, and in a short time this improvement became as rapid as the others.

"My experience shows me that when stall cattle get Herbageum, there is never any trouble from indigestion or waste of food through lack of assimilation."  
**JOHN GIBBS,**  
Fordyce, Dec. 18th, 1902.

**FERRY'S SEEDS MEET ALL NEEDS**

Experience has established it as a fact. Sold by all dealers. You sow—they grow. 1904 Seed Annual postpaid free to all applicants.  
**D. M. FERRY & CO.**  
WINDSOR, ONT.

**DOMINION SHORTHORN HERDBOOK WANTED.**

The Dominion Shorthorn Breeders' Ass'n will pay \$1 each for any of the following volumes of their herdbooks: Volumes 7, 8, 9, 10, 11, 12, 13, 14, 15. Send by express if possible, unpaid (if by post, postage will be returned with price).

**HENRY WADE, Secretary,**  
TORONTO, ONT.

**AN OPPORTUNITY**—Hereford bull, Inguois bred by F. W. Stone, Guelph; 34 months, and sure. Write  
**F. KANSOM,**  
Ancaster, Ont.

**Shorthorns, Cotswolds, Berkshires**

**FOR SALE.**—Seventeen bull and heifer calves, from 6 to 11 months old from \$55 to \$60 each. Registered, and freight paid to any part of Ontario and Quebec. Also a few young cows and heifers. A few young hogs and sows, from 3 to 6 months old.  
**F. BONNYCASTLE & SON,**  
Campbellford P. O., Ontario.

**Veterinary.**

**PIGS WITH BRONCHITIS.**

1. Pigs, three months old, have a cough. I am feeding Dr. Hess' food. They always have a spell of coughing as soon as they get out of their bed to feed.

2. What will kill lice on cattle?

J. A. M.

Ans.—The pigs have bronchitis, probably an infectious form. Remove all healthy pigs to a noninfected pen. Little can be done for the affected more than good care, and I do not think they will do any good. If you see they are getting worse, it will be better to destroy them, and disinfect the pens by washing thoroughly with a five-per-cent. solution of carbolic acid, and following up with a thorough coat of hot-lime wash, with five-per-cent. carbolic acid. This must be done before fresh stock is introduced into the pens.

2. Any of the commercial sheep dips, or a five-per-cent. solution of Zenoleum.

V.

**UNTHRIFTY HORSE.**

Horse is not thriving. He is dull, sweats and tires easily; drinks little when going out, but heartily when he comes in. Some time ago, he urinated three times in twenty minutes. He bites his back, and looks around towards his kidneys. He appears tender on pressure on his back. He slavers badly. I had his teeth examined by a veterinarian, and he said they were all right.

A. J.

Ans.—Your horse has chronic indigestion. I am of the opinion his teeth require dressing. Have your veterinarian examine his mouth again. Purge him with 8 drs. aloes and 2 drs. ginger. After purgation ceases, give 1 dr. each sulphate of iron, gentian and nux vomica and 3 drs. bicarbonate of soda, either as a ball mixed with vaseline or as a drench mixed with half pint cold water, every night and morning as long as required.

V.

**ECZEMA.**

Aged horse's legs are all swollen, and they and the body covered with pimples, which break and discharge a little, dry, and form scales.

J. M. B.

Ans.—Keep him in a comfortable stable, clip him and blanket well, and do not expose to cold, as it is dangerous to clip in cold weather, unless great care be taken; while it is very hard to treat a case of this kind without clipping. Purge with 8 drs. aloes and 2 drs. ginger. Follow up with 30 drops carbolic acid, three times daily in a little cold water, given as a drench. Dress the legs and body well, twice daily, with a five-per-cent. solution of creolin. Clothe well, and keep warm after dressing.

V.

**CRACKED HEELS.**

The whiffletrees caused my colt's heels to get sore in the fall. Now it resembles scratches, but extends well up the legs, which are sore and swollen.

R. J. M.

Ans.—This is scratches or cracked heels. Keep in nice dry stall, purge with 8 drs. aloes and 2 drs. ginger. Follow up with 1½ ozs. Fowler's solution of arsenic, twice daily for a week. Poultice the legs with boiled turnips and powdered charcoal, applied warm, three times daily for two days and nights. This will soften the scales. Then apply, three times daily, a lotion made of one ounce each of sulphate of zinc and acetate of lead to a pint of water.

V.

**COW FAILS TO CONCEIVE.**

Cow calved in September; was bred in November, December and on January 1st. She has been constantly in heat since last service.

W. J. R.

Ans.—It is probable her ovaries are diseased, and, if so, nothing can be done. All I can recommend is an examination to see whether the neck of the womb is open, and, if not, force an opening with your finger, or if necessary, use a sound or other blunt instrument. Breed in about two hours after operating.

**TUBERCULOSIS.**

Killed a cow, and when we opened her large quantities of matter escaped from the abdominal cavity. There were also spots like sponges in the flesh and intestines. Lungs were healthy.

A. O.

Ans.—The cow had muscular and intestinal tuberculosis. The flesh is not fit for human food.

V.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

**QUESTIONS AND ANSWERS.**  
Miscellaneous.

**VALIDITY OF MARRIAGE.**

My daughter, who is now seventeen years of age, after going with a gentleman eleven months, who is now nineteen years was married a week ago, without my consent. The gentleman gave her age as twenty, and his twenty-one, to the minister, who then married them. Is the marriage legal or not?

YOUR SUBSCRIBER.

Ans.—We consider the marriage valid. The husband may have rendered himself liable to certain penalties, but that is quite another matter.

**WEIGHING HOGS.**

If a farmer sold a bunch of hogs to a drover and took money on them, and when he took the hogs to town, a distance of about four miles, the nine hogs were one hundred and thirty pounds lighter than they were when he weighed them at home, can the drover take the hogs at his own weight, if the farmer's scales are standard scales? J. M. Glencoe, Ont.

Ans.—Apparently, there was no weighing as between both parties at the time of purchase, and we think that under the circumstances, the weight at time and place of delivery must govern.

**HYDRAULIC RAM.**

I have quite a strong spring on my farm, which runs within twenty rods of my stable. There is quite a good fall, but it is gradual. Do you think it could be dammed back so that I could use a hydraulic ram? The stream has its starting point in the sand. I am told that it would flow down into the machine and spoil it. J. A. A.

Ans.—If the spring would deliver about one gallon per minute, and could be dammed back, so that a fall of about three feet between the dam and the ram could be secured, the ram should be a practical contrivance. See answer to similar question in our January 14th issue, and write the manufacturers for circulars, giving details of the arrangements and apparatus.

**FEED FOR BROOD SOWS.**

Please tell me, through the columns of the "Advocate," which is the best food for brood sows. Would you advise to feed roots of any kind? I fed one sow on carrots, sugar beets and bran till the time she farrowed, and her offspring were of good size, but were too weak to help themselves. Do you think the roots were the cause of their being weak? Is it better to keep the sows closed in a pen during the winter, or to keep them out in the shed in the open air. I. D. K.

Ans.—See article on this subject in "Advocate" for January 21st, page 88. While roots in moderation are suitable for brood sows, it is quite possible to overdo the feeding of them. A variety of foods is better, and the sows should have exercise in the open air. A shed is all right until within two weeks of farrowing. Scattering a little grain on the ground so that the sow takes exercise in getting it, and eats it slowly, is good practice.

**LARGEST STUD IN THE WORLD OF AMERICAN-BRED**  
**Percheron, Shire and Hackney Stallions and Mares**

I breed, feed, and grow them with size, quality and action. Won over 80% of all first prizes and gold medals shown for at New York, Ohio, Indiana, Missouri, Iowa, Minnesota and Wisconsin State Fairs and International at Chicago for past four years, and am now selling stallions of equal value at \$500 to \$1,000 below my competitors. My stallions are young and fresh, 2 to 5 years old, and sold on a guarantee of 60%. Terms to suit the purchaser.

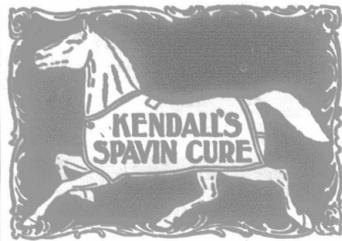
CORRESPONDENCE AND A VISIT SOLICITED. om

**LEW W. COCHRAN,**  
607 West Main St., CRAWFORDSVILLE, IND.

**THE HORSE MARKET**

**Demands Sound Horses Only.**

Lame horses sell at less than half their actual value and are neither desirable for use or sale. The remedy is easy. A few bottles of



**KENDALL'S SPAVIN CURE**

will work a permanent cure for Spavins, Ringbones, Splints, Curbs, etc., and all forms of Lameness. It cures thousands of cases annually. Such endorsements as the following are a guarantee of merit.

**Cured two Bone Spavins of Ten Years' Standing.**  
Earlville, N.Y., Mar. 11, 1901.  
Dr. B. J. Kendall Co., Gentlemen:—Some years ago I used your Kendall's Spavin Cure on a horse that had two Bone Spavins, and it removed them entirely. These Spavins had been on him from birth, and were of ten years' standing. I now have a case of a mare that was injured by falling through a bridge, and am going to give her complete treatment with your Spavin Cure. Please send me a copy of your "Treatise on the Horse and his Diseases." Yours very truly, CLARK G. PORT.

Price \$1; six for \$5. As a liniment for family use it has no equal. Ask your druggist for Kendall's Spavin Cure, also "A Treatise on the Horse," the book free, or address  
**DR. B. J. KENDALL CO., Enosburg Falls, Vt.**

**\$5,000 Reward.**

Anybody can secure that amount who will prove that any letter or endorsement which we publish in any way, relative to the merits of **Tuttle's Elixir** is spurious or untruthful. It needs nothing but the truth to support it. It is undoubtedly the best veterinary remedy known to man. Used and endorsed by Adams Express Company.

**Tuttle's American Condition Powders**—A specific for impure blood and all diseases arising therefrom. Spavins, 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—some produce 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 Spavins, Ringbone, Curbs, Splints, Windgalls, Capped Hock, Strains or Bruises, Thick Neck from Distemper, Ringworm on Cattle, and to remove all unnatural enlargements. This preparation (unlike others) acts by absorbing rather than 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: om

**J. A. JOHNSTON & CO., DRUGGISTS, 171 KING STREET EAST, TORONTO, ONT.**



**Dickinson's Blister** is the best in use for spavins, ringbones, splints, curbs or any bony enlargements causing lameness. Guaranteed not to leave any blisters. Sent on receipt of \$1, with full directions for use.

**S. S. DICKINSON, PORT HOPE, ONT.**

**GOSSIP.**

Judge Burton, a very old and infirm stipendiary, was engaged in trying a case, when an equally old and infirm witness came into court to give evidence. By mistake he took the passage leading to the bench, whereupon counsel asked: "Come back, sir, where are you going? Do you think you're a judge?" "Indeed, sir," said the aged one, glancing toward Judge Burton, "I fear I am fit for little else."

Messrs. A. Mansell & Co. have recently shipped from Liverpool, per S.S. Pontiac, to Genoa, Italy, on account of Conte Giovanni Fevedin, a high-class roan Shorthorn bull, bred by Mr. S. F. M. Nevett, and a small but select lot of Southdowns from the Pagham Harbour Co. The shippers have received notice of their safe arrival, and the Conte has expressed his unqualified approval of the selections made on his behalf.

**GREAT DEMAND FOR SHROPSHIRE.**

Messrs. Alfred Mansell & Co., live-stock agents, Shrewsbury, England, have received from their Melbourne agents, under date of Nov. 26th, last, the following very encouraging statement: "You will be glad to hear that the run on Shropshire flock rams the last month throughout Australia has been phenomenal, never saw anything like it before. Pure-breds in Tasmania and Victoria all cleaned out, and now breeders of freezers are buying up grade rams, but it is a pity they have to use the latter. Half-bred Shropshire lambs for export to London have been sold in thousands this year in Victoria and South Australia, at 12 shillings to 15 shillings on the properties, prices unheard of before breeders used Shropshire sires."

**LEONARD BURNETT'S SALE.**

An important dispersion by auction is that, on Feb. 24th, of the entire herd of Shorthorns and flock of Shropshire sheep, together with some good Clydesdale mares belonging to Mr. Leonard Burnett, of Greenbank, Ontario. The farm is near Port Perry, on the branch of G. T. R. running between Whitby and Port Perry, and also near Uxbridge on the Midland branch, about 40 miles from Toronto. Mr. Burnett, being a brother-in-law of Hon. John Dryden and living near him, got most of his foundation stock from Mr. Dryden, and has used bulls imported and bred by him and by the Watts, of Salem, which were the sires of most of the breeding cows. Among these were the Cruickshank bulls: Imp. William Rufus =6455=, Imp. Duke Dido, of the favorite Duchess of Gloster family, and Imp. Victory, another Cruickshank-bred bull. Among the sires appearing in the pedigrees are Imp. Sussex and Imp. Royal Barnpton, used so successfully in Mr. Dryden's herd, and which, together with the former bulls mentioned, have left their impress on the type of the herd, which are uniformly of the approved stamp—low, level, blocky and smooth. The younger things are largely the get of the Dutch-bred bull, Count Sarcasin =32057=, of the Cruickshank Secret tribe, a son of Count Arthur, and his dam by the Sittytombred Gravesend, and these youngsters are well up to the right standard in quality and character.

The Shropshires are a really good flock, founded on importations by Mr. Dryden, Mr. Robert Miller and others, and high-class imported rams have been used from the start, so that the flock is up to a good standard, and as sheep are looking up, and the prospect is bright for a good demand, the present is a good time to found flocks or to improve and strengthen existing flocks. This sale affords an excellent opportunity to secure good specimens of this popular breed at one's own price.

Clydesdale mares are the very best kind of property to own in these times when the demand for good draft horses is so active. We bespeak for Mr. Burnett a good gathering at his clearing sale, which is made necessary by his having leased his farm, and we advise all interested to send for the catalogue as per the advertisement on another page in this issue.

**Anxious Mothers of Sick Children**

Appreciate the Relief and Cure Which Comes with the Use of Dr. Chase's Syrup of Linseed and Turpentine.

It is the mothers who have made Dr. Chase's Syrup of Linseed and Turpentine popular.

They are quick to recognize the superiority of this great medicine over ordinary cough medicines, and in their enthusiasm told their friends and neighbors of the benefits of this treatment.

They told of their anxiety when their children were suddenly seized with cough or severe colds.

They told of how quickly relief and cure were obtained by the use of this remedy and of how pleased the children were to take it.

The good news of the merit of Dr. Chase's Syrup of Linseed and Turpentine has spread until few people in this broad land have not heard of it.

Croup, bronchitis, asthma, whooping cough, throat irritation, severe chest colds and pneumonia soon yield to the extraordinary soothing, healing influence of this preparation.

Dr. Chase's Syrup of Linseed and Turpentine, 25 cents a bottle, family size (three times as much) 60 cents, at all dealers, or Edmansen, Bates & Co., Toronto. To protect you against imitations, the portrait and signature of Dr. A. W. Chase, the famous recipe-book author, are on every bottle. -om

**Imported Clydesdales**



My offering now consists of **Three Imported Two-year-old Clydesdale Stallions**

of choicest breeding, best quality and immense size. Inspection invited.

**Geo. Stewart**  
Howlok, P. Q.

**FOR SALE.**  
**Seven Imported Clydesdale Fillies,**

2-year-olds, sired by the prizewinning stallions, Ascott Corner, Handsome Prince, William the Conqueror, etc. All have been bred to stallions. For further particulars address: om **PATTERSON BROS., Millbrook, Ont. Millbrook on G. T. R. Cavanville, C. P. R.**

**THE KINDERGARTEN STUD FARM, GUELPH**  
**JAMES HURLEY, Proprietor.**

Breeder of Thoroughbred horses from noted sires and dams. All classes of horses for sale.

**FOR SALE:** Three imported Clydesdale stallions—Umar 2129, Vice-Admiral 3447, and Knight of Park 2921; also two registered Canadian-bred stallions, 2 years old. For further particulars address **DAVIS & GRAHAM, Schomberg, Ont.**

**Clydesdales and Hackneys For Sale.**

Four young Clydesdale and 2 Hackney stallions, all imported, representing the best blood in Great Britain. Prices right. Inspection invited. **MOWAT & HABB, Shelburne, Ont.**

**CLYDESDALES FOR SALE.**



New importation arrived November 14th, 1903. This shipment includes a number of horses that have won good premiums in Scotland as well as prizewinners at the H. & A. S. S. and R. A. S. shows.

**30 IMPORTED STALLIONS**

for sale. Inspection is solicited and prices and terms will be found defying competition.

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



**DEATH TO HEAVES Guaranteed**  
**NEWTOR'S Balm, Cough, Distemper and Indigestion Cure.** A veterinary specific for wind, throat and stomach troubles. Strongly recommended. \$1.00 per can, mail or express paid. Newtor's Remedy Co., Toledo, Ohio. Your druggist has it or can get it from any wholesale druggist.

# Trumans Pioneer Stud Farm

BUSHNELL (McDonough Co.), Ill.



IMPORTERS AND BREEDERS OF

## SHIRE, PERCHERON, SUFFOLK, BELGIAN, HACKNEY STALLIONS

At the recent International, stallions now in our barns won 1st and 5th in aged class; 1st and 4th in 3-year-old class; 2nd and 5th in 2-year-old class; gold medal offered by the English Shire Society, and gold medal offered by American Shire Horse Association for best Shire Stallion, any age, and Grand Champion Shire Stallion of the show.

We have on the farm at the present time imported Shire mares that won the following premiums at the last International: 1st and 2nd in aged class; 1st in 3-year old class; 2nd in 2-year-old class; 2nd and 3rd in yearling class; 1st for best three mares, and gold medal for the best imported mare; 3rd in double heavy harness class; 2nd and 5th in single heavy harness class, and 4th in light harness class.

If you want a prize-winner, come to the same place that our competitors do to find them. If we can sell importers their prize-winner, why can't we sell you yours? We have made seven importations the past 12 months and have another shipment ready only, but to give you a good, honest deal. We will charge you no more for these prize-winners than others charge for the cheap, old-fashioned kind. Have imported more Shire stallions than any two of our competitors combined during the past year.

Write for our 25th annual catalogue and poster.

J. G. TRUMAN, Mgr., Bushnell, McDonough Co., Illinois.

# ALEX. GALBRAITH & SON

BRANDON, MAN.

have on hand a magnificent collection of

## CLYDESDALES

SUFFOLKS and PERCHERONS, with a few choice HACKNEYS and GERMAN COACHERS

Prizewinners at the Royal Show, the Highland Show, and the International. The best horses in North America at present for sale at reasonable prices, on easy terms, and every stallion guaranteed. A safe motto: "Buy stallions only from those who have a well-earned and established reputation." Catalogue for 1904 now ready. Address

JAMES SMITH, Manager, Brandon, Man.

# Imp. Clydesdales and Shorthorns

MESSRS. SMITH & RICHARDSON, COLUMBUS, ONT.

Importers of Clydesdale horses and Shorthorn cattle, are now offering 10 imported stallions, including sons of the renowned Baron's Pride, Prince Thomas, Royal Carrick and Mountain Sentinel; also 10 mares, 6 of them imported, and the balance from imported stock. Shorthorns, imported and home-bred, all ages. Stations:

Oshawa & Brooklin, G.T.R.; Myrtle, C.P.R. 40 miles east of Toronto. Long-distance Telephone at residence, near Columbus Telegraph, Brooklin.



## CLIP YOUR HORSES

with 20th Century Clipper ONLY \$7.50

They feel better, look better, work better, and are less liable to catch cold. Don't let your horses stand in the barn all night with a heavy damp coat of hair on. It weakens them and they lose flesh. If clipped they dry out quickly, gain flesh and can be groomed in one fourth the time. Weighs only 15 lbs. Clips a horse in 30 minutes. Send for Catalogue H. CHICAGO FLEXIBLE SHAFT CO. 110 La Salle Ave. CHICAGO, ILL.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

### GOSSIP.

#### THE GREAT SHROPSHIRE SALE.

Attention is again called to the advertisement of the attractive auction sale of 200 Shropshire sheep from the Hill Home flock of Mr. J. G. Hanmer, at Brantford, Ont., on Feb. 17th, when 75 breeding ewes in lamb to imported rams, 75 ewes lambs and 50 rams are to be sold, without reserve, to the highest bidder. The Shropshires have proved themselves well suited to all sections of Canada and the United States, and are, perhaps, the most generally popular breed in America, being easily kept, producing the finest quality of mutton at low cost and a good fleece of fine quality that sells readily at highest market prices. There is room for a small flock of sheep on most farms, and no class of stock, in the average of years, will give as good an account of itself, considering the cost of keep, as will a flock of sheep. Many farmers, when other classes of stock were at low ebb, testify that their sheep helped them over the hard place, and they have done it in numerous instances. The present is a favorable time to stock up and be prepared for the inevitable rise in sheep values, which is sure to come, indeed is now coming to Canadian farmers. A visit to Hill Home Farm, on the day of this sale, will be a treat for those who love sheep, and it is a convenient place to reach from any direction. Mr. Hanmer has the reputation of being one of the best judges of Shropshires in Canada, and one of the most successful importers and breeders, and the character of the breeder as well as of the flock is up to a high standard.

#### MERCER'S SHORTHORN SALE.

The catalogue of the dispersion sale of the entire herd of 54 head of Shorthorns belonging to Mr. Thos. Mercer, Markdale, Ont., to take place on Feb. 24th, shows that they are richly bred, representing a large number of the best of Scotch families, including Missies, Lovelys, Matchless, Village Girls, Clarets, Floras, Minas, etc. At the head of the herd is the imported bull, Broadhooks Golden Fame, of the Cruickshank Broadhooks family, a roan coming two in March, bred by Sylvester Campbell, Kinellar, Scotland, sired by the Duthie-bred, Golden Fame (76786), of the Cruickshank Brawith Bud tribe. He is bred in the purple, and we are assured is as good as his breeding, and as nearly all the females of breeding age have been bred to this grand young bull, their value will be greatly enhanced, as his first calves now coming are said to be exceedingly promising. There are in the sale two other nicely-bred imported Lulls coming a year old in March: Chief Victor, of the Jilt family, a roan, by the Marr-bred King Victor, and his dam by the Duthie-bred Scottish Prince; and Royal Victor, a red of the same family, and by the same sire. Two other grandly-bred bull calves coming a year old in April and May, both sired by Village Squire, of the Cruickshank Village family, are Squire Matchless, a roan of the Cruickshank Matchless family, and Squire Stamford, of the Marr Stamford tribe. Among the females are two yearling daughters of Imp. Chief of Stars, by the great sire, Star of Morning: One, Mina Maid, a red, of the Kinellar Mina sort; the other, a roan daughter of Imp. Pineapple 12th. Two Marr Floras are Village Flora, by Village Squire, and Scotch Lassie, by Gordon Prince. Three others of the same family are: Flora 89th; Flora 90th, and Lassie Jean, by Diamond Prince, by Imp. Diamond Jubilee. Five of the Marr Stamford tribe, from two to five years old, are richly bred, having in their list of sires such noted bulls as Imp. Royal Sailor and Young Abbotsburn, the World's Fair champion, and others of outstanding character.

A quintette of Kinellar Clarets, a half dozen Marr Missies, and a half dozen of the excellent Cruickshank Village family combine to make the offering one of most attractive character. Of these last, more may be said in our next issue. Markdale is a station on the Owen Sound branch of the C. P. R., with good connections from all directions. The catalogue is now ready for distribution, and will be mailed to applicants.

### Horse Owners! Use



## GOMBAULT'S Caustic Balsam

A Safe, Speedy, and Positive Cure  
The safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle, SUPERSEDES ALL CAUTERY OIL FIRING. Impossible to produce scar or blemish. Every bottle 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. The Lawrence-Williams Co., Toronto, Ont.

## Imported Clydes & Shires, Shorthorns & Yorkshires

Five Clydesdale Stallions; one Shire Stallion; eleven Clyde Fillies; three Shorthorn Bull Calves, imp. in dam, a few imported Heifers; and imported Yorkshire Hogs. Clydes by such sires as Prince of Carruchan, Prince Stephen, Prince Thomas and Royal Champion. Write for prices, or come and see.

GEO. ISAAC,

Cobourg Station, G. T. R. COBOURG, ONT.

## RED RIBBON STUD

Largest Importers and Breeders of

## Shire Horses



In the Dominion, including first-prize winner at Royal Agricultural Show in England; and gold medal for best Shire stallion, gold medal for best Shire mare, donated by the Shire Horse Association, England; three silver medals for sweepstakes, eight 1st prizes, four 2nd prizes and one 3rd prize at Industrial Exhibition, Toronto, 1903. Stallions and mares all ages, home-bred and imported, always for sale. Over 60 to choose from.

MORRIS & WELLINGTON,

Fonthill P. O., Welland County, Ont.

## 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.

## Thorncliffe Clydesdales

THORNCLIFFE STOCK FARM has for sale a carload of Clydesdale stallions and mares, including prize-winners. Some of the mares are in foal to the justly-celebrated stallion, "Lyon MacGregor." For prices, etc., etc., apply to

ROBERT DAVIES  
36 Toronto Street, TORONTO.

ROSEDALE STOCK FARM J. M. Gard-house, Prop.  
CLYDE AND SHIRE HORSES, SHORTHORN CATTLE, LEICESTER SHEEP.

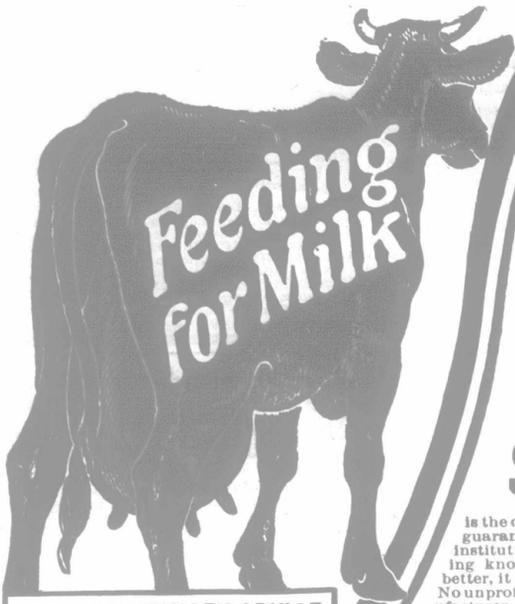
Choice imported and home-bred stallions and mares, also young stock. Two extra good young bull calves, and a few imported and Canadian-bred Scotch cows and heifers, bred to the imp. Marr bull, Chief Ruler. Telegraph Post Office and Telephone (at residence), Weston, Ont. G. T. R. C. P. R. Station.

## CLYDESDALE MARES

Registered mares, from three years old and upwards, for sale.

NELSON WAGG.

Claremont station, C. P. R., 2 miles. Stouffville station, G. T. R., 4 1/2 miles.



Milk is a very complex fluid, containing all the elements of the animal body. The food, therefore, to produce it should be rich in all these elements. The error too frequently committed by dairy men is in supplying a ration from one kind of food instead of giving a variety. It is a fact that butter has a higher flavor when produced from hay cut from an old meadow, because old pastures seldom contain less than 12 to 15 species of grass. It requires two thirds of the full ration of the dairy cow to keep up the animal heat and supply the necessary waste. If the system of the animal is in poor condition, it requires more. By adding Dr. Hess Stock Food, the great cow tonic, to the food regularly as directed, the digestion is kept in perfect order and every particle of the nutrition is extracted from the food eaten, and is applied to fat, bone, muscle and milk formation; thus, less food is required to keep up the animal system, and more goes to produce profit.

## Dr. Hess Stock Food

is the only scientific stock food on the market. It is sold on a written guarantee; it is formulated by Dr. Hess (M.D., D.V.S.) If these institutions of learning know of nothing better, it must be good. No unprofessional manufacturer can equal it.

**Our Information Bureau.**—For any disease or condition for which Dr. Hess Stock Food is not recommended, a little yellow card enclosed in every package entitles you to a letter of advice and a special prescription from Dr. Hess (M.D., D.V.S.). In this manner you are provided with a universal treatment for all stock difficulties either in the stock food itself or in the special prescription to which the little yellow card entitles you. Endorsements from physicians, scientists and stock feeders furnished on application.

**DR. HESS & CLARK, Ashland, Ohio, U. S. A.**

Also Mfgs. of Dr. Hess Poultry Pan-a-see and Dr. Hess Healing Powder.

Dr. Hess Stock Food is sold on a written guarantee. 100 lbs. for \$7.00; smaller quantities at slight advance. Fed in small dose.

### FREE VETERINARY ADVICE DURING FEBRUARY

Until March 1st, Dr. Hess (M. D., D. V. S.) will furnish every reader of this paper a letter of advice, and a special stock prescription, free of charge. This information is free to the users of Dr. Hess preparations at all times, but this month we offer it to those who have never used our goods as a means of demonstrating Dr. Hess' ability to formulate stock preparations. If you are in need of special veterinary advice, describe your difficulty fully in a letter to Dr. Hess & Clark, Ashland, Ohio, care Information Bureau, and the letter of advice and prescription will be furnished you free, providing you state what stock you have (number of head of each kind), what stock food you have fed, and mention this paper. Enclose 2c stamp for reply.

Instant Louse Killer Kills Lice

# PAGE "ACME" NETTING

150-foot roll, 4 feet high.....\$4.40 For poultry and garden. Better than old style. Of local dealer or us. Freight paid.  
 150-foot roll, 5 feet high..... 5.10  
 150-foot roll, 6 feet high..... 6.00

**THE PACE WIRE FENCE CO. LIMITED** 34  
 Walkerville Montreal Winnipeg St. John

### GOSSIP.

Mr. R. H. Harding, Thorndale, Ont., writes: "In your report of the sheep department at the late Ontario Winter Fair, you are slightly wrong in regard to the winnings in the Dorset class. Your report says Mr. Luxton won first in the carcass class for both yearlings and lambs. The facts are that R. H. Harding won first for yearling, and John Hunter, 2nd and 3rd."

L. P. Hayter, King's Co., N. B., writes: "What this part of the country wants is improved stock of all varieties. What would a horseman think of travelling a nondescript horse who interferes, and fully one-half of his colts follow his example, and breeding to all kinds of mares. Since the late Hugh McMonagh, of Sussex, died, we may say that the horses of this country have degenerated instead of progressing. And now, the cry is for a cheap sire, and I think that some have got enough of it. What is ten or fifteen dollars in the value of a grown-up horse?"

### TWO OF A KIND.

Mr. John Lloyd Jones, the enterprising young breeder of Shropshire sheep, of "The Oaks," Burford, Ont., writes: "My late father took your paper from the commencement of it, and when he retired from farming, it still continued to come to 'The Oaks' in my name. I have, therefore, read it since a boy, and am of the opinion that no farmer should afford to do without it. Kindly accept my congratulations on the advancement of your valuable paper."

"As we have many friends among the livestock men, perhaps you may find room for the following announcement: On the evening of the 19th January, my wife distinguished herself by presenting me with a pair of little boys, weighing 10 and 8 lbs, respectively. All are well, and the strainline breeders will be glad to hear that these are the first of the 'The Oaks' strain. The boys were born at the same time, and I am glad to say that they are both registered."

## PINE GROVE SHOR'HORNS 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.,** Ontario.  
 Rockland,

## W. B. WATT'S SONS,

Breeders of  
**SHORTHORNS AND CLYDESDALES.**

FOR SALE: A number of choice young bulls fit to head any herd. Several good young cows and heifers, daughters and granddaughters of great Royal Sailor (imp.), and in calf to Scottish Beau (imp.) by Silver Plate.

Let us know what you want and we will try to supply you at a moderate price.  
 Elora Station, C. T. R. and C. P. R., Salem P. O. Tel. No. 42a.



**19**  
 High-class Shorthorn Bulls For Sale

Some imp. and some from imp. cows, and sired by imp. bulls. Also cows and heifers. New importation came home Dec 10th.

Arthur Johnston, Greenwood, Ont.

### JOHN GARDHOUSE & SONS

Highfield P. O., Ont., Breeders of

Scotch and Scotch-topped Shorthorns, Shire Horses, Lincoln and Leicester Sheep.

A good selection of young stock both sexes always on hand for sale. Scottish Prince (imp.) Vol 19, at head of herd. Royal Albert (imp.) 2087, at head of stud. Farms 3 1/2 miles from Weston, C. T. R. and C. P. R., and electric cars from Toronto.

### OAK LANE STOCK FARM.

Shorthorns Cotswolds  
 Yorkshires and Barred Rock Fowls.

Imported and Canadian-bred Shorthorns. Open to take orders for N.-W. trade. Write for prices. Satisfaction guaranteed.

**GOODFELLOW BROS.,** MACVILLE, ONT.

### JOHN DRYDEN & SON

BREEDERS OF

**CRUICKSHANK SHORTHORNS AND SHROPSHIRE SHEEP.**



Catalogue of twelve young bulls of choicest breeding and splendid quality sent on application.

Your choice of 25 BEAUTIFUL YEARLING RAMS at reasonable prices. Also a FEW SELECT EWES

Station and Post Office, Brooklin, Ont.

### HUNTLYWOOD FARM

**SHORTHORNS AND SOUTHDOWNS**

We have for sale two fine young bulls of the noted Broadhooks tribe and one Secret. Write for prices.  
**W. H. GIBSON, Mgr.,** Point Claire P. O., Quebec

### GOSSIP.

Messrs. A. Gilmore & Sons, Athelstane, Que., breeders of Yorkshire Swine, Pekin ducks and White Rock fowl, in ordering a change in their advertisement, report their stock in good condition, and guarantee satisfaction to purchasers on all mail orders.

There is one woman poet in New York who will read proof carefully until the edge of a recent error wears off. She spent two days on a touching poem, the pivotal line of which read:

"My soul is a lighthouse keeper."  
 When the printer finished with it the line read:

"My soul is a light housekeeper."

Our Beautiful Language—A boy who swims may say he's swum; but milk is skimmed and seldom skum, and nails you trim, they are not trum. When words you speak, those words are spoken; but a nose is tweaked and can't be twoken, and what you seek is never saken. If we forget, then we've forgotten; but things we wet are never wotten, and houses let cannot be lotten. The goods one sells are always sold; but fears dispelled are not dispold, and what you smell is never smoled. When young, a top you oft saw spun; but did you see a grin e'er grun, or a potato neatly skun?—Tit-Bits.

Professor O. C. Marsh, of Yale College, once met a negro driving an old horse which had a curiously malformed hoof. "When your horse dies," said the professor to the old darky, "I will give you three dollars for that hoof if you will cut it off and bring it to me." "Very well, sah," was the reply, and horse and driver disappeared. Two hours later, when the professor reached home, he found the negro, who had been impatiently awaiting him for an hour. Handing a carefully wrapped package to the professor, the darky said, "De hooss is daid, sah."

A certain officer in the army is very much disliked by his men, and "V. C." relates that one night, as he was returning to barracks, he slipped into some deep water. A private in his regiment happened to see the occurrence, and with great difficulty pulled the officer out. The officer was very profuse in his thanks, and asked his rescuer how he could reward him. "The best way you can reward me, sir," replied the private, "is to say nothing about it." "Why, my good fellow," said the astonished officer, "why do you wish me to say nothing about it?" "Because, if the other fellows knew I pulled you out they'd blooming well chuck me in!"

A popular commercial traveller attended a large social gathering one evening, and after the supper was over was promenading with one of the guests, a young lady, to whom he had just been introduced. In the course of conversation the subject of business came up, and she said: "By the way, Mr. Scott, may I ask what your occupation is?" "Certainly," he answered. "I am a commercial traveller." "How very interesting! Do you know, Mr. Scott, that in the part of the country where I reside commercial travellers are not received in good society?" Quick as a flash he rejoined: "They are not here, either, madam."

When Rudyard Kipling visited Cecil Rhodes on his South African fruit farm, Mr. Rhodes went around his farm before breakfast, and Mr. Kipling was good and hungry before he returned. When Mr. Rhodes came back he found his trees laden with placards inscribed in huge black letters with "Famine," "Pity the Starving," etc. On reaching the front door he read: "For the human race breakfast tones the mind, invigorates the body. It has sustained thousands; it will sustain you. See that you get it." "Why die when a little breakfast prolongs life?" In the breakfast room Kipling was found reading his paper, but the expression of innocence on his face was rather overdone.—Christian Register.

In advertising any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

### Piles Cured Without Pain

In the Privacy of Your Own Home.

The free trial package which we send to all who write will give instant relief, and start you toward a perfect cure. After you have tried that, you can get a



MRS. MAUD SUMMERS, Cured of Piles by Pyramid Pile Cure. After All Remedies and Doctors Had Failed.

full-sized package from any druggist for 50 cents. Frequently one package cures. It is applied in the privacy of the home. Call for Pyramid Pile Cure and nothing else. All druggists have it, for it has cured so many cases of piles and relieved so much suffering and is so popular a remedy that no druggist can afford to be without it.

The healing process begins immediately with the first application and continues rapidly till the sufferer is perfectly cured. The pain ceases at once, and you go about your duties without further inconvenience.

This is much more sensible than being cut and tortured with a knife. It is much more satisfactory than a humiliating examination by a physician. It is much cheaper than paying a big doctor's bill for an operation. It is a certain, safe and painless cure for piles.

Write Pyramid Drug Co., Marshall, Mich., for free trial package, which will be sent in plain wrapper. After that is used, you can get full-sized package from us or any druggist for 50 cents.

### Troubled with Kidney Trouble for Six Months.

Many Men and Women Are Troubled With Kidney Trouble, Some For Less Time, Some For Longer—No Need To Be Troubled For Any Length Of Time, If They Only Knew Of The Cures Being Made By

**DOAN'S KIDNEY PILLS.** Backache Is The First Sign Of Kidney Trouble—Then Come Complications Of A More Serious Nature.

**DOAN'S KIDNEY PILLS** TAKEN AT THE FIRST SIGN OF BACKACHE WILL SAVE YOU YEARS OF MISERY. Mrs. William H. Banks, Torbrook Mines, N.S., tells the public about the great qualities of Doan's Kidney Pills in the following words:—I was troubled with kidney trouble for six months, and had such terrible pains across my kidneys all the time that I could hardly get around. After taking one box of Doan's Kidney Pills I began to feel better, and by the time I had taken three boxes I was completely cured.

Price 50c. per box, or 3 boxes for \$1.25; all dealers or The Doan Kidney Pill Co., Toronto, Ont.

**The Safety MILKING INSTRUMENT** is far superior to the old-fashioned MILK TUBE. Price \$1 by mail, prepaid. Circulars Free. MOORE BROS., V. S., Albany, N. Y.

### GOSSIP.

"Gentlemen of the jury," said an Arapahoe lawyer, "what kind of sweating has been done in this case? Here we have a physician, a man who from his high calling should scorn to tell an untruth. But what did he testify, gentlemen? I put the question before him plainly, 'Where was he stabbed?' Unblushingly, his features as cool and placid as marble, he replied that he was stabbed an inch and a half to the left of the medial line, and an inch above the umbilicus. And yet, gentlemen, we have proved by three unimpeachable witnesses that he was stabbed just below the railroad station.

A good story is told of an old couple, who frequently got into argument upon religious subjects. The old gentleman contended that the Bible was almost wholly about men, and ignored women. His wife took strong ground against this view, but finally, for the sake of peace, allowed her husband to have the last word.

"You know I am right, Mary," he concluded, "and you just argue the matter to be contrary."

After a while Mary said: "John, I must confess you are right. The Scripture writers knew a great deal about men, much more than they did about women, and one passage that has just occurred to me convinces me that the Bible was really written more for men than women."

"Of course it was," replied John, almost rapturously, "and you knew it all the time; but, Mary, what was the verse that has brought you to agree with me?"

"It was written by the wisest of all the old Scripture writers, John."

"Yes, yes, but was it, Mary?"

"It is this, John, and remember it was written by the—"

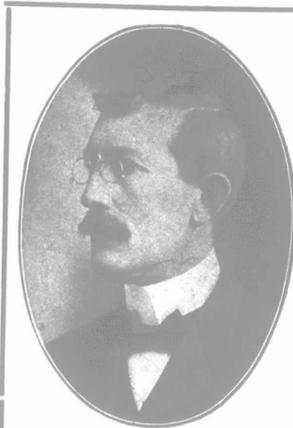
"Oh, but the verse!"

"Well, John, it is this: 'All men are liars.'"

A new Hampshire judge, says Lippincott's Magazine, has in his possession the following letter, sent to him by an old farmer who had been notified that he had been drawn as a juror for a certain term of court:

"Dear Judge,—I got your letter tellin' me to come to Manchester an' do dooty on the jury an' I rite you these few lines to let you know that you'll have to git someone else fer it ain't so I kin leave home now. I got to do some butcherin' an' sort over a lot of apples just about the time the jury will be settin' in your Court. Si Jackman of this town says that he would as soon as not go, fer he ain't nothin' else to do jess now, so you better send fer him. I hate the worst way not to oblige you, but it ain't so I kin at present. Ennyway I ain't much on law, never havin' been a jooryman 'ceptin' when old Bud Stiles got killed by the cars here some years ago when I was one that set on the boddly with the koroner. So you better send fer Si Jackman, fer he has got some kin in Manchester fer he wants to visit ennyhow, an' he'd be willin' to go fer his carfare there an' back. Ancer back if you want Si."

**IMPORTANT SALE OF AYRSHIRES.** Dairymen throughout the Dominion will be interested in the announcement, advertised on another page, of the coming auction sale, on March 10th, of the entire herd of Ayrshire cattle belonging to Messrs. R. Reid & Co., of Hintonburg, a suburb of the City of Ottawa, reached by the street railway system. This is justly considered one of the best herds of Ayrshires in Eastern Ontario, and comprises 60 head, with a prospect of an addition of half a score of calves before the date of sale. The sale has been rendered necessary by the expiring of the lease of pasture land, and the rapid growth of the city preventing the re-leasing of the land on which account it has been decided to sell the entire herd, and confine operations to other lines of stock-keeping. The cows in this herd having been supplying a first-class milk trade in the city of Ottawa, and have been bred and selected for profitable work at the pail. The catalogue will be sent on application, and further notes may be looked for in these columns in later issues of the paper.



Dr. J. L. Scott's Condensed Dietetic Stock Food is doing wonders wherever it has been tested, and all who have fed it are unanimous in its praise. The question of feeding to the up-to-date farmer is one of vital importance, and whether you desire to produce flesh in horses or cattle, or the hard, firm bacon so much in demand, nothing is equal to

### Scott's Stock Food

which does its work quietly but quickly, without purging or other irritating action. Sharpens the appetite, increases the secretions of the stomach, bowels, liver and kidneys, aids in assimilation of food, and by its tonic effect increases strength and vigor. This medicated food contains the purest and best tonic ingredients known to veterinary science. We aim to give value—one pound of our compound equals ten pounds of ordinary stock food. If your dealers have not got it have them send for it. Read this:

Beaver Dam, Wisconsin, June 3rd, 1903.

Dear Sir,—Allow me to volunteer an endorsement of your Condensed Dietetic Stock Compound. After 13 years' trial of it, I think my success in raising horses and cattle for years can be attributed more to your Stock Compound than any one else. I have hardly lost an animal, except by contributory negligence, since you induced that your remedy would not hurt her. After using it she got well. We fattened her and watches the results, won't use any other. I know any farmer that once uses your compound, and cattle on my farms. If you will give me your formula for making the Condensed Dietetic Stock Compound for my own use, not to sell or give away, you can go to my farms and pick out a horse to suit yourself without any cost except the formula. Respectfully yours, T. L. NEWTON, Esq., President of State Board of Agriculture.

Put up in pails, 25 lbs., \$2.50, or \$1 and 50c. packages.

MANUFACTURED BY **DRS. SCOTT & TAMLIN,** Veterinary Surgeons, LONDON, ONT.

We are offering **18 BULLS** from 4 to 10 months old, sired by imported Diamond Jubilee = 28861 =. Also a few females, all ages, of good Scotch breeding.

**FITZGERALD BROS.,** Mount St. Louis, Ont. Elmvale Station, G. T. R.; Hillsdale Telegraph Office.

**Shorthorns and Clydesdales.**

We are now offering an extra good lot of young bulls, home-bred and imported; also stallions, and a few young mares which are in foal.

**JOHN MILLER & SONS,** Claremont Sta., C.P.R. on Brougham P.O.

Present of **Shorthorns**: Our stock bull, **Heir-at-law** = 34563 =, a grand stock-getter and sure, 3 years old. Also 1 bull, 13 months; heifers and cows. Shropshire, all ages and sex. **BELL BROS.,** Bradford, Ont.

**SHORTHORNS FOR SALE.** Four bulls, that challenge comparison, sired by the champion of champions, **Spicy Marquis** (imp.). This is a rare chance. **Brave Ythan** at head of herd on **JAMES GIBB, Brookside, Ont.**

**Hawthorn Herd OF DEEP-MILKING SHORTHORNS.**

FOR SALE: Five young bulls, also a few females, by Scotch sires. Good ones.

**Wm. Grainger & Son, Londesboro, Ont.**

**Shorthorns, Clydesdales, YORKSHIRES.**

I offer for sale a young red bull calf by Republican (imp.), out of Nonpareil 34th (imp.)—a good one. Also young Yorkshires and Clydesdales, all ages. Also Count Amaranth at a bargain, if taken soon.

**A. E. HOSKIN, SPRINGVALE FARM, OSGOUD ST. & P.O. SHORTHORNS.**

Importer and breeder of choice Shorthorns. **Scottish Hero 156726** at the head of herd. on **JAS. A. OREAR, Shakespeare, Ont.**

**GRANDVIEW SHORTHORNS.** For sale: One bull by Barron's Heir (imp.) (28854), also a few females. Herd headed by the **Missie** bull, Marengo 31055. **J. H. BLACK & SON, Allenford P. O. and Station. om**

**SHORTHORNS.**

Four Bulls, nine to fifteen months old; four heifers, two years old. A number of cows, also in calf to Royal Prince = 31241 =, by imp. Royal Sailor.

**H. K. FAIRBAIRN,** Thedford P.O., Telegraph and G.T.R. station.

**Spring Grove Stock Farm**

**Shorthorn Cattle and Lincoln Sheep.**

**HERD** prize and sweep stake at Toronto Industrial Exhibition, three years in succession. Herd headed by the **Bruce** Mayflower bull, Prince Sunbeam, imp. Present crop of calves sired by Imp. Wanderer's Last, sold for \$2,005. High class Shorthorns of all ages for sale. Also prizewinning Lincolns. Apply **om**

**T. E. ROBSON, ILBERTON, ONT.**

**CHAS. RANKIN, WYEBRIDGE, ONT.**

IMPORTER AND BREEDER OF **SHORTHORN CATTLE and OXFORD DOWN SHEEP.**

Herd headed by **Pride of Scotland** (imp.). **FOR SALE**—Females and bulls of all ages, from noted Scotch families.

**FOREST HILL STOCK FARM. HIGH-SHORTHORNS** for sale. A choice lot of young bulls, from six to eighteen months old. Apply **G. W. KEAYS, HYDE PARK P. O., ONT.**

**FLETCHER'S SHORTHORNS**

Comprise Cruickshanks, Orange Blossoms, Nonpareils, Crimson Flowers, Mysies, Langshires, Butterflies and Jessamines, and are headed by the noted Duthie-bred bull, (imp.) **Joy of Morning** (76929), winner of 1st prize at Toronto Exhibition, 1903. Several choice heifers and young cows bred to Joy of Morning, also bull calves suitable for herd headers, for sale. **GEORGE D. FLETCHER, Erin Shipping Sta., C.P.R. o Binkham P.O.**

**SHORTHORNS FOR SALE**

I have on hand 9 young heifers from 5 to 11 months, 8 young bulls from 7 to 11 months, and 3 or 4 bred heifers (bred to Royal Sovereign), that I will dispose of at reasonable prices to quick buyers, as I am overcrowded. This is a great chance to get a fine first-class young stock of good breeding and individuality. Be sure and get my prices before purchasing. Address **RICHARD WARD, Balsam, Ont.**

**I GUARANTEE A \$5.00 PACKAGE OF BARREN KOW CURE** postpaid, to make any cow under 10 years old breed, or refund money. No trouble, no risk. Given in feed twice a day. **L. F. Selleck Druggist, Morrisburg, Ont.**

**W. G. PETTIT & SONS** FREEMAN, ONT., Importers and Breeders of

**Scotch Shorthorns**

110 head in the herd, 40 imported and 20 pure Scotch breeding cows. Present offering: 3 imported and 6 pure Scotch from imported sire and dam; 6 Scotch-topped from imported sires; also imported and home-bred cows and heifers of the most popular type and breeding. A few choice show animals will be offered. **Burlington Jet. Sta. Telegraph & Telephone**

**Scotch Shorthorns Leicester Sheep**—For sale: Three young bulls by Christopher (imp.) 28859, and Tuscarora Chief 46733. No reasonable offer refused. Leicester rams, yearling ewes, ewe lambs and young bred ewes of rich breeding. Write for my prices and let me quote you on something choice. Address: **W. A. DOUGLASS, P. O., Tuscarora, Ont. Station—Caledonia, Ont.**

**WILLOW BANK STOCK FARM.** Established 1855.

**SHORTHORNS AND LEICESTERS**

A grand lot of young stock for sale, rich in the blood of Scotch Booth and Bates families. Rosierucian of Dalmeny 45220 (imp.) at head of herd. We breed the best to the best Leicester sheep of rare breeding and quality. Address: **JAS. DOUGLASS, Proprietor, P. O. and station, Caledonia, Ont.**

## TRADE TOPICS.

**PEDIGREE STRAWBERRY** plants are advertised in this issue by R. M. Kellogg, Three Rivers, Michigan, who will send free to applicants his book, "Great crops of Strawberries and How to Grow Them," written by the advertiser, who claims to have discovered the way to develop fruit organs in a plant, and make it grow two big berries where one little one grew before. See the ad., and send for the book.

**NOW IS THE TIME** to decide about the tree planting. Wind-breaks of spruce, pine or cedar would have been a great benefit this winter, and something can always be added for ornamental purposes. Fruit-raising also is a growing industry. Grapes, cherries, etc., are pushing still further north. Then when the plans are laid, there is the reliable Winona Nurseries to turn to from which any variety of tree can be selected at the lowest possible cost. They have stock of all kinds, and are willing to offer suggestions in making selections.

**AN IMPLEMENT** that has sprung into general favor within a very short time is the Kemp Manure Spreader. This machine seems to have made its appearance just at the time it was wanted, and justly continues popular, because of the great amount of labor it saves. Now it is scarcely possible to pick up an agricultural paper without seeing something said in the praises of this modern implement.

**UNIVERSAL GARDEN TOOLS**—Before securing garden tools, we desire to direct the attention of our readers to the line of hand-garden tools, manufactured by the Ames Plow Company, of Boston. Their seeder drops so the operator can see the seed in the ground before it is covered. The garden drill might be termed the unit of the famous Matthews group of all-purpose tools. The plow for furrowing and ridging is one of them. The wide and narrow tooth cultivator is still another, followed by the hoe for weed-cutting and top-soil stirring, and rake for pulverizing and smoothing. The seeder may be purchased alone, or a combination of all the above in one may be had. The company makes plows, harrows, cultivators, corn planters, hay tedders, and a long line of other up-to-date implements and machinery.

## GOSSIP.

A young lady attending one of the London (Ontario) schools has become so proficient in drawing that she recently drew a picture of a hen so realistic that when thrown in the waste-basket it laid there.

Our live-stock representative recently called upon Mr. Geo. Rice, of Currie's Crossing, Ont., and found his herd of Holsteins in good thriving condition. Mr. Rice intends moving to the large farm, recently run by the estate of the late Mr. E. D. Tilson, known as the Annandale Stock Farm, at Tilsonburg, Ont. Mr. Rice expects, in the very near future, to be running a herd of nearly 100 Holsteins.

In a certain Highland parish the church collection, after being counted, was placed in a box which was consigned to the care of the minister, says the author of "Bygone Church Life in Scotland." The minister hid it, with the key, in a place known only to himself and the beadle.

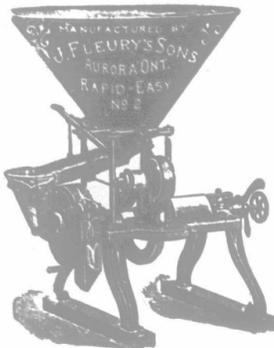
In spite of this, small sums of money were regularly extracted from the hoard, and one Sunday, when the minister discovered that some more had disappeared, he summoned the beadle.

"David," said he, "someone has been taking the church money from the box, and you know there is no one has access to it but you and myself."

Thinking he had the beadle thoroughly cowed, the minister fixed him with his eye, and paused for an answer. But David dumfounded him by his cool proposal.

"Well, now, then, if there's a de-beshment, it's for you and me to make it up between us and see something about it."

## "RAPID-EASY GRINDERS"



are sold more largely than any others. Within the last 9 months the output has increased 60%, and yet they are SELLING as fast as we can turn them out. You ask WHY? The ONLY answer we can give is that these grinders do MORE WORK with SAME POWER than any others. Here are parts of a few letters received lately:

"I am highly pleased with the No. 2 'RAPID EASY' Grinder I bought from Mr. Graham. I use a 10 H. P. engine—not a very strong one—and grind from 20 TO 30 BUSHELS MIXED GRAIN PER HOUR, and grind it AS FINE as ANY MILL in the country. I have used 8-INCH Grinders of DIFFERENT makes, but I think your 10-INCH run—just as easy."

CHAS. WALKER, Sharp's Corners, Ont.

"I have one of your No. 2 'RAPID-EASY' Grinders. It gives me GOOD SATISFACTION. I find it ALL you claim for it."

ABRAM ROWAND, Walkerton, Ont.

"I cannot praise the No. 2 10-in. 'RAPID-EASY' Grinder TOO MUCH. It is STILL doing the WORK and I have NOT WORN OUT ONE SET OF PLATES YET. I drive it by WINDMILL."

EDWARD C. TANNER, Sarnia, Ont.

"I moved down here from near Sunderland last spring. A thresher here has asked me to get a price on No. 2 'RAPID-EASY' Grinder. I was able to BEAT ANYTHING in the Townships of Brock and Mariposa, and I think I CAN DO IT HERE. I make some of the farmers LOOK when they have TO PROT a little (bringing grain to her)."

WM. R. OLIVER, Cobourg, Ont.

"Your GRINDERS are giving GREAT satisfaction. The last two are PLEASING the purchasers GREATLY. I set up the No. 3 (large machine) on Monday and it goes A No. 1."

MOS SCHIEDEL, Kossuth, Ont.

"Find settlement for GRINDER No. 3. It is giving VERY good satisfaction. With 14 H. P. engine we grind as much as 90 BUSHELS PER HOUR FINE CHOP."

ADAM GRAHAM, Nithburg, Ont.

The RAPID-EASY is made in sizes to suit ANY power. We would like to send you a machine. At any rate, WRITE US and state POWER you would use.

## GENERAL AGENTS:

The Fairchild Co., Winnipeg, Man. Bligh & Prince, Truro, N. S.  
J. Clark & Son, Fredericton, N. B. T. J. Trapp & Co., New Westminster, B. C.  
Lounsbury Co., Newcastle, N. B. A. Horne & Co., Charlottetown, P. E. I.  
K. E. Mutch & Co., Charlottetown, P. E. I. J. M. Clark & Co., Summerside, P. E. I.

A lithograph hanger showing Grinder, and ANY INFORMATION YOU ASK.

**J. FLEURY'S SONS, AURORA, ONTARIO, CANADA.**  
MEDALS and DIPLOMAS—World's Fairs, Chicago and Paris.

17  
Shorthorn Bulls

3 imported bulls.  
7 bulls from imp. sire and dam.  
7 bulls from imp. sire and Scotch dams.  
25 females, imp. and Canadian Scotch.

**R. MITCHELL & SONS,**  
Nelson P. O., Burlington Jct. Sta.

**GEDARDALE FARM.** For Sale, three young Bulls, from 6 months old to two years. All good standard reds and from first-class stock. "Gloucesters" and "Lord George" stock. Also three cows in calf, and three heifers, from one to two years old, two of them in calf. "Tribby," "Beauty" and "Flora" dams. DR. T. S. SPROULE, Markdale, Ont., P. O. and Station, O.

**3 SHORTHORN BULLS 3**  
FOR SALE.

Two 2-year-olds, 1 bull calf, all of good breeding and from deep-milking strains. Prices right. Also heifers for sale.

**W. B. ROBERTS, - SPARTA, ONT.**

**Shorthorns, Leicesters and Berkshires.**

FOR SALE—1-yearling bull, bull and heifer calves; Berkshire boars and sows, ready for service, and suckers ready to wean. Write for wants, or come and see E. Jeffs & Son, Bond Head P. O., Bradford and Beeton Stns., G.T.R. O

**Mertoun Herd of Shorthorns**

Established in 1882. Prince of Banff (imp.) = 45212 = heads the herd. THREE CHOICE YOUNG BULLS for sale; also A FEW FEMALES, in calf to Prince of Banff. Prices right. O

**D. HILL, STAFFA P. O., ONT.**

**Scotch-Topped Shorthorns**—(Imp.) Captain Mayfly (No. 28858), winner of sweepstakes at Toronto (1900), 1st at Toronto and London (1902), at head of herd. Animals of all ages and both sexes for sale.

JOHN C. BRICKER.

Elmira P. O. and Station, on G. T. R.

**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. O

**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.

**ISRAEL GROFF, ALMA, ONTARIO.**

## PROSPECT High-class SHORTHORNS

**HILL FARM** High-class SHORTHORNS  
FOR SALE: 8 bulls, from 6 to 18 months old; 2 sired by Aberdeen Hero (imp.), 6 by Royal Duke, he by Royal Sailor (imp.). Also some heifers.

J. R. McCALLUM & SON, Iona Sta., Ont.

## J. WATT &amp; SON,

Salem P. O., Ont. Stations G. T. R. & C. P. R., Elora.

**SHORTHORNS AND BERKSHIRES.** Ready for shipment, bulls by Royal Waver and Scottish Peer; also three two-year-old heifers, by Royal Victor and Valase; 40th, bred to Royal Archer (imp.) or Prince Louis (imp.). Our stock show excellent quality and individuality. Young Berkshire boars and gilts, rich in the blood of the great sweepstakes Baron Lee 4th. Write for description and prices.

## SHORTHORN BULLS FOR SALE.

Some ready for service, young, and bred from imported and Canadian stock; also a number of heifers and cows, Dorset sheep and Yorkshire swine for sale. D. BARTLETT & SONS, Smithville P. O. and Station, Ont. O

## SHORTHORNS AND BERKSHIRES.

4 extra good bulls from 7 to 9 months old, by Bandoiler = 40106 =; also 12-yr-old. Cows and heifers, with calves at foot or in calf, heavy milkers in herd. Berkshires—young sows 3 and 5 mos. old, lengthy bacon type, and with pedigrees of best breeding. Prices reasonable. O

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

16  
Shorthorn Bulls

## FOR SALE.

Bred in the herd that produced Topsman and Moneyfuffel Lad; sweepstakes winners at Toronto, all ages competing; also Lord Stanley, junior champion over all beef breeds, and heading three first-prize herds at World's Fair, Chicago.

Yonge St. Trolley Cars from Union Station Toronto, pass farm.

**J. & W. RUSSELL, RICHMOND HILL, ONTARIO.**

**SHORTHORNS.** 8 young bulls, 11 heifer calves, yearlings, two-year-olds and young cows for sale. Several Miss Ramdens and the very best families represented. Prices moderate. G. A. BRODIE, Hethesda, Ont. Stouffville Station. O

## 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.

WM McDERMOTT,  
Living Springs P. O.,  
Fergus Station.

## SCOTCH SHORTHORNS

Twelve blocky, sappy young bulls, 10 to 11 months old, reds and roans, sired by the Princess Royal bull, Imp. Prince of the Forest = 40192 =, and out of high-class Scotch and Scotch-topped cows. Also ten thick fleshed heifers, in calf to Imp. Prince of the Forest, placed at head of herd at cost of \$650.

Come and see, or write for prices.

J. & E. CHINNICK, Chatham, Ont.

## GOSSIP.

A prominent East Peterborough, Ont., Agriculturist passed away on January 20th, at Norwood, in the person of Mr. W. G. Patterson, who, until lately had been a resident of the Township of Dummer. Mr. Patterson had been for twenty-five years a member of the Board of Directors of the East Peterborough Agricultural Society, and the pallbearers at his funeral were chosen from the Board of Directors of the Society.

Mr. O. Sorby, Guelph, Ont., writes: "I have just sold to Mr. George Kirkwood, of North Keppel, Ont., the very finely-bred imported Clydesdale stallion, Tweed (1978), bred by Lord Polwarth. His sire is that good breeding horse, McRaith (10229), who was by McGregor, and his dam, Border Constance, was by Knight of Lothian, grandam by Prince of Wales, and great grandam by Darnley.

Sheep breeders and farmers who desire to improve their flocks should bear in mind the great sale of Shropshires from the flock of Mr. J. G. Hamner, to be sold at his Hill Home Farm, at Brantford, Ont., on February 17th, when and where 200 registered sheep are to be disposed of by auction. They, of the "golden hoof," are going to have their innings, and that very soon.

Mr. R. Taylor, Pithvie, Carnoustie, says the Scottish Farmer, seems to have acquired an insatiable appetite for the cracks of the Shorthorn breed, and his latest purchase is on his usual wholesale lines. From Mr. Dron, Criffvechter, he has bought nine yearlings—six heifers and three bulls—mostly sired by Golden Gift. Among these is Golden Charm, got by Golden Gift, out of Village Belle, which alone cost £350. The other eight yearlings are of exceptional style, quality and colors. A two-year-old daughter of Golden Gift, named Lady Catherine, and in calf to the first-prize Highland winner, Proud Favorite, was also purchased. It took some money to entice Mr. Dron to part with the last-named heifer, but Mr. Taylor ultimately secured her.

South American buyers continue to scour the Old Country in search of the very best class of yearling and two-year-old Shorthorns for exportation. Mr. Casares, of Buenos Aires, who recently bought Sir John Gilmour's stock bull, Royal Archer, the champion of the breed at the Highland Show, for 600 guineas, has purchased from Lord Fitzhardinge, Berkeley Castle, Gloucestershire, the two-year-old heifer Darlington LXVIII, at the handsome price of 200 guineas. The heifer is about due to calve to a bull which is a direct descendant on both sides of the house of the record-priced bull, Duke of Connaught. Mr. Casares also offered 300 guineas for a couple of yearling heifers of the same strain, but Lord Fitzhardinge declined to part with them under 400 guineas. Mr. Hughes, another enterprising exporter to the Argentine, has purchased from Sir Nigel Kingscote a couple of heifers and a young bull at high prices.

The imported Shire stallion, King Holt, a photograph of which appears on another page of this issue, is a fair representative of the class of draft horses, imported by Truman's Pioneer Stud Farm, Bushnell, Ill., whose advertisement will be found in this paper. The picture is a photograph, and hence, a true likeness without any fixing up. This is one of the most enterprising importing firms in America. They are Englishmen who have been brought up to the business of breeding high-class Shire horses, are first-class judges of a draft horse, and having interests on both sides of the Atlantic, having a resident buyer in England, know where the best horses are to be found, and can buy to the best advantage; hence, can afford to sell at as reasonable prices as any, and are regarded as reliable business men. They also handle Percheron, Belgian and Suffolk stallions, and give satisfactory guarantees. We advise all interested to write J. G. Truman, Manager, Bushnell, Illinois, for their catalogue.

Oxford Down Sheep at "Farnham Farm."

Flock established 1881. First time entered show-ring since "World's Fair," Chicago. Won this year at Toronto, Syracuse, London and Ottawa, 40 firsts, 25 seconds, 12 thirds and 6 champion prizes.



HOLSTEINS, TAMWORTHS, COTSWOLDS Present offering: Bull calf, 8 mos., won 4 first prizes. Litter 3-month-old pigs, and younger ones; choice animals. Ram and ewe lambs and two 2-shear rams; perfect covering. H. O. BEECHER, Hilton, Ont., Brighton Sta., G. T. R.

JERSEYS For sale: Sweepstakes bull at London, 1903, 30 months old, sired by Brampton Monarch (Imp.) and out of a deep-milking cow; also fifteen other imported and home-bred bulls, and cows and heifers, all ages. Can spare a carload. B. H. BULL & SON, Brampton, Ont., C. P. R. & G. T. R. Sta., om

EUROPEAN ADVERTISEMENTS.

W. W. CHAPMAN,

Secretary of the National Sheep Breeders' Association, Secretary of the Kent or Romney Marsh Sheep Breeders' Association, and late Secretary of the Southdown Sheep Society.

Pedigree Live Stock Agent, Exporter and Shipper. All kinds of registered stock personally selected and exported on commission; quotations given, and all enquiries answered.

Address: HOWBRAY HOUSE, NORFOLK ST., LONDON, W. C., ENGLAND.

Cables—Sheepsote, London.

BEST and CHEAPEST IN THE MARKET. Kemp's Instantaneous Sheep-Dipping Fluid. 1-gal. Imperial tin for 75c. STRENGTH EQUAL TO ANY. Instantly kills ticks and parasites on sheep and lambs. Improves and waterproofs the wool. A sure remedy for vermin, mange, etc., on horses, cattle, sheep, and dogs.

CLAYFIELD STOCK FARM

J. C. ROSS, PROP., JARVIS, ONT. Cotswold Sheep ready for shipment. Shearling and yearling rams, bred ewes and ewe lambs; imported and Canadian-bred. My flock has won 131 firsts and 85 seconds at Toronto, London, Guelph and other county shows, also silver medal and two diplomas, during the last two years. Shorthorns ready for shipment. Two yearling bulls, one six months' bull and several young heifers of choice breeding. Clydesdales—I have for sale two or three very choice two-year-old and three-year-old fillies. Accurate Description Guaranteed.

Linden Oxfores.

Imported and home-bred stock of the choicest breeding always on hand.

R. J. HINE, Dutton, Elgin County, Ont.

FAIRVIEW SHROPSHIRE EWES.

A few good ones, bred to first-class imported prize-winning Rams, for sale. Also Barred Rock cockerels, equal to the 1902 birds, which, without exception, pleased customers. Prices \$1.50 and \$2.

JOHN CAMPBELL, Woodville, Ont.

Lincoln Sheep and Shorthorn Cattle

Choice Lincoln Lambs of both sexes. Several carloads choice yearling rams and two carloads of one and two-year-old ewes, ready for Sept. and Oct. delivery. Also some choice young bulls, cows and heifers, which will make good herd foundations.

F. H. NEIL, PROP.

Telegraph and R.R. Station, LUCAN, ONT.

SHROPSHIRE shearing rams, shearing ewes, ram and ewe lambs of choice breeding. Prices right. GEO. HINDMARSH, Alisa Craig, Ont.

"MODEL FARM" SHROPSHIRE

Everything sold that has been offered for sale. Am booking orders for rams and show flocks. August delivery. Write for prices.

W. S. CARPENTER, PROP., SIMCOE, ONTARIO.

Only The Best. My small but select importations of Shropshires and Short-horns are just home. Imported and home-bred rams and ewes, bulls and heifers of the best quality and breeding for sale at moderate prices.

ROBERT MILLER, Stouffville, Ont. Representative in America of Alfred Mansell & Co., Shrewsbury, England.

"BROAD LEA OXFORDS." Am offering choice ewe and ram lambs, shearing ewes and a few shearing rams for flock headers. Also young Yorkshire pigs of the best bacon types. Teeswater, G. T. R. W. H. ARKELL, Mildmay, G. T. R. om Teeswater, Ont.

American Leicester Breeders' ASSOCIATION.

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

Pedigrees now being received for Vol. 5. For information, blanks, etc., address:

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

TAMWORTHS

At living prices. Have some excellent young stock of good bacon type; both sexes. LOUIS D. BARCHFELD, Grimaby, Ont., P. O. and Station. Telephone on farm.

GLENHOLM HERD OF TAMWORTHS

For sale: 1 boar, 6 months; Sept. and Oct. pigs, both sexes. Pairs supplied not akin.

F. O. SARGENT, Eddystone, Grafton Sta., G. T. R.

YORKSHIRES

FOR SALE, from the Pioneer Herd of the Province Quebec, both sexes and all ages. Satisfaction guaranteed on all mail orders. Also a few Pekin ducks and White Rock cockerels left for sale.

Railroad stations: Athelstan, N. Y. C. Address: Huntingdon, G. T. R.

A. GILMORE & SONS, Athelstan, Que.

IMPORTED AND CANADIAN-BRED YORKSHIRES.

Sows bred to farrow March and April to imp. show boars. Also boars ready for service, and young pigs, all ages, shipped not akin. The sweepstake young herd and sweepstake sow, any age, were bred by me.

H. J. DAVIS, Importer and Breeder of Yorkshires and Shorthorns. WOODSTOCK, ONT.

BERKSHIRES AND YORKSHIRES.

For Sale—Boars fit for service; sows in farrow and ready to breed, and younger stock, all of the ideal bacon type. Pairs not akin. JOHN BOYES, Jr., Rosebank Farm, om Churchhill, Ont.

Weston Herd Large Yorkshires

Choice young stock for sale, from imported and home-bred stock of highest breeding and quality. Prices low. Satisfaction guaranteed. My motto: "Not how cheap, but how good." Telephone, Telegraph and Stations: C. P. R. and G. T. R., Weston, Ont. (electric cars from Toronto). Address: om

L. ROGERS, EMERY, ONT. Willow Lodge Berkshires.

I will offer very cheap for the next thirty days, young boars and sows from 2 months old up to 7 months old, of extra quality and breeding, in order to make room for the litters now with sows. Can supply pairs not akin.

WM. WILSON, Snelgrove, Ont.

YORKSHIRES

For sale: Sows in pig to imported boar; sows 3 months old; boars imported and home-bred; at reduced prices for one month. Write om C. & J. CARRUTHERS, COBBOURG, ONT.

FOR SALE: Yorkshires and Holsteins

Best type and quality. Young stock constantly on hand. Prices right. R. HONEY, om Brickley P. O., instead of Warkworth.

Chesterswine

From Toronto and London prize-winners. Doreet sheep and lambs. Prices reasonable. R. H. HARDING, Mapleview Farm, om Thorndale, Ont.

YORKSHIRES AND COTSWOLDS.

Grand young boar and some excellent young sows, 5 months old, of right type. Also high-class Jersey cattle and young Cotswold ewes. WM. WILLIS & SON, Newmarket P.O. and Sta.

LARGE YORKSHIRES

GLENBURN HERD; winners of gold medal 2 years in succession; averages 100 head. Sires at head of herd: Imp. Holywell Hewson and Oak Lodge Prior. A large number of sows for sale, due to farrow in March or April, also a few good young boars. Prices reasonable. David Barr, Jr., Renfrew, Ont., Box 3.

FOR SALE—Ohio Improved Chester Whites, the largest strain, oldest established registered herd in Canada; young sows in farrow; choice young pigs, six weeks to six months old; pairs not akin; express charges prepaid; pedigrees and safe delivery guaranteed. Address: E. D. GEORGE, Putnam, Ont.

GOSSIP.

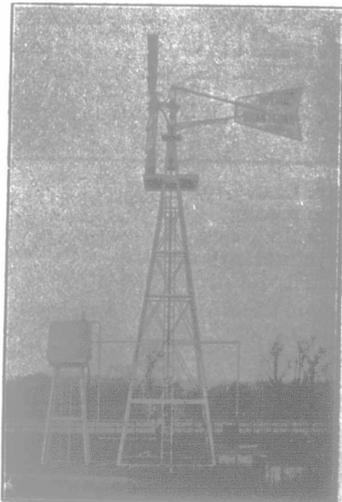
Messrs. Dunham, Fletcher & Coleman write: "Owing to the fact that the last of their 1903 importations of Percheron, French Coach and Belgian stallions and mares did not reach the United States until late in the last year, the issuance of the Oaklawn catalogue has been somewhat delayed. It will, however, be ready for mailing in a few days now, and all who desire a copy of this splendidly illustrated book should write the firm at Wayne, Illinois. The regular advertisement appears elsewhere in this issue."

In reporting the shipment of a consignment of Suffolk sheep to Messrs. Lane Bros., of P. E. I., Mr. Ernest Prentice, Ipswich, Eng., Secretary of the Suffolk Sheep Society, writes: "As soon as Canadian sheepmen realize the fact that the mutton value will in the future be increasingly more important than wool value. Suffolks will become the breed in the Dominion. They are the best 'rustlers,' and are unequalled for hardiness and fecundity. In recent years they have held the leading position in the Smithfield Club Carcass Competitions."

Mr. Oswald Sorby, Guelph, writes: "I have just sold to Mr. James Smillie, of Inwood, Lambton Co., Ont., the imported Clydesdale stallion, Bombe, by Baron's Pride, dam by Macgregor. He was twice a first-prize winner at Glasgow Show. His full sister, Lady Victoria, was the Cawdor-cup winner. His full brother, Earl of Bombe, was champion at the International Show in 1900. For four years he was King Edward's stud horse at his Windsor farm, and he was quite a prizewinner while in England. Judging by the photograph of Baron Bombe sent us by Mr. Sorby, he is a worthy son of his illustrious sire, and his breeding and record should make him an excellent investment, even at the big price paid for him. Mr. Smillie is to be congratulated on securing such a horse and the district he goes to on having the privilege of his services."

Official Records of Holstein-Friesian cows, from Jan. 5th to Jan. 18th, 1904: Records of forty-three cows were received, all of which have made seven-day records, one a sixty-day record, three thirty-day records and four fourteen-day records. Twelve full-age cows averaged, age 6 years 8 months 27 days, days after calving, 19: Milk, 421.8 lbs.; butter-fat, 14.880 lbs.; equivalent butter, 17 lbs. 4.8 ozs., percentage of fat, 3.54. Six four-year-olds averaged, age 4 years 5 months 27 days, days from calving, 33: Milk, 432.2 lbs.; butter-fat 14.696 lbs.; equivalent butter, 17 lbs. 2.3 ozs.; percentage of fat, 3.40. Seven three-year-olds averaged, age 3 years 3 months 6 days, days after calving 19: Milk, 375.1 lbs.; butter-fat, 12.079 lbs.; equivalent butter, 14 lbs. 1.5 ozs.; percentage of fat 3.27. Eighteen two-year-olds averaged, age 2 years 2 months 11 days, days from calving, 29: Milk, 301.4 lbs.; butter-fat, 10.870 lbs.; equivalent butter, 12 lbs. 10.9 ozs., percentage of fat 3.61.—S. Hoxie, Supt.

Messrs. D. C. Platt & Son, Millgrove, Ont., who advertise in this paper Large English Yorkshire hogs, write: "We are now booking orders for spring pigs got by three as good if not the best boars in America. Two of them are first-prize and silver medal winners at Toronto. Summer Hill Duke of York, we claim, is the best boar to-day we ever owned, both as an individual and a stock-getter. He weighs over 800 lbs., and is as smooth as it is possible to get a hog. Expert judges that have recently seen him pronounce him a model of the breed. Summer Hill Slasher is another hog that will be heard from at the fairs next year. He is a young hog with great promise. He has substance and quality equal to anything in the herd. Among the sows we have bred to these are a number of our prize-winners at Toronto and London. We should be able to supply our customers with winners for the fairs next fall. Parties wanting something good from March and April litters should write us for particulars. Prices are reasonable. We are also offering about one hundred pigs of both sex, now about three months old, extra quality and breeding, and prices right."



CUT OF

"IMPERIAL" PUMPING WINDMILL

Outfit which won the CHAMPIONSHIP OF THE WORLD against 21 American, British and Canadian manufacturers, after a two months' thorough trial. Made by GOULD, SHAPLEY & MUIR CO., Limited, Brantford, Canada.

THE L. O. SMITH FEED & LITTER CARRIERS.

Patented June 16th, 1903. Can be adapted to any barn or farm building. Write us for particulars. LYMAN C. SMITH, OSWAGA, ONT.

GENUINE Pratt's Astral Lamp Oil SOLD IN ALL COUNTRIES, AND RECOGNIZED AS THE HIGHEST-GRADE OIL MANUFACTURED. WHOLESALE ONLY. THE QUEEN CITY OIL CO., Limited, TORONTO.

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"Fruitland," Kamloops, B. C. Newly-developed irrigated lands in the beautiful fertile valley of the Thompson River, on the main line of the C. P. R., within half a mile of the City of Kamloops, the inland capital of British Columbia, and a well-known health resort. Significant soil for fruit of all kinds: Apples, peaches, cherries, plums, peaches, grapes, strawberries, and all kinds of vegetables grown in abundance. Perfect climate; air dry and bracing. Good schools, churches, boating, shooting, fishing, etc. For full information apply to: Manager, Canadian Real Properties, Ltd., Box 155, Kamloops, B. C.

BRITISH COLUMBIA FARMS

Mild climate, the best dairying country in North America. No blizzards. No cyclones. No droughts. No hot winds. No summer frosts. No cloudbursts. The heaviest crops per acre in Canada. We make this statement without fear of contradiction. Cool nights and good water. The best price for all kinds of farm produce. THE CALIFORNIA OF CANADA, with land at one-tenth the price.

Write for farm pamphlet to THE SETTLERS' ASSOCIATION, BOX 540, VANCOUVER, B. C. Please refer to this paper.

BISELL'S STEEL ROLLER.

6, 8, 9 and 12 foot widths. The favorite rollers for all the Provinces. Write for full description and reasons why Bissell's are the best. Address om T. E. BISSELL, Dept. W., Elera, Ont.



In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

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...CREAM  
SEPARATORS

Are famed for their easy running, due to simplicity of construction. See the self-balancing, frictionless bowl. Write for booklet.



**R. A. LISTER & CO. LTD.**  
579 & 581 ST. PAUL STREET,  
MONTREAL.

Every Farmer Should Have a

**2,000-lb.**  
**KING EDWARD**  
**SCALE**



Get our special prices this month

Manufactured by  
**G. Wilson & Son, Ltd., Toronto, Canada.**



**BOOK SALT** for horses and cattle, in ten and car lots.  
Toronto Salt Works, Toronto.

**BOYS FOR FARM HELP.**  
The Managers of Dr. Barnardo's Homes invite applications from farmers, or others, for the boys who are arriving periodically from England to be placed in the country. The young immigrants are mostly between 11 and 15 years of age; all will have passed through a period of training in Dr. Barnardo's English institutions, and will have been carefully selected with a view to their mental and physical suitability for Canadian life. Full particulars as to the terms and conditions upon which the boys are placed may be obtained upon application to Mr. Alfred B. Owen, Agent Dr. Barnardo's Homes, 214 Park Ave., Toronto.

**CURES RUPTURE**



A Startling Discovery by an eminent Toronto specialist, by which Rupture of all forms and conditions, no matter how bad, or of how long standing, can be cured, painlessly, rapidly and permanently, at home; without a moment's loss of time from work. **REV. C. N. DEWEY**, of Wheatley, Kent Co., Ont., whose portrait here appears, is cured and not a moment from his pastoral duties. A valuable book full of information to the ruptured and a **Free Trial Treatment** sent, plainly sealed, free of all cost. Strictly confidential. **DR. W. S. RICE**, 2 Queen St. East, (Dept. 27), Toronto, Ont.

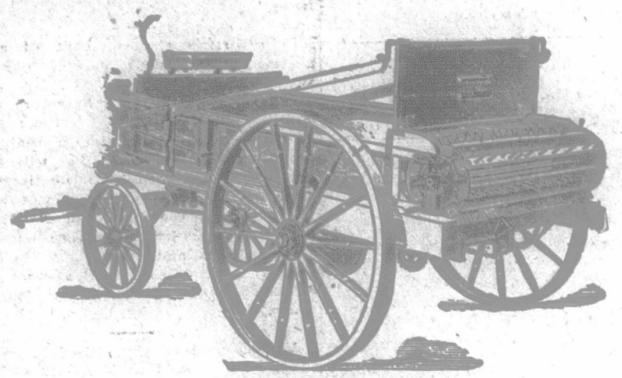
**EWING'S**  
Selected Farm and Garden  
**SEEDS**

are thoroughly reliable and better cannot be found. We mail free our Illustrated Seed Catalogue for 1904 to all sending us their address. Our assortment is complete, and includes full lines of Plants, Flowering Bulbs, Shrubs, Trees, Etc., besides all varieties of seeds for farm or garden, and Seed Grain.

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**WANTED IN CANADA**  
Position of General Manager. Thoroughly acquainted with all phases of stock-raising and grain-growing in Canada. Address  
**W. H. GEAR,** 100 St. George Street, Stoke Newington, London, E.C.

**Kemp's 20th Century**  
**Manure Spreader.**



**A CROP-MAKER and**  
**A LABOR-SAVER.**

WHOLESALE LUMBER YARD, BURLINGTON, VT.      J. R. BOOTH, LUMBER MANUFACTURER, Ottawa, Ont., November 14th, 1903.

Mr. R. King Farrow, 520 Gilmour St., Ottawa, Ontario:  
Dear Sir,—I have just had a chat with Mr. Sleeth, my farm foreman, in reference to the two "Kemp 20th Century Manure Spreaders" purchased from you a few weeks ago. He is very extravagant in his praise of these implements, both as savers of labor and efficiency and economy of the work they perform. They appear to be everything you guaranteed, and I most cheerfully recommend the Spreader to fellow farmers in this district.  
Yours very truly, J. R. BOOTH.

Drop a postal card for our Booklet, entitled "Multiplying His Acres."

**The KEMP MANURE SPREADER CO., Ltd., STRATFORD, ONT.**



Sunlight Soap makes homes bright.

**SUNLIGHT SOAP**

should be used to clean your house as well as wash your clothes. It does twice the work of a common soap in half the time and with less labor. Don't take our word for it, but try it for yourself.

ASK FOR THE OCTAGON BAR

Sunlight Soap Washes the Clothes White and won't Hurt the Hands.

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**HELP WANTED! RELIABLE MEN**  
IN EVERY LOCALITY IN CANADA AND UNITED STATES

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**ONE CENT WILL**  
**MAKE US ACQUAINTED**



DROP us a post-card, if your present thoughts are about Cream Separators. AND we'll tell you the merits that have led the NEW CENTURY AMERICAN from victory unto victory. AN enquiring acquaintance becomes a buyer and warm friend. HENCE we want to know you—and you will profit by knowing us.

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**Maple Sugar Makers**



"It costs but the asking to learn the Grimm system for tapping, and gain at least one pint of maple syrup from every tree. A Grimm sap spout is inserted without injury to the tree. Samples free. Estimate guaranteed."

**Champion Evaporators.**  
**MAPLE SYRUP**  
**EVAPORATOR.**

Not a single feature of the "Champion" Evaporator could be dispensed with and leave a perfect Evaporator. Durability, rapidity, and high quality of product, with saving of fuel, are its features. Our sectional pan system makes it easy to handle, and evaporating. Write for catalogue, state number of trees you tap, and an estimate of your requirements will follow.



Also manufacturers of the  
**CHAMPION FRUIT EVAPORATOR.**  
**The Grimm Manufacturing Co.**  
84 WELLINGTON ST., MONTREAL.

**Ferro-Nervo**  
(The French Nerve Tonic)

A positive cure for all diseases arising from a deranged and exhausted condition of the vital forces of both male and female, irrespective of the cause, duration or condition. Permanently and positively cures nervous prostration, palpitation of the heart, weakness, mental dependency and worry, sleeplessness and impoverished blood. Ask your druggist or send us \$1.00. Money back if dissatisfied.

Royal Chemical Co., Windsor, Ont.

FOR MEN      FOR WOMEN

**TORONTO**  
**ENGRAVING CO.**  
**92 BAY ST**  
CUTS BY ALL PROCESSES  
LIVE STOCK A SPECIALTY

**Farmers Contemplating Marriage,**  
AS WELL AS  
**Those Already in Wedded Bliss,**  
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