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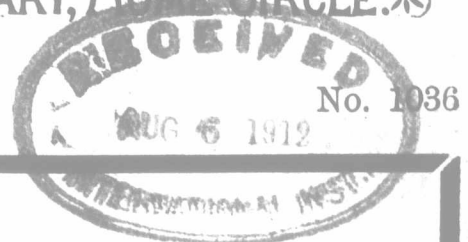
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Vol. XLVII.

LONDON, ONTARIO, AUGUST 1, 1912.



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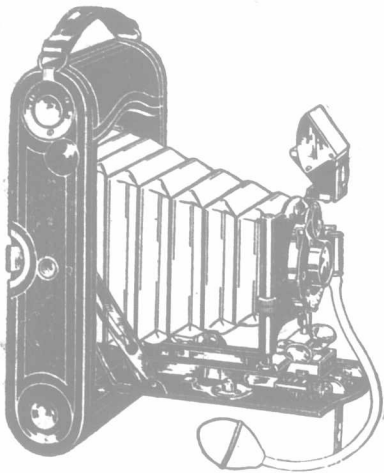
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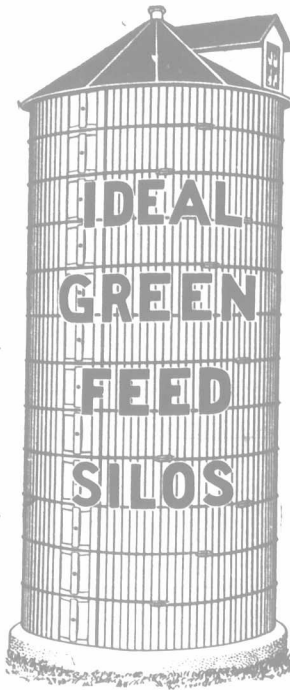
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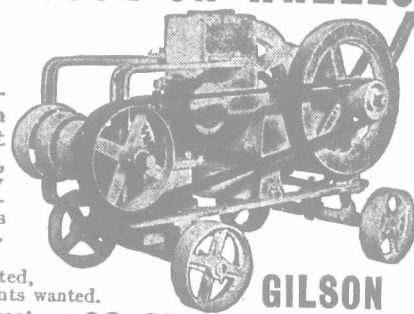
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Vol. XLVII.

LONDON, ONTARIO, AUGUST 1, 1912.

No. 1036

EDITORIAL.

Alberta cattle are expected at Chicago this year, in the face of a 27½-per-cent. tariff.

Onward the silo continues its irresistible sweep. The day is now not far distant when silos in Western Ontario will be almost as numerous as barns.

An immense crop of oats seems to be maturing the continent over. There is no safer and no better grain feed. Oats, corn and clover make a great combination.

A leading authority in the New England shoe trade is quoted as saying that in a little over four years the growth of the automobile industry had helped to advance the price of leather 72 per cent. This is another bright spot in the horoscope of the cattleman.

Dairying and the production of canning-factory crops like peas and corn have been found a money-making combination in Prince Edward, in Elgin, and in many other counties. Cured pea straw and ensiled sweet-corn stalks from which thirty dollars' worth of ears per acre have been sold, make economical cattle feed.

Present indications point to an abundant harvest, and the stoutness of the straw insures a more comfortable bed for the live stock than that which served them last winter. In a year of plenty the straw is not often valued high enough by the growers. It takes a year like 1911 to convince people of its importance.

Free house, garden, milk, fruit, and, in some cases, fuel, constitute a much-appreciated addition to the hired man's income, an addition which nearly always represents more to him than it costs the employer. The plan has the further merit of improving the home life of both parties, and often secures an extra hand to milk.

The calf slaughter still goes on, and the consumer complains of dear beef. The cattle-feeder is being gradually compelled to operate on a smaller scale because of the scarcity of stockers. Feeding cattle and finished beef must continue to be scarce and high in price, unless something is done to put an end to the unwarranted slaughter of the calves.

Already we read of a scarcity of labor in the West, and the need of thousands of men to harvest a bumper crop. Men of the Eastern Provinces need not go West in search of work. There is plenty to do, at a good wage, at home. A big crop is being taken off here, and labor is scarce. Financially, after deducting expenses, the man who stays in the East will be the best off.

Silos have become all but universal in Oxford and East Elgin Counties. In two days' drive we met only two or three farmers without them. One of those is likely to build before long; the others are operating on a very small scale. Many have two silos, and some three or four. One man, with three hundred acres, had four, 20 x 42 feet, 15 x 42 ft., 16 x 40 ft., and a small one 15 x 30 ft. Fourteen by forty and sixteen by forty are every-day sizes in Oxford.

Sprinkled over Eastern Canada may be found exceptionally good farmers who have made ten, twenty and forty thousand dollars at dairying and hog-raising, fruit-growing or mixed husbandry, and better opportunities than they had are still open. In the West, such examples would be blazoned forth in immigration literature, written up in the papers, and heralded far and wide to indicate the resources of the country. What the East needs is self-discovery through advertising.

The Grand Trunk management announces that more than eight thousand heads of Ontario families, with about five million dollars in cash, have settled along its line in Manitoba, Saskatchewan and Alberta. It may be good business for the Grand Trunk to subtract from the East in order to build up the West, but where will Ontario get off? We can appreciate the anxiety of the corn-belt States to stem the Northward migration of their people.

It is false economy to do without things which can be made earn a very large interest on the investment in farm operations. Most of the labor-saving devices now employed on up-to-date farms are profitable investments, but in their installation, as well as in the purchase of everything required for the farm, even hired labor, a low price is not always the best guide. Very often, the highest-priced machine, implement or man is the most profitable in the long run.

The hay crops are harvested, and some of the early fields of grain are in the barn. Now is the time to begin after-harvest cultivation. The man who commences to prepare for the next crop as soon as the present crop is harvested is the one most likely to reap the largest yields. There is no better way in which to destroy innumerable weed seeds and to hold moisture during the dry season of late summer and early autumn than to plow lightly, thoroughly disk or cultivate the land as soon as the crop is off the unseeded grain stubble.

One of the most satisfactory observations of a recent trip through Oxford County was the extent to which dairymen have adopted the plan of milking at five o'clock. Five a. m. and five p. m. seems to be the rule. This divides the day evenly for the cows, and winds everything up in time for supper between six and seven p. m. The day has gone by when men would stay ten hours in the field, with four or five hours' chores extra. A business view of dairying regards milking as part of the day's duty, and expects a corresponding reduction in the other work accomplished. And what is good for the servant is also well for the master. A definite quitting hour is best all round.

That public school education in America has been made altogether too bookish, too academic and too little in touch with the practical realities of every-day life, as it must needs be subsequently experienced by the majority of pupils in a community where the masses as well as the classes are schooled, is commencing to dawn upon other persons besides agriculturists, who, as a class, have been the first to perceive it. A slashing arraignment of the American public-school system along these lines appears in a recent issue of the Ladies' Home Journal, the writer, in her impatience, going so far as to call it an absolute failure, complaining that it fails to fit girls for household duties or boys for productive citizenship.

What Shall I Do, with My Milk?

What shall I do with my milk? This question, recently discussed in "The Farmer's Advocate" by Prof. Dean, is with many dairymen one of the live problems of the hour. Four main lines of dairying are open to various readers of this paper.

1. Home buttermaking.
2. Selling the milk outright to condensary or for retail trade.
3. Patronizing the cheese factory.
4. Sending cream to the creamery or supplying a sweet-cream trade.

With a very few exceptions, home dairying is out of the question in communities where co-operative facilities exist. To spend ten hours a week churning, working and marketing five or ten dollars' worth of butter, which might have been made at the creamery, is not good business, as anyone would find who had to hire the work done at current wages. As a rule, the creamery will pay nearly as much cash as can be obtained for dairy butter, and a great deal of needless trouble is avoided.

* * *

Selling the milk outright has been attractive to many, because of the ample cash returns, these usually running a good deal beyond cheese-factory or creamery checks. For instance, the condensary at Aylmer paid, for the year ending March, 1912, an average price of \$1.23½ per cwt., running from \$1.55 for the four winter months, down to \$1.00 for June and July of this year. The milk-powder factory at Brownsville has paid similar prices, but increased during July to \$1.05 for the first half and \$1.15 for the latter half, with \$1.20 promised for August. The conditions demanded are not very onerous, once the necessary facilities have been provided. In brief, they are quick cooling and cleanliness. Cans are washed at the condensary, but the patrons haul their own milk, many of them co-operating with each other, taking turn about. Where one lacks a cooler and has to use cold water, or even ice, it takes quite a while to lower the temperature to 50 degrees, and the delay cuts into a forenoon's work.

For city trade, much the same conditions obtain. Take London as an example. Wholesale prices here last year were lower than at most other cities, running \$1.20 per cwt. for summer months and \$1.40 for winter. Some purveyors paid more, but these, as a rule, insisted on a pretty regular supply, which is one of the most expensive and troublesome conditions the producer has to meet, frequently entailing the purchase of cows and feed on scant markets, and at other times leaving a surplus of milk to be fed to pigs or churned into a dab of butter.

That sale of milk leaves no by-product for hog-feeding, is accepted by many with complacence, thanks in part to the irregularity of the pork market and a current belief that packers have not given farmers a square deal. One condensary patron declared to us that he would not have whey for the bother of washing the cans. It was no good, anyway. He had tested it once by feeding a bunch of pigs on whey and rape, and the pigs did nothing! No wonder. On the other hand, one of the largest dairymen in Oxford County says his farm shows the effect since the hog-manure supply has been cut off, though he is feeding practically everything he raises and buying some grain besides for his cows.

Chemistry throws light on this subject. One

THE FARMERS ADVOCATE AND HOME MAGAZINE

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thousand pounds of average whole milk contains 5.8 pounds nitrogen, 1.9 pounds phosphoric acid, and 1.7 pounds potash. Suppose a herd of twenty cows, producing one hundred and twenty thousand pounds of milk a year. This would contain 696 pounds nitrogen, worth, at commercial-fertilizer prices, \$125.28; 228 lbs. phosphoric acid worth \$13.68, and 204 pounds potash, worth \$10.20, or a total of \$149.16 worth of plant food—practically a hundred and fifty dollars' worth. Of course, seeing that a large proportion of this plant food is nitrogen, which the growth of legumes and purchase of grain would partially, if not wholly, restore, it should be possible to keep up and probably increase the productivity of a farm while selling milk, if the land has a good bottom to begin with. But fertility will not increase so fast as if feeding whey or skim milk to hogs, and carefully applying the hog manure. That dairymen may be found in the finest sections of Oxford County buying fertilizers, and convinced that it pays, proves that the chemist's calculation is worthy of consideration. The effects of selling fertility become increasingly evident with time.

Now comes the cheese business. Cheese, with hogs as a side-line, has been the making of many of the finest farming sections of Canada, and, while cash returns have seldom run so high as from the sale of milk, they have been fairly steady, while production of milk for the factory, leaving the cans on the milk-stand each morning for a hired hauler, entails a minimum of labor and expense. Cheese dairying interferes comparatively little with the routine of farm work. Moreover, the multiplying demands for milk for city trade, for condensing, and so on, are tending to restrict the make of cheese, and thus raise prices. This year, sales for April, May, June and July have netted patrons rather better than a dollar per hundredweight of milk. In addition, they have 96 pounds of whey for each hundred pounds of milk, and pasteurized whey is counted good value

at 10 cents per cwt. Reverting to our suppositious example, suppose the hundred and twenty thousand pounds milk from twenty cows all went to the cheese factory—it doesn't, because cheese is not made in winter, but, for sake of comparison, suppose it did—this would yield one hundred and eight thousand pounds of whey, worth \$108.00 for feeding. Even from a fertilizer point of view, this whey would contain approximately, according to Henry, 108 pounds nitrogen, worth \$19.44; 118 pounds phosphoric acid, worth \$7.08, and 216 pounds potash, worth \$10.80, or a total of \$37.32. The large difference in fertilizing value between the whole milk and whey is principally represented by the nitrogen in the casein, which, along with fat, constitutes the bulk of the cheese. Near the Brownsville milk-powder plant is a cheese factory, and the salesman, Alex. Fulton, gave us these figures from his own business. He has 100 acres of land, on which he grows corn, oats, clover and some wheat. From seventeen cows, his cash proceeds for milk during 1911 amounted to \$1,109.17. In addition, he runs off each year about forty hogs, purchased as suckers, and sells three or four hundred bushels of wheat. He does the work with the help of a married man living on the place, and the condition of his farm may be judged from the fact that his average yield of fall wheat is 35 bushels per acre. There is permanency and satisfaction in a system of dairying like that, with less onerous labor than where enough cows are kept to consume all the produce of the farm. It is more interesting and less binding, even if not always quite so remunerative. We notice that the man who goes in for keeping as many cows as his place will carry usually gets tired of the business after a while, and wants to sell out and quit.

Perhaps least remunerative in direct returns, but in many respects one of the soundest and best lines of dairying to follow, is the sale of cream—sweet cream, at sweet-cream prices where that is possible, but otherwise patronizing a butter-factory. As Prof. Dean says, selling cream "means more and better live stock, more fertility retained on the farm, and, to a man on a worn-out or wearing-out farm, this is no small matter to consider." A ton of butter-fat removes from the soil scarcely a cent's worth of fertility, and when a rich cream is skimmed, the removal of fertility from the farm is a negligible factor, for about nine-tenths of the plant food in the whole milk is retained on the farm to be fed to young stock, which in turn void a goodly percentage of the fertilizing constituents as manure.

Going back to our hypothetical example, let us see how the three lines of dairying compare in respect to the removal of fertility:

Sale of whole milk, 120,000 lbs., removes	\$149.16
Sending to cheese factory 120,000 lbs., removes	\$149.16—\$37.32= 111.84
Selling cream from 120,000 lbs. removes	\$149.16—\$134.24= 14.92

Skim milk, however, like whey, when rightly used, has a much greater value as feed than as manure. For economical rearing of good calves it is almost indispensable. If a farmer wishes to build up a high-class herd of cows, or, again, if he wishes to raise steers, skim milk has a value almost impossible to estimate. For colts, poultry and hogs, it also comes in to excellent advantage. Look for thrifty stock on a farm where skim milk abounds. Considering prices of other feed, 25 cents per cwt. is a very low value to place on warm, sweet separator milk, and, in reasonable quantities it can easily be made worth much more. Having regard to the steadily advancing price and difficulty in buying good cows, shrewd dairymen need hardly be reminded of the wisdom of breeding their own heifers, and some for sale, as well. It makes a more interesting, less laborious and usually more profitable system of farming than milking an unlimited number of cows, sacrificing the discards every little while at low prices, and going out with hard cash to purchase substitutes.

So there is a great deal more to this subject than cash returns. The aim should also be to de-

velop a permanently profitable and satisfying system of farming, to conserve fertility and to solve the labor problem, by eliminating the drudgery of too much milking, which ties every hand to the place week in and week out.

Perhaps we may conclude by endorsing an opinion recently expressed to us in conversation: Dairy products are bound to rise in value. There is no getting away from it. Expanding demand, advancing wages, and opportunities open to farmers in other lines, all taken in conjunction with the inherent nutritive value of milk, will contribute to this end. Dairying is an excellent line for the young farmer to adopt in moderation. Aim at quality of product. Keep a few cows, feed liberally, and select closely. Eliminate the culls; they wear the heart out of a man, without putting him ahead.

An Erroneous Theory.

The American theory of protection is that the measure of the customs duties should be fixed by the difference between the cost of producing an article in the protected country, and the cost of producing the same article in foreign and competing countries. The part that protection plays in enhancing the cost of domestic manufacture is ingeniously overlooked. Manifestly, a country that imports anything must pay for its imports with exports. The exports being sold in foreign markets, probably in the face of duties, must have been produced at a cost which would admit of competition with similar products from the country where they are produced cheaply as staples. Plainly, the basic industries of a country, which supply the bulk of its exports, cannot be protected by import duties in any large way (unless combined in gigantic organization to eliminate competition in the home market, and maintain prices artificially there above the level of the exportable surplus).

But the protection of secondary industries, by making some things dear, raises the cost of production in the basic industries, and hampers them in meeting competition in export markets. Except as in the case of a young nation desiring to develop cities and provide reasonable diversity of employment, high protection, as an ultimate policy, is obviously fatuous, its effect being to handicap the industries for which a country is specially adapted, in order to develop others for which it is less fitted, and which are, accordingly, less profitable. It thus entails an economic loss. It is just possible that a very small revenue tariff, say 5 or 10 per cent., might prove of advantage to the country collecting it, but a high-tariff policy is an expensive burden.

Undoubtedly, a chief source of erroneous argument both in the United States and Canada is neglect of the farmer's interest. The agricultural community has been looked upon as a stable factor which would go on producing, whether or no. The fact that agricultural output could be curtailed by enhancing the cost of the farmer's living, labor and implements, was innocently overlooked. Nevertheless, it has been so curtailed, until the United States, which should be still pre-eminently an agricultural country, is actually importing largely of some staple food products. So the high cost of living across the line is to some extent a reactive result of a systematic policy of strangling agriculture to build up urban industry. In its final outcome, it is not such a very bad thing for the individual farmer, but it is a handicap to the nation at large.

Lifting oneself by his bootstraps has never been a very profitable exercise.

"Foot-and-mouth" vs. Trade.

Some idea of the alarming consequences of the recent outbreak of foot-and-mouth disease near Liverpool, Eng., where contagion was carried from Ireland, may be inferred from the extent to which Great Britain is dependent upon the sister Isle for finished beefs, feeding cattle and other stock. Of Irish cattle, sheep and pigs, over two million head are annually exported to England. From Dublin alone, between 6,000 and 7,000 cattle are shipped to Britain every week, between 2,000 and 3,000 from Belfast, and about 5,000 from Cork, Waterford and Londonderry, not to mention those

from other parts. Suddenly all the trade was stopped, markets closed, and suspected areas fenced in, causing incalculable inconvenience and loss. Such stoppage of supplies from one quarter would necessarily stimulate the demand and probably raise prices of stock and meats from other sources, such as those from Canada and the United States, where, however, supplies are already scarce enough.

HORSES.

Wayne Dinsmore, Secretary of the Percheron Society of America, says that 203 horses of that breed have been sold into Canada from the United States between Jan. 1st and July 8th, 1912.

The new Stallion Enrollment Law for the Province of Ontario takes effect from the date (Aug. 1st) of the present issue of "The Farmer's Advocate." Hereafter, all stallions kept, offered or travelled for service must be enrolled, and pay the \$2.00 fee annually.

The city demands the mature horse. This is no obstacle in the way of the breeder, for, with a little care, the colts and young horses will do the farm work just as well as the more mature animals, and at the same time they are increasing in value.

Crowded city streets mean slower traffic, and, as there is an increasing amount of dray work to be done, larger loads must be taken to make up for the slower speed. This is a good reason why the horse-dealer wants the heaviest type of drafter. The horse which is able to move the biggest load is of most value to the city trade.

A pair of twin colts being successfully raised by hand were observed recently by an editor of this paper on the farm of Emerson Elliott, in South Oxford. The dam, aged 22 years, died when the foals were three weeks old. The youngsters, however, fell upon the good care of Mrs. Elliott, and promised to make a team of useful horses.

Although the breeding season is now over, there are many mares in the country which could yet be bred with profit to their owners. While late colts do not always make as good growth the first summer as earlier foals, by the time they reach a marketable age little difference in size is noticeable, and the late foal gives an opportunity of working the mare through the spring rush, which is often cut off when the early colt arrives in the midst of seeding.

Educate the colt. Sometimes attempts are made to teach the colt beyond its capacity, but more often, on the average farm, his education is neglected or put off so late as to make the work of "breaking" much more strenuous, and at the same time the risk of the colt's usefulness being permanently impaired is much greater. Teach the sucking foal to lead. Handle his feet. Teach him to obey your wishes. It is not necessary to give him a broad education while very young, but the point is to teach thoroughly every little part with which you wish the colt to become familiar.

With the thousands of auto-trucks which are used for transportation of heavy loads on our city streets, and with their numbers increasing yearly, it would seem as though the draft horse would soon be of small consequence as far as city traffic is concerned. Demand for the right class of drafters, and the high prices paid for them are, however, sufficient proof that the rapidly-growing needs of a continuous, sure and efficient means of transportation by heavy dray cannot be met without the use of the horse. There are many places where the horse goes that the auto-truck cannot travel. The good horse still has his place, and will continue to hold it. Horse-breeders need have no immediate fear as to the outcome of the horse business.

Belgians and Phosphates.

The Belgian horse, according to the Live-stock Journal, is bred in eight provinces of Belgium, but in general, the finest specimens are produced and the industry flourishes most in the Province of Brabant (from which the term Brabanconne is derived), practically the whole of Hainut and those parts of the Provinces of Liege and Namur lying on the left bank of the Meuse. These provinces are rich in alluvial soils, and belong to the same geological formation. The fertility of the land, the temperate climate and copious pre-

cipitation are all conducive to an intensive system of agriculture, and not the least potent factor in the development of the superb frame of the Belgian is accounted for in the liberal amount of phosphates contained in the soils of these districts. According to Leyder, Belgian agriculture consumes 16 pounds, German agriculture 8 pounds, French agriculture about 6 pounds, and English agriculture 5 pounds of phosphoric acid per acre. To continue profitably an intensive system of agriculture involves liberal supplies of manure, and the most practical and economical means of obtaining it is to keep live stock.

The Amount of Feed for the Work Horse.

Different individual horses require different amounts of feed to keep them in good condition and in good heart for their work. No hard-and-

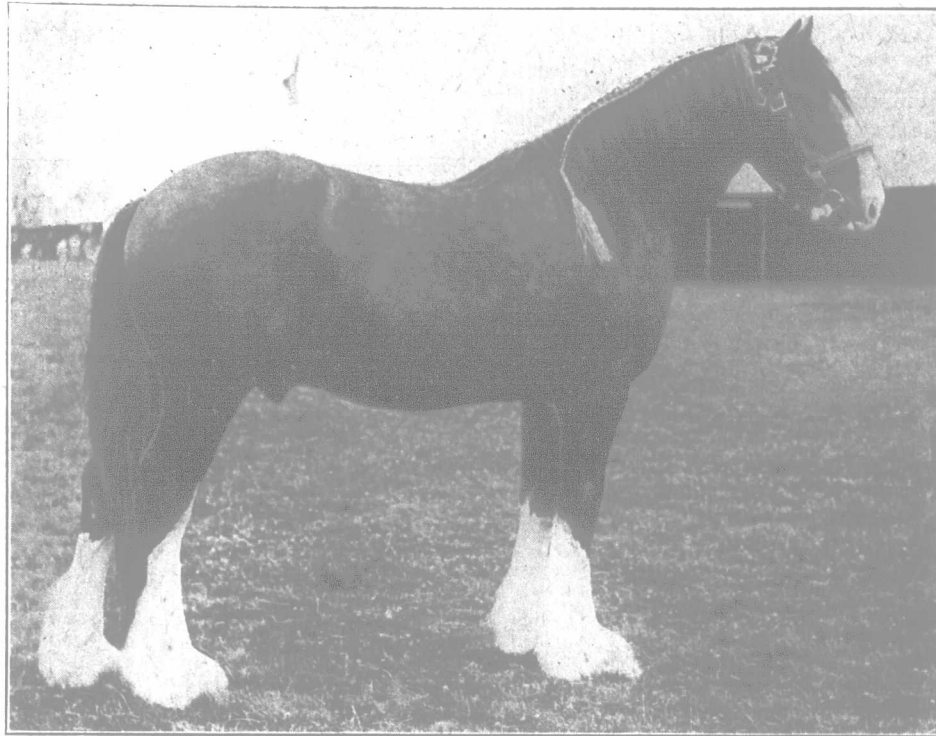
quantity of hay and oats, regardless of the difference in size. Some valuable experiments were carried on by the Illinois Agricultural Experiment Station some time ago, in which a great variety of feeds were used, and records carefully kept of the weights of the horse, the amount of food consumed, and the amount of work done. A number of farm work teams were employed in the experiment, and they were at hard labor daily. The results showed that, for the farm horse at work every day, from one and one-fifth to one and one-third pounds of grain, and from one to one and one-fourth pounds of hay for every hundred pounds of live weight per day were required in order to maintain the body weight of the animal, and at the same time produce energy enough to do the work. A 1,200-pound farm horse would, at this rate, require from 14 2-5 to 16 pounds of oats or other grain, and from 12 to 15 pounds of hay. This is a little more than the common practice of

feeding three gallons of oats per day, but is not a great increase over this amount. What should be done is to feed all the horses according to their size, as nearly as possible, and according to the work done.

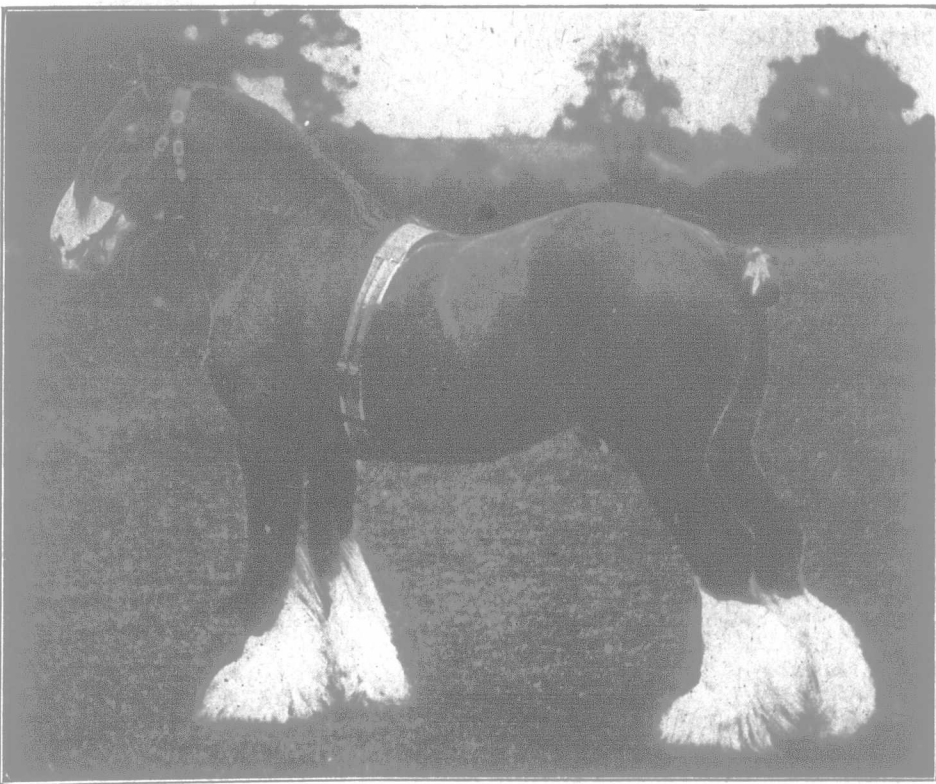
Satisfactory results were obtained by feeding the grain in three equal feeds, but the hay was not divided equally. One-half the hay was given at night and the remainder was given in equal quantities at the morning and noon feeds. This is quite reasonable, as the horse has more time to eat and digest the larger quantity at night. Giving large feeds of hay in the morning or at noon, when the animal is obliged to "bolt" his feed before being put to work, is not conducive to the best health of the horse. Under such conditions, he is obliged to digest the food at a time when practically all his reserve energy is required to do the work in the fields, digestion is impaired, and feed wasted.

Idle days for the horses come on every farm, and few there are who properly cut the ration on these days. Feeding the amounts before mentioned, it was found by experiment that the grain fed should be reduced one-half on idle days, until four days have elapsed, or until the horses are again put to work, when it may again be increased. This prevents attacks of azoturia. The ration for the idle horse may

very profitably be made more bulky than that given when he is doing heavy work. The hay ration for the hard-worked horse should never be too heavy. That is, he should never be permitted to gorge himself with this coarse feed, it being far better to feed more concentrates, and thus facilitate digestion. If the hay is chaffed, a very slight saving in grain may be made, and, when the horses are at very hard labor, a further slight saving was noticeable when fed ground grain. The profit of grinding horse's feed depends very largely upon the condition of their teeth and the facilities for getting it ground.



The Dunure (16839).
Clydesdale stallion; brown; foaled May, 1910. Champion Royal Show, 1912.
Sire Baron of Buchlyvie.



King Premier.
Shire stallion. First in three-year-old class, Royal Show, Doncaster, 1912.
Sire Dunsmore Premier.

fast rule can be laid down to govern the feeding of all the horses in a stable; in fact, no two animals comprising a team have exactly the same capacity for the digestion and assimilation of food. It is necessary for the breeder to study each animal under his care, in order that the best use may be made of the feed allowed. While no definite rule can be adopted, a general quantity by weight, compared with the weight of the horse, is of value as a basis for commencing the ration, to be changed from time to time, until it is found to be rightly adjusted for each individual animal. It is common practice on the farm to feed the horses three times daily, and on many farms each and every horse at work gets the same

The Importance of Feed.

The horse of the present day is not the result of selection alone. Improved conditions of feeding, sheltering, handling and caring for the breeding stock must have exerted an influence upon the horse during the past centuries. If the highly-organized, well-fed, warmly-stabled beauty of the present day, no matter whether he be heavy-drafter, carriage or race-horse type, be forced into conditions of scanty feed, poor care, and poor or no shelter whatever, how quick will a change toward the primitive types be noticed. Weight, smoothness, usefulness and beauty, demanded and admired in the twentieth-century horse, are the result of good breeding coming from careful selection, accompanied by abundant feeding from the time the colt is foaled until it has reached maturity. Good feeding is, then, just as essential as good breeding.

The one time when good feeding is necessary is when the horse is young. The colt inherits a predisposition to great weight, to speed, or to high-stepping qualities, as the case may be, but these cannot be developed without feeding and good care, especially while the colt is growing. Seeking to economize, many men think that the colt, not having to do any considerable amount of work, and none at all during the first two winters, requires nothing more than straw or poor quality hay for feed, and no other shelter than the straw stack, often situated in an exposed barnyard. Colts under such conditions, while sometimes appearing to thrive well, cannot possibly do as well as they would if well housed and well fed, and the result of the poor feeding and care must assert itself some time, which it usually does before the horse reaches maturity, in a small, undersized animal, not fitted to command the top price on the market. They may be fattened up and made to appear larger than they really are, but such fat is easily worked off them and is not so permanent as that which is put on when the colt is sucking his dam and is gradually added to after he is weaned, up to the time he is mature and goes to work. Fat and weight built up in this manner are lasting. Present-day colts cannot "rough it," at a profit to their owners. They must be fed well at all times. Poor feeding means failure; good feeding, success. At present prices, colts pay well for the feed consumed, and a little grain and good hay, with a comfortable stable and plenty of bedding, should not be denied the colt.

LIVE STOCK

Finish the Cattle.

"Only a few choice cattle were offered." "No extra-good cattle were on the market." These are common expressions in the reports of our largest markets. What do they mean? It is true that the bulk of our cattle are marketed in a low degree of finish. Whatever is the cause, there is a scarcity of really high-class cattle, both butchers and exporters. Many cattle go on the market before they are fat enough to command top prices. Such cattle are not as profitable to the feeder as if they had been properly finished and placed on the market in a condition to command the top price. There is often a difference of two cents per pound live weight between choice and medium grades, and up to four cents between the best and common grades. The common or medium grade steer is usually just in a condition to go ahead and make rapid gains when he is thrust upon the market and disposed of at whatever price he will command. Would it not pay the feeder well to finish him? From two to four cents per pound on the carcass is not to be despised. This increase not only counts on the increased weight, but also on the weight of the entire carcass. The finished animal is in demand and commands the price, whereas the inferior class of cattle are not so readily disposed of, and the price offered must be accepted. The man who seeks to sell unfinished cattle is to a certain degree at the mercy of the drover or dealer. It always pays to produce the best.

The Time to Purchase Ewes.

The best time to purchase breeding ewes is considered by J. B. Spencer, author of "Sheep Husbandry in Canada," to be August, just after the lambs have been weaned. The ewes can be purchased then as cheaply as at any time, and the best selection, if choosing ewes that have raised lambs, may be made, as their milking qualities and strength can be ascertained. Besides, purchasing at this season gives plenty of time to prepare for next year's lamb crop.

While there is one additional year's usefulness in a shearing ewe, one that is sixteen or seventeen months old, if she has not had a lamb, still, as a rule, two-shear ewes are to be preferred in selecting breeding stock. Selecting at this age, one has a guarantee that they are breeders, and also has the advantage of being able to judge of

those likely to be the best breeders and best milkers. However, very few shearing ewes prove non-breeders. These ewes should have the run of the stubble fields, not sown to clover, or old pastures until about the middle of September, and then given access to a rape or clover field. If this green food is not plentiful, it will pay to feed a small quantity of grain, to insure the ewes being strong and thriving when bred. This is the secret of having a large percentage of twins dropped. It may be well, as claimed by some, to breed from ewes themselves twins; but even so, they must be strong and thriving well to have the best results, because not only will larger returns result, but the lambs will be stronger and more likely to live and do well, providing the treatment of the ewes continues good up to lambing time.

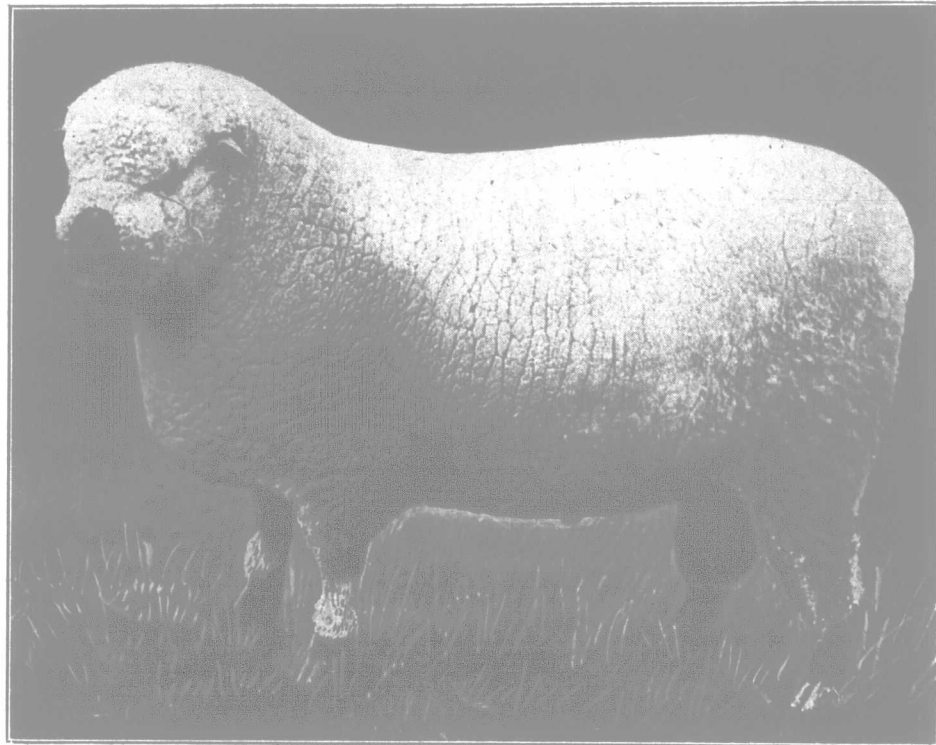
Nature and History of Foot-and-mouth Disease.

For many years no occurrence has so adversely affected the live-stock world as the late outbreak of foot-and-mouth disease in Great Britain and Ireland. Though happily free from its ravages for so long a period, Canada is intensively concerned in the situation created, not only because of its effect upon trade, but because of the peril arising from the extremely contagious nature of the ailment, which is otherwise known as Aphthous Fever, Epizootic Aphtha, and Exzema Epizootica. It is a virulent, contagious and inoculable malady of animals, characterized by initial fever, followed by the formation of vesicles or

fused. In the Old World its effects are now experienced from the Caspian Sea to the Atlantic Ocean. Hungary, Lower Austria, Bohemia, Saxony and Prussia were invaded in 1834. Cattle in the Vosges and in Switzerland were attacked in 1837, and the disease, extending to France, Belgium and Holland, reached England in 1839, and quickly spread over the three Kingdoms. At this time the importation of foreign animals into England was prohibited, and it was supposed that the infection must have been introduced by surplus stores, probably sheep which had not been consumed during the ships' voyage. This invasion was followed at intervals by eleven outbreaks, and since 1902 Great Britain has been free of foot-and-mouth disease. From the observations of the best authorities, it would appear to be an altogether exotic malady in the west of Europe, always invading it from the east; at least, this has been the course noted in all the principal invasions. It was introduced into Denmark in 1841, and the United States of America in 1870, from Canada, where it had been carried by diseased cattle from England. It rapidly extended through cattle traffic from the State first invaded to adjoining States, but was eventually extinguished, and does not now appear to be known in North America. It was twice introduced into Australia in 1872, but was stamped out on each occasion. It appears to be well known in India, Ceylon, Burma and the Straits Settlements. In 1870 it was introduced into the Andaman Islands by cattle imported from Calcutta, where it was then prevailing, and in the same year it appeared in

South America. In South Africa it is frequently epizootic, causing great inconvenience, owing to the bullocks used for draft purposes becoming unfit for work. These cattle also spread the contagion. It is not improbable that it also prevails in Central Africa, as Schweinfurth alludes to the cattle of the Dinkas suffering from a disease of the kind.

Though not usually a fatal malady, except in very young animals, or when malignant, yet it is a most serious scourge. In one year (1892), in Germany, it attacked 150,929 farms, with an estimated loss to the owners of £7,500,000 sterling. It is trans-



Two-shear Shropshire Ram.

First and champion, Shropshire and West Midland Show, June, 1912.

blisters on the tongue, palate and lips, sometimes in the nostrils, fourth stomach and intestine of cattle, and on parts of the body where the skin is thin, as on the udder and teats, between the claws, on the heels, coronet and pastern. The disease begins suddenly and spreads very rapidly. A rise of temperature precedes the vesicular eruption, which is accompanied by salivation and a peculiar "smacking" of the lips. The vesicles gradually enlarge and eventually break, exposing a red, raw patch, which is very sensitive. The animal cannot feed so well as usual, suffers much pain and inconvenience, loses condition, and, if a milk-yielding creature, gives less milk; or, if pregnant, may abort. More or less lameness is a constant symptom, and sometimes the feet become very much diseased, and the animal is so crippled that it has to be destroyed. It is often fatal to young animals. It is transmitted by the saliva and the discharges from the vesicles, though all the secretions and excretions are doubtless infective, as well as all articles and places soiled by them. The disease can be produced by injecting the saliva, or the lymph of the vesicles, into the blood of the peritoneal cavity.

If we were to judge, observes a writer in the new Encyclopaedia Britannica, by the somewhat vague descriptions of different disorders by Greek and Roman writers, this disease has been a European malady for more than 2,000 years. But no reliance can be placed on this evidence, and it is not until we reach the 17th and 18th centuries that we find trustworthy proof of its presence, when it was reported as frequently prevailing extensively in Germany, Italy and France. During the 19th century, owing to the vastly extended commercial relations between civilized countries, it has, like the lung plague, become widely dif-

missible to nearly all domestic animals, but its ravages are most severe among cattle, sheep, goats and swine. Human beings are also liable to infection. The treatment of affected animals comprises a laxative diet, with salines, and the application of antiseptics and astringents to the sores. The preventive measures recommended are, isolation of the diseased animals, boiling the milk before use, and thorough disinfection of all places and substances which are capable of conveying the infection, together with the deep burying or burning of diseased carcasses.

Secure the Flock Header.

There are several good reasons why the stock ram should be selected early in any season, but this year offers more than usual. Ordinarily, there are quite a number of rams of the various breeds imported from the Old Country, and this helps to supply the demand for the best types of sire to be used as stock-getters. This year, owing to a serious outbreak of foot-and-mouth disease on the other side of the Atlantic, an embargo has been placed on sheep entering Canada from the home land. Just at this season, this means a great loss to breeders and sheep importers.

At the present time, the Federal Government is putting forth every effort to encourage sheep-breeding in Canada. Of course, the use of pure-bred rams is advocated, and many of these are being purchased for the purpose of encouraging the industry. Reports all indicate an awakening in Canada's sheep industry, and the best type of pure-bred rams are likely to be none too plentiful this fall.

It is important that the flock-header be secured at an early date. Shearlings or two-

shear rams are more desirable than lambs, and, to avoid being forced to use a lamb, an early choice will be necessary. Our sheep-breeders have on hand some choice stock, and the first buyer to make a selection, provided he is a good judge, secures the best sire, and nothing but the best is good enough for your flock.

A Retrospect of Foot-and-mouth in Canada.

Fortunately, Canada has not at any time experienced a typical outbreak of foot-and-mouth disease. Although it was supposed to have been observed in 1870 and 1875, there are no particulars on record officially with reference to these suspected outbreaks; in fact, the Hon. C. Dunkin and the Hon. L. Letellier, the Ministers of Agriculture for those years, stated in their reports that Canadian cattle were free from any epizootic disease.

On May 4th, 1884, foot-and-mouth disease was discovered on board the S. S. Mississippi. The disease was of a mild form, and the stock, upon being landed at Quebec, were isolated in quarantine station, and all possible measures taken for the disinfection of contact matter. One hundred and ninety-three animals were landed, fifteen of which were exhibiting symptoms of this disease, and fifty-seven others contracted the malady while in quarantine. There is no record of any deaths or of the origin of these animals.

On June 3rd of that year, the S. S. Oxenholme arrived at this port with 106 cattle on board, 11 of these animals being found affected with foot-and-mouth disease, and 15 or 16 others showing evidence of having had the malady recently. There is no record of any deaths, neither can we find any further particulars. It is quite evident, however, that very prompt measures were taken, which were very successful in eradicating the disease, as well as limiting it to the quarantine station. As these animals were undergoing the usual quarantine, and were, therefore, foreign stock, this outbreak cannot be fairly credited to Canada.

Regarding the fact that, while this disease is a very serious one in other countries, it has not resulted in an epizootic in Canada, competent authorities say that, in view of the indisputable evidence of its extremely infectious nature, it is possible that the vitality of the organisms causing these particular suspected outbreaks was of a very low order, and under unfavorable conditions became extinct. No other explanation can be given, provided the outbreaks referred to were actually due to infectious foot-and-mouth disease. There is every reason to suppose that foot-and-mouth disease would spread with amazing rapidity throughout this country if a virulent strain of organism were introduced. This disease is a peculiar one, and, while it is readily diagnosed by its typical characters and extreme infectivity, little is known of the causative agent. The germ, we are informed, is ultra-microscopic, and, therefore, exceedingly minute. It passes through the

Standard Chamberland and Berkefeldt filters, which prevent the passage of practically all bacteria that can be detected by the most modern microscopes. This is proven by the fact that saliva taken from affected animals, mixed with sterilized water, passes through the Standard filters without losing its infectivity, as it readily produces the disease when inoculated into healthy, unexposed stock.

The constancy with which the discharges from diseased animals cause the development of foot-and-mouth disease in all contacts has demonstrated the fact that this malady is caused by a specific infection, and that every outbreak starts from some previous case or cases. Authorities differ regarding the length of time the virus of this disease will remain active outside of the animal body, but there is no doubt that, under certain conditions it does not retain its effectiveness for a long time. It has further been shown that animals recovering from the disease will infect others for months, and quite frequently re-infect themselves.

Our readers will readily appreciate that these peculiarities necessitate the taking of very radical measures to eliminate the disease from any country, especially so when it is considered that infection may be carried on the clothes of human beings, on hay, straw, fodders and stable utensils, as well as on the feet of all animals, including birds. Although outbreaks of this disease are chiefly confined to cloven-footed animals, horses, dogs, cats and even poultry may occasionally become infected, as well as human beings.

While the mortality from this disease is quite low, the serious losses depend chiefly upon the diminution of milk secretion and shrinkage of flesh, and general condition of affected animals. The immunity conferred by this malady is of short duration, and animals are consequently subject to repeated attacks, unless they are properly disposed of.

The frequency with which foot-and-mouth disease breaks out and infects tremendous areas in countries governed by inadequate sanitary police measures demonstrates only too clearly the very serious nature of this not very fatal malady.

A member of the editorial staff of "The Farmer's Advocate" has a very vivid recollection of what was believed to be an appearance of the malady. His large stock of pure-bred cattle, sheep and hogs, in the fall of 1875, contracted, through a purchase of sheep which were imported by an Ontario County breeder, and which appeared to be infected with foot-rot, but was later declared by the then principal of the Ontario Veterinary College, the late Doctor Andrew Smith, to be foot-and-mouth disease. At all events, the disease broke out on several farms in the neighborhood, a distance of four to six miles apart, which appeared mysterious at the time, but is evidently characteristic, as before stated, and may be carried in many and diverse ways. The losses by death in these outbreaks here mentioned were very few, not one per cent. of the animals affected, the remainder recovering within ten to twenty days,

and thriving well afterwards. The chief symptoms were high fever, loss of appetite, slobbering, eruptions of yellowish blisters in the mouth and on the tongue and lips, as well as on the feet and udder. Treatment was simple, consisting of only the application of a solution of carbolic acid on the affected parts.

It has been announced that a German scientist, Professor Wilhelm Grugel, Dean of the Hygienic Institute of the University of Rostock, has found the bacillus that causes foot-and-mouth disease, and also has serum for immunizing cattle against the dread malady. The treatment, of course, is preventive, and not curative. It is claimed that experiments have demonstrated beyond a doubt that treatment of healthy animals is unqualifiedly successful in rendering them immune.

If this immunizing animals from foot-and-mouth disease becomes a practical reality, it will enlarge the possibilities of cattle trade between Canada and Great Britain. Stockmen the world over wish Professor Grugel success.

THE FARM.

Ventilating Root Houses.

Editor "The Farmer's Advocate":

Regarding the several inquiries re ventilation of root houses, as published in your issue of July 18th, I would say:

1. Where roots—that is, turnips, mangels or carrots, are piled in large heaps or in deep bins, it is necessary, or at least very advisable, to introduce fresh air, in some way, at the bottom of the pile, or somewhere near the bottom, unless the root house is very cool and there is plenty of opportunity for the heated air at the surface to escape.

2. Occasionally, mangels covered with earth, as are sometimes found near the intake of the root house, keep better than those not surrounded by soil; but, generally speaking, freedom from earth is a condition of good keeping. Especially is this true of carrots and turnips.

3. It is a good practice to keep roots a few inches off the floor, or at least to so pile them that a circulation of air under the heap of roots is permitted. Separation from the wall by studding or other means is not necessary, in my opinion.

4. Our experience here would point to the earth floor as being more advisable for roots than cement.

5. Fresh air should be introduced from the bottom. It will circulate up through the roots quite freely, unless there is a good deal of loose earth lying in the heap.

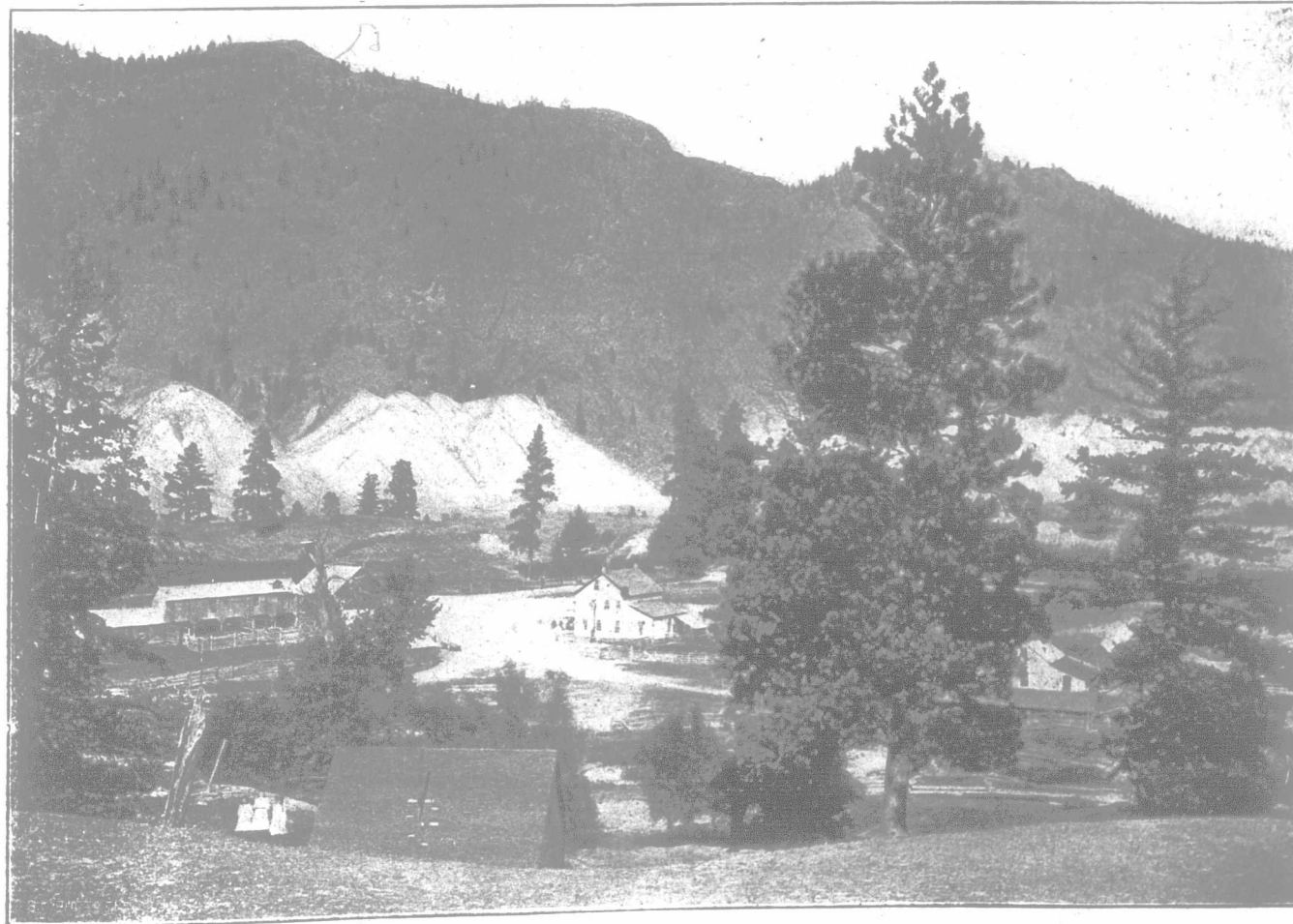
6. The outlets for heated air should be near the ceiling or in the ceiling itself, and should be controlled by traps or lids which should be easily handled from some central point, in order to insure their being looked after.

7. Such a root house as described would probably be fairly satisfactory, provided the roots were not piled in more than seven or eight feet deep, and even in such cases provision should be made for ventilation. A good plan would be to take the air in from the floor level by having openings through the brick wall into the stable. These openings should be subtended by small conducting passages made of lattice work, leading to the inside. Some of these might be short, but others should be long, reaching to the far side of the root house. These lattices, boxes or conduits should be about six inches square. The heated air should be allowed to escape through shafts extending from the ceiling to the roof, but this is impossible, then there should be an opening through the wall, near the ceiling, to the outer air, which should prove fairly satisfactory. These openings, either in the ceiling or in the wall near the ceiling, should be protected by lids or dampers of some kind to prevent ingress of air in cold weather.

I am not very much in favor of root houses in barns, for the reason that they have a tendency to make a building dark, and are very sure to be the cause of evil odors for a greater or lesser period sometime during the year. J. H. GRISDALE,
Director.

ANOTHER OPINION.

1. I would advise ventilating shafts every eight or ten feet apart, the shaft to be made one foot square on the inside. Take four scantling



A Ranch in the Foothills of the Rockies.

or small poles long enough to extend from the floor to the ceiling; nail strips around the poles sufficiently close to prevent the roots from filling in the air space.

2. The cleaner and freer from soil, the better. This point is where heating and decay first begins. I would advise one ventilator to be put in quite close to where the roots drop into the root cellar.

3. If the earth floor is thoroughly underdrained, or the concrete floor properly made—that is, with plenty of coarse stone between the concrete and the earth—it would not be necessary to have anything between the roots and the floor. On the walls, if they are frost-proof, nothing extra is required.

4. As far as the keeping qualities are concerned, there is but little difference; the concrete is the more easily kept clean.

5. If plenty of fresh air is let in at the top of the root cellar, it will not be necessary to have an underground shaft.

6. Outlets for the foul air should be 18 inches square, and extend from ceiling of the root house to at least three feet above the roof of the building, and to be placed about fifteen feet apart. The outlets can be controlled by hinged doors or slides, and careful watching.

7. Ventilate similar to the Rutherford system. Have the fresh-air chambers coming in at the bottom connected with air chambers at the bottom or on the floor, the air-chambers to be slatted one foot in the clear; also, have extra air-chambers same size standing on top of those every eight feet all through the root cellar; outlets to be 2 feet by eighteen inches, and to be placed about 12 feet apart, the outlets to extend from the ceiling to 3 feet above the roof of the main barn. The outlets can be so arranged on the main floor to allow the roots, when drawn from the field, to be put through them.

(a) The Rutherford system, with floor conductors in addition.

(b) Size and construction all right, if in a convenient place for filling and feeding, and if the above ventilation system is adopted, and care to keep out frost above ground.

JOHN FIXTER.

The Needs of the Hoed Crops.

A late spring season and exceedingly wet weather during the last stages of grain seeding and at the time for preparing the land for the root crops, accompanied by cold weather and frosty nights, served to give the mangels, turnips and corn a setback from which they have not yet recovered, although the warm weather and frequent showers have been doing much toward overcoming the backward condition. Cultivation is the one thing most needed now to keep these crops growing, and if they are to be classed this autumn as good or bumper yields, frequent working is imperative. Held back as they were, they did not get the early cultivation that they should have had; then haying came on, and in many districts showers delayed these operations, and the hoed crops suffered. Corn has had the most difficulty in making satisfactory growth, and many fields look spindly and yellow. This important crop cannot be let dwindle. It must be made the most of, and, besides taking advantage of every shower which stops haying and harvesting to work in the corn and roots, regular weekly cultivation should be resorted to in order that the setback which these crops received earlier in the season be as far as possible overcome. Stock farms must have silage or roots, and the difference between a good and poor crop of these is the difference between thin and fat cattle next spring, or the difference between well-filled and half-filled milk cans during the winter. Scanty fodder also means a small amount of manure, and future crops of all kinds depend more or less directly upon the supply of this material. The stock farmer can ill afford to lose part of his fodder supply. A full crop means much to him, and a short crop proves a menace to his entire season's operations. Therefore, it is necessary that he put forth every possible effort, when the elements have been against him, to overcome the loss by his own efforts, the only method being a frequent and thorough stirring of the soil. The cultivator should be kept going in the corn until it gets so large that further working is impossible. The bottoming of the root crops may be hastened and the size materially added to by scuffling at frequent intervals during July and August. Keeping the cultivator going may yet insure abundant corn fodder and full root cellars in most districts this season.

Commercial Fertilizer on a Dairy Farm.

Buying commercial fertilizer to use on a dairy farm may seem like carrying coals to Newcastle, but W. J. Whaley, of Oxford County, is convinced that it pays. In proof, he points to a splendid field of fall wheat, thick, even, long of straw, and with excellent heads. To this field he had applied 200 pounds per acre of a complete fertilizer, selling locally at \$28.00 a ton. He also used it, with encouraging effects, on spring grain. Three drill spaces in his barley field left without fertilizer were a week or ten days behind in heading out. Mr. Whaley expects to reap a margin over and above the outlay of \$2.80 per acre, and finds the fertilizer also of advantage to the clover seeding. Every field of cereal crop on this 213-acre farm is seeded down each year. The meadow is cut one year, pastured one, and then broken for corn, roots and wheat, the corn being followed by oats, barley and mixed grain. A few acres of emmer were noticed in one field. Five acres were seeded to alfalfa in 1911, and nine more in 1912. Four hundred rods of tile were laid in 1911, some tiling and fencing being done each year. Thirty-four Holstein-grade cows last year returned \$70 each from the cheese factory, averaging a little less than 7,000 pounds milk. Mr. Whaley has been a rather extensive hog-feeder, but is reducing his stock of swine, keeping only enough to use up the whey, which he values at 10 cents per cwt. His hogs have usually brought him about five or six hundred dollars a year over and above the grain feed. A silo 20 x 34 ft. was nearly filled last year with twenty acres of White-cap Dent corn.

Exceptionally good facilities for cooling milk were observed on this farm. A strong-flowing well just outside the milk room fills a three-quarter-inch pipe with the best of cold water. This runs through a cement tank, into which the cans are set, being lifted out and run along under an overhead metal track to a point directly above the milk wagon. The flow is so strong that the water dare not be held back for fear of its forcing out around the curbing. In winter the water runs into a small elevated tank, and thence through the stable.

Mr. Whaley has two sons with agricultural-college training, and his farm shows evidence of enterprise and thrift.

Crop Rotation for Potatoes.

Van Slyke, in his book, "Fertilizers and Crops," gives three crop rotations for potatoes. Crop rotations he considers essential for best results with potatoes for several seasons, and especially because when grown on the same soil they are subject to scab and other diseases. They do especially well after clover or cowpeas. The following rotations are given as illustrations:

(a) Three years: Winter wheat seeded to clover in spring, 1 year; clover hay and green manure, 1 year; potatoes, 1 year.

(b) Four years: Rye seeded with clover and timothy, 1 year; hay, 1 year; potatoes, 1 year; oats or barley, 1 year.

(c) Four years: Wheat seeded with clover, 1 year; clover hay and green-crop manure, 1 year; potatoes, 1 year; beans, 1 year.

In case of long seasons, potatoes often follow some early crop, or are put in as an early crop and followed by something else.

Dead Weight to Return Car.

Pulling back the horse fork or sling car with a three-eighths-inch rope is not only dangerous at times when the rope breaks and one takes an incautious header off the load, but at the best it is hard on the hands. A first-rate idea was observed lately in the barn of John Hopkins, in Oxford County, and afterwards at other places in the vicinity. At each end of the mow a rope chute runs down to the basement. The draw-rope passes down one chute, while in the opposite one hangs a dead weight, connected with the car by a rope. The weight is just sufficient to pull the car back automatically after the load is tripped. When filling the other mow, the draw rope and weight are simply reversed. It works smoothly, and is well worth while. The chutes may be used for feeding or for ventilation, as desired.

Stook vs. Barn Threshing.

Editor "The Farmer's Advocate":

Stook threshing has a decided advantage in getting on with the work, as it saves twice handling, provided enough help can be had for the occasion, which is difficult sometimes, as it requires at least four teams to keep an up-to-date separator going, and more men to handle the grain than on the barn floor. But I consider barn threshing has a decided advantage to the grain, it being stored in the barn for some time in the straw, the storing having a curing effect, even if only for a few days, and makes less risk when stored in the bins, or even if sent at once to the market. If possible, I think it a great advantage to have straw under cover, not only for its feeding value, but for convenience in handling when feeding out. One advantage in stook threshing is in blowing the straw into the space where the grain would otherwise be stored. I have had no experience in cutting and storing straw. If cutting were done, of course, the straw would have to be stored in barn, as stacking would be impossible. Cutting would be an advantage if it were wanted for mixing with chop when feeding; otherwise, I do not see where it adds to the feeding value.

The blower and self-feeder are great savers of help, but I am of the opinion that much more grain is wasted in the straw than with the old method of straw-carrier and hand feeding, on account of the indiscriminate and careless, as well as hasty way of putting the grain sheaves on the feeder, and the strong draft and suction of the blower carrying grain out with the straw, which cannot be detected as it could when a man stood at the straw carrier.

As to the number of hands, that depends largely on capacity of machine and the condition of the grain; if grain is dry and straight it is almost impossible to get it to the machine faster than it can be taken care of. Under ordinary circumstances, at least four men are required to get grain to the machine.

Any thrifty farmer will have his granary in order, with his bins ready to receive the grain, and should see that the best qualities should be set apart for seeding purposes in bins by themselves. For instance, some portions of the field have plump and more matured grain, and the very best should always be selected for seeding purposes. I am convinced, by experience, that, by sowing the earliest-matured and heaviest grain, the returns will be increased to a very great extent, possibly 25 per cent.

The importance of not letting grain stand too long before being cut should not be overlooked. Advantages are better grain, avoiding shelling while cutting and handling, and better feeding value of the straw. J. C. DANCE.
Elgin Co., Ont.

THE DAIRY.

Conditions of Good Milk Supply.

Following are the conditions as to care of milk insisted upon by the milk-powder factory at Brownsville, Ont. In substance, they are strict cleanliness and thorough cooling. Cleanliness must obtain from the time of commencing milking to delivery. Cooling implies lowering the temperature immediately after milking to 65 degrees, and delivering at that. Any effectual means of cooling may be employed. Some cool by setting the cans in tanks of running or iced water. This is cheaper, but slower, than an aerator. The patron is supposed to whitewash his stable twice a year and ventilate it properly. He also agrees not to feed anything that will impart an undesirable flavor to the milk, turnips being specifically barred.

The Brownsville powder factory took in last year about fifteen million pounds of milk, but the receipts this year will be a little lighter, owing to the price of cheese, labor scarcity and other factors. During the third week of July they were running around 33,000 pounds per day, being a heavy drop from the flush.

Condensaries and Silage.

Condensary prejudice against silos is steadily disappearing. The Aylmer district is peppered with them. The following very reasonable clause is the only stipulation regarding silage-feeding which the Aylmer condensary requires in its contract: "If the dairyman feeds ensilage, he agrees to not feed the cows until after they have been milked, and also agrees to see that the milk is delivered to the factory free from any taints or odors that might be caused by bad ensilage, company not agreeing to accept ensilage milk unless the milk is in A-1 condition." No difficulty is found in complying with the latter condition.

POULTRY.

Something About Geese.

Editor "The Farmer's Advocate":

Raising geese has become almost a thing of the past in many parts of the country. Some years ago nearly every farmer would have a few, but for one reason or another, real or otherwise, people have ceased raising them, till, at the present time, the familiar cry is rarely heard. I think perhaps the chief reason for disposing of them was the difficulty experienced in plucking. I remember, one time, spending at least half a day trying to rid one goose of her fluffy coat. I have had a prejudice against them ever since.

Nevertheless, I know that a flock of three or four geese, properly handled, will be found quite profitable stock on any farm. A neighbor of mine has a flock which she keeps in a fair-sized yard where there is abundant pasturage and running water, and she has told me that, apart from this, they need very little attention during warm weather. In the winter they have a small enclosure as protection from the weather in one end of a large, open cattle shed, and are fed twice a day. A great many people make the mistake of feeding too much grain, and, as a result, force them to lay too early, or perhaps become too fat for breeding purposes. Silage is as good a feed as any for them, while corn and corn meal is also good.

In raising geese, it is not necessary that there should be a pond for them, any more than for ducks. Only an abundance of fresh drinking water is necessary. A running stream is good, but in this case, while the goslings are young and tender, it will be better to pen them up with the mother goose away from the stream, as you must not allow them to become chilled. For feed, different breeders have different plans of feeding. The neighbor who I mentioned before gives bread soaked in water at first, then scalded cracked corn, but never so much that they will lose their appetite for grass. A too heavy grain diet causes them to weaken on their legs. In moderate weather they require no artificial heat after a week old. They should be confined to pens, and moved every day onto fresh grass, until strong enough to have their liberty. It is better to set the first lot of eggs under hens, five to seven to a setting, according to the size of the hen. Then the goose may be set, and, as a rule, she will cover about fifteen eggs. It is a good plan to test out the clear eggs after they have been set a week. As a rule, each goose should average about twenty goslings in a year, and the average weight of these when fattened is about ten pounds, so that goose-raising, if properly handled, should be as profitable as anything in the poultry line. Of the larger breeds, of which the Embden is the best, I think it generally pays to market them at the age of about ten weeks.

Some advise plucking the feathers every two months, but I have been told that this is a mistake, although, in doing so, the feathers are an item worth considering; but once a year has proved to be the best for both laying and breeding purposes, as plucking often causes the meat to be tough and stringy.

C. S.
Carleton Co., Ont.

Dryness in the Poultry House.

The first essential of the poultry house is that it be dry. There is no condition, unless it be actual starvation, according to Bulletin 132 of the Iowa State College of Agriculture, that will be more surely and quickly fatal to fertility and egg production than dampness in the hen house. It is likely to cause an outbreak of disease, as well.

To secure a dry hen house, it is necessary, first of all, to select a dry location. A gentle slope to the south, with good air, drainage and a porous soil, is the ideal building spot. The ground immediately surrounding will then drain quickly, and the yards will be dry and warm. Where yards are damp, evaporation is constantly going on. Evaporation is a cooling process, so damp yards give the hens cold and dirty feet. Cold feet will lessen egg production; dirty feet will make dirty nests and eggs, and dirty eggs bring poor prices.

Often it is not possible to have an ideal location, and then extra precaution must be taken. If the best site available is inclined to hold moisture,

the moisture must be kept from getting into the house. Placing a 3-inch tile even with the bottom of the foundation and just at the outside, and giving it proper outlet, will prevent the entrance of moisture to a large extent. The foundation should be high enough above grade to prevent the entrance of surface water.

Especially care needs to be taken in building the floor; its improper construction is one of the most common causes of dampness in hen houses. The board floor is generally dry, because of the air space below it. Because of the high cost of lumber, the tendency is toward the cement or dirt floor. In either case, if special precautions are not taken, the moisture is likely to come up, just as oil travels up a lamp wick.

To avoid this, the capillary attraction must be broken. Whether a dirt or cement floor is used, remove enough dirt so that 6 or 8 inches of coarse material, preferably crushed rock, may be filled in. If a dirt floor is desired, spread some finer material, as cinders, over the rock, and finally put six inches of dirt on top. Many people seem to prefer the dirt floor, but it is not nearly so sanitary as the cement floor. It requires much more labor to care for it properly. The cement floor is readily cleaned, and will soon pay for its extra cost in the labor it saves. However, the cement will get as damp as the dirt, unless the precaution noted above is taken to keep the moisture out. Over the crushed rock place a thickness of two-ply roofing, and carefully seal all seams and edges. Lay the grout above the roofing, and finish with a half-inch finishing coat.

What has proven to be a very satisfactory floor was constructed by laying clay building blocks on their flat side on a bed of well-settled gravel, and plastering the whole with cement plaster. This floor is cheap, and has proved to be warm and dry.

Single-wall houses are cheaper than double-wall houses, and this, together with the fact that they are generally drier, commends their use.

Permanent vs. Movable Poultry Houses.

A permanent house is any house that is built on a permanent foundation, while a movable house is one which is so constructed that it can be moved from place to place. Movable houses are necessarily small. They are very often called colony houses. A movable house is always a colony house, but a colony house is not always a movable house, as it may be built stationary. Colony houses contain only one family or colony of birds, hence the name.

Both styles of houses have their advantages. The permanent house can usually be built at a less cost per hen capacity. In bad weather it is easier to get from one pen to another, and the hens are probably better protected from the cold and wind.

On the other hand, the movable colony house is simply made; may be moved from place to place as feed, weather and convenience suggest. For the small village lot or the land too rough to move the house there is no advantage to build it movable. For the farmer or poultryman who has fairly level land, the movable house is a decided advantage.

One of the troubles in keeping poultry housed in permanent houses is the difficulty of keeping the land pure and sweet. With the movable house the yards can be changed at will; the poultry may be kept in one field after another, thereby the poultry, instead of becoming a nuisance, are a decided advantage. They help scatter fertility over the farm, which later may be turned under for crops. Where poultry are used in combination with a fruit farm, the houses are moved along the edge of the orchard. Movable houses may be used most advantageously with ordinary farm crops, especially with corn, roots, etc. In growing grain, young chicks are easily reared in movable houses located along the headland or in the rough part of the field. The grain forms a protection against the hawks, etc., and the little damage that may be done to the grain is more than compensated for by the bugs and insects eaten by the chickens.

An added advantage in this method (the movable house) is that a comparatively small outlay is required to start. Only sufficient house room to accommodate the present flock is required; additional houses may be built each year as the flock increases. Feed that might otherwise go to waste may be utilized. More advantage of the weather can be taken. In the spring the houses can be drawn into the sun, and as the weather grows warmer they can be taken to an orchard or grove, where the trees will shade the birds from the hot sun.

With movable houses, fences are not essential,

while a permanent house requires a permanent yard, the fencing of which costs often as much as the house. The colony housing makes it possible to use a system of feeding that saves labor. Where the birds have unlimited range, they can be fed by the hopper system better than when they are yarded. This method of feeding saves much labor, and can be best used in the colony system. —[Farm Poultry Bulletin published by Macdonald College, Que.

A good flock of laying hens go far towards swelling the summer's income on a farm. A reader whose poultry business was written up in these columns a few years ago mentioned casually the other day that, since March 20th her flock of seventy-five had been making her a dollar a day. That is better than milking three extra cows.

GARDEN & ORCHARD.

Insects Attacking Vegetables.—IV

By Arthur Gibson, Chief Assistant Entomologist, Experimental Farm, Ottawa.

BLISTER BEETLES.

Complaints have been received from various parts of Canada of the prevalence of blister beetles. In eastern Canada these insects are reported to have done injury chiefly to potatoes, while in the West the favorite crop attacked has been broad beans.

Blister beetles have the habit of appearing suddenly, and in many instances much injury has been done before the farmer or gardener is aware of their presence. When they congregate in great numbers, it is only a matter of two or three days before a crop is entirely ruined. Fortunately, however, they oftentimes disappear from a locality as suddenly as they came.

The most regularly-occurring species is the black blister beetle. It occurs particularly in Ontario and the Eastern Provinces, but some seasons it is also present in large numbers in Manitoba and the other Western Provinces. It is of a uniform dull-black color, and in length varies from a little more than a quarter to slightly more than half an inch. It is chiefly complained of as a potato pest, but it will also attack mangels, beets, carrots, cabbages, tomatoes, corn, beans, etc.

The ash-gray blister beetle, similar in appearance to the black blister beetle, but of uniform ash-gray color, is another common species in the East, especially during July. Potatoes and beans are favorite food plants, but peas and other field and garden crops are frequently destroyed.

In the Western Provinces, the Western blister beetle, or, as it is also called, "Nuttall's Blister Beetle," is the one which nearly every year attacks leguminous crops, particularly Windsor broad beans. It is a handsome species, and in length is from three-quarters to one inch. The wing-covers are purple, greenish, or of a coppery color. The time of the appearance of the swarms of this beetle varies. In 1910 the beetle appeared in large numbers in Saskatchewan from about the 25th of July till the middle of August.

In British Columbia, and also in some of the other Western Provinces, the spotted blister beetle is frequently abundant. In color it is gray, or, rather, the body is black, clothed with fine gray hairs, excepting small areas on the wing covers, which show up as black spots. The beetle appears any time from May till the middle of August. Potatoes are particularly attacked, but beets, cabbages, spinach, beans and clover are often injured seriously.

In the older Provinces, where potatoes are so largely grown, little injury from the attacks of blister beetles should result if the vines are sprayed regularly with the ordinary poisoned Bordeaux mixture (4 pounds of copper sulphate, 4 pounds of fresh lime, 4 ounces of Paris green, and 40 gallons of water), so widely used for fungi and leaf-eating insects. As is well known, blister beetles in their larval state are predaceous on the eggs of grasshoppers. It is well, therefore, that the farmer should realize this and watch for the appearance of blister beetles in years following excessive outbreaks of grasshoppers. Whenever these latter insects appear in destructive numbers, the now well-known Criddle mixture* should be applied. This has given excellent results, particularly in Manitoba and the West. When the grasshoppers are destroyed in this manner, the chances are, of course, that blister beetles will not be present in numbers to do very serious damage the

following year. When spraying crops with an arsenical mixture for the destruction of blister beetles, it is important that the mixture be applied immediately their presence is detected, on account of the voracious habits of these insects. Paris green, the insecticide which has been mostly used, can be applied either as a spray, using one ounce to every ten gallons of water, to which has been added an equal quantity of freshly-slaked lime, or as a dry application mixed with from 10 to 20 parts of flour, land plaster or slaked lime. Plants with such coarse foliage as the potato will stand double the above strengths of Paris green. In some outbreaks it may be necessary to repeat the application, as the beetles which are killed are soon replaced by others.

Blister beetles are very easily disturbed, and for this reason a remedy which has often been very successfully employed is for two or three boys, or more if necessary, to walk through an infested field and wave from side to side boughs of spruce, or other branches. Such an operation will drive the beetles ahead of them, and when the insects come to the edge of the crop they will disperse, and seldom return. This method has given excellent results in outbreaks of the Western Blister beetle. This latter species is particularly ravenous, and is capable of destroying a crop in a very short time, even in a day, according to some reports. In such instances, of course, spraying would be of little avail. In the United States the beetles are often driven in the above manner into a windrow of hay or straw, which is immediately set on fire, and thousands of the insects are thus destroyed.

In gardens, many of these beetles may be killed by beating them from the plants into pans containing water with a little coal oil on the surface. If any of the species which feed on the blossoms of fruit or other trees should occur in injurious numbers, many, no doubt, could be jarred from the trees into an inverted umbrella or other contrivance, and then put into a vessel containing coal oil and water.

On account of the good habits of the larvæ of blister beetles in feeding upon the eggs of grasshoppers, it is often undesirable to destroy them, but, of course, when they occur in destructive numbers it is well that one of the above measures be taken as soon as possible for the protection of the crop.

*The Criddle mixture is made by mixing one pound of Paris green with five ordinary pailfuls of horse droppings, which have been moistened with about half a pailful of water in which two pounds of salt has been dissolved. It is simply scattered among the crop which is being attacked, or along the edge of a crop towards which the young grasshoppers are working.

Potato Bug Destroyer in Nova Scotia.

Editor "The Farmer's Advocate":

My son, a few days ago, saw a small light brown beetle, square shouldered and about as wide as, but rather shorter than, the adult potato bug, with its proboscis sticking into a young potato bug, and when touched it walked off with the bug. The color does not tally with that of the one found by Peter McArthur, but otherwise they appear to be similar, and the great thing is each had its proboscis into a potato bug when found.

"What are we going to do about it?" How can we keep the bugs in check without also destroying the beetle until the latter becomes numerous enough to control the pests?

Halifax Co., N.S.

J. TURNER.



The Niagara Fruit Belt.

Looking from "The Mountain" northward to Lake Ontario.

A Friend of Fruit Growers.

Editor "The Farmer's Advocate":

I have been a constant reader of "The Farmer's Advocate" for about ten years. I am a farmer's son. I would just like to express my ideas about the little red fox in your valuable paper. I don't think he gets credit for all that he should by most farmers, who look upon him as the worst enemy they have. I don't say he won't take a chicken or a duck once in a while, but I will say the harm he does in this way is not to be compared with the good he does by killing black mice and cotton-tail rabbits, which get to be a complete nuisance to fruit-growers in this part of the country, their ravages being very noticeable during last winter. A neighbor of mine had a whole orchard of young trees completely spoiled by cotton-tail rabbits, and many others had several trees injured or killed. Now, in conclusion, I would like to say that I know it to be a fact that the fox will destroy more mice and rabbits than any other animal living. I think, also, it is to the farmer's interest to give him a chance to live, and not kill him at every opportunity. The Government, in my opinion, should protect them from April 1st to Dec. 1st.

A CONSTANT READER.

Controlling Black-rot of Apples.

The black-rot canker is a well known disease of trees in many parts of Canada. The fungus causes the bark attacked to become roughened and blackened and dead areas appear in it. A single canker often causes the death of all portions of the limb or limbs above the infected area, and dependent upon the limb for food. Remedies have been recommended as follows:—Cutting off or digging out and burning badly diseased branches of trees and the prompt removal of rot-affected apples as they fall; cutting out all small to medium-sized cankers on the trunks, followed by disinfection of the wound; keeping the bark whole by preventing sunscald and injuries of all kinds; keeping the trees healthy, vigorous and clean by cultivation, care and spraying; and in some cases re-heading old trees where the upper branches are diseased and the trunk and main branches in good condition.

That the disease can be controlled has been proven by experiments carried on by the Ontario Agricultural College in an orchard near London, Ontario, where a large number of trees were treated for the disease. These trees were badly damaged, and all showed extensive cankers on the trunks and lower limbs. The cankers were carefully cut out, disinfected with corrosive sublimate (1 in 1000) and painted over. Lead paint free from turpentine was first used, but this was found to crack and check, and thus did not afford complete protection, so a second coating of tar was given. The coal tar was found to give better protection in not cracking or blistering, and no injurious effect was noticed from its use.

The cutting out of the cankers was supplemented by lime-sulphur sprayings for the control of apple scale. Nearly all the trees treated showed rapid recovery in one year, and no new cankers could be found on any of the trees in the orchard. It is, therefore, quite safe to state that if the orchard is properly sprayed with lime-sulphur for apple scab the black-rot can be controlled by carefully cutting out the cankers on the diseased trees, disinfecting with corrosive sublimate (1 to 1000) and painting over the wounds with coal tar.

Thinning Peaches.

F. M. Clement, B. S. A., now District Representative of the Department of Agriculture for Elgin County, Ontario, made extensive investigations into the peach industry of the Niagara District during his final year as a student at the Ontario Agricultural College. From these investigations he gives the following on thinning the crop:

"As yet, very few farmers have the courage to thin the fruit. They cannot bear to see large quantities of fruit pulled off and thrown onto the ground, and consequently, as yet, few of the growers are thinning systematically. A large number practice it a little, but it cannot be said that it is a regular feature of orchard practice; but, to my mind, it is just as important as cultivation and manuring, because we lose the value of the past labor by not continuing the good work a little longer, and removing some of the fruit that is tending to break down the tree. In a thinning experiment conducted in the orchard of Mr. Haynes, of St. Catharines, the trees thinned from three to five inches produced 550 pounds of fruit, while those that were unthinned produced 555 pounds; but in the latter case there were six thousand peaches, and in the former only a little over three thousand; or, in other words, the peaches were almost twice the size. From the trees that were thinned from five to seven inches we obtained 446 pounds of fruit, but they were all exceptionally large and of an excellent quality. No safe distance to thin can be recommended, but in no case should two peaches be allowed to touch each other, unless they are on opposite sides of a fairly large twig. They color and mature much better if they do not touch each other at all. A man must use his own judgment, and if in doubt whether the fruit should be taken off or not, take it off, because in nearly every case when the trees appear with only half a crop in the early season, when large and more developed have all that they can bear."

Celery Blight.

Celery, especially during early summer, when the weather is hot and dry, and the growth is somewhat retarded, is very subject to a blight or leaf-spot. This disease develops more rapidly during sultry nights, when the air is filled with moisture. When the disease first makes its appearance a grayish spot is noticed on the leaves, which in a day or two changes to a brownish color, with a burnt appearance. If the weather continues sultry, and conditions are favorable to the development of the disease, it will gradually spread to all portions of the plant, and the stem will droop, and the plant appear to be scalded. New leaves will continue to be thrown up by the heart of the plant, but when once badly infested, it never has strength enough left to sufficiently overcome the disease to produce a marketable crop.

The proper time to do the spraying for this blight is before it makes its appearance, but if caught in time it may be checked even after first noticed, by spraying with Bordeaux mixture. Spraying should commence when the plants are in the seed-bed, and should be continued until the weather becomes cool in the late summer or early fall, when the plants are growing thrifty. The main thing is to keep the plants growing well throughout the summer, as it is the weaker, sickly, slow-growing ones which first show the attack of the disease, and from which it spreads throughout the patch. Spraying precautions should always be taken, as prevention is better than cure with this, as well as all other diseases of plants and animals.

THE FARM BULLETIN

Wealth and Brains.

By Peter McArthur.

They say that Sir Jingo McBore
Is worth fifty millions or more,
And he made it by slaving
And scripping and saving,
And selling his eggs at the store.

* * *

Canada is surely a favored country. Besides having a bracing and invigorating climate, unlimited natural resources, and an industrious population, we are blessed with a lot of rich men of whom any country might well be proud. If you doubt it, just read the papers. They are all the time bubbling over with pleasant anecdotes about our belted knights and their public-spirited doings, and there does not seem to be one of them who is not a shining example for the youth of the country to follow. In the United States it is so different. Their rich men are known to be greedy and unscrupulous, and "Morgan" and "Rockefeller" are simply popular names for the money-devil. Their operations in the field of High Finance are exposed by the muck-rakers of the Press, and their methods of robbing the patient people are held up to execration. Our rich men apparently get rich by exercising the homely virtues of thrift and economy and foresight, and when they put through mergers and issue watered stock, we all rejoice and are glad; and whenever a new batch of them is knighted we practice speaking their titled names with reverential awe. This is a beautiful state of affairs, and Canadian mothers are not to be blamed if they tell their children about the good deeds of Sir William This and Sir Edmund That, and cherish the hope that their dear ones may grow up to be knights, or even Lords.

Wouldn't it be terrible if some bold man should undertake to show that some of the things done in Canada are no better than they should be, and that the plain people are being robbed even more systematically than they are in the wicked States. Perish the thought. Our rich men are all good and great, and differ from the rest of us only in having more "brains" and being a lot "slicker" than we are. They are interested only in "moving the crops" and "developing the resources of the country," and if millions stick to their fingers, they cannot help that. Money has a way of sticking to some people. I have been told that some of our rich men cannot even go for a walk without having lost coins stick to their shoes, and every time they clean off the mud they get enough stray quarters to pay for their lunches. Most of them began life as country boys, like the rest of us, and made their fortunes simply by doing the same things we do on a bigger scale. By that I mean such things as salting the cattle before selling them, and putting small potatoes in the middle of the bag, and selling balky horses to the minister, and other perfectly legitimate business transactions.

* * *

Sir Jingo McBore, they avow,
Had no equal at milking a cow;
He never would stop
Till he milked the last drop,
And he's milking the Government now.

* * *

A rainy afternoon is a good thing, even in the harvest time. It gives us a chance to think things over and to meditate on the growth and prosperity of the country. The bountiful harvest we are gathering in will enable us to pay dividends on all the watered stock in the country without feeling it—able statisticians estimate that there is now over \$600,000,000 in existence. It will also make it possible for all the monopolistic mergers and trusts to prosper, and perhaps to force up the cost of living a little higher, so that Canada will rank with the most expensive and civilized countries in the world. It is true that the only justification for the existence of watered stock is that it enables a few more people to make millions and buy titles, and move in automobile society. But there have been rich men since the beginning, and we cannot hope to change a state of affairs that is so ancient and respectable. As Voltaire says: "There is nothing so respectable as a venerable wrong." There will always be rich men, and people will admire them, no matter how they get their wealth. But there has been a change in the method of getting wealth during the past few centuries, and I am inclined to think that is a sign of progress. The "Robber Barons," the knights of other days, were fighting men who took what they wanted by brute force. They raided their neighbors whenever they were powerful enough to do it, and robbed them of their property, and became very rich. But in time people became weary of that type of rich man, and they enacted laws and enforced them; that put an end

to this kind of robbery. But they no sooner did this than cunning men saw what a powerful instrument unjust laws might be made in securing wealth. By securing law-protected monopolies, they accumulated riches, but in time they became intolerable, and monopolies were abolished. Governments were forbidden to grant them. But that did not give permanent relief. Another lot of rich men developed, who amassed fortunes by evading the law. They secured monopolies by organizing business so as to stifle competition. By controlling Governments through contributions to party campaign funds, they were able to shape the laws so that they can tax the plain people at will. They are the kind we have to contend with, and surely we shall be as able to grapple with them as our fathers were with the other types. The strong men and the court favorites have been put in their place, and now we must deal with the corruptionists and promoters of Big Business. It should not be so very difficult a task to a people who are enjoying the advantages of popular education. But it is time we were making a beginning.

* * *

Sir Jingo McBore as a child
Was honest and truthful and mild;
He was willing and handy,
And never bought candy,
And see how his millions have piled.

* * *

If I have been told once, I have been told a hundred times during the past few years, that "Men of brains can't be kept from making money. They will always find a way." And yet I am not convinced. While knocking around the world I have met a good many very rich men, and few of them impressed me as having any brains beyond the faculties of Pride, Greed and Cunning. As for the kind of brains that we find in statesmen and men of learning and culture, the rich men I met might as well have had their skulls filled with Myonnaise dressing. It does not require brains to enable a man to give a contribution to a political party's campaign fund in return for lavish charters or legislation that will give special privileges. It does not require brains to hold up a business man who is in need of money, and make him give up a large block of stock in his enterprises before accommodating him with a loan of the people's money. Circumstantial stories have reached me of such things being done, and at the present it does not matter very much whether they are true or not. It is enough to know that, with a financial system free from Government inspection, such things are possible. Even if it has not been done, the opportunity is there, and is a constant source of temptation. It will not require very much brains to correct that state of affairs. It is undoubtedly true that many rich men laid foundations of their fortunes by the use of brains and the exercise of the ordinary virtues, but in their big operations they have been noted chiefly for lack of conscience. If they needed brains, they could always hire it—the "hired cunning" of the legal profession, for instance. No, I do not think we need worry much about the opposition we shall meet from "brains" in the coming fight for human rights. What we have to fear is cunning and unscrupulousness.

* * *

Sir Jingo McBore making hay
Works like anyone else, so they say.
He fumes and he sweats,
And he fusses and frets,
And on Sunday he sleeps all the day.

Relative Profits of Corn and Alfalfa.

Prof. W. J. Spillman, of the Department of Agriculture at Washington, D. C., gives through Hoard's Dairyman a few interesting figures brought to light in the cost-accounting work carried on by that Department. They have detailed records of the labor, cost and income from 34 crops of corn. The average profit on these crops is \$9.88 per acre. The average profit on eight crops in Iowa is \$13.22; thirteen crops in Wisconsin, \$12.06; six crops in Indiana, \$9.10; and seven crops in New York and New England, \$2.94. They have similar records for eleven crops of alfalfa, mostly in New York and the North Central States. The average profit per acre on these eleven crops is calculated as \$21.79. This is a very good showing for alfalfa.

"Since one team can manage as many acres of alfalfa as it can of corn, if not more, it is seen that, where alfalfa does well a man can make more, on the average, by devoting his time to alfalfa than he can by devoting it to corn; but he can make more than a combination of the two, if he has land enough, than he can from either alone. Suppose, for instance, he has 40 acres of alfalfa. Now, he can grow some corn in addition to the alfalfa, but just how much is not known. Let us suppose it is 25 acres. The 40 acres of alfalfa, at an average profit of \$21 per

acre, gives a total profit of \$840. The 25 acres of corn at \$10 an acre gives a profit of \$250. I think, under ordinary circumstances, on land where alfalfa thrives, the greatest profit will come from growing all the alfalfa the situation permits, and then growing all the corn in addition that can be taken care of properly in connection with the alfalfa."

The 1912 Winnipeg Industrial.

Although, on account of somewhat unfavorable weather and cramped quarters, the Winnipeg Exhibition of 1912 was not the great success it might have been, it was easily good enough to rank among the successful yearly shows of the West. The Canadian Industrial Exhibition has clearly outgrown its present grounds and its present buildings, and as long as it must occupy these premises it can at the best but mark time. More suitable quarters are urgently needed. With a suitable home, the Canadian Industrial is ensured a continued expansion. As it is, the cramped and old quarters magnify every fault and inconvenience that may be apparent.

There was nothing lacking in the display from live stock and poultry to machinery and arts. In every section it was good; some sections were superior to last year, while some were hardly on a par with the exhibits of 1911.

A feature of the exhibition was the large display of machinery. Especial interest was manifested in the test of the huge tractors breaking virgin prairie to the north-west of the city.

On the whole, there was little change in the numbers out in the live-stock sections. Horses did not make the display of a year ago, although in several sections there were outstanding animals of merit. Cattle hardly held their own, but, for quality and close competition, it is doubtful if any show has been ahead of that of 1912 in most breeds. The herds from the stables of J. G. Barron, of Carberry and the Van Horne Farm were missed in the Shorthorn classes. Sheep and hogs were out strong, and had their allotted space crowded with quality stock, and made up in numbers what had been lost in other sections.

Stockmen and farmers this year had the honor of being tendered a luncheon by Royalty. His Royal Highness the Duke of Connaught, who, with his daughter, Princess Patricia, was present throughout the exhibition, had farmers as guests in the directors' quarters on Wednesday of the second week.

HORSES.

Horses, on the whole, were not out in as large numbers as in previous years. Evidence of this was given in a number of the heavy-draft classes, in which keen competition was lacking. However, there were many line-ups that tested the judge's ability to the utmost, and the winners in the various classes invariably were real top-notchers.

Clydesdales.—The Scotch breed predominated in draft horses, and in many cases furnished some excellent line-ups both for numbers and quality. Competition was quite keen, and honors were fairly evenly distributed. In most of the classes the horses that secured first honors would be contenders at the largest shows in Canada.

The exhibitors were: W. I. Elder, Wm. Grant, Regina; J. Graham, Carberry; Carruth & Brown, Portage la Prairie; A. Graham, Pomeroy; John Bowler, Manitou; J. McNab, Thornhill; Colquhoun & Beattie, Brandon; McKirdy Bros., Napinka; J. M. Webster, Cartwright; Matt Gibb, Morden; D. McLean, Frobisher, Sask.; H. O. Wright, Winnipeg; John Wishart, Portage la Prairie; and M. C. Weightman, Morden.

In aged stallions, the judge spent considerable time before making the awards. They were a classy bunch, the winner being J. Fowler, on Baron Sprout, sired by Baron's Pride; John Graham, on Queen Royal, took second, with Wm. Grant third on Warlaby. Baron Sprout was the most symmetrical animal, with good quality, and was later made reserve champion.

The three-year-old stallions, although not out in numbers, must be given credit for their excellence. Colquhoun & Beattie secured first prize on Critic, sired by Everlasting. This horse was made champion of the breed, and afterwards cleaned up the stallions of all the draft breeds for highest honors. He was a top-notcher in Great Britain, having won first at the Royal, and, owing to his draftiness, his wealth and quality of bone, and his extreme action, is sure to be a serious contender in the best American competition. The second prize went to Wm. Elder on Kirktown Squire, a typey horse, but lacking a little in action.

In the two-year-old stallions, McKirdy Bros., on Crown King, by Gartley Bonus, took first. He is a great quality animal, as was also their second-prize horse, Gartley's King.

Andrew Graham, on an excellent bunch of youngsters, made a clean sweep in the yearlings.

In the brood mares, with foal by side, A. Graham took first on Miss Banks, and also was

first on foal. Matt. Gibb was a very close contender, and was awarded second prize for both mare and foal. They were a line-up of good breeders.

Competition to suit the most ardent admirers of the breed was located in the yeld mares any age. John Graham, on Border Rosie, by Hiawatha, was first, with McKirdy Bros., on Show Queen, second, and H. O. Wright, on Lady Fleming, third. Border Rosie is a very drafty, quality mare, with good action, and was made reserve champion female.

In three-year-old fillies, J. Wishart took first on Darling Bell, and also third and fourth places, with McKirdy Bros. second. Wm. Grant, on Lady Hopetoun, secured highest honors in the two-year-olds. She has plenty of quality, and displayed great action for a youngster, and took the championship over all Clydesdale females. D. McLean received second place on Lady Peggy, by The Real Mackay.

The yearling fillies included some good material, both for size and quality. Wm. Grant took first on Kismet, by Cawdor Laird, with A. Graham second on Forest Lady; Grant was also fourth.

In three animals, the produce of one sire, McKirdy Bros. took first, with A. Graham second. The latter also obtained first prize for mare and two of her progeny.

Canadian-bred Clydesdales.—In the aged-stallion class, J. McNab took first on a very stylish horse. McKirdy Bros. secured highest honors in two-year-old stallions on Gartley King, by Show King. He is a roan colt, with excellent quality, and later was made champion stallion of the Canadian-bred classes. J. M. Webster secured second place in the two-year-olds on Prince Ivory, by Black Ivory, afterwards made reserve champion.

John Wishart, on Darling Bell, by Vigorous, took first in the three-year-old fillies. She is a very smooth mare, with good action. McKirdy Bros. were awarded second place on Royal Princess.

In the two-year-old fillies, Wm. Grant got first prize on Lilly Lansdown, and second on Aurora Belle. David McLean was third on Lady Peggy. Lilly Lansdown was made champion in the Canadian-bred females, with McKirdy's Show Queen reserve.

Percherons.—Colquhoun & Beattie, of Brandon; C. D. Roberts, of Osborne, and W. C. Henderson, were the main exhibitors of Percherons, which were out in very small numbers, the aged-stallion class offering the only competition.

Nine drafty aged stallions put up a strong fight, and the final reckoning showed Jaume, by Menteau, and owned by Colquhoun & Beattie, in first place. He was afterwards made champion stallion of the breed, and reserve champion over all breeds. The same firm took second on Gasdon, a heavier horse, but not so good a mover as the winner. Third prize went to T. G. Fraser, on Perdreaux, and fourth to W. C. Henderson, on Morsie, both good drafty Percherons.

C. D. Roberts received fifth place in the aged stallions, first in stallions two years old, first in yearling stallions, and first on yeld mare, any age.

Shires.—Only a few Shires appeared. In fact, there were only two or three on the grounds. M. C. Weightman was the owner, and must be given credit for having some fairly typical individuals.

Belgians.—There was but one exhibitor of Belgians, W. C. Henderson. His string are a good bunch of fair-quality horses, with great weight. They were all shown in the aged-stallion class. Culbuteur, a chestnut, with more quality than the others, and yet being quite drafty, was placed first. Paul De Montignies, sired by Roys, was second.

Agricultural Horses and Drafters.—These classes were filled with an unusually high standard of horses.

M. C. Weightman secured first and second on brood mare, and also on foal. In the three-year-old gelding or filly class, Weightman was first on a bay animal with considerable quality. Alex. Steel took second prize.

Wm. Grant took first in the two-year-old, and also in the yearling gelding or filly class. In the latter class Weightman was second, with Steel Bros. third. Weightman was also first for yeld mare or gelding, any age.

The heavy-draft classes brought out some good weighty ones. The Canadian Express Co. won first for single gelding and for team. Matt. Gibb took first on team of geldings or mares sired by a Clydesdale stallion, and McKirdy Bros., on Show Queen, took first for mare or a gelding sired by a Clydesdale.

For light-draft teams, A. Graham was first, and M. C. Weightman second. A. C. Rome secured the prize for the best general-purpose team to a wagon, and Weightman, also, for his four-horse teams, was awarded first place.

Light Horses.—Aged Hackney stallions were a good class, D. M. Cameron winning first on Ter-

ington Asslatin, and Thos. Jasper second, with Alex. Steel third.

In Standard-breds, Dan. McKinney was made champion stallion, and Stadacona reserve.

CATTLE.

The cattle classes, with few exceptions, made a great exhibit. No one had a walk-over in any breed, and in most cases there was a stiff fight.

G. P. Bellows, Maryville, Missouri, placed Shorthorns; Prof. W. H. Peters, M. A. C., Winnipeg, placed Herefords and Red Polls. Mr. Bellows and Prof. Peters placed Aberdeen-Angus, and W. F. Stephens, Huntindon, Que., placed dairy breeds.

Shorthorns.—The showing of Shorthorns was on a par with anything that has been seen at Winnipeg, and practically all the exhibitors came in for a share of the prize-money. Several of the old exhibitors were not out this year, but their places were filled by new blood. R. W. Caswell; Geo. Sayer, Illinois; J. H. Melick (a new exhibitor); J. A. Watt, of Salem, Ont.; H. L. Emmert, a local breeder; H. O. Ayearst, and A. W. Severin, were the chief exhibitors. The bull classes were not so well filled as they might have been, but they lined up a grand aggregation. Aged bulls—1, Geo. J. Sayer, on Uxor Prince, last year's grand champion; 2, Caswell, on Keir Emblem; 3, Ayearst, on Crimson Flash. Two-year-olds—1, Watt, on Gainford Marquis, the well-known showyard winner; 2, Caswell, on Marshal's Heir; 3, Melick, on Mutineer. Senior yearlings—1, Melick, on Pride of Albion; 2, Emmert, on Missie's Prince. This was a great fight, the thicker bull winning, although the hind-quarters of Emmert's bull outclassed those of the winner. Junior yearlings—1, Caswell, on Lavender Marshal; 2, Watt, on Salem King; 3, Emmert, on Choice Goods. Senior bull calves—1, Emmert, on Sittyton Selection; 2, Watt, on Royal Flush; 3, Emmert, on Augusta Star; 4, Caswell, on Jilt Royal; 4, Sayer, on Sittyton Stamp. Junior bull calves—1, Watt; 2, A. W. Severin.

Watt's great bull, Gainford Marquis, in fine bloom, was made senior and grand champion, and Melick's Pride of Albion took the junior championship.

Aged cows—1, Sayer, on Fair Start 2nd; 2, Watt, on Dale's Gift 2nd; 3 and 4, Melick, on Maxwalton Dorothy and Maxwalton Gloster; 5, Caswell, on Sylvan Star 4th. Cows in milk—1, Ayearst, on Cinderella; 2, Severin, on Rose Alberta 8th; 3, Caswell, on Miss Fortune; 4, Melick, on Rose 2nd. Two-year-olds—1, Sayer, on Queen Mildred; 2, Melick, on Maxwalton Gloster 3rd; 3, Caswell, on Merry Maiden; 4, Sayer, on Mary Anne of Oakland; 5, Orange Lady; 6, Caswell, on Gloucester Sultana 2nd. Senior yearling heifers—1, Emmert, on Princess 4th; 2, Sayer, on Maxwalton Missie; 3 and 4, Emmert, on Thelma 2nd and Lady Mistletoe; 5, Caswell, on Sylvan's Stamford. Junior yearling heifers—1, Melick, on Cloverdale Mildred; 2, Emmert, on Emma of Oak Bluff; 3, Sayer, on Duchess of Gloucester 78th; 4, Watt, on Gainford Raglan; 5, Caswell, on Clipper's Sultana. Senior heifer calves—1, Melick, on Clover Leaf Dorothy; 2, 3 and 4, Emmert, on Duchess of Oak Bluff, Stanley Queen and Ury's Star 6th; 5, Sayer, on Sittyton Lancaster. Junior heifer calves—1, Emmert, on Sittyton Rosebud; 2, Melick, on White Pearl; 3, Ayearst, on Crimson Flirt; 4, Caswell, on Fancy Clara.

The senior championship for females went to Sayer's Fair Start 2nd, a splendid individual, placed grand champion. The junior championship line-up of Shorthorn females was what the judge was pleased to call one of the finest line-ups one would find in any show-ring in America. Emmert's senior yearling Princess 4th got the award and reserve grand championship. In herd bull and four females any age, there was one of the closest line-ups ever seen at Winnipeg, and there was a grand battle; four herds, each having top animals, lined up. First place went to Melick on his herd, consisting of Pride of Albion, Maxwalton Gloster, Maxwalton Dorothy, Clover Leaf Dorothy and Clover Leaf Mildred. Sayer was second, Watt third, and Emmert fourth. In herd bull and three females, under two years, Emmert was first, Melick second, Sayer third, and Emmert fourth. Three calves, under one year, Emmert was first, Watt second, and Caswell third. For three animals the get of one bull, Melick was first with three by Avondale, Sayer second and Emmert third. For two, the progeny of one cow, Melick was first with two out of Duchess of Gloucester 39th, and Sayer second. In Western herds, Emmert was first, Caswell second, and Ayearst third. Emmert was first in breeders' herd, and Caswell second.

Aberdeen-Angus.—This breed made a great showing, and it was a hard fight from beginning to end between the herds of J. D. McGregor, Brandon; James Bowman, Guelph, Ont., and O. V. Battles, Maquoketa, Iowa. Aged bulls—1, McGregor, on Leroy 3rd of Meadowbrook; 2, Bowman, on Magnificent; 3, Bowman, on Highland Warrior. Bulls under two years—1, Battles, on

Balmont; 2, McGregor, on Expert of Dalmeny; 3, Bowman, on Elm Park Wizard. Senior yearlings—1, Battles, on Royal Eric; 2, Bowman, on Beauty's Prince; 3, McGregor, on Rugby Lad. Junior yearlings—1, Battles, on Eileen's Lad of Rosemere; 2 and 3, McGregor, on Glencarnock Prince and Glencarnock General. Senior bull calves—1, Bowman, on Beauty's Erwin; 2, Battles, on Thick Lad of Rosemere; 3, Battles, on Proud Lad of Rosemere.

The grand championship for bulls went to Battles, on Balmont, in preference to McGregor's big bull, Le Roy 3rd of Meadowbrook.

Aged cows—1, McGregor, on Violet 3rd of Congash; 2, Bowman, on Elm Park Beauty; 3, Battles, on Thickset Myra. Two-year-olds—1, McGregor, on Queen Rosie of Culham; 2, Battles, on Rose of Rosemere; 3, McGregor, on Glencarnock Rubicon. Senior yearlings—1, Battles, on Myra of Rosemere; 2, McGregor, on Queen Mother of Glencarnock; 3, Bowman, on Elm Park Witch 2nd. Junior yearlings—1, McGregor, on Glencarnock's Pretty Rose; 2, Battles, on Barbara of Rosemere 3rd; 3, McGregor, on Eriford. Senior calves—1, Bowman, on Elm Park Pride 12th; 2, Battles, on Marguerite Lass of Rosemere; 3, McGregor, on Black Rose of Glencarnock. Junior calves—1, Bowman.

The grand championship for females went to McGregor's two-year-old Queen Rosie of Culham, after a hard fight with the senior cow, Violet 3rd of Congash, from the same herd.

In herd, bull and four females, any age, McGregor was first, Battles second, and Bowman third. In herd, under two years, Battles was first, Bowman second, and McGregor third. Battles was first and Bowman second for two, the progeny of one cow.

Bowman was first, Battles second, and McGregor third, for two calves under one year. For three, the get of one bull, Battles was first for three by Oakville Quiet Lad, McGregor second for three by Golden Glean, and Bowman third, on three by Elm Park Ringleader.

Herefords.—The display of Herefords was put up by J. A. Chapman, Hayfield, and L. O. Clifford, Oshawa, Ontario. Both these exhibitors had out stronger herds than they exhibited last year, and the sections, although not well filled, contained excellent types of the breed.

Aged bulls—1, Clifford, on Refiner. Senior yearlings—1, Chapman, on Beau Albion; 2, Clifford, on Bonnie Brae 35th. Junior yearlings—1, Clifford, on Donald Lad. Senior bull calf—1 and 2, Clifford, on Bonnie Brae 45th and Elect 3rd. Junior bull calf—1, Chapman, on Roseland Chief. Aged cows—1, Clifford, on Princess 7th; 2 and 3, Chapman, on Fairy Ring of Island Park and Rosemount Beauty. Two-year-olds—1 and 2, Clifford, on Miss Brae 26th and Miss Brae 23rd; 3, Chapman, on Fairy Princess. Senior yearlings—1, Clifford, on Miss Brae 34th; 2, Chapman, on Virgil Lass; 3, Clifford, on Miss Brae 35th. Junior yearling—1, Clifford, on Miss Brae 38th; 2, Chapman, on Bells 2nd. Senior calf—1, Clifford, on Miss Brae 40th; 2, Chapman, on Fairy Vic of Island Park. Junior heifer calves—1 and 2, Clifford, on Amy 25th and Princess 51st; 3, Chapman, on Fairy Vic of Island Park 2nd.

Refiner was made champion male, and Miss Brae 38th champion female of the breed.

In herd bull and four females, Clifford was first and third, and Chapman second. In two calves under one year Chapman was first, and Clifford second. Clifford was first and second in two, the progeny of one cow. In three animals, the get of one bull, Clifford was first and second, and Chapman third.

W. J. McComb made an excellent exhibit of Red Polled cattle.

DAIRY CATTLE.

Ayrshires.—The whole show of Ayrshires was put up by P. D. McArthur, or North Georgetown, Quebec. He had in all 35 head in his string, and the quality may be assumed from the fact that he won the first place for dairy herd of four cows, any breed.

Holsteins.—Holsteins were not out in the strength that they were a year ago, when five large herds competed. This year, W. J. Cummings, H. Hancox, Dominion City; A. B. Potter, Langbank, and Jas. Herriot, were the exhibitors.

Aged bulls—1, Cummings, on Riverview Hengervald. Two-year-olds—1, Cummings, on Alcarto Polkadot Corrector 8th; 2, Hancox, on Sir Modest Colantha Fayne. Yearling bulls—1 and 2, Potter, on Sir Julia Ouilletette and Paladine Allie; 3, Hancox, on Colantha Sir Modest. Senior calves—1, Cummings, on Glenlea Hengervald; 2, Hancox, on Dairy Lass Sir Modest; 3, Potter, on Martha's Ouilletette. Junior calves—1 and 2, Cummings, on Glenlea De Bell Hengervald and Glenlea De Kol Hengervald; 3, Hancox, on Sir Modest Ringwood.

Aged cows—1, Cummings, on Daisy Camille 2nd; 2 and 3, Hancox, on Josephine Teake De Kol and Lady Bonheur 5th; 4, Potter, on Martha's Anne. Three-year-olds—1, Cummings;

2, Potter. Two-year-olds—1, 2 and 4, Cummings; 3, Hancox. Yearlings—1 and 2, Cummings. Junior calves—1 and 2, Cummings.

The male championship went to the calf Glenlea De Bell Hengerveld, and the female championship to Daisy Camille 2nd, the aged cow.

In herd, bull and four females, any age, Cummings was first, Potter second, and Hancox third. In herds under two years, Cummings was first and Potter second. In three, the get of one bull, Cummings was first and second, and Potter third. Two calves under one year went to Cummings, with Hancox second. Herd bred by exhibitor was won by Potter, with Hancox second.

Jerseys and Guernseys.—Jerseys were represented by but one herd of a very few head, shown by V. A. Little, Stonewall; and Guernseys by one animal, a bull shown by H. H. Hinch, of Winnipeg.

SHEEP.

The sheep pens were taxed to their utmost, every available pen being filled. The gentler animals came out not only in numbers, but also in quality. They were an excellent lot, and especially in the Leicester classes furnished close competition. The onlookers showed a keener interest than is usually seen at the Western shows, as such a large aggregation of high-class sheep is seldom seen in the West. The judging was done by G. H. Hutton. The exhibitors were:

Cotswolds—T. A. Cox, Brantford, Ont. Leicesters—T. A. Cox; A. P. Potter, Langbank, Sask.; R. D. Laing, Stonewall; A. J. McKay, Madonald; and J. Bartlett, Oakville, Man. Shropshires—T. A. Cox, and Fred Skinner, Indian Head, Oxford; T. A. Cox, and Peter Arkell & Sons, Teeswater, Ont. Suffolks—James Bowman, Guelph, Ont. Hampshires—T. A. Cox. Dorsets—J. A. Chapman, Hayfield, Man.

Leicesters put up the best competition, being out in largest numbers. McKay secured first on aged and shearing rams and aged and shearing ewes, and also both championships. Potter, Cox and Laing divided the remainder of the money.

Cox took nearly all the money in Shropshires and Hampshires, and Arkell in Oxford. Bowman and Chapman being the only exhibitors in Suffolks and Dorsets, respectively, took all the money. There was keener competition in the mutton class, T. A. Cox winning the first prize, Arkell and McKay securing the second and third places. T. A. Cox also obtained most of the first places for the grade sheep.

SWINE.

The swine entries exceeded those of former years, and the quality of the animals showed improvement. A number of Berkshires were there from Ontario, and won a large share of the Berkshire awards. In nearly every class there was keen competition, and it was not without a fight for the honors that the awards were given. Every exhibitor showed good animals of a very high rank, the kind that any intending breeder would do well to commence with. The Berkshire classes brought out the strongest aggregation, although Yorkshires, Poland-Chinas, Duroc-Jerseys, Tamworths and Chester Whites were exhibited in goodly numbers. G. H. Hutton made the awards.

The exhibitors were: Berkshires—H. L. Emmert, Oak Bluff; W. J. Cummings, Glenlea; A. J. McKay, Macdonald, Man.; T. A. Cox, Brantford, Ont. Yorkshires—W. H. Mortson, Fairlight; A. B. Potter, Langbank, Sask., and T. A. Cox. Tamworths—W. H. Mortson and R. H. Bryce were the only exhibitors. Poland-Chinas—P. D. McGrath, Oak Bluff; F. H. Wieneke and M. J. Stanbridge, two Manitoba breeders; J. A. Chapman, Hayfield, Man.; W. H. Mortson, and O. C. Miller, Cheadle, Alta. Chester Whites—W. J. Cummings, Glenlea. Duroc-Jerseys—O. C. Miller, and John Maurer, Clive, Alta.

In Berkshires, Cox took most of the first prizes. H. L. Emmert exhibited some very good animals, and won second place in the aged boars, boars over six months and under one year, the yearling sows, sows over six months and under one year, and on the herd (boar and three females), bred in Western Canada. A. J. McKay showed some good utility stock, and was awarded second place in boars of calendar year, and third place in sows of the calendar year, and on sow and litter of pigs.

Yorkshires furnished a duel between Mortson and Potter. Mortson got first on aged boars, while Potter was first and second in boars of the calendar year, first in aged sows, yearling sows, sow and litter of pigs, herd, boar and three females. He also obtained the championship and reserve championship for females on two very typey sows with a great deal of quality.

Mortson obtained the greater number of prizes in the Tamworth classes, getting both championships. Bryce secured first money on young sows, besides several second and third awards.

F. H. Wieneke secured first place in all the boar classes in Poland-Chinas, and had the champions in both sexes. Stanbridge did well in the female classes.

The Chester Whites and Duroc Jerseys were a good lot, and deserving of more competition. Honors in the bacon classes were distributed between W. H. Mortson, A. B. Potter and T. A. Cox.

In the specials, considerable interest was centered because of the competition between breeds. T. A. Cox, on his Berkshires, obtained the grand championships in both sows and boars, on his yearling animals. W. J. Cummings had the reserve champion boar, and J. Maurer, on a stylish, typical fat hog, received the reserve championship for females.

Veterinary Director General Appointed.

The important position of Veterinary Director-General at Ottawa, left vacant through the resignation of Dr. J. G. Rutherford, V. S., on March 31st, last, has been filled by the appointment of Dr. Fred Torrance, of Winnipeg, Man.

Dr. Torrance, after obtaining his B. A. at McGill University, spent a year at the Ontario Agricultural College. He then attended the Montreal Veterinary College, taking the V. S. of that institution, and later D. V. S. of the McGill faculty of comparative medicines. Going West subsequently, he engaged in veterinary practice in Brandon, Man., and for some years held the position of district veterinarian under the Provincial Government. In 1897 he moved to Winnipeg, where he developed a large practice, and when the Agricultural College of Manitoba was organized, he was appointed lecturer in veterinary science, and later professor, a position which he has held up to the present time. He was one of the first members of the Veterinary Association of Manitoba, and has held the position of secretary-treasurer and registrar for ten years. He is also a member of the American Veterinary Medical Association, and has been one of its vice-presidents. He is also a member of the International Commission on Bovine Tuberculosis. In research work, he made special investigations into the disease of swamp fever of horses, and presented to the meeting of the A. V. M. A. the first paper on that subject in America. He has also contributed to the agricultural press on veterinary subjects.

For the present, Dr. Torrance will be live-stock commissioner, as well as Veterinary Director-General, but these branches of the service are to be divided by the Minister of Agriculture during the year. The former duties have been for months efficiently discharged by Prof. H. S. Arkell, as Acting Commissioner.

Prices of Agricultural Products at U. S. Markets.

Following is the range of prices of agricultural produce at important markets in the United States from July, 1905, to July 1st, 1912, as given in the official United States crop report:

Table with columns for Date, Wheat (No. 2 red winter, N. Y. (f. o. b. alfalt), Chi. c. g.), Corn (No. 2, No. 2 mixed, No. 2 oats, No. 2 rye), Baled Hay (No. 1 timothy), Wool (Ohio fine, unwashed, Best tub. washed), Live Hogs (bulk of sales), Butter (Creamery, extra), Eggs (Ave's best, fresh, Cheese-colored), and Per. Lb. for various items.

September colored—September to April, inclusive; new colored—May to July, inclusive; colored—August.

In a talk on the subject of dairy cleanliness, Dean Webster, of the Kansas College of Agriculture, told a story of a woman who had a sick child. The physician wanted to know something of her ideas of cleanliness, and asked her if she had a bath tub? "Yes," she replied; but she thanked the Lord she never had any use for it.

Ayrshires at The Highland.

In the aged-bull class at the Highland Societies' show at Cupar, the three-year-old Ayr Review, a brown-and-white-colored bull, shown by James Howie, Hillhouse, Kilmarnock, and sired by Knockmurrin Hopeul, was awarded first prize, and was later declared male champion, and grand champion of the breed.

Two-year-old bulls were a strong class, and the premier award went to Robert Osborne's Mortain Mains Prieskan, almost white, bred by exhibitor, and got by Auchenbrain Pluto; he is thus half-brother to the famous Peter Pan. Second award went to Logan's Craigie Lea, from Bargaenoch, Drongan. He was bred by Misses Mair, Craigbrae, and sired by Knockmurrin Hopeful. James Howie had third with Howie's Climax, a Mortain Mains bred son of Auchenbrain Pluto.

The winner in the yearling-bull class was Hubinate, a promising white-and-brown son of Auchenbrain Pluto. Second was Zimbar, a well-grown, handsome son of Auchenbrain Pluto. Both these were shown by Mr. Osborne.

In the class for cows in milk, Alex. Wilson, Paisley, was placed first, with Flirt 13th, a brown-and-white six-year-old, bred at Manswrae, and sired by Newhouse's King Edward. She is a very good stamp of dairy cow, and carries a long, level udder, with big, even teats. Second award went to Alex. Cross, of Knockdon, for Lady Diana, a handsome brown-and-white, nine-year-old cow, by Prince III. C. R. Dudgeon, Cargen Holm, Dumfries, was third, with Cargen Mains Miss Robb, a six-year-old cow by Bonnie Scotland. Three-year-old cows in milk made a small entry, and Alex. Cross was first with Lady Constance, bred by Exhibitor, and got by Muir Royal Review, and out of a Prince 3rd dam, and she is a cow of great size and quality, showing true breed characteristics and big, well-set teats. The second prize fell to Chas. M. Douglas for Mavis, home-bred, and got by the same sire.

In the two-year-old class, Robert Osborne, Morton Mains, had first and second winners in the home-bred Lanugem and Nemourna II. Mr. Osborne also had the winners in the yearling heifer class in Thoughtless Beauty II. and Kymaline II. The champion female was Alex. Wilson's first-prize cow in milk, Flirt 13th.

Bladder Campion Spreading.

It is discouraging to see the way some weeds are spreading. Bladder campion, bell weed, or rattle weed, is one of them. This campion is often wrongly named white cockle, because of its white petals at the end of the bladder-like inflation which surrounds the seed pod. It should be easily recognized by comparing it with the cuts found in the different weed bulletins. It has a very persistent, deep-growing root which is hard to kill. When plants are first noticed, they should

be cut out below the ground line, and a good handful of salt put on each root. This will kill it. If something like that isn't done, up it springs again very shortly, with a determination, if at first it didn't succeed to produce seed, it will try again. If let alone, it will accomplish it, too, just like the burdock that is cut off above

its crown, seen all over the country at this time of year.

The plant sends up numerous flower stems. The longer it is established, the more stems it will send up. The seeds mature early, and when ripe they easily spill out on the ground. The seed has considerable vitality, and will remain in congenial soil some years without growing. Besides spreading from seed, it may start from a cut-off crown trailed to a mellow, inviting soil. Sheep will eat the plants, and will keep them trimmed down quite closely. Cattle will eat them, but neither cattle nor sheep will kill them. However, they weaken the plants, and if the pasture field infested were plowed up in July and bare-fallowed, the process of smothering the weed with cultivation would be quite effectual.

The plant widens its constituency through commerce in hay and small seeds. Clover and grass seed should be carefully examined before sowing, to see that there is none in it. It will be found more and more frequently in seeds from year to year if it is allowed to spread, as it has been doing of late years. Look out for this enemy.

Pull or Spud Out the Buckhorn Now.—Red clover seed producers with ribgrass or buckhorn in their meadows can easily see it now just out in blossom, and before the clover has come on too tall to hide it. Going over the piece in narrow strips with hoe or by hand-pulling, will add very much to the value of the seed.

T. G. RAYNOR.

Illustration Farms.

The Committee on Lands of the Canadian Conservation Commission is making good progress in the selection of demonstration farms, the lists having been completed for Ontario and the Maritime Provinces, and Quebec partially. Those in the Western Provinces are also being chosen by F. C. Nunnick, B. S. A., Agriculturist of the Committee. This movement grew directly out of conservation investigations concluded in 1910-11, with a view to obtaining detailed information regarding farm methods and management. The farms used as a basis were among the best representatives in their respective districts. Such farms are always a stimulus to a community. One can always learn something from the example of a successful neighbor. It is now proposed to unite the farmers adjacent to these illustration farms in voluntary-improvement associations, in conjunction with the investigations conducted upon them. It is believed that, by coming together from time to time to consider methods and rural problems generally, and to impart information in a co-operative spirit, much good will be accomplished. To this end, a simple form of constitution has been prepared, setting forth the aims of the association, and providing for a president, vice-president and secretary-treasurer, who shall constitute an executive committee. Any farmer or other citizen residing in the vicinity of the illustration farm or where the meetings shall be held may become a member, if interested in better farming and paying the membership fee of 25 cents per year. Any person may become an honorary member by unanimous vote at any regular meeting. He shall be entitled to all the privileges of an active member, except voting and holding office, and shall not be subject to any membership fee. Meetings will be held at the discretion of the officers, and upon request of the Field Expert of the Commission on Conservation. The usual parliamentary rules will govern procedure of meetings. The list chosen to date is as follows:

Geo. R. Barrie, Galt, Ont.; Thomas Hall, Brooklin, Ont.; Paul Snider, Elmira, Ont.; Nelson Peterson, Ruthven, Ont.; A. M. Colver, Simcoe, Ont.; Wm. T. Hands, Perth, R. M. D. No. 1, Ont.; R. F. Taylor, Essex, Ont.; Parliament Bros., Cannington, Ont.; Whittaker Bros., Williamsburg, Ont.; J. M. McLean, New Perth, P. E. I.; Adam Brown, New Glasgow, P. E. I.; Albert Schurman, Cen Bedeque, P. E. I.; H. M. Tatterie, River John, N. S.; Fred Vatour, St. Louis, N. B.; Vernon B. Leonard, Central Clarence, N. S.; Shaw Bros., Victoria, N. B.; Taylor Bros., Antigonishe, N. S.; Kenneth Raymond, Parish of Norton, N. B.; Chester Keith, Corn Hill, N. B.; Thomas McDowell, Shawville, Que.

A new use for a scarecrow was recently brought to light on a New York farm. The owner of the farm noticing bees buzzing around the ragged, made-up figure, made a closer examination, when both legs of the trousers were found to be distended with honey. A cheap hive for so industrious a colony.

Wheat-cutting is reported to have commenced in Alberta July 24th, and cutting will be general over the southern part of the Province ten days from that date.

P. E. Island Notes.

On July 22nd haying was just getting general, and the weather was anything but favorable—showers almost every day for a week, followed by a day's rain, that will damage the cut hay very much. The hay crop is light. There are some few good fields of clover, but the second-year meadows are poor; in fact, the poorest we have had for some years. Other crops are looking fairly well. Oats will be up to the average. Wheat is about an average. In some fields we notice some joint-worm. Fodder corn is making a fine showing, and potatoes and roots promise a bumper crop. The make of cheese and butter at the co-operative stations is well up to average of recent years, and, with prices booming so far, dairymen are greatly encouraged. Pastures are holding out well. Prices of horses are the highest yet. Best specimens of both draft and carriage stock sell as high as \$300 each, while any good farm horse is salable at \$150 to \$200. Eggs are as much as five cents higher than the average of last year, and the shipments are larger than usual. Beef is higher than ever known here, and, while some of the poorer-quality cattle are going out to Sydney and Newfoundland, high-priced cattle are coming in in carloads from Toronto to supply a demand for choice beef. Experts have been holding agricultural meetings through the Province, at which live-stock judging has been the principal feature. These meetings, together with the cow-testing associations which have been organized, are a great education to farmers in the matter of selecting stock for the dairy that will be a greater source of profit than formerly.

Farmers' picnics are the order of the day, and the objective point of most of them is the Experimental Farm. During the fortnight preceding date of writing, very many Farmers' Institutes have visited the institution, and have been much pleased with the look of things there, and greatly interested in the different experiments inaugurated and carried on by Superintendent Clark and his staff. The crops at this Station are looking well. Alfalfa is proving a success. Small fruits are an immense crop. Grapes promise a large yield. A new sheep barn is now being erected, and the experiments in fattening sheep will be carried on to a greater extent than formerly, and to much better advantage. The experimental orchard, set out two years ago, is making a fine growth. Fruit-growers will be greatly interested in this orchard, as there are so many varieties under test. Our Department of Agriculture are offering handsome prizes for competition in fields of grain, and we understand farmers are taking more interest in these competitions than usual.

W. S.

Ontario Beekeepers' Association.

The Honey Exchange Committee of the Ontario Beekeepers' Association met in the Secretary's office July 24th, to consider the reports on crop conditions. Replies were received from double the number of beekeepers that reported in 1911, which year was then a record one in this respect. These replies show a still further decrease per colony, the average being 48.7 pounds, as compared with 50.9 in 1911, a short year, and 58.3 in 1910. It was further noted by the committee that there was a decided shortage in the Eastern Counties, and many large beekeepers did not report, as crop was a failure.

Owing to the heavy losses in bees, as a result of the past winter, which condition was shown by the spring report of the Provincial Apiarist, there is, no doubt, much less honey in Ontario than at this time last year. Fruit, which comes into competition with our honey, is selling at firm prices, the only crop which is reported as being at all normal being apples. Under these circumstances, the Committee would recommend the following prices:

No. 1, light extracted (wholesale), 11½c. to 12½c. per pound.

No. 1, light extracted (retail), 14c. to 15c. per pound.

No. 1, comb (wholesale), \$2.25 to \$3.00 per dozen.

No. 2, comb (wholesale), \$1.50 to \$2.00 per dozen.

A later report will be sent out to producers of buckwheat honey.

Losses from Rabies.

People who seem disposed to think so lightly of outbreaks of rabies, or to attribute "mad-dog scares" to veterinary officials, do not realize the seriousness of such cases until they come near home. An additional example of this kind occurred lately near Belmont, Ont., in Middlesex County, where a dog had taken hydrophobia over a month before. Recently the disease developed among the live stock, some of which he had bitten before being destroyed. As a result, three head of valuable cattle and a couple of hogs died,

or had to be shot, and two farms were quarantined by order of a Dominion Veterinary Inspector.

Small Fruit Scarce in Nova Scotia.

Perhaps the most wanted articles at this time of season by the housewife are fruits for preserving. Strawberries, for the most part, have been a failure not only in Antigonishe County, but other parts of the Province. Especially in Guysborough County, the berry crop is much less than last season. One berryman of Guysborough last season supplied several Antigonishe merchants with berries, while this season he could only supply one.

Pictou County people have been importing berries from Prince Edward Island. Wild strawberries were also not plentiful, the failure due in both cases to the early frosts and dry summer.

Farmers are in the midst of haying, the weather being at present very much broken. The work is going on slowly. The crop will not be as good as last season. Good reports are coming from certain sections. The new and well-looked-after ground is yielding a good crop, while clover is excellent. The old land, as year after year goes by, is yielding poorly. The intervale hay will likely be good, as the present rains will help everything.

Grain is growing with new vim as never before. Turnips in most parts have proven a failure.

Col. Robt. McEwen, C. M. McRae, and H. W. Canning, M. P. P., a committee of the Dominion Sheep-breeding Association, were in New Glasgow, Pictou County, Thursday, July 18th, interviewing persons interested in sheep-breeding. The Dominion Government has made a grant of \$15,000 to the Association, and it is proposed to hold sales of pure-bred rams and grade ewes. The above committee wish to consult with persons interested in regard to breeds and localities for sales. J. M.

Antigonishe Co., N. S.

Cutting Grain.

Grain-cutting is now general over a great portion of Eastern Canada, and the West is just beginning to harvest what promises to be a bumper crop. While driving the self-binder may not be as strenuous work as stooking, it is no "small boy's" job, and, to be well done, requires considerable attention. True, the newer models of self-binders are as near perfect as one could desire, yet the leaving of an even stubble, making a clean cut and tying an even sheaf, all of which count in the after-work to be done on the field or with the crop, demand that considerable attention and skill be exercised in operating the binder.

Where the grain of the crop is grown particularly for seed, it is necessary that it be well ripened before being cut. The production of seed is the aim of every plant. The seed is the last portion of the plant to develop, and all other portions give of their strength to the seed right up to the time of complete maturity, or to the dead-ripe stage. Thus, the germinating and growing power of the seed is strengthened by allowing it to thoroughly mature before cutting. Of course, the possible loss of allowing the crop to become overripe must be guarded against.

In cutting where clover has been sown, it is good practice to leave considerable stubble to protect the seeds from the hot sun during the remainder of the summer, and to hold the snow in winter.

Pursuant to a large meeting of live-stock dealers, in conference with the Toronto City Board of Control, the latter body has asked the Dominion Government to appoint a commissioner to investigate the alleged existence of a meat trust in Canada. The proposal to establish a public abattoir in Toronto was unanimously endorsed by the cattle men, of whom about 100 were present.

Prof. H. S. Arkell, Acting Live-stock Commissioner, Ottawa, has been sent by Hon. Martin Burrel, Minister of Agriculture, to attend the conference this week in Winnipeg of Western farmers, stockmen and packers, with a view to a possible revival of the live-stock industry in the Western Provinces.

Hon. W. J. Hanna, Provincial Secretary for Ontario, has made plans for the building of a series of model roads, to the extent of 12 or 14 miles, around the Prison Farm and the Ontario Agricultural College, at Guelph, Ont. These roads will be built of the best material, with concrete culverts, built at the cheapest possible cost, and to be used as models by counties and municipalities.

According to late Government returns, there are now some 850 rural-mail-delivery routes in Canada, of which 250 were established last year, and there are 25,000 delivery boxes in use. The system is most in vogue in Ontario.

QUESTIONS AND ANSWERS. Miscellaneous.

RAILWAY BLASTING.

A railway company has settled for a right of way across our farm, and the contractors are now working in a field of barley; are blasting in a hill. If they blow stones, or do other damage outside the right of way, to whom shall we apply for compensation—the railway company or the contractors?

Ontario. T. W. Ans.—It would probably be advisable to apply to both.

REPAIRS.

1. We wish to know where to get repairs for threshing machine manufactured by the _____ Company, Brantford, Ont.; manufactured twenty years ago, or a little longer. 2. We also wish to know where to get repairs for the _____ engine manufactured in Toronto over twenty years ago.

K. B. Ans.—1 and 2. We have no knowledge as to where these repairs may be purchased. Inquiry of some of the present-day manufacturers might aid in locating them.

ALFALFA SEED.

Would the 10th of July be too late to let a field start growth for a field of alfalfa seed, and what is the best way to harvest it and take care of it, and what kind of a machine is it threshed by, a grain separator or clover huller? This is the crop to grow for all kinds of stock. It will pay to grow for pasture if one has to seed a field each year for this purpose. It will grow if the seed is treated, and do well sown the same as other seeds, and will grow where red clover will grow.

A. J. M. Ans.—This should not be too late a date. Of course, a great deal depends upon the location and the season, but in Kansas many growers save the third cutting for seed, so commencing growth in Middlesex Co., Ont., at the date stated, should not be too late under average conditions. Most growers harvest with the mower. Some have special table attachments, and bundle the crop. Others cut it down and rake it up like hay, only rake it when it is damp. In some parts of Kansas it is cut with the self-binder, bound into sheaves, and allowed to dry in the stook for about ten days. The clover huller is the most satisfactory machine to use for threshing the crop, although it may be quite successfully done by using a grain machine with a special clover attachment.

PEONIES NOT FLOWERING.

Peony which I set out three years ago has never blossomed. Last year, and this year also, small buds formed, but seemed dried up and never got any larger. The ground is quite rich. Other plants are growing near it. One, called "Pride of the Meadow," is about a foot or a foot and a half away from it. Did not know whether that would affect the peony or not. Would removing peony to another part of the garden be of any benefit? The peony seems thrifty, and has grown nicely, but will not blossom.

G. L. G. Ans.—It is difficult to give the reason for peonies not flowering. I have known peony growers to dig out and discard roots that showed this failing. It is usually thought insufficient fertilizing has a great deal to do with it. In sandy soil this failing is also often observed. My plan with peonies is to mulch late in the fall with an inch or two in depth of fairly well rotted barnyard manure. This is forked in around the roots in early spring, with the addition oftentimes of a good sprinkling of bone meal. If the soil the peonies mentioned are in is very sandy, I would advise digging in some soil of a clay loam around them. We have about one hundred varieties of peonies testing here. None of them have so far developed the non-flowering habit. Peonies do not like to be crowded with other plants. If the plants are removed, it should be done in early fall, end of September, or early in October. Spring-planted peonies are often very unsatisfactory. WM. HUNT.

REMOVING LANDMARK.

1. What is the penalty for a person removing and taking away a corner-stone, and a landmark, between two farms, the same having been put down by a Government Surveyor, and been there for fifty years? It has always been recognized as the dividing line between the two farms.

2. What course of procedure would I have to take against such person? 3. Providing such person were to replace said stone and refuse to recognize it as the boundary line, could I take proceedings against such person for lifting stone? SUBSCRIBER. Ontario.

Ans.—1. Five years' imprisonment. 2. Make a complaint, or lay an information in writing, and under oath, before a justice of the peace, under section 532 of The Criminal Code. 3. Yes.

RAPE AFTER WHEAT—CARELESSNESS—METAL SHINGLES.

1. Would you advise sowing rape on land after taking fall wheat off? Would it make enough growth for lambs in the fall?

2. If a hired man, through carelessness, allows a horse to run away and break a buggy, can he be held responsible?

3. Do you think metal shingles are much warmer to work under than wooden ones, on a barn? E. J.

Ans.—1. Rape, sown on a fall-wheat stubble immediately plowed and worked, should produce quite a crop of fall feed for sheep, but why did you miss a chance of seeding down with wheat? 2. If you can prove the accident was caused by carelessness. That may not be easy. 3. Somewhat.

COW STIFFENED—SOWING ORCHARD GRASS.

1. We had two cows last winter that stiffened up. They were fed what silage they would lick up clean. They also got a few mangels and barley and oat chop, with what straw they cared to eat. They are watered in the stable, but were let out every fine day. They were standing on a well-bedded cement floor.

2. We plowed a field of sod in June and intend sowing fall wheat. Would it do to sow orchard grass with the wheat, or when could I sow it? R. T.

Ans.—1. This was probably indigestion or rheumatism. Was the silage fed frozen? If rheumatism was the cause, it would be well to lay over the cement where these two cows stand, removable false floors of plank. However, in a less severe winter they would probably be all right with good bedding, a little more exercise, and care to avoid feeding frozen silage or roots. 2. Without any definite experience to judge by, we should prefer to take chances on spring sowing of orchard grass. Sow with the clover.

FARM CROSSING—BUYING AT AUCTION.

1. The railroad crosses my farm, and it is the custom for the sectionmen to remove the plank crossing in the fall, leaving nothing but ballast for the sleigh to catch on all winter, letting the runners scrape on the steel rails, making it almost impossible to draw a heavy load over without danger of getting stuck. Can I make them leave plank in at least the center of track and outside? What is the lawful height for the plank to be on the rail—a little above or below the top of the rail? Is there any difference in height of plank between a farm crossing and public crossing?

2. A buys an article at public auction. After buying it he inspects it and considers it is not worth what he bid for it, and refuses to take it. Can owner compel him to take it, and pay what he bid for it? D. F. Ontario.

Ans.—1. We would refer you to sections 83 and 86 of The Ontario Railway Act (Ontario Statutes, 1906, chap. 30), and sections 252, 253 and 258, of the Railway Act (Revised Statutes of Canada, 1906, chap. 37), for information upon these questions. 2. Yes.

SPRAY FOR OX-EYE DAISY.

1. Would you please state in your paper if there is any spray that could be used to kill ox-eye and crow-foot daisies?

2. Myself and a neighbor were at the Turner Ayrshire sale, and understood the price paid for the record heifer to be \$2,000, but it was reported by "The Farmer's Advocate" to be \$1,700. Were we mistaken, or did some other bidder get her? W. B. C.

Ans.—1. There is no spray that is satisfactory for killing these weeds.

2. "The Farmer's Advocate" report was \$1,750, and we believe is correct, as it was written by our own agent, who was present at the sale.

AN ACCIDENT.

A hired a horse and buggy from B, a liveryman. A asked for a quiet horse; B said anyone could drive it. After starting out the horse took fright and jumped the ditch, throwing A out, and breaking his leg, and breaking the buggy. Can B collect damages for buggy? If not, can A collect damages? F. E. S. Ontario.

Ans.—It does not appear from the foregoing statement of facts, alone, that it is a case for damages from either party. It is possible, of course, that one of them may have a good cause of action against the other; but far more would be required to support it than is disclosed by the statement.

GRAVEL FROM HIGHWAY.

If A is taking gravel off the roadway adjoining B's property, how near can A go to B's fence, on a bank of about six feet? If A goes so close to the fence that it falls the following spring, is A liable to any damage? W. J. H. Ontario.

Ans.—A may go all the way, provided he does it under proper authority from the municipal council, and assuming that the gravel is being taken for the purpose of keeping in repair some road or highway within the municipality; but if in doing so he should cause B's bank to fall as suggested, or occasion him other damage, B's proper course would be to apply to the council for compensation.

Veterinary.

INJURY TO HOCK.

Horse received an injury on inside of the hock. The wound discharged a watery fluid, but healed up under my treatment. Now there is a puffy swelling in front, and one on the outside of the joint below and in front of the point of the hock. F. H. D.

Ans.—There is now a bog spavin and thoroughpin. These may have been caused by the injury. They are very hard to remove, and are not likely to cause lameness. Repeated blistering will probably reduce them, but they will be liable to recur. Get a blister made of 2 drams each of biniodide of mercury and cantharides, mixed with 2 ounces vaseline. Clip the hair off the parts. Tie him so that he cannot bite them. Rub the enlargements well once daily for two days with the blister. On the third day apply sweet oil and turn him in a box stall or on grass. Oil every day until the scale comes off. Repeat the blistering once every month as long as necessary. V.

GOSSIP.

SALE OF IMPORTED CLYDE MARES.

Attention is called to the advertisement on another page of the auction sale, in London, Ont., on August 14th, of fourteen imported Clydesdale fillies, twelve two-year-olds, all stinted to high-class sires in Scotland, and two yearlings, all personally selected by the importer, who is a well-known breeder of Clydes in Scotland, and knows the type of horses required in Canada, having himself had experience in both the Eastern and Western Provinces. We are assured that this offering is full of first-class breeding and quality, combined with good size and character, and will be sold without reserve. For information, apply to Capt. T. E. Robson, Auctioneer, London, Ont.

TRADE TOPIC.

THE C. P. R. AND AGRICULTURAL COLLEGE SPECIAL, AND THE WORK IT ACCOMPLISHED.

On Saturday evening, June 29th, the Agricultural College Special, run by the Canadian Pacific Railway, completed its very successful tour of Manitoba. The train was on the road for 32 days, and in that time covered all the Province tributary to the Canadian Pacific Railway. Eighty-seven different points were visited, 1,305 addresses given to 22,900 people, which included 9,851 men, 7,426 women, and 5,623 of the senior classes of the schools.

The live stock carried consisted of three pure-bred Holstein cows, one pure-bred Hereford steer, and four types of the best quality work horses and brood mares. Professors Peters and Jones discussed the horse problems, including types to raise, emphasizing draft, foal diseases, etc. Milk cows formed the subject of the second lecture, and the Holstein was advocated for Manitoba. Practical demonstration was shown in the cows exhibited, one being a 2,000-lb. weed, and another an 18,000-lb. prizewinner. The Hereford steer was used to illustrate the difference between dairy and beef types.

A short talk was also given on hog production and the raising of sheep.

After the stock-judging, Principal Hales, of the Brandon Normal School, gave the men a short address on agricultural education in the public schools, and advocated strongly more thorough training of our teachers in agriculture, and they in their turn taking up more of the time in teaching that subject in the rural districts, and also in small plots for agricultural purposes being attached to each school. The question of consolidated schools was also gone into by Mr. Hales, and strongly recommended for most districts.

Professor Lee also gave an interesting lecture on the identification and eradication of weeds. Farmers who were at the meetings last year came in, bringing with them weeds which they had found in their fields and which they were unable to identify, asked their names, and the best way of destroying them. Mr. Lee dealt particularly with the destruction of the sow thistle, the Canada thistle, mustard, wild oats, and French weed.

The subject of fodder crops was covered by Mr. Harrison. Principal Black gave a strong, practical talk on working a Manitoba farm. Poultry-raising was covered by Prof. M. C. Herner, and dairying was discussed by Profs. Mitchell and Crowe. Mrs. Salisbury gave useful instruction to the ladies on home nursing, sanitation, ventilation, etc.

The senior classes of the schools at almost every point came over to the train in a body, and were addressed by either Principal Hales, Professor Lee, or J. J. Golden, on the birds of Manitoba; of the great good birds did in killing insects which were harmful to all vegetation, the need of getting sufficient trees around the farm so that the birds would stay in the district, and also how to identify the different kinds of birds.

All the meetings were opened with a short address, explaining to the farmers why the Canadian Pacific Railway Company and the Agricultural College staff thought it necessary to run the train, the interest the Canadian Pacific Railway took in the farmers who were living along their line, and the desire for better farming, and for having prosperous farmers living along the company's lines. The farmers were also invited when they came to Winnipeg to call on the officials of the company, who were always glad to have them come in and discuss matters of mutual interest.

Altogether the meetings were a great success. Many kind remarks were heard on all sides as to the generosity of the C. P. R. in furnishing the train free of charge. The announcement made in regard to the company starting demonstration farms for the benefit of the farmers in the vicinity in which they were located was always greeted with much appreciation, and many farmers expressed the hope that the C. P. R. would locate a farm of this description in their district, as it would have a very beneficial effect in keeping before them all the time the best methods of farming.

Farmers and Banking

TO-DAY progressive farmers make extensive use of a Bank's facilities for depositing money for safe-keeping and profit, for paying bills by means of cheques, and for consulting with the Manager on various matters relating to loans, investments and purchases.

Farmers' business is invited by

The Bank of Toronto

Open a Savings Account with the Bank of Toronto—a bank with assets of \$57,000,000, an experience of 57 years; and with 110 Branches in Ontario, Quebec and the West.

MARKETS.

Toronto.

REVIEW OF LAST WEEK'S MARKETS

At West Toronto, on Monday, July 29, receipts numbered 142 cars, comprising 3,181 cattle, 232 hogs, 579 sheep, 162 calves, and 18 horses. Trade good for butchers', but slow for export cattle. Exporters slow sale, at \$7 to \$7.50; choice butchers', \$7 to \$7.50; good, \$6.50 to \$7; medium, \$6 to \$6.50; common, \$5.25 to \$6; cows, \$3 to \$5.90; calves, \$3 to \$8.50; milkers, \$45 to \$65; sheep, \$3 to \$5; lambs, \$7.50 to \$8. Hogs, \$8.50 fed and watered, and \$8.15 f. o. b. cars.

Receipts of live stock at the City and West Toronto yards last week were as follows:

	City.	Union.	Total.
Cars	95	252	347
Cattle	938	3,684	4,622
Hogs	2,370	3,622	5,992
Sheep	1,606	2,849	4,455
Calves	493	212	705
Horses	20	130	150

The total receipts of live stock at the two markets for the corresponding week of 1911 were as follows:

	City.	Union.	Total.
Cars	253	232	485
Cattle	3,483	3,198	6,681
Hogs	4,833	4,525	9,358
Sheep	3,446	1,204	4,650
Calves	778	148	926
Horses	—	86	86

The combined receipts at the two markets last week show a decrease of 2,059 cattle, 3,366 hogs, 195 sheep, 221 calves, and an increase of 64 horses. Although every class except that of horses appears in the decrease column, the figures are not so large as those of last week.

Toward the end of the week the market was active all around, and stronger prices were realized on an improved quality of stock offered. Butchers' cattle and good fat cows were much firmer, and more could have been sold if they had been offered. Sheep and lambs held firm and steady, and hogs advanced a trifle.

Export Steers.—Forty-five cars of this class of cattle were offered. The best price for choice cattle was \$7.75, ranging down to \$7.25 for medium grades.

Butchers'.—The demand for choice butchers' stuff was keen, and prices advanced 10c. to 25c. per cwt. for the best grades towards the end of the week, although earlier in the week there was a drop from quotations of the previous week. Choice cattle sold from \$7 to \$7.50; good, \$6.25 to \$7, and common cattle at \$5.25 to \$6; cows, \$5 to \$6 for the best, and from \$4.75 down for the commoner grades; canners, \$3; bulls for export, \$5 to \$5.50, and a few

sold for \$6. Lighter bulls brought \$3.50 to \$4.50.

Milkers and Springers.—Milk cows were easy, and the offering was greater than the demand. Choice milkers brought \$40 to \$75 each, and springers from \$40 to \$60 each.

Veal Calves.—The supply of veal calves was not very large during the week, and the market closed strong, with a keen demand. Good calves sold at \$7 to \$8 each, and medium from \$4 to \$6 each.

Sheep and Lambs.—The market was a little easier, at a slight decline in price. Light ewes, \$4 to \$4.50; heavy ewes, \$3.25 to \$3.50; lambs, \$7 to \$8; rams, \$3 to \$3.50.

Hogs.—Not many hogs are being marketed now, and prices held firm, and in some instances advanced about 10c., selects selling at \$8.30 to \$8.40, and \$7.90 to \$8.10 f. o. b., country points.

Horses.—Quotations stand: Drafters, \$225 to \$275; general purpose, \$175 to \$225; wagon and express horses, \$160 to \$225; drivers, \$100 to \$150; workers, \$80 to \$90.

BREADSTUFFS.

Wheat.—No. 2 red, white or mixed, \$1.03 to \$1.04, outside points; Manitoba No. 1 northern, \$1.12½; No. 2 northern, \$1.09½; No. 3 northern, \$1.06½, track, lake ports. Oats—Canadian Western No. 2, 45c. to 45½c.; No. 3, 44c.; extra No. 1 feed, 45c.; Ontario No. 2, 44c. to 45c.; No. 3, 43c., track, Toronto. Rye—No. 2, 90c., outside points. Buckwheat—70c. per bushel, outside points. Peas—No. 2, \$1 to \$1.25 per bushel, outside points. Barley—For malting, 87c. to 88c. (47-lb. test); for feed, 60c. to 65c., outside. Corn—No. 3 yellow, 75c., track, bay ports. Flour—Ontario winter - wheat flour, \$4.20, seaboard. Manitoba patents—First patents, \$5.70; second patents, \$5.20; strong bakers', \$5 in jute; in cotton, 10c. more.

HAY AND MILLFEED.

Hay.—Baled, car lots, track, Toronto, \$15 to \$16 for No. 1, and \$10 to \$12 for No. 2. On the market—Old, \$20 per ton; new, \$14 to \$17. Straw.—Baled, car lots, track, Toronto, \$10 to \$10.50 per ton. Bran.—Manitoba, \$23 per ton; shorts, \$26. Ontario bran, \$24, in bags; shorts, \$27, car lots, track, Toronto.

COUNTRY PRODUCE.

Butter.—Creamery pound rolls, 28c. to 29c.; creamery solids, 28c.; separator dairy, 25c. to 26c.; store lots, 21c. to 22c. Eggs.—New-laid, 25c. Cheese.—New, per lb., 14c. to 15c. Poultry.—Turkeys dressed, per lb. 20c. to 22c.; last year's chickens per lb., 16c. to 17c.; spring chickens per lb., 30c. to 35c.; fowl per lb., 14c. to 15c. Potatoes.—Ontario potatoes, car lots, per bag, \$1.50 to \$1.60; New Brunswick Delawares, per bag, \$1.75 to \$1.90; new potatoes, per barrel, \$3.75. Beans.—\$2.90 to \$3.10.

FRUITS AND VEGETABLES.

Prices for all kinds of fruit continue firm. Oranges, late varieties, \$4 to \$4.25; lemons, per case, \$4.50 to \$5; bananas, bunch, \$1.75 to \$2; red currants, basket, 75c. to 90c.; raspberries, box, 12c. to 14c.; sweet cherries, basket, \$1.50 to \$1.75; sour cherries, basket, \$1.50 to \$1.75; gooseberries, 11-quart basket, 75c. to \$1; Bermuda onions, per box, \$1.25; cabbage, per crate, \$2.25; tomatoes, per basket, \$1.10 to \$1.50; watermelons, each, 40c. to 45c.; peaches, per half dozen baskets, \$2.25; pears, Bartlett's, per box, \$4; plums, \$1.75 to \$2.50; blueberries, basket, \$1.50; apples, bushel hamper, \$1.25 to \$1.50.

HIDES AND SKINS.

E. T. Carter & Co., 85 East Front street, have been paying the following prices: No. 1 inspected steers and cows, 13c.; No. 2 inspected steers and cows, 12c.; No. 3 inspected steers, cows and bulls, 11c.; country hides, cured, 11½c. to 12c.; country hides, green, 10½c. to 11c.; calfskins, per lb., 13c. to 16c.; lambskins and pelts, 35c. to 40c. each; horse hides, No. 1, \$3.50 each; horse hair, per lb., 34c.; tallow, No. 1, per lb., 5½c. to 6½c.

WOOL.

Unwashed, coarse, 12½c.; unwashed, fine, 14c.; washed, coarse, 19c.; washed, fine, 21c.; rejects, 16c.

Montreal.

Live Stock.—Really choice steers were scarce on the market. Many buyers were present, and prices held up well. Packers were buying plenty of cattle, and the market was active. Choice butchers' sold up to \$7.25, a few good ones bringing \$7, and the bulk of the trade was done at \$6 to \$6.75. Bulls sold at around \$4; cows \$5 to \$5.50 for choice, and \$4 to \$4.50 for common. The market for sheep was firm, at \$4 for ewes; \$3 to \$3.25 for bucks, and \$7 for lambs. Calves showed a wide range in quality and price, selling from \$2 to \$10 each. Owing to the continued small supply of hogs forward, a much stronger feeling developed in the market, and advances of from 25c. to 50c. per cwt. were recorded. Sales the middle of the week reached \$9 per cwt., and closed at \$8.75 to \$9.

Horses.—No marked change was noticed in the horse market. Supplies are light and demand continues firm. Heavy horses find ready sale. Quotations continue as follows: Heavy draft horses, weighing 1,500 to 1,700 lbs., \$300 to \$375 each; light draft horses, 1,400 to 1,500 lbs., \$225 to \$300 each; light horses, 1,000 to 1,100 lbs., \$125 to \$200 each, and old or inferior stock, \$75 to \$100 each. Choice drivers and saddle horses sell up to \$350 to \$500 each. Dressed Hogs.—Abattoir fresh-killed hogs sold at \$12.75 to \$13 per cwt.

Potatoes.—The market for potatoes showed a decline, as indicated the previous week. Green Mountains sold at \$1.40 in car lots, on track. The quantity of new potatoes offered is gradually affecting the market.

Syrup and Honey.—White clover comb honey, 10½c. to 11½c. per lb.; extracted, 8c. to 8½c.; dark comb honey, 7c. to 8c. Maple syrup, in wood, 7c. to 7½c. per lb.; in tins, 70c. to 75c. each; maple sugar, 9½c. to 10c. per lb.

Eggs.—Very little change was noticeable in the market for eggs. If anything it showed a little advance. Good eggs are scarce. Quotations were 25½c. to 26½c. for selected stock, with poor stock selling down to 15c. and 16c. per dozen. Straight receipts were firm, at 22c. to 23c.

Butter.—Quotations were 26½c. to 27c. for choicest creamery, and 25½c. to 26c. for seconds. The make seems short.

Cheese.—The market held firm but quiet in the country, with no change. Finest Westerns were quoted at 13c. to 13½c., and Easterns at 12½c. to 12½c.

Grain.—There was an increased inquiry from foreign buyers for new crop Manitoba spring wheat. Oats—Canadian Western No. 2, 45c. to 45½c.; No. 3, 44c.; extra No. 1 feed, 45c. Barley—Manitoba feed, 63c. to 64c. Corn—American No. 2 yellow, 68c. The market was firm.

Flour.—The trade in flour continued quiet for export, but the domestic trade was fair. Manitoba spring-wheat patents, firsts, \$5.80; seconds, \$5.30; strong bakers, \$5.10; winter patents, choice, \$5.40 to \$5.50; straight rollers, \$4.95 to \$5; in bags, \$2.40 to \$2.45.

Feed.—The market for all kinds of mill-feed was active and firm, the demand showing an improvement over the previous week. Bran, \$22 per ton; shorts, \$26 per ton; middlings, \$27; mouille, \$30 to \$34 per ton, the former price being for mixed, and the latter for pure grain mouille.

Hay.—The new crop prospects exerted an influence on the market. Pressed hay in car lots sold at about the same prices as those paid the previous week. No. 1, \$18 to \$19 per ton; No. 2 extra, \$16 to \$17; No. 2 good, \$15 to \$15.50; No. 3 hay, \$11 to \$11.50, and mixed clover, \$13.

Hides.—Calf skins, 19c. and 17c. per lb. for Nos. 1 and 2, respectively; beef hides, 11c. to 13c. per lb.; lamb skins, 25c. to 30c. each; horse hides, \$1.75 to \$2.50 each. Tallow, 1½c. to 3c. per lb. for rough, and 6c. to 6½c. for rendered.

British Cattle Market.

John Rogers & Co., Liverpool, cable quotations for Canadian steers, 14½c. to 15½c. per pound.

Cheese Markets.

Stirling, Ont., 12½c.; Campbellford, Ont., 12½c. to 12 11-16c.; Madoc, Ont., 12 11-16c. to 12 13-16c.; Brockville, Ont., 13c. to 13 1-16c.; Kingston, Ont., 12½c. to 12 13-16c.; Vankleek Hill, Ont., 12 11-16c. to 12½c.; Ottawa, Ont., 13c.; Cornwall, Ont., 13 1-16c.; Kemptville, Ont., 13c., 13 1-16c., 13½c.; Napanee, Ont., 12½c. to 15c.; Picton, Ont., 13½c. to 13½c.; Iroquois, Ont., 12 15-16c.; Belleville, Ont., 12½c. to 13c.; London, Ont., 13½c.; Cowansville, Ont., 12 13-16c.; butter, 26½c.; St. Hyacinthe, Ont., 12½c.; butter, 26½c.; Canton, N. Y., 15c.; butter, 28½c.; Watertown, N. Y., 14½c. to 14½c.

Chicago.

Cattle.—Beeves, \$5.80 to \$9.85; Texas steers, \$4.90 to \$7.10; Western steers, \$5.85 to \$7.90; stockers and feeders, \$4.10 to \$6.90; cows and heifers, \$2.80 to \$8.25; calves, \$7 to \$10.10.

Hogs.—Light, \$7.85 to \$8.40; mixed, \$7.40 to \$8.25; heavy, \$7.25 to \$8.20; rough, \$7.25 to \$7.50; pigs, \$6.75 to \$8.10.

Sheep and Lambs.—Native, \$3.15 to \$5; Western, \$3.25 to \$4.75; yearlings, \$4 to \$5.50; lambs, native, \$4.25 to \$7.50; Western, \$4.25 to \$7.50.

Buffalo.

Cattle.—Prime steers, \$8.50 to \$9.15; butcher grades, \$3 to \$8.25.

Veals.—\$4 to \$11.

Hogs.—Heavy and Mixed, \$8.75 to \$8.85; Yorkers, \$8.70 to \$8.80; pigs, \$8.70 to \$8.75; roughs, \$7.40 to \$7.60; stags, \$5 to \$6.25; dairies, \$8.50 to \$8.70.

Sheep and Lambs.—Lambs, \$4.60 to \$8.

GOSSIP.

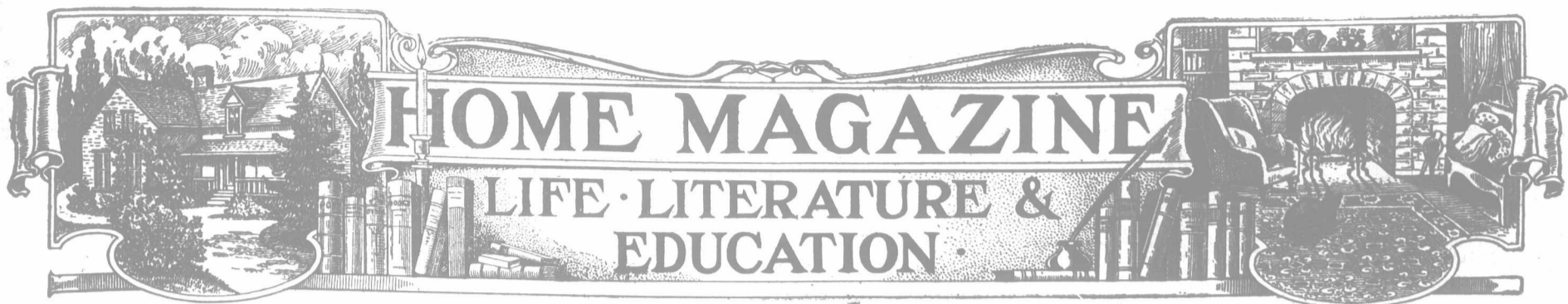
J. W. Burt, Coningsby, Ont., writes that he has sold the young Aberdeen-Angus bulls which he advertised in these columns, and that their purchasers are well pleased, and the calves are reported doing well. He has now on hand a beautiful bull calf, nine months old, and a few choice heifers for sale. If interested, make inquiry about these good cattle.

The death is announced of Abner Strawn, formerly of La Salle County, Illinois, well remembered by the older generation of breeders of Shorthorn cattle in America as an extensive breeder of that class of stock, and a liberal purchaser of Canadian-bred Shorthorns and Clydesdales. He had also the reputation of being a high-class farmer, his farm being one of the very best managed in the State. He spent his last years with members of his family in Chicago.

ADVERTISING LIVE STOCK.

The direct returns from advertising pure-bred live stock are great, as many will testify. There is, however, another advantage. Advertising which results in sales is beneficial to the home trade because it establishes reasonable prices and stimulates the home demand. Farmers in the advertiser's neighborhood hear of the prices which the latter receives for his animals, and of the frequent shipments which he makes, learn to appreciate the value of his stock, have their eyes opened to the possibilities of pure-bred stock-breeding and become enlisted in it themselves, willing to pay just prices for their foundation stock. In time, instead of there being one breeder, or a few scattered ones, there is a community of breeders, the demand for whose stock is increased to the car-lot basis. A few communities have thus been developed within the confines of our own state, and others are now being rapidly developed in a similar manner.

Increased financial gain, however, is not, and should not be, the only advantage to be derived from the live-stock advertising. It should give deserved prominence to the farmer, his community and his occupation, and this it does when properly combined with intelligence and enterprise.—Wisconsin Agriculturalist.



What Kind of Education Tends Most to Make a Farmer Happy and Useful.

By "Bernice," Bruce Co., Ont.

(Held over "Farmer's Advocate" Literary Society Essay.)

It is conceded that choice of material upon which much labor is to be expended is an important consideration. Some land is of such a nature that the most painstaking, wearisome toil of brain and brawn could but yield the most meagre results. So in the soil of humanity, there are such diversities of taste, such grades of energy and ambition, such differences of opinion regarding life and its responsibilities that all the education in the world could not make real farmers out of certain people. They have no affinity for, and have or fancy they have nothing in common with the "doings" of farm-life. To them it is too slow and plodding, too altogether "tame" and stereotyped to suit their "advanced" ideas of progress, and if circumstances compel their taking up the work for a time it is done very mechanically and very likely very indifferently.

Another type almost equally "impossible" is the man with the notion which was so prevalent some years ago that "most anyone could be a farmer." He, entering the arena with such a hazy conception of the requirements of the "game," and with so little appreciation of its rewards that he attempts no improvement, cannot be pitied when the commercial and competitive handicaps of the age leave him behind in the race.

Decided Inclination to Farm-life.—The child who has been brought up on a farm and instructed by an intelligent, broad-minded and practical farmer, certainly stands a good chance of cultivating a taste for agricultural pursuits; but, if in addition to this, the boy has natural tendencies toward them, a real love for nature and her mysteries, the process of instruction is a real pleasure; and when manhood is reached he has already familiarized himself with much fundamental knowledge, and made a good start on a successful farming career. The "soil" in this case is of a good quality and with proper conditions and cultivation cannot fail of creditable results.

School education and the more complete the better is most desirable. While its lack may not be a positive detriment to a so-called successful career, it certainly is a most serious drawback which will influence his whole life. Looking to his life-work the boy should, while giving all diligence to the "common" branches, give particular attention to the sciences which bear more directly upon it such as—chemistry, botany, agriculture, etc., etc. Later, a course in an Agricultural College where definite information practically demonstrated according to most approved methods is most helpful.

Choice of Farm.—The location and adaptability of land determines largely the branches of farming taken up. After decision, give intelligent, concentrated study to them. Secure information from reliable sources. Keep eyes and ears open to learn, and do not be afraid to admit your ignorance, but always with the intention of correction.

"Grey Matter" of Good Quality.—This seems such an obvious requirement that it should need no mention, but if ever brains were needed in farming they are to-day, when the competitive element is such a strong factor in the world's economy. Skilled labor being at such a premium, wages so high, one's capital more or less "scattered," especially if he goes into mixed farming, that it is only by keeping an accurate account of outlay and receipts and a close watch upon the probable avenues of waste that anything more than an approximate idea can be had of one's financial standing. Farming is recognized now as a business, and business methods should obtain. Good judgment is needed. A clear idea of values; the ability to make fair estimates and intelligent decisions when necessary be they regarding people, property or political issues.

Enthusiasm and Energy.—Are a spirited pair of steeds warranted to carry their owner over most of life's difficult highways, and they work equally well in the furrows if guided skilfully. Whole-souled enthusiasm for the work, appreciation of its possibilities and determination to make those possibilities facts will make one forget or not notice the jolts en route. The courageous, sensible man, recognizes the necessity of work—often hard and continuous, but his optimism does not allow it to spell drudgery.

Good Health and Cheerful Disposition.—A knowledge of the needs of the physical frame and careful attention thereto count heavily in the scale of happiness and usefulness, but when combined with a sunshining disposition—all of which may be acquired to a large extent—they are almost invincible.

Versatility to Considerable Measure.—While many approve of the mixed farming plan and believe in carrying out the advice, "Know something of everything," still others with equal success lean very decidedly to one special feature, and concentrate their energy and money upon testing the remainder of the maxim, viz.: "Know everything of something." One's own judgment, circumstances and finances must decide just how many "irons" he would be warranted in placing "in the fire."

Knowledge of Soil Requirements.—Its capability and adaptability are positively essential where grain or fruit culture are taken up. Through all cropping systems keeping in mind the fundamental problem in agriculture viz.: "Maintaining soil fertility while producing profitable crops."

Economy Properly Understood.—Not using a dollar's worth of time on a five cent product, nor yet carelessly neglecting to save a nickle simply because it is only of that value. Never cut down expenses in essentials. This is not economy. Study to avoid waste of time, energy and wages where horses in greater numbers might be used instead of men, and—as in the West in places—machinery such as gasoline engines takes the place of horses.

Method and Methods.—Keep ahead of your work by being prepared. Attend to the work of the hour in its own time. System, of course, simplifies labor, thus giving physical, mental, and nerve rest, and the time saved may be directly used in recreation or improvement along some other line, the change being in itself restful. Have a system of working, but see that it is a good system. Because your father planted his oats according to the moon's vagaries is no reason that you should. Be receptive and learn the best ways of working.

Neatness.—Should be observed for its own sake as a joy-giver to one's self and others, to say nothing of its commercial value.

Thoroughness.—The masterful knowledge of any subject at once makes it a source of power and happiness.

Literature.—What advantages for home education there are on every hand to-day! The farm journals with their comprehensive range of matter treated so intelligently and solely in the farmer's interests; the "farm pages" of our newspapers; the reports and bulletins on various subjects sent out by the Agricultural Colleges, etc., etc., are a liberal education in themselves. The daily paper is one of the "must-hes" of the up-to-date man-of-affairs, from which he makes survey of the markets and the world's doings.

But, oh! the delightful wonderland of literature made possible to the average farmer by the cheapness of the good books of to-day! How the book-lover revels in the profusion, and our friend of the educational process is a book-lover certainly. Delving deep in the profundity of a favorite classic; straying with some historian through the years ago; or forgetting the weariness of his body in the rippling flow of a poem, he truly finds a delightful blending of utility and happiness in his library.

A Love of Music and Art.—May be laughed at by the morbidly practical man secure in his opinion that "such things may be well enough for women-folk who have nothing to do, but for a farmer! how perfectly absurd! "Little he dreams—poor blind man, that every day of his life he is missing sights and sounds in which the angels themselves delight, and only a heart attuned to nature's melodies can appreciate.

What to him is the cricket's cheery chirp, the lark's ecstatic song as it skyward soars, or the prosaic frog's contented croak?

What beauty sees he in the shimmer of the moonlight upon the old water-trough in the pasture; the nodding of a stock of feathery golden-rod, or the wild abandon of a storm as it sweeps through the forest swaying the wood-giants so piteously?

Nor could he be convinced of the exact sanity of his artistic farmer friend who would insist upon his real delight in the brook's rippling song or a fleecy cloud edged with the sunset's golden tinge.

How much life means beyond the mere material things!

Neighborliness.—We may choose our friends, and it is our own fault largely if the choice is unwise, but our neighbors are in a manner "thrust upon us" or we upon them, and congenial or otherwise we have to make the best of the situation; but our important query should be—How are we to fill the relationship and prove ourselves to be the highest type of good neighbors?

Our duty to our neighbor does not end when we have helped him with his threshing or sheep-shearing, or in giving exactly sixteen ounces to the pound of seed-grain, but we owe it to him that our general life should emanate the very spirit of sympathy, tact and helpfulness and that other grace which as often is just a little harder to cultivate—the willingness to be helped.

Brotherhood.—Cultivate the broadmindedness which can live above and see beyond the too-well-entrenched economy of dollars, wheat, hay and hogs, or the continuous grasping after "more land."

Fall in line with any movement which exists or may arise in your community for the public good. Be willing to sacrifice your personal inclinations for the sake of the "greatest good to the greatest number," and even go a step farther and be a live and active force in furthering the lessons of the larger relationships of life and our kinship with all men.

AN IDEAL EDUCATION FOR THE FARMER.

By "Taps," Wentworth Co., Ont.

(Held Over "Farmer's Advocate" Literary Society Essay.)

Of what should a farmer's education consist? Surely that is a subject to ponder over. One could never fully describe, even if he could conceive of a perfect education for any man, much less a farmer, who, of all men, most needs, can best appreciate and use, and perhaps best shows the value of a good and complete education. The race is beginning more and more to realize the great importance of the farmer, of the high position he must fill as the one to whom mankind must look for bread; just because of this high position he needs to be trained, that he may fill it and exalt it.

Granted then that he needs an education, of what should it consist? Of course he must have the common principles of education, "the three R's" and their companion subjects, which are taught in the public school, but after that what will most benefit him? It must be knowledge that will help him to work real practical information and training. How can he best obtain it?

Perhaps the greatest help any young man can have, who wishes to become an up-to-date practical farmer, is a course in a good agricultural college. Here he should be trained to think for himself and to become self-reliant, so that when necessary, he can apply all his knowledge of scientific farming to his own service. It is well that there are colleges where farming, a science, is taught as such; it is well that there have been men who realized that farming is worthy of a lifetime's research. Thus the young man should after completing his course, be as competent to enter his life-work as those who are educated for any other profession. He should know when he leaves this college, both the theory and the practice of farming, and be able to run one on a system, similar to any business enterprise.

So much for what he learns in school. That however is a very small part of his education. He should be able to continue it alone, or his college days have been of little use. If he has learned this all-important secret, he need never experience one dull uninteresting day in the open air of the country. Who could be lonely with nature for his companion? The farmer should make her such. She is never dull or monotonous. He should study her, love her, know her,—he will receive his own reward. He should be familiar with all her children, the animal and bird life of field and woods, with the flowers and all growing life. He should know all her moods; love her storms and sunshine, wind, heat, and calm. Thus, spring and summer, all the changing seasons as they come, will find him with a greater longing to live and learn. This is the farmer's heritage and one of the greatest factors in his development.

But the farmer need not stop with nature. There are other realms he should be acquainted with. All literature and art are open to him. These are avenues of delight he cannot afford to pass. What wealth there is for him to claim in literature; how much beauty has been preserved in pictures from "the regions of the past" for his eyes; what an exquisite enjoyment may be his through music,—beauty and poetry blended into sound; these may all be his. Why can he not enjoy them with any other man? They are necessary to the development of his higher being.

There is another element of the farmer's education which we must not forget. He should in addition to other things have a

knowledge of civic affairs. He should know how his country is governed, and realize his own responsibility. He must understand what is meant by good citizenship and its relation to his country. This is one of the most important points in a farmer's education, for, as is the individual, so is the nation. May the individuals have high ideals.

We have touched a few of the points which should be contained in a farmer's education. He should be well trained as far as the schools can do it—trained to live and think; he should be versed in all the mysteries of nature; he should be familiar with and appreciate literature and art; he should be a good citizen of his country and of the world. There is one thing more: To be the highest type of man,—and this whether he be farmer or not, he should have in his heart the Christ spirit. He must love and follow the only perfect Man that the world has ever known. The more he does this, the brighter will be his character. This is the greatest part of all his education.

Wentworth Co., Ont.

"TAPS."

MAKE THE BEST OF IT.

By E. S., Grey Co., Ont.

Ever count your best and highest moments your truest moments. When you feel strong, courageous, magnanimous, kind, cheerful, enterprising, and industrious,—then you are your real self. Assert that you will always be yourself, and the shadows of weakness, cowardice, meanness, unkindness, melancholy and idleness will flee from your presence. If you would achieve success, act as though you had already achieved it, and see how easy it will be for you to grow up to the place or the position to which you aspire. Put yourself in the place of the successful man or the good man. It is the only way to get there. Then put on your best smile every day. Don't put it away in a dark closet to be brought out and worn only on special occasions. The oftener you wear it the more slowly it will wear out. Look on the bright side always. If things go wrong, consider that the occasion is a challenge to your inherent manhood to stand the test and not go down under the weight of anything which threatens to crush your plans. Remember that the man who does his duty cannot fail. Therefore, make the best of it.

Do not bemoan your past mistakes and failures. Forget them. Throw them overboard. They don't belong to you now, and you have no right to keep them. Think highly of yourself. You were made to have dominion over your surroundings. So expand your chest and hold your chin high. It is the only satisfactory way to live. Drop your faults and failings out of sight. Give them no room in your life and they will not come back. Develop the positive side always. If you are full of good, evil cannot harm you. Therefore, make the best of it.

Do you think the world is getting worse? If so, make the best of it. Is your neighbor getting more dishonest, mean, and uncharitable, every day? If so, make the best of it. But wait,—did you ever consider that his vices are only his virtues gone astray? It is possible for him to do wrong only when it is possible for him to do right. Have you ever tried to put him on the right

track? His case is not hopeless. Therefore, make the best of it.

Do you delight in telling your friends of the faults and peculiarities of those who are not your friends? If so, you are not making the best of it. Their faults will multiply fast enough without your aid. Besides, those peculiarities which seem to you to be faults, may be virtues in reality. Do not put on colored glasses while looking at your neighbor's defects. By the way, it is a good plan, also, to keep the liver in good order. (Plenty of fresh fruit will help). Therefore, make the best of it.

Would you like to be rich? If so, remember that what you are is of far more importance than what you have. The question, what are you worth, cannot be answered in terms of dollars and cents. One uncharitable thought, one unkind word, one mean action, will subtract more from your real worth than will the loss of a million dollars. Do you believe it? It is so easy to forget. One kind intention, one helpful word, one generous deed, will enrich you more than will the gain of a million dollars. Is it true? If so, make the best of it.

Are you getting old and worn out? Do you find on looking back that the thoughts and words and deeds of your life have left you poor and thin and weak? If so, make the best of it. Act in the present. Your days are not yet ended. But every moment is precious. Therefore, use them all. Can you measure the possibilities of a single moment? Do not despise one because you have thrown away a million. Wake up, and be a man, to-day. Then, tomorrow you will be richer. Therefore, make the best of it.

Some Old Time Echoes.

ON TREK IN THE TRANSVAAL.

No. V.

On the summit of the hill we found our "boys" awaiting us, John with his handsome dusky face lighted up by a smile of welcome, and Jim, his lieutenant (i.e., forelooper), smiling also. They had the horses ready for inspanning (to "inspan" is to harness, or to yoke your oxen or your horses, as the case may be, and to "outspan" is the reverse), when, lo! it was discovered that the halters had been forgotten, so that John must mount one of the steeds and return to Maritzburg for them, whilst we, of necessity, must remain over night at Howick. Of this, an entry in my journal of 2nd June says: "This hotel is of a fair size; rooms unceiled but lofty, floors boarded, a luxury we shall soon lose; French windows opening out to the verandah, from which we see, on the winding road below us, over which we ourselves had just come, wagon after wagon crawling along, dragged leisurely by its fourteen to eighteen oxen, according to its load. Here and there feed groups of animals, our own amongst them. Just at the foot of the hill is the Umgeni River; its current dangerously rapid. We crossed it safely yesterday, but sad accidents do occur, one quite lately having ended disastrously, wagon, horses and drivers going over the beautiful fall below of between 340 and 350 feet. Of this fall Natal is justly proud, and it is a great attraction to lovers of fine scenery.

On the 4th June I record as a specimen the first of a long chapter of accidents, for accidents over South African roads, and especially with South African horses, cease to be accidents, but are rather incidents of travel. John's late return with the missing halters postponed our start from Howick until 3 p.m. It gets dark about six, and that quite suddenly, like the letting down of a curtain. Just out of Howick is a steep mountain, and up it our horses simply refused to go. They jibbed, plunged and kicked. The leaders and the two behind them turned round to look at us, getting their front legs mixed up in a confused heap over the traces, their hind ones over the pole. One was thrown down, his plunges driving the rest wild. Some men passing with their oxen (all help one another on the road as a matter of course) came to our rescue, and by the time we were righted for a fresh start it was almost dark, and we were still thirteen miles from Curry's hotel, our next stopping place, these performances being repeated at every hill. When our wagon got jammed into one of the many big gullies on the road no amount of whipping or urging could induce those animals to extricate us. We spent more of the time out of our wagon than in it, and finally agreed to walk the last five miles to Curry's, leaving the boys to get out of the hobble as best they could. We reached the hotel at 10 p.m., our "trap" (everything is a "trap" in S. Africa) arriving some hours after, as much pushed by the men as pulled by four of the quieter horses, which had proved more amenable to the measures employed. Never shall I forget the dirt and discomfort of those weary hours, or the griminess of our garments. We had been told that we must give up all idea of feeling really clean from the moment of our start, and from henceforth we indeed realized that our opportunities for a real "wash" must be furtively, nay, even surreptitiously obtained, for once away from the outskirts of civilization we should have but a sparse supply of water and next to no privacy. The redness of the dust may give a kind of picturesque gypsy-like hue to one's general appearance, but dirt is dirt all the world over, and no attempt at poetical interpretation of its results upon one's person can make of it anything but an almost unbearable nuisance to travellers on trek across the veldt of South Africa.

Looking back from the vantage ground of privileged, progressive Canada, it may seem hard to believe that there could be so many difficulties to be encountered and so many delays to be put up with in a journey which now, with railway facilities, can easily be accomplished in a couple of days. To have worked such a change under such adverse conditions of soil and climate is surely another triumph of engineering skill and an enduring monument to what the best brains of a United Empire can accomplish when the opportunity for achievement presents itself. Meanwhile a backward glance into the difficulties encountered by the pioneers of early colonial days may not be without its wholesome message for a generation born into a world where express trains, motor cars, telephones and even aeroplanes are at their service if only they have the money to pay for them.

But it is time to return to the yellow

old pages of my journal of thirty-seven years ago, if I am to give those who may care to read my extracts anything of an adequate idea of the rough and ready methods which had to be adopted over and over again before we reached our goal in the Transvaal. My pen pictures must be just snapshots, taken with little regard to consecutive arrangement. The first relates to an incident which led to the final decision that we must give up all hope of using horses, but must substitute steady-going old oxen in their places. It reads thus, and it takes somewhat the form of a prophecy:

"Our mishap of to-day has nothing to do with the horses. The men oiled our wheels and bound leathers around our springs, but these roads would break anything. We are gravely told we shall come back with hardly a piece of the original wagon or harness left. There are large boulders over which we bound, gullies into which we dip, almost precipices which we seem to overhang. Whatever may come in the way we must go over it, or struggle through it somehow, therefore by the end of our journey we shall have many adventures to relate."

This prophecy was fulfilled to the letter, for a more delapidated vehicle could hardly have been found than was ours when we arrived at last at the mining settlement at Eersteling.

At Estcourt or Bushman's River.—Both these names must be familiar to those who have studied the history of the war in South Africa, but in June, 1875, Estcourt was but a collection of houses hardly deemed worthy of a mention upon the map of Natal. It was not without a wild beauty of its own and to the kindness and hospitality of its people I can thankfully testify.

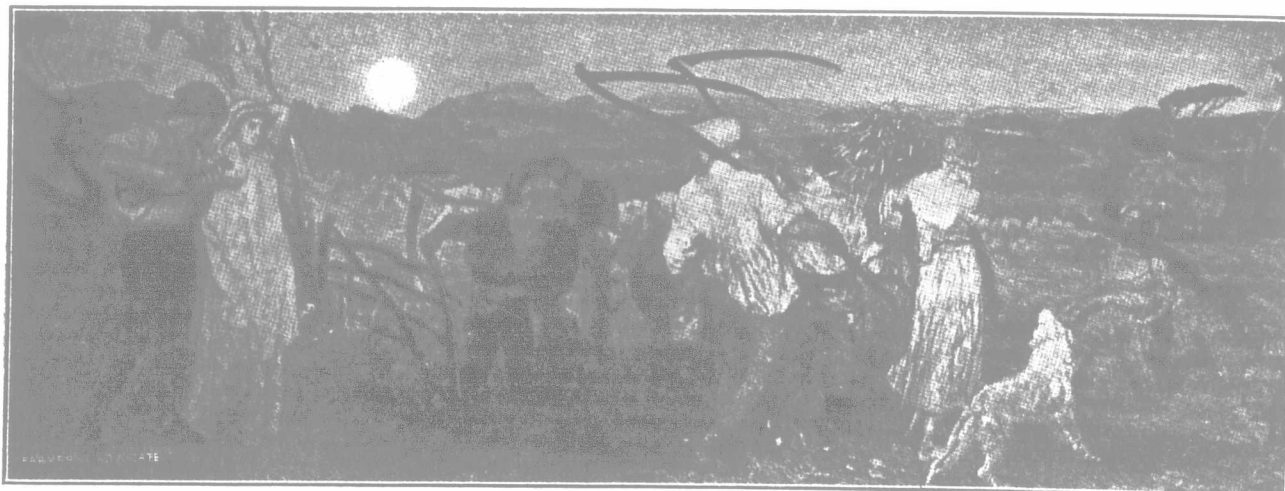
Directly we had reached our temporary quarters at the primitive hotel, a judge and jury, so to speak, empanelled themselves and sat upon (some of them literally) our unfortunate wagon, making candid remarks which doubtless amused themselves, but hurt us cruelly. They looked wise as owls as they shook its body, rattled its wheels, weighed its pole, but had not competent judges done the same before we left Maritzburg and pronounced it fit for service? It is true the bright green paint, which had made it look almost as good as new, may have covered some of its defects. Its fresh tilt and clean lining might have had a touch of hypocrisy about it, but I for one had been thankful that it had at least tried to put "a good face" upon it. The pole certainly was too heavy; of that there could be no doubt, so it was necessary to have that serious defect remedied before making a fresh start. "And now you know the history of our delay," I wrote on the 7th June, "just for a re-adjustment of the pole, and a raising of the body to lighten the strain upon the wheelers. What is your hurry? we are asked. Take it easily, we are admonished. I daresay you will get off the day after to-morrow, etc., etc." Upon which remarks, and from later experiences, I find in my log the following comments:—

"We have been here three days, and in all probability we shall be here for three days longer. I dare not trust myself to express half the exasperation I feel at this long detention for such an inadequate cause. My temperament is quite too explosive for South Africa, I am convinced, and if I lived—no, I should die of it long before that—until I was eighty, I do not believe time would ever reconcile me to the dead-alive, leave-it-alone-and-it-will-all-come-right fashion in which people set about, or wait for somebody else to set about, what could as well be done speedily if they would begin it less sleepily. An express train shrieking through the cuttings and tunnels of these mountain passes—and it is to be hoped that one will do so some day shortly—would work miracles, galvanizing these dry bones—oh! dear Natalians, do forgive me!—into new life and vigour. How some sharp Yankee competitors would make your tradespeople "look alive" after a manner hitherto unknown to them! Competition of any kind would give the impetus wanting; and Natal, to say nothing of the Free State, and the Transvaal, could find room and work for shoals of blacksmiths, wheelwrights and handicraftsmen generally, if only they would come here."

Another prophecy which has also come true.

H. A. B.

(To be continued.)



The Harvest Moon.

From a painting by Mason. By permission of the Perry Pictures Co.

Hope's Quiet Hour.

The Joy of Loving.

That great joy far away, far away in the golden clouds, the one whom you can hardly see when you stand as high as you can on tip-toe: That is the great joy of Loving.—From "The Blue Bird."

There is a great joy in being loved—a joy we all recognize and try to secure—but the joy of loving is far greater, and it is well within the reach of everyone of us. There are some joys which are out of reach, even of those who stand on tip-toe. The blind are cut off from the joy of seeing, the "shut-in" must do without the joy of healthy exercise, the poor must do without luxuries, and the plain must go without the coveted satisfaction of beauty. But the joy that is so high that it reaches the golden clouds, the joy of God Himself, the joy that can transfigure the most ordinary life and fill it with unspeakable bliss, may be ours now and always. Rich or poor, healthy or sickly, clever or stupid, ugly or beautiful we may be, yet the door into this House Beautiful is flung wide open for our entrance. It is our own fault if we stay miserably outside.

It was the Man of Sorrows Who talked most triumphantly about "My Joy." If joy comes from loving, then His joy must throw the joy of all other men into the shade. Some people seem crushed by the sorrow of unrequited affection. They have given love and received only indifference; and all the brightness seems to have gone out of their world. I read a little story the other day about an old-fashioned woman who had been "deserted at the altar," and who took to her bed and stayed there for years, in consequence. She was not ill, but she felt that her heart ought to be broken, and acted accordingly. She had looked for happiness only in being loved, and had never discovered that the great joy of loving was worth infinitely more. One who cares chiefly about being loved is selfish, seeking something for self, always wanting to take instead of to give. Such an attitude of mind is debasing rather than uplifting, torturing the soul with jealous doubts and fears, and unhappy if the lover shows any interest in any other person or thing. No lasting happiness can ever come from selfishness, though we usually begin life by fancying that we shall be happy if only we can get everything we want. A poet says:

"My love no longer loves me—let me die!
The glory is gone out upon the hills,
And the gray downfall of its ashes fills
The old bright places of the earth and sky.
Why should I wander up and down and cry
To every ghost of joy whose presence thrills
The heart of sorrow till his cup o'er-spills?
I will lie down upon my face and die."
One bent above him with resplendent wing:
"Twas not her love for thee set earth aglow;
'Twas thine own love for her—that is still thine."
Joy sent him like an arrow from the string:
"Show me the rough ways where her feet must go—
I never loved before, O Love divine!"

If you think that life has lost its glory because the one whose love you covet is indifferent to you, rouse yourself from that black mistake. Give love, without fretting about repayment, and joy will light your life like sunshine. One of my favorite texts is the one from Zephaniah, which gives us the secret of the infinite Joy of God—the Great Joy of Loving: "He will rejoice over thee with joy; He will rest in His Love; He will joy over thee with singing."
The other day I was on the boat returning from Niagara to Toronto. Beside me was a young Englishman who had taken a child of four years old for a day's holiday. She was no relation, but the daughter of his landlady, but

he had given up his whole day to the business of making her happy. It was no light task for a young man, and he certainly did not undertake it from a selfish desire to secure his own happiness. But any little inconvenience that resulted is over and probably forgotten, while God Himself is to be trusted to give a rich return of lasting joy. Our Lord has said: "Whoso shall receive one such little child in My Name receiveth ME," and "Inasmuch as ye have done it unto one of the least of these My brethren, ye have done it unto ME." The high privilege of ministering to the King of all the ages lies at our feet—are we taking advantage of it?

Love is not only a feeling, it must find some solid outlet or it is worthless. "He that hath My commandments, and keepeth them, he it is that loveth Me," said our Master. Love that is satisfied with feeling and talking is not the kind of love He will accept. Even a religion that can cast out terrible evil and can work miracles, may be rejected by Him Who will say to those who have prophesied, cast out devils and done many wonderful works in His Name, and yet have secretly indulged in wilful and deliberate sin: "I never knew you; depart from Me, ye that work iniquity."

We are living in a glorious age, an age when men are awake to the fact that the good of all mankind is the business of each of us. Everywhere we find a recoil from the selfish question of the first murderer: "Am I my brother's keeper?" Thousands of enthusiastic men and women are doing their best to secure a reasonable wage for poor workers, playgrounds for children, a chance for those who are fighting with the white Plague, better conditions for the neglected and downtrodden. It is the age of brotherhood, and anyone who indif-

ferently says: "The condition of the poor and of the criminal class is none of my business," is far behind the age God cares, and it is our business to care, too. It may be, as Dean Hodges declares, that in the past the Church of God devoted all her energies to the task of fitting men's souls, one by one, for heaven. But now she has discovered that there is another side to her duty. "Instead of simply preparing men to go to heaven, it is to bring heaven down here on this green and brown earth on which we live. Instead of saving men from punishment, it is to save them from their sins. Instead of ministering only to the soul, it is to minister to the whole man."

The world's duty to a criminal was thought to be only to punish him and prevent him from injuring society. Now we understand that we have failed unless he is helped to start afresh and realize the glory of manhood. He is not an enemy, to be feared or conquered, but a brother to be helped for love's sake.
Are you tired of trying to enrich your own life; tired even of the struggle after holiness? Are you depressed with the small progress you appear to make, feeling that it is hardly worth while trying? We all get down-hearted at times, but I can speak from my own experience when I say that such depression is usually the result of thinking about ourselves. We fix our attention on our own pains and troubles, our own failures and losses, our own nerves and disappoint-

ments. The young Englishman I saw on the boat the other day told me that General Booth's inspiring message to the people of Canada, as a watchword for this year, was the one word, "Others."
If we could only form the habit of seeking the happiness of others, leaving our own happiness for God to care for, there would be far less grumbling heard, far less weariness felt. It is no use sitting down hopelessly and saying: "I can do so little to help others that it is hardly worth while trying to do anything. There was a great crowd of hungry people once, and a boy with five tiny loaves of bread. What were they among so many? They were hardly worth considering, in themselves, but they were laid unselfishly in the hands of Christ, and the thousands of hungry people were given more than they needed. Do you think that the boy who gave up his own food for love's sake was allowed to go hungry? And just think of his joy as he remembered that his small gift had brought help to so many! What does it matter to God whether you have five loaves or five thousand? If you place your gift in His hands, He can multiply it as there is need. He can—through you—help a million as easily as one. But, if you keep your loaves only for your own use, they will not be able to satisfy a hungry heart. God does not only keep Joy as a precious jewel laid up for us in the next world, He wants us to walk in its light here and now—and love is the great secret of joy. We all want to live grandly and nobly—is anything in the universe greater than LOVE?"

The Beaver Circle.

OUR JUNIOR BEAVERS.

[For all pupils from First Book to Junior Third, inclusive.]

The Little Black Cat.

Dear little cat with yellow eyes
That cocked her head and looked so wise!
What if her fur had turned to brown?—
She was the oldest cat in town.
From fond friends do you turn away
Because they're wrinkled, old, or gray?
Rather dingy she looked, 'tis true,
But what are looks when one can do?
A huntress she, of ancient fame,
Who never failed to "bag" her game.
And oft her game, to our surprise,
Was of a most prodigious size;
And such great distance did she roam
She scarce had strength to drag it home.
Year after year she chose her nest—
A place that kittens like the best—
In the big barn's sweet-scented hay,
The very nicest place to play.
But when the earth was white with snow,
And wintry winds began to blow,
Beside the stove she sat and purred,
So eager for a look or word.
Ah, little cat we loved so well!
Strange are the stories Time can tell!
How long ago now seems the day
Since from our home you went away!
—Marguerite Borden, in Granite Monthly.

The Somethin' in the Barley.

(A True Story.)

One day little Linda May started as usual for her daily long walk to school. Linda lived in the country, and generally she did not mind the mile or more which lay between her home and the schoolhouse.

On this particular day she trudged happily along, watching the great clouds of fog as they rolled up from the river bluffs not far away, and rejoicing in the bright sunshine.

The latter half of her way lay beside a lone barley field. The grain was now nearly ready to reap. It was a glorious field.

Suddenly she saw a strange motion in the grain near her. Something was running through it.

The motion kept on. The something in the barley was trying to keep up with her. As she ran, it ran. If she stopped to listen, it stopped. Her heart beat horribly. She felt as though she were going to suffocate.

What—what was this mysterious creature which she could not see, but which evidently could see her?

Was it going to spring upon her and tear her flesh—perhaps kill her with poison fangs?

Nerving herself to her full strength, little Linda sprang forward. Faster than the wind her small feet flew over the brown, pebbly road. As fast ran the strange creature in the barley. She could follow its motions as she glanced toward it with frightened eyes.

The child threw herself at last upon the little green in front of the schoolhouse, while in response to her anguished shriek, the teacher and the children came trooping out.

But before they could reach her, her little pet kitten, which had followed her from home, began to play about her head and face, as she lay in the grass.

From one of the whims which too often inspire her kind, the kitten had preferred to accompany her little mistress under the cover of the barley, rather than in the open road. Probably she knew that if she were seen she might be sent home.

Linda recovered promptly when she learned the cause of her fright, moreover, she learned to find out the reasons for things before being frightened by them.—Kate Upson Clark, in Little Folks' Magazine.

Competition for the Junior Beavers.

Here is a competition just for yourselves little Beavers; the Seniors may not try this time. Write a story about a cat, and be sure to sign your age and class at school, as well as your name. Send the letters so that they



A Part of Rose Garden on Silver Brook Farm, Stayner, Ont., Property of George Grainger.

They are good, they are bad, they are weak, they are strong,
Wise, foolish,—so am I.
Then why should I sit in the scorners' seat,
Or hurl the cynic's ban?
Let me live in my house by the side of the road,
And be the friend of man."
DORA FARNCOMB.

Quiet Work.

One lesson, Nature, let me learn of thee,
One lesson which in every wind is blown,
One lesson of two duties kept at one,
Though the loud world proclaim their enmity—

Of toil unsever'd from tranquillity!
Of labor, that in lasting fruit outgrows
Far noisier schemes, accomplish'd in repose,
Too great for haste, too high for victory!

Yes, while on earth a thousand discords ring,
Man's fitful uproar mingling with his toil,
Still do thy sleepless ministers move on,
Their glorious tasks in silence perfecting;
Still working, blaming still our vain turmoil,
Laborers that shall not fail, when man is gone.
—Matthew Arnold.

may reach The Beaver Circle not later than September 1st. Address them to "The Beaver Circle, Farmer's Advocate, London, Ont."

Junior Beavers' Letter Box.

Dear Puck and Beavers,—My father has taken "The Farmer's Advocate" for quite a while, and I like reading the little letters. I have three brothers and no sisters. I live half a mile from school and four miles from the post office.

I have a pet dog called "Jack." My brother and I hitch him to the little sleigh, and have great fun sleigh-riding in winter. Wishing Puck and the Beavers every success, I am your little friend,
LUELLA FARR
(Age 9, Sr. II.).
Floradale, Ont.

Dear Beavers,—As this is my first letter to your Circle, I hope it is not for the waste-paper basket. I thought I would tell you about our flowers at school. The boys have one side of the walk and the girls the other. Of course our side is the nicest. We have 1½ miles to go to school; we found it very cold last winter, but we drove our white pony (we call her Dolly), and put her in a near-by stable. There are seven in our family, four brothers and two sisters. I am a twin; my mate is a boy. As this is a long letter I will now close.
ALMA G. THOMSON
(Age 10, Jr. 3rd Book).
Woodham, Ont.

Dear Puck and Beavers,—My father has taken "The Farmer's Advocate" for a couple of years, and I enjoy reading the letters every Friday. I have a calf for a pet. I have a black dog; his name is Watch, and he is very fond of hunting groundhogs. He killed two on the 24th of May when we were planting the mangels. We live a mile and a quarter from Neustadt. As my letter is getting long I must come to a close.
EDWIN REINER
(Age 9, Book II.).
Neustadt, Ont.

Dear Puck and Beavers,—This is my first letter to the Beaver Circle. My father has taken "The Farmer's Advocate" about two years. For my pets I have a calf, coming two years old, and two rabbits, and one bantam. I have a horse named Centy. My father is spraying this morning. As my letter is getting rather long I will close. Wishing the Beaver Circle every success.
F. RUSSELL PORTER
(Age 9, Book Jr. Second).

Dear Puck and Beavers,—I am ten years old, and I go to school in summer, but it is so cold that I don't get much in winter. I like my teacher very well. Her name is Miss Jeffray. I have two pets; one is a dog and the other is a cat. The cat's name is Tibbie, and the dog's name is Molly. She is a little rat terrier. I hope this will escape the w.-p.b. I will close, wishing the Beavers every success.
BEULAH BAILEY
(Age 10, Senior Part Second).
Evansville, Ontario.

Dear Puck,—My father has taken "The Farmer's Advocate" for a long time. We go to school every day, and we get a ride with the milkmen to the school. We have a mile and a half to go to school. Our teacher's name is Miss Munro, and I like her very much. I have one brother younger than me, but I have no sisters. I guess I will close. I hope to see this in print. So good-bye.
MARGARET FRASER
(Age 10, Sr. II.).
Lancaster, Ont., 4th Con., R.R. No. 1.

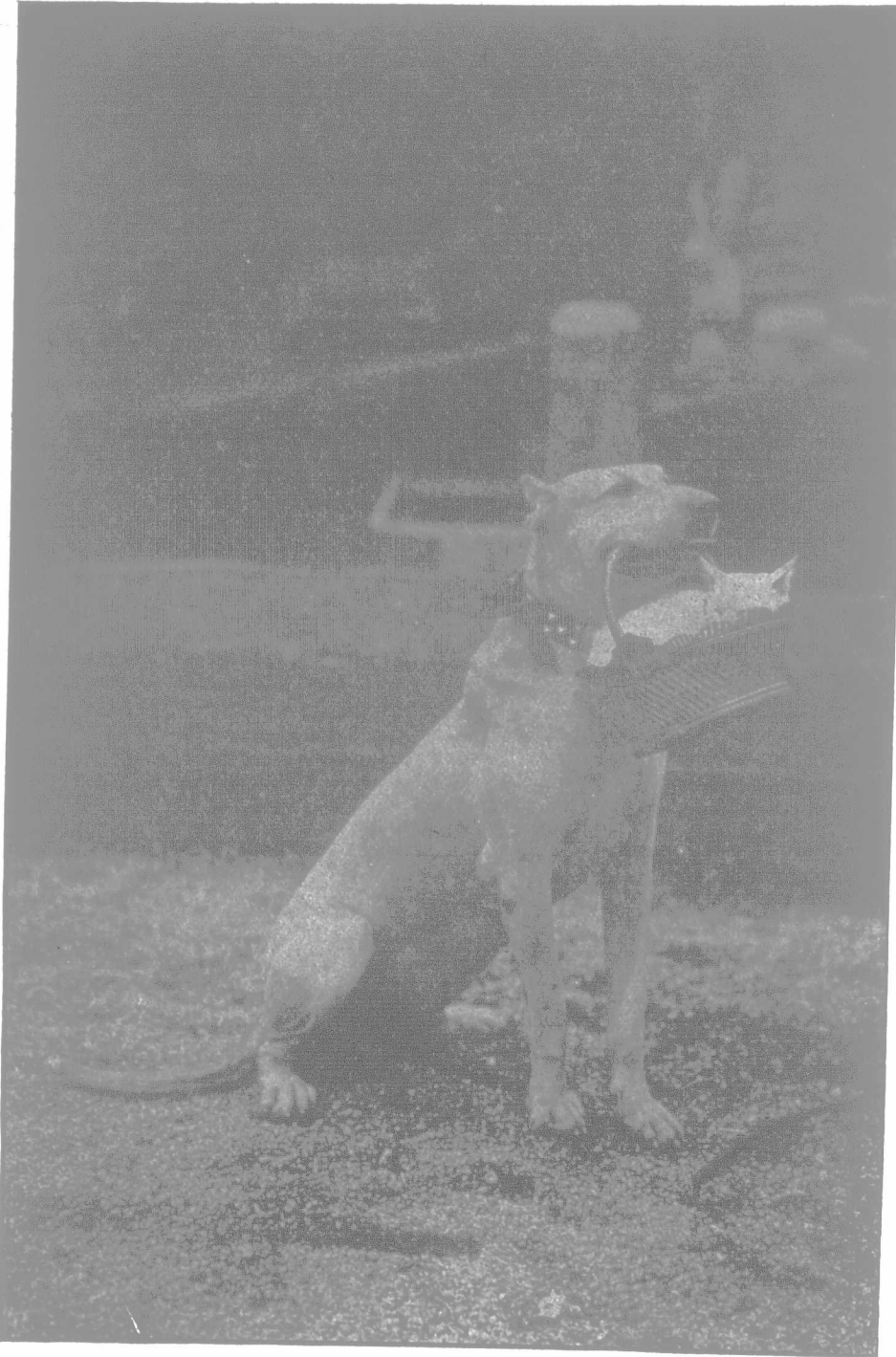
Dear Puck and Beavers,—I am going to tell you about one of my pets. I have a little kitten which I call Sunny. He is fond of playing with a string. One day when I went in the stable Sunny was there; he was in one of the windows trying to catch some mice. I watched him for a while to see if he would catch anything. After a while he knocked down a nest of mice. He jumped after them and soon fixed them. There were five of them, and he ate them all. I am one of the scouts of Chatsworth.

There are about 24 of us. We are going to hold our celebration on Monday if it's a fine day. Wishing the Beaver Circle every success.
EARL CARR
Chatsworth, Ont.
You are Number 43 on the Garden Competition list, Earl.

Dear Puck and Beavers,—This is my first letter to the Circle. My father has taken "The Farmer's Advocate" for twenty years, and we all like it very much. I have been going to school a little over one year, and like it very well. We have a school garden this year, and I have sunflowers and daisies in my plot. I have 1½ miles to go to school, and I like my teacher (Miss Baker) fine. I have no brothers and sisters to play with, but I have lots of pets. I have two dogs, Rover and Puppy. Rover will draw me all over the snow on my sleigh. Some times he goes so fast he throws me off. I want to get a little wagon for the summer.

He bought it at a store and put it in a box at our place and it got away. It stays around the farm all the time, and we throw crumbs on the gallery for him and he eats them. Well, I will close, wishing the Beavers every success.
DONALD L. McDONALD.
North Lancaster P. O., Ont.; Box 25.

Dear Puck and Beavers,—My birthday was the 3rd of July. I have a sister and a brother. My sister's name is Jean, and my brother's is Peter. My sister is 9 years old; my brother is 6. For pets I have a cat and dog. I call the dog Collie and the cat's name is Archie. I will close now with a riddle: Why is climbing up a steep mountain like trying to kiss a pretty girl? Ans.—Because it's hard work to reach the mouth of the crater.
LAURA REID
(Age 7, Pt. II.).
Paisley, Ont.; R.R. No. 1.



A Basketful of Kitten.

I have two old cats and seven kittens, and sixty little chickens. There is a big tile on our farm, and something was carrying grass into it, so I set a trap yesterday, and last night I caught a muskrat, and another this morning. As this is getting too long I will close, hoping this will escape the w.-p. b.
DAYTON MILLS
Yarmouth Centre, Ont. (Age 7).

Dear Puck and Beavers,—This is the second letter I wrote to you, as the first one did not find its way to the waste-paper basket. We have in all eight horses; now there are two teams at home whose names are Mag, Doll, Maud and Fred, and two colts two years old, and one one-year-old; one is a fox and the other is a kind of a brown. We have a pet pigeon; he is white. It was my cousin that brought him here.

Dear Puck and Beavers,—As this is the first time I have written to you, I will not make my letter too long. My father has taken "The Farmer's Advocate" since last winter, and I enjoy reading the Beavers' letters. I have an old horse; he was given to me for a birthday present. He is 25 years old, and is very wild. I have a sister six years old. She and I go to school; she has just gone since April. She likes to go. Papa has driven me to school since November. Our teacher is a good one. She is leaving us this term. I tried for the third in June. There are 32 scholars going to our school. Wishing the Beavers every success, I will close.
HAROLD A. OTTO
(Age 9, Book Sr. II.).
Newington, Ont.

Beaver Circle Notes

Some of the little letters had to be thrown into the w.-p.b. because they were written on both sides of the paper. It is very awkward for the printers when you do that, so please remember what to do the next time, little Beavers.

The Ingle Nook.

[Rules for correspondents in this and other Departments: (1) Kindly write on one side of paper only. (2) Always send name and address with communications. If pen-name is also given, the real name will not be published. (3) When enclosing a letter to be forwarded to anyone, place it in stamped envelope ready to be sent on. (4) Allow one month in this department for answers to questions to appear.]

"Jean has begun to take lessons in oil-painting,"—this was the announcement that set that particular ball of conversation rolling one afternoon recently.

"Well," said Helen, "I think Jean is wise to do so. She has real talent, I imagine; she has plenty of time; and she has a little income,—she will never have to depend upon art for a living."

"Oh you—you mercenary girl!" exclaimed Mary, "Now there is Miss M—. She starved through a course in art in Paris, she starved through a post-graduate course on 'her own hook' afterwards, and now she is making her mark right in Old London, too. If she had held back just because she hadn't an income, where would her career have been?"

"Oh, I know," returned Helen, "but Miss M—, you know, is a perfect enthusiast in regard to art. I suppose she had enough of the 'divine afflatus' about her to warrant her in going on as she did, and I am quite sure she would be happier living on bread and milk in a garret, so long as she could paint all the time, than doing anything else that would mean ice cream and macaroon on a veranda any time she chose. Miss M— isn't like ordinary folk you know. Most girls would hate the starving, would never come to anything in art, and would find that they had spent the best years of their lives in chasing a will-o'-the-wisp. Now, I really think that just ordinary girls like these would be much wiser to do something that would assure a good living, and spend the money that would have been spent in painting lessons on prints from the old masters,—such fine ones are to be had now, in all sizes, for so very little money,—Perry prints, for instance."

So far Ethel, the bride of six weeks, had been stitching away at her fancy-work without saying a word. Now she looked up, letting the dainty embroidered doiley drop. "Just here I want to make a confession," she said, "I didn't tell you all, but I was perfectly wild to take painting lessons last winter. In fact, I had quite decided to. I wanted some pictures for my house, and I was silly enough to think that it would be nice to have a few of my very own work. Well, I chanced to be in Toronto about that time, and had a chance to visit an art exhibit. Some of the pictures—oh, I just raved over them! And how I wondered whether I should be able to paint anything like them. Afterwards I had the opportunity of meeting one of the artists,—and what do you think? He told me that he painted, as a rule, six or eight hours a day in summer, a little less in winter owing to the poorer light, that he had been 'practicing' for twenty years, and that he felt that, then, he was only getting past the edge of things in art.—And I had imagined that I could paint up a few for my house in a single winter! Can you wonder that I laughed—just laughed—at my own conceit? . . . Well, Helen's plan came to me. I calculated how much money I should have spent on painting lessons and spent it on prints,—a misty lake from one of Corot's paintings, a 'Madame Le Brun and Her Daughter,' a copy of Constable's 'Cornfield,' a 'Harvesting Poppies' by

Breton, Mason's 'Harvest Moon,' a 'Song of the Lark' by Breton (I do love his pictures!), and a 'Turner's 'Old Temeraire.' The whole seven didn't cost me five dollars. I had plain mats and plain brown frames put on them, and you know how lovely they look in my little home."

"I should say so!" exclaimed Mary, enthusiastically. "You have the most artistic little house I know."

Ethel smiled—"But how it would all have been ruined if I had put my own daubs up! . . . But I have not finished my story. Shortly after my visit to the artist's I was in another home, decorated from garret to cellar, almost, with pictures painted by the lady of the house, and displayed by her with the greatest satisfaction, just as mine should have been displayed by me had I not had my eyes opened to what really good work should be. All the pictures were copies, indifferently done at that—not a speck of genius anywhere. The painter evidently had not specialized. She had tackled everything—mountains, trees, rivers, animals, even a few figure studies. You may imagine how 'common' it all looked after that art exhibit, and how glad I was that I had not fallen likewise into temptation."

Little Doris, a twelve-year-old sister, had been sitting on the step—a little pitcher with big ears, as are most children.

Now she was heard;—she had evidently been thinking the matter out. "I guess that girl who starved in a garret just tried to sell her pictures," she ventured. "She should have given painting lessons. Miss T— gives painting lessons, and she makes lots of money."

"Miss T—!" and everybody laughed. "Yes," said Helen, "Miss T—'s trap is the sort into which many people fall. Such teachers explain why we see so many daubs on the walls of houses. We need a few art exhibits of the best kind to open the eyes of the people in general as yours were opened, Ethel."

Mary had been, since her first outburst, listening in silence to the conversation. "Yes," she now said, "after all I believe you and Ethel have come to the right conclusion. It is all right for a genius to strain every nerve to attain excellence, other people are much wiser to leave such things pretty well alone. All the same, I do think that if one loves to do a thing one may be pardoned for dabbling at it a little, just for the enjoyment and interest of it. Now, you, Helen, are musical,—not a genius, but you spend a great deal of time on music and get a great deal of enjoyment out of it. I am not musical, but I love to dabble in water-colors. I just took two or three lessons to learn how to prepare the paper, and so on, the mechanical part of it, you know, and ever since I have been making little sketches on almost every holiday, and I have had a great deal of pleasure in doing so. It isn't an expensive fad, because I don't frame the pictures. I keep them away in a portfolio. Some day I may accomplish a little scene well enough to feel like framing it and putting it in my own bedroom—a little pet scene, you know, that will remind me of summer days, in midwinter."

"Why, I completely forgot," said Helen. "Your sister showed me your portfolio one day, and most of the sketches were quite charming. I can easily see that painting may be to you, with the real love you have for it, what music is to me."

"So we are all satisfied," laughed Ethel. "I wanted pictures—just pictures with which to adorn my walls, and the prints filled the bill without worrying over paintings, which would never have been satisfactory; you, Mary, paint for the work's sake and are satisfied; you, Helen, can admire art from afar and take consolation in music instead."

"Some day, all the same," declared Helen, "I hope to own one really good painting. I love good prints, too, you know, and I have a number of them, but I want at least one really truly painting."

"At all events, we will none of us be Miss T—s," added Mary, and then everyone laughed again.

Now this, in substance, was a real conversation among very real people. There may be an idea in it for someone.

We have the misfortune, at our office, to be next door to an automobile garage. At any hour of the day you may see cars large and small buzzing about there, and often in the early morning, just as we paper folk come straggling in to spend our day among books and papers, with the constant whirr of machinery in our ears, we have the exasperation of seeing gay parties starting off from the garage, out into the sunshine and away off "far from the madding crowd" towards the green fields and hills beyond the city's border.

Sometimes the papers and machinery seem a poor alternative, but there are always compensations. Possibly those gay travellers, when they do chance to work, have not such interesting work as ours; possibly, even, they have no work to do at all, which is a worse case still, for, given a man who has no work to do and you may wager your last dollar that he is a victim, often enough, of ennui. Besides, if one owned an automobile and had plenty of time to spare, would one not run the danger of going about in it too much, and growing fat and unhealthy from sheer lack of exercise? After all there is a great deal of real pleasure to be had from just trudging along looking at things, and getting, all the while, the very best tonic in the world without knowing it. After all there is a good deal to be said in favor of shanks-ponies.

And so one might go on; there are usually compensations—if one takes pains to hunt up the most congenial thing that can be found to do, for the present at least. If you find your own thoughts good company and love the country, there is something worth while in being out of doors, even though the work in field or garden be hard. If you can't bear to be alone and must have people about all the time, there may be

MUSTARD PICKLES—CHILI SAUCE.
(Held over from last year.)

Dear Junia,—We have only taken "The Farmer's Advocate" since Christmas, and have enjoyed reading the helps in the Ingle Nook. I saw where the jolly wife wanted someone to print a recipe for mustard pickles. I will send one that I have used and found it keeps well:

Mustard Pickles:—1 head cauliflower, 2 qts. green onions, 2 qts. cucumbers, 2 qts. green tomatoes, 8 large green peppers, 4 cups brown sugar, 1 cup flour, 2 ozs. turmeric, ½ lb. mustard, 1 gallon vinegar. The cauliflower, onions, tomatoes and cucumbers to be cut separately and salted over night; then heat vinegar and spice, put all together and let come to a boil.

Chili Sauce:—13 ripe tomatoes, 13 large green apples, 1 lb. brown sugar, 3 onions, ½ lb. raisins, ½ teaspoon cloves and allspice, a little salt, and 2 pints vinegar. M. J. L.

ANOTHER.

Dear Junia,—I am very much interested in your page, as there are so many helpful hints given as to how other people do to make life easier. I thought perhaps it was only fair that I should also help when I could. Someone asked for a good recipe for mustard pickle. I have the Macdonald Institute recipe, which I will give, for without doubt it is the best.

Mustard Pickle:—1 qt. large cucumbers, 1 qt. large onions, 1 qt. silver skin onions, 1 qt. small cucumbers, 2 or 3 cauliflowers, 3 strong green peppers, 3 strong red peppers, ½ gallon cider vinegar, 4 cups brown sugar, ½ lb. mustard seed, 1 cup flour, 1 cup ground mustard, 2 tablespoons turmeric. Cut up large cucumbers, onions and cauliflower. Put each kind of vegetable in separate dishes

until the pieces are of the same size. Spread with the butter, then put the slices together alternately until there are 5 or 6 layers. Press these well together, then with a sharp knife cut down slices about half an inch thick.—Pictorial Review.

Salad in Tomato Cups:—Scoop out the pulp from firm, round tomatoes, sprinkle the inside with salt, put the shells on a platter and set on ice to chill. Mix 1 cup peeled and chopped apple with ½ tablespoon lemon juice, add ½ cup chopped nut meats and 1 cup celery chopped. Mix all together with salad dressing and fill the tomato cups.

Potato Salad:—Mix together 1 pint mashed potatoes, the yolks of 3 hard-boiled eggs, 1 cucumber pickle chopped fine, 1 small onion chopped fine (may be omitted). Mix with salad dressing thinned with cream. Pile in a dish lined with lettuce, and garnish with rings cut from the whites of the eggs.

Devil Cake:—Beat ½ cup butter to a cream; beat in 1 cup sugar, then the beaten yolks of 4 eggs, which have been whipped up with another cup of sugar. Add 1 cup hot mashed potato, 2 squares melted chocolate, and, alternately, ½ cup sweet milk and 2 cups sifted flour sifted again with 3½ level teaspoons baking powder, a teaspoon each of cinnamon and nutmeg, and ½ teaspoon ground cloves. Lastly, add 1 cup walnut meats chopped fine, and the whites of 4 eggs beaten dry. Bake in a loaf and frost with chocolate or plain white icing.

With Blueberries.

Blueberry Tea Cake:—Mix well together 1 pint of flour, ½ teaspoonful of salt, ½ cupful of soft butter, 1 egg, 1 scant cupful of sweet milk, ½ cupful of sugar. Lastly add 1 pint of sound, ripe blueberries. Bake ½ hour in a square tin; cut in squares, and serve hot.

Blueberry Shortcake:—One egg, 2 cups sour milk, 2 tablespoons butter, ½ teaspoon salt, and 1 teaspoon baking soda. Mix the dough as soft as can be handled, roll into two sheets, one of them ½ inch and the other ¼ inch thick. Put the latter in a well-buttered pan, cover with a thick layer of fine ripe blueberries, add sufficient sugar to sweeten, lay on the other crust, and bake. Cut in squares, and serve hot with plain or whipped cream.

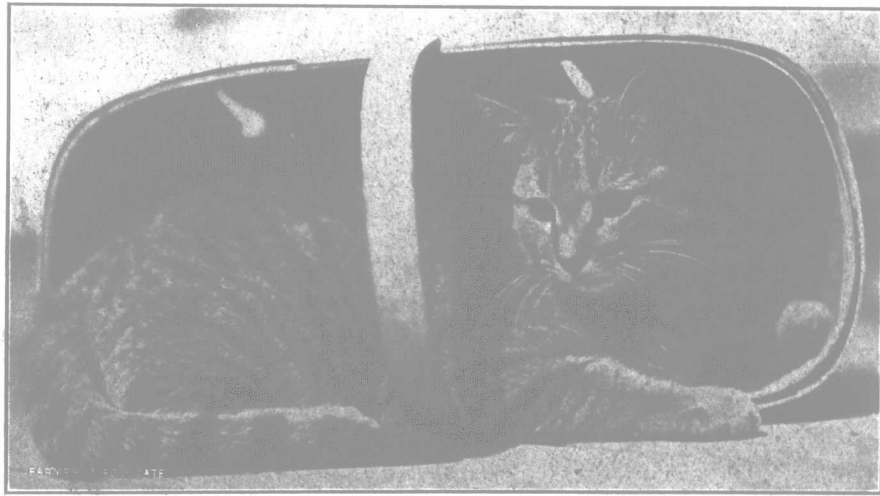
Blueberry Cobbler:—Pick over 1 quart of sound, ripe blueberries, and put them in a two-quart earthen pudding dish with a very little water, cover, and cook gently on the back of the stove until tender. Then sprinkle a little sugar over them, and some little bits of butter. Rub 2 rounded tablespoons of butter into 2 rounded cupfuls of flour, 1 teaspoon sugar, ½ teaspoon salt, and 2 rounded teaspoons of baking powder. Mix well together, and add 1 cupful of cold water, stirring it in quickly and lightly. Do not beat it. Drop it by spoonfuls in a circle on top of the fruit, leaving a large opening in the center. Bake in a brisk oven. Serve hot with a sweet sauce or with cream.

Canned Blueberries:—Allow ½ lb. of sugar and ½ pt. of water to every quart of sound, ripe berries. Allow the juice of 1 lemon to every 3 qts. of berries. Make a thin syrup with the water and half the sugar. When it boils, skim well, and add the berries, let simmer 5 minutes, and add the rest of the sugar and the lemon juice. Let it come to a boil again, and can at once.

Blueberry Pudding:—One pint of grated bread crumbs wet with 1 pint of boiling milk. Add 4 well-beaten eggs, ½ cup of sugar, a pinch of salt, and 1 quart of fine, ripe blueberries. Bake in a moderate oven until firm. Heap fresh, ripe berries on top, sprinkle with white sugar and cover with whipped cream, or serve the pudding plain with sweet cream.

Blueberry Toast:—Stew 1 qt. of blueberries in a very little water and sufficient sugar to sweeten. Have ready some nicely browned toast, lay it on a hot platter, and moisten well with hot milk. Spread a thick layer of the stewed blueberries on each slice, and serve at once. Pass sweet cream with it; makes a delicious breakfast dish.

Blueberry Sauce:—Cook blueberries with a very little water until quite soft, add sugar to sweeten, let cook a minute longer, and strain. To each pint of juice add 1 tablespoon cornstarch, and cook until thick and smooth. Serve hot. Very nice with rice, blanc mange, or any



"Dear Little Cat with Yellow Eyes."

compensation in working in mill or store or factory, notwithstanding the treadmill of it. If you chance to be in a totally uncongenial environment, there is always the bright spot in being able to say, "This need not last forever. People were not made to be unhappy. I will keep my eyes open for a better chance."

. . . If you have given up a career to marry, you may have your home and children to rejoice in instead; if you have not married you may have the career to look to, or the satisfaction that comes of being able to go from place to place at your own sweet will. If you are rich you can enjoy the opportunities that come with riches; if not you may learn, like Thoreau, to be rich through doing without the unnecessary. —I know nothing like Thoreau's "Walden," with a Salt's "Life of Thoreau" accompanying, to show one how very possible this is. . . And so the story goes, something unpleasant, usually, to bear, something pleasant to counterbalance:

"For taking the year together, my dear, There isn't more rain than sun."

So buzz away there, automobiles! Go your way, gay parties. If you can ride, we can walk; if you can idle, we can work; if you can go off on pleasure jaunts, we, like the good old bookkeeper in "Prue and L," can follow, yet go farther and faster than you. For may we not have our fairy paths still, leading to our Castles in Spain? We wish you a pleasant ride and a good morning.

JUNIA.

Cookery for the August Picnic.

Orange Marmalade Sandwiches:—Cut the bread into thin slices. Put six together, after buttering thinly, with marmalade. Press under a weight, then when well pressed together trim off the crusts and cut down in thin slices with a sharp knife.

Nut Sandwiches:—Chop the nuts fine and mix with salad dressing. Spread on slices buttered bread and put together, with a lettuce leaf between each two pieces. You may add chicken, olives, celery or figs to the nuts and chop together, if you like.

Brown and White Sandwiches:—Work the butter with a little celery salt, and some finely chopped red peppers and olives or pickles. Work to a paste. Cut the brown and white bread into thin, even slices, and trim off the crusts,

plain pudding; also very nice on toast.—Ohio Farmer.

The Scrap Bag.

TO CLEAN TAFFETA SILK.

Sponge the silk carefully with alcohol, then hang out of doors in a windy place. If very much soiled it may be washed in mild suds. Do not wring.

TO CLEAN HATS.

Soiled straw hats that are beginning to look the worse for the summer's wear may be cleaned as follows: Remove all trimming. Dissolve one or two table-spoons oxalic acid crystals in a bowl of warm water. Wash the hat thoroughly with this, applying it with a nail brush. Rinse well in two clear waters, then dry in the sun.

TO CLEAN COMBS.

Do not wash them. Clean them by drawing a piece of doubled cotton repeatedly through between the teeth.

TO KEEP LEMONS.

Keep lemons in cold water, changing it every day, and they will not dry.

NEW REMEDY FOR FRECKLES.

Horse-radish root, 1 oz.; boiling water, 1 pint; borax, 2 drachms. Apply at night.

A BRUISE.

Rub a bruise with sweet oil and then with spirits of turpentine and it will not likely turn black.

COOKING A STEAK.

Put it into a very hot, dry frying-pan and brown as quickly as possible. Shake the pan constantly, and turn the meat without pricking or cutting to let the juice escape.

WARTS—TO REMOVE.

Moisten the warts several times a day with water and rub them with a piece of washing soda.

TO REMOVE IRON RUST.

To remove iron rust from white clothes cover the spot with plenty of powdered alum and hold it over the spout of the boiling teakettle.

TO WASH TROUSERS.

Make a good suds of soap and warm water, and wash the trousers in this, rubbing as little as possible. Rinse twice in cool water, not wringing them but letting them drip. After the last rinsing turn them inside out, and pin to the line by the waistband in a shady place. Use plenty of clothes pins so that there will be no sagging. As fast as water collects in the hems press it out with a cloth. Before they are quite dry press carefully with a hot iron on the wrong side. Finally turn them and crease down the front of each leg.

How a Throne Was Won.

The Orient is still the land of the strange and romantic. Straight from every-day modern life in India comes a story that might have been invented by Scheherazade herself for the entertainment of the Sultan. It is an account, in *T. P.'s Magazine*, of how the present Gaekwar of Baroda won his throne.

In 1875, after the Maharaja Malhar Rao was deposed, the council sought a worthier member of the family as his successor. Four sons of the house lived in the city, but the council felt that they were all too old and incompetent to become efficient rulers.

In a distant village, in a mud hut, the council found a poverty-stricken family of the royal race. In this family were three sons, each of whom was young enough to be molded into a capable ruler. After some deliberation, the council decided that one of these boys should have the throne, but left the selection to the dowager maharanees.

Accordingly, the three brothers—Gopal, Dada and Sampat—were summoned to the city of Baroda. Shortly after their arrival, they were admitted to the presence of the maharanees. Her highness asked each in turn why he had come to Baroda.

The youngest was so awed and bewildered by the magnificence of the court, that after smiling foolishly for a moment, he burst into a storm of tears and sobs.

The next in age, who was more stolid, did not behave so hysterically. He answered

the query as any well-behaved Hindu lad of his age would have done. He had come to Baroda, he declared, because his relatives had brought him there.

But when Gopal was asked the same question, he airily responded:

"I have come to be the Maharaja of Baroda."

The maharanees and her councilors with one accord decided that the youth who gave this bold reply showed the most promise of becoming an able ruler of his people. He was chosen, and there has been no need to regret the choice.

"The Farmer's Advocate" Fashions.



6892 House Gown or Wrapper, 34 to 44 bust.



7459 Coat for Misses and Small Women, 14, 16 and 18 years.



7361 Boy's Suit, 6 to 12 years.



7484 Tucked Blouse or Shirt Waist, 36 to 46 bust.



7476 Fancy Blouse, 34 to 40 bust.



7350 House Jacket, 34 to 44 bust.

Please order by number, giving age or measurement, as required, and allowing at least ten days to receive pattern. Price ten cents per pattern. Address, Fashion Dept., "The Farmer's Advocate," London, Ont.

The Value of a Smile.

The thing that goes the farthest
Towards making life worth while,
That costs the least and does the most,
Is just a pleasant smile.
The smile that bubbles from the heart,
That loves its fellow men,
Will drive away the cloud of gloom,
And coax the sun again.
It's full of mirth and goodness too;
With maply kindness blent,
It's worth a million dollars,
And doesn't cost a cent.

August.

By Susan Hartley Swett.

August, swart and sunburnt,
Stands amid the wheat,
Butterflies in purple
Float about her feet;
Freckled lilies in the woods
Peer like Gipsies in red hoods.

Blackberries spill their nectar
All along the hedge;
Little wafts of sweetness rise
From the flowering sedge;
Hollyhocks like ladies tall
Lean above the garden wall.

Marigolds like sunshine heaped
In broad velvet laps
Crowd the garden borders;
Corn-flowers' azure caps
Are by cobweb ribbons tied
To a stately London-pride.

Wild grapes purple by the brook,
Speckled apples fall
With a cool thud in the grass
By the orchard wall;
Sunflowers passionate and bold
Grasp all day the great sun's gold.

Bees are thick on the red balm,
Like a golden-brown crust;
Little sudden singing showers
Sweep away the dust.
Fireflies flash their torches bright
For the feet of groping night.

Ripe perfection everywhere,
Nothing lost or spent,
Never hint that it is late
Mars the day's content,
Wealth awaiting in gold store,
Beauty shining at the door.

Happy August, what to her
Is to-morrow's cold?
Rest and stillness, ripeness, peace
Do not make life old,
And in tales the crickets weave,
No one ever would believe.

Alexandre Dumas: Chef.

How completely Alexandre Dumas was master of another art than that of fiction, is shown by an amusing anecdote in *Madame Judith's* witty—and gossipy—"Recollections." A very sociable company was gathered late one evening at her apartments. Dumas the elder, Theophile Gautier, De Banville, and other lesser lights were there. After much conversation and reading aloud, everyone grew hungry. But the hostess had sent away her servants, and had made no preparation for a late supper.

"No matter!" cried the resourceful Dumas. "If the cooks have gone to bed, we'll take their places!"

And calling on several of the company to act as his assistants, he started foraging. Soon he found abundant provisions, among which was a hare.

"Fine!" he shouted. "In half an hour we shall have a splendid meal!" And he vanished, with his satellites, into the kitchen.

In thirty minutes the door leading from the kitchen was thrown open, and an extraordinary procession appeared.

First came Theophile Gautier, bearing a large platter of food; then Dumas, attired in a chef's full costume,—white apron, cap and all,—proudly bearing aloft the hare; behind came two of the satellites, one of whom carried a big knife, the other a gigantic fork.

"I never ate a better dish," said Madame Judith. Dumas was a capital cook. After the repast he exclaimed:

"Are not literature and cooking twin sisters? It is too bad that a good cook is not esteemed as highly as a good novelist. I am just as proud when I make a good sauce as I am when I write a good page.

"Alas! if genius had not been deflected from the kitchen, what astonishing progress the art of cooking might have made! What divine joys would have been vouchsafed to mankind if Corneille, Racine, Moliere and Voltaire had turned their marvelous talents to the invention of new dishes!"

"He is right!" shouted Theophile Gautier.

A MATTER OF NAMES.

"What is the difference between pomme de terre and potato?"
"About two dollars."

A Medieval Household.

The extravagant luxury of the modern multi-millionaire's establishment, with its scores of servants and underlings, is not so remarkable, after all, if it is compared with the elaborate housekeeping conducted by a great noble or ecclesiastic of the middle ages. Take, for example, Gascoigne's account of Cardinal Wolsey's retinue as it is quoted by Mr. F. J. Snell in his recent book, entitled, "The Customs of Old England." After stating that the ambitious churchman had in attendance upon him "men of great possessions, and for his guard the tallest yeoman in the realm," the old chronicler proceeds:

"And first, for his house, you shall understand that he had in his hall three boards, kept with three several officers, that is, a steward that was always a priest; a treasurer that was ever a knight, and a comptroller that was an esquire; also a confessor, a doctor, three marshals, three ushers in the hall, besides almoners and grooms.

"Then he had in the hall-kitchen two clerks, a clerk-comptroller, and a surveyor over the dresser, with a clerk in the spicery, which kept continually a mess together in the hall; also, he had in the kitchen two cooks, laborers and children, twelve persons; four men of the scullery, two yeomen of the pastry, with two other paste-layers under the yeomen.

"Then he had in his kitchen a master-cook, who went daily in velvet or satin, with a gold chain, besides two other cooks and six laborers in the same room.

"In the larder, the scullery, the buttery, the ewry, the cellar, the chandlery, the waferly, there were yeomen and grooms; in the wardrobe of beds, the master of the wardrobe and twenty persons besides; in the laundry, a yeoman, groom, and thirteen pages; in the bake-house, the woodyard, the barn, there were yeomen and grooms; porters at the gate, two yeomen and two grooms; a yeoman in his barge, and a master of his horse; a clerk of the stables, and a yeoman of the same; a farrier and a yeoman of the stirrup; a maitlour and sixteen grooms, every one of them keeping four geldings.

"There were also the officers of Wolsey's Chapel, and the singing men of the same. And he had two cross-bearers and two pillar-bearers; in his great chamber, and in his privy-chamber, all these persons, the chief chamberlain, a vice-chamberlain, a gentleman-usher, besides one of his privy-chamber; he had also twelve waiters and six gentlemen-waiters; also he had nine or ten lords, who each of them had two or three men to wait upon him, except the Earl of Derby, who had five men.

"Then he had gentlemen cup-bearers, and carvers, and of the servers, forty persons; also, he had of alms, who were daily waiters of his board at dinner, twelve doctors and chaplains, besides them of his chapel; a clerk of his closet and two secretaries, and two clerks of his signet; four counsellors learned in the law.


"And for that he was chancellor of England, it was necessary to have officers of the chancery to attend him for the better furniture of the same.

"All these were daily attending, down-lying and up-rising; and at meat he had eight continual boards for the chamberlains and gentlemen-officers, having a mess of young lords, and another of gentlemen; besides this there was never a gentleman, or officer, or other worthy person, but he kept some two, some three persons to wait upon them; and others at the least had one, which did amount to a great number of persons.

"Now," Gascoigne quaintly inquires in concluding his formidable specification, "having declared the order according to the chain roll, use of his house, and what officers he had daily attending to furnish the same, besides retainers and other persons, being suitors, [that] dined in the hall; and when shall we see any more subjects that shall keep such a noble house?"

"Therefore here is the end of his household; the number of persons in the chain were eight hundred persons."

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An Unhappy Woman's Advice.

A woman who has had a very unhappy married life gives this advice to young women:—

Do not marry a man to reform him. It cannot be done unless he is under 22. The woman who permits her heart to rule her head makes a sad mistake.

If a girl loves a man, in spite of his dissipation and selfishness, she plunges into matrimony with her eyes closed.

No woman should ever depend entirely on her husband for happiness. It is folly, and leads always to heartache. A married woman should have a life apart from her husband.

Let her keep sweet and true and lovable, but beyond a certain point she should not venture, lest she loses her individuality in her husband's, with the result that he may impose upon her.

Beware of a man with an ungovernable temper, and many men are endowed with this quality.

Shun the man who drinks to excess, for it is a habit that leads to wretchedness.

Avoid also the man who is selfish, the man who considers a ways his own interests before those of his wife.

Many men are fickle, and it depends on the wife's power to hold them.—Globe.

NEW TELEPHONE DIRECTORY

The Bell Telephone Company of Canada is soon to print a new issue of its Official Telephone Directory for the District of

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Parties who contemplate becoming Subscribers, or those who wish changes in their present entry, should place their orders with the Local Manager at once to insure insertion in this issue.

Connecting Companies

Should also report additions and changes in their list of subscribers, either to the Local Manager or direct to the Special Agent's Department, Montreal.

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MENTION "FARMER'S ADVOCATE."

The Path to Contentment

It is sometimes hard to tell where contentment leaves off and indolence begins; but it is quite true that, in this ambitious, struggling American life of ours, a great deal of happiness is spoiled by forgetting to appreciate the blessings we have in our eager desire for more. Many people are straining their eyes into the future so much that they quite overlook the present.

But if one can only realize the beauties and comforts of each day as it passes and give a few moments to reminiscence over past pleasures, without, of course, sacrificing one's ambitions for the future, he will quite surely find his life sweeter and richer.

To be a little less vague, a man should form a habit of enjoying his life as he lives it. He may hope to be more prosperous, to have larger business or a better position next year, but he should not let that hope interfere with his appreciating the position he has won for himself this year.

Next year he will have one less year of life to live than he has this year, and what he gains in success he loses in youth. Each year he pays a mighty price for what he gains—a year of his life—one sixtieth or eightieth of his life span at the least, and quite possibly a much larger fraction. In spending this precious thing he should follow the business axiom of trying to attain the maximum of returns for the price paid.

So, when a man works, let him work to the best of his ability, and he cannot work to the best of his ability if his work one day exhausts him so that he cannot work with all his vigor and enthusiasm the next day. And work, after all, is only one of the important elements in his life. He should cultivate the power to play, to make and keep friends, and to be a bright and attractive element in his family. If he has young children, he should consider daily engagements to play with them quite as important as a business engagement. Their years are passing, too, and he should not lose too much time of their beautiful childhood. His boy has a right to expect a daily game of ball or marbles or a half hour of reading aloud with his father, just as his little girl should find in him a sympathetic play-fellow in her doll-house. What kind of tools to select for the work-bench, the choice of a bicycle, the "Swiss Family Robinson," fairy tales, doll dresses, rabbits, imaginary voyages to the Spanish Main or Viking Land, toy stores and "pretend" tea-parties—all the dear, delightful occupations and interests of children are second in importance to nothing; and the father or mother who is too busy to enter enthusiastically into this charming realm is not only neglecting an important duty, but is missing the sweetest pleasures which life has to offer.

It is well to build for the future, but while one is building one should have warmth and shelter and a home fireside now, and have a mental attitude that allows a full enjoyment of that fireside. Your neighbor may have more servants and a larger house and income than you, but is he really richer? His servants mean more vexatious domestic problems, and his wealth is quite powerless to purchase him more happiness than you can acquire. Emerson says, though you travel the world over to find the beautiful, unless you take it with you, you will find it not. One gets the best out of life by his mental and spiritual attitude toward life. Too much ambition brings restlessness and discontent; too little brings incapacity for true enjoyment. A man with the proper poise makes work the means and not the end, and finds time to enjoy and profit by the good things that are close at his hand every day. The man who is so absorbed in his business that he has only a vague, absent-minded interest in things beyond his office door, gets really very little out of life.

The man whose worldly prosperity makes him think he must have an elaborate home, elaborate food, and elaborate entertainments in order to be comfortable, is feeding the body and starving the soul. True culture is not found in fashions, but in a sympathetic appreciation of beautiful things; and if a man finds delight in the view of a daisy-white meadow, a violet-tinged glen, in

poetry and art and music, and in the play and prattle of children, or a stimulating conversation, he has riches which a millionaire cannot buy with all his money.

In other words, if a man will only pause for a little space every day upon the breeze-swept hilltop of the present, and look about him at the view and find it pleasant, breathing in the sweetness and sunshine of life, he will then find that the path to contentment, flower-bordered and inviting, lies close at his feet, luring him to follow it.—The Independent.

The "Titanic" Disaster and Peace.

By Edwin Ginn, in The Independent, New York.

[Mr. Ginn, the eminent Boston publisher and philanthropist, sent us this little article, which we commend to our readers. Mr. Ginn, it will be remembered, was the first citizen of the world to give a million dollars to the cause of universal peace.—Editor.]

I doubt if history records any nobler examples of heroism and self-sacrifice than were displayed by the passengers on board the steamship Titanic. The sole thought among the men was, "Are there any more women and children? If so, they must be cared for first." The question as to whether they were from the steerage or first cabin was not asked. No preference was shown. This should be a striking lesson to those who are constantly preaching the indifference of the rich to the condition of the poor.

Another great lesson to be drawn from this disaster is that bravery and heroism are not bred solely in battle. The men who sacrificed their lives at the sinking of this ship had been, for the most part, trained neither for the army nor the navy, yet they stood back calmly and courageously, knowing that death must certainly come in a few moments. The soldier in battle always feels that he has a chance of life, but the men on the Titanic knew that they were doomed.

During these days when the minds of all have been focused on this terrible tragedy, I wonder how many have asked the question, "Why is it that the world stands aghast at the loss of fifteen hundred souls, when the news of a battle in which twenty thousand men lie dead on the field, and as many more are maimed for life, excites so little comment?" To be sure, many read the account with deep sorrow and regret, but it makes but a slight impression upon the community at large. None of the wheels of business is stopped; the churches hold memorial services.

But hardly had the Titanic sank beneath the waves when the various steamship lines began to take measures to prevent, if possible, another such disaster. Orders were issued to have all passenger boats provided with enough lifeboats and rafts to accommodate everyone on board; to install a sufficient number of wireless operators so that there would be always at his post an intelligent man familiar with the various codes; to lay out routes far enough south to avoid icebergs; to provide glasses for the lookout; to drill the crew daily in the performance of their duties. It should also be arranged that no man, captain or otherwise, would be obliged to be upon the bridge more than two nights in succession; and a rate of speed should be established, when in the vicinity of ice fields or in a fog, which would insure safety. Our Government, as well as the British Government, is investigating very carefully causes and conditions, and I hope that the maritime nations will in the near future enact laws which will insure the perpetuity of these safeguards by compelling their observance. The sinking of this great ship, with its precious freight of human life, will no doubt accomplish much in making ocean travel safe.

But what steps are being taken by the nations to save the world from a much greater sacrifice of human life in battle? And yet life should be as sacred in the one case as in the other. The only reason that I can see for the recognition of the value of human life in the one instance, and its apparent disregard in the other, is because of the feeling that one is an accident which should be avoided, while the other is taken as a matter of course, the result of many generations of

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FARM—Want to buy good farm, from owner only. State price and description. Address: Malcolm, Box 764, Chicago, Ill.

FOR SALE—100 acres clay loam to clay; frame house; bank barn; five miles from Victoria Harbor and Port McNicol, 1 1/2 miles from Vasey; good for grain, fruit and dairying. Price, \$3,500. Apply to George Jones, Vasey, Ontario.

FARM FOR SALE—180 acres, 1st concession Delaware, 3 miles from Southwood Stn., 14 miles from London. Excellent grain and dairy farm; well watered; 6 acres apple orchard; brick house and suitable outbuildings. Apply: Joseph Weld, "Farmer's Advocate," London.

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WANTED—Cash paid for Military Land Grants in Northern Ontario. Please state price and location. Box 88, Brantford.

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custom and education. Men and women look upon the battlefield as a necessary evil, the only way in which the nations can be protected in their rights, and until they are brought to realize that human life should always be held sacred, we cannot hope to see the present war system done away with. Each nation is seeking its own interests, first, last, and all the time, rather than the good of all. This is a question that the individual nation can never settle. Efficient and resolute co-operation of all the nations is what we need.

In future conferences at The Hague for the discussion of these vital questions affecting international relations, I sincerely hope that the Governments, backed by strong public opinion, will appoint only men of large scope and vision, who are capable of dissociating the selfish interests of their own nation from their considerations and are looking only to the benefit of the entire human race. I would take all such questions entirely out of the hands of military men. I do not desire to say anything deprecatory to those men in their place, for as a class they are as humane and noble as any others; but they are unconsciously influenced by their vocation, and have no proper place in Hague conferences. In some nations it has been estimated that one-fifth or one-sixth of the entire population are peculiarly interested in the continuance of the war system. In these conventions there should be no representative from any nation who is interested in such a system. The representatives should be those who have at heart the safety of the nations as a whole, and the creation of such a protective force as will insure the safety of each nation against the encroachment of any other. It would need but a very small proportion of the present armies and navies of the world to guarantee that protection. All of the instrumentalities necessary to carry on the world's work in peace and order would come naturally and easily after the rights of each nation have been secured in this way.

If these and similar lessons can be taken to heart in such a way as will bring about decisive action for the good of all, the heroes who were swept to their death on board the Titanic will not have given their lives in vain.

Extracting Perfumes at Home.

It is not difficult to extract the scents from flowers if one knows how. The result, we are told by S. Leonard Baslin, in The Scientific American Supplement (New York, May 25), will rarely resemble the product to be obtained at the perfumery shops, because few scents sold in the stores are simple essences; nearly all are the result of skilful blending, an art which requires ingenuity. Still Mr. Baslin lays down rules for the amateur which will make it quite easy to extract the scents of common garden blossoms, and to preserve them in permanent form. Generally speaking, he says, scent may be gathered from any strongly-scented blossoms, though better results seem to be obtained in some cases than in others. Roses, violets, lilies, tuberose, and lavender, are good to begin with. It is important to cull the blooms at the right time. Says Mr. Baslin:

"In nearly all cases there is a short period when the fragrance is in a more intense form than at any other time, and it is then that the gathering of the flowers must take place. It is generally thought that the blooms will smell most strongly immediately after they have opened, but this is not the case. It is far better to wait until the organs of the flowers have become fully matured, and it is then that the scent will be at its best. Certainly a point should be made of securing the petals in the forenoon, before the heat of the day has in any way faded them. It is very necessary that the flowers should be quite free from any traces of rain or dew. It is a rather delicate matter drying the flowers, as unless the process is done quickly the petals will wither and the natural fragrance depart. For the purpose of drying it is a good plan to prepare a framework with wire netting stretched across. . . . Into this the blossoms may be placed in a single layer, and the whole thing moved up and down with a swinging motion so that the air rushes freely

around the blooms. In a short while it will be found that all traces of moisture, which is almost certain to have been present if the flowers have been gathered early in the morning, will have gone.

"It will be now necessary to obtain some very pure Lucca oil. A great deal depends upon making quite sure that the material is genuine olive oil; much of the cheaper stuff on the market to-day is refined animal oil, and not at all suitable for our purpose. The highest grade vegetable oil is in itself practically scentless, and will, moreover, be found to take up the delicate essences of the flowers quite readily. The next step is to secure some pieces of wadding such as may be purchased at any drapers' stores in lengths. Last of all we shall need some wide-necked jars; those made of glass are the best, although this is not an essential point. Now with a sharp pair of scissors cut the wadding into circular portions such as will easily fit into the jar. A good number of these should be prepared beforehand. Next pour a quantity of oil into a dish, and in this immerse the pieces of wadding. As it is desirable that the wadding should be well soaked, it is a good plan to leave them for a while. . . . Be quite sure that the jars are quite clean, and then sprinkle a thin layer of salt on the bottom of the first jar to be filled. Now cover the salt with a layer of petals, and over this place a section of the oil-soaked cotton wool, then sprinkle a little more salt, next arrange another layer of petals to be followed by more wadding. This routine is to be repeated until the jar is full, and in order to get a number of sections of wadding into place, it will be necessary slightly to press the contents of the jar. We must now make quite sure that the contents of the jar are protected from the action of the air. A large cork answers the purpose well, but in any case parchment or grease-proof paper fixed over the opening is quite sufficient."

The jars should be sealed without delay, and left in a warm, sunny place, ten days or a fortnight. At the end of this time they are unsealed and the oil drained away, pressing the wadding with a spoon to drive the oil into the body of the jar. It will be found that the exprest oil is highly perfumed. Then:

"As soon as possible the essence should be stored away in tightly-stoppered bottles. If desired, the perfume may be made more convenient for certain purposes by dilution (with alcohol). . . ."

"As has been indicated, a large part of the art of scent-making consists in judicious blending. Certain of the strongly-aromatic herbs will, if properly used, add much to the value of some scents. The most difficult point is to keep the various values in the right proportion so as to avoid an undue predominance of any one. A very pleasing fragrance may be made by combining rose leaves and lavender. . . . In the same way a small quantity of rosemary or bay leaves improves the fragrance of violet perfume. . . . It is very necessary in adding the leaves of any plant to see that they are perfectly macerated. Each leaf should be cut off separately. . . ."

"Certain substances to be obtained at the chemist's store will also help us to improve the perfume of natural essences which may not be very powerful for some reason or another. Cloves added to the jar of petals will assist in giving a remarkable piquancy to the resulting scent obtained by some of the methods indicated above. It goes without saying that some of the substance usually known as 'orris root' will give an enhanced value to violet perfume without in any way indicating that the scent is other than perfectly natural. It will be found that all perfumes improve by storing, and many rather feeble scents become strangely intensified after keeping for a week or so. All scent-makers are at times mystified by the fact that certain perfumes will lose all their fragrance for a short while. It is quite likely that some of the homemade scent may, after an interval, part with the best of its fragrance; fortunately, however, this is only a temporary matter, and quite often the odor comes back in an intensified form. At present it is quite impossible to explain this phenomenon, which, to say the least of it, is distinctly a curious one, especially to the amateur dealing in perfumes."

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Interesting Facts About Our Own Country.

The United States has an area of 3,616,000 square miles, while Canada has 3,745,000 square miles.

In 1867 there were 2,284,702 bushels of wheat exported from Canada. In 1910-11 48,802,115 bushels were exported.

The natural resources of Canada are her minerals, her arable lands, her fisheries and her forests. These have only been developed to a very slight extent.

When Confederation took place there were 2,278 miles of railway in Canada. To-day there are 25,400. The 3,638 post offices in 1867 have grown to 13,324 in 1912.

Canada contains one-third of the area of the British Empire, extending from east to west a distance of 3,500 miles, and from north to south a distance of 1,400 miles.

Lord Strathcona said that before the end of the present century the population of Canada would be eighty millions. There is no reason why the prophecy should not be fulfilled.

Saskatchewan has an area of 250,650 square miles and a population of nearly half a million. Its Premier says: "Our reputation as the potential bread-basket of the Empire is well established."

British Columbia is Canada's largest Province. It has 395,000 square miles, or ten per cent. of Canada's total area, and is larger than the British Isles, Denmark, Switzerland and Italy combined.

The Premier of Alberta says: "To indicate the outlook of a Province which within the past decade has increased five-fold in population and proportionately more in wealth is difficult without seeming to exaggerate."

"Five Thousand Facts About Canada," by Frank Yeigh, is a little booklet containing an immense amount of interesting and valuable information concerning our own country. It is well worth the quarter of a dollar it costs.

Practically Canada contains all the known valuable minerals of any importance. The coal area alone is estimated at 97,200 square miles. In gold and silver we have untold wealth, and in nickel it is admitted that we have no competitors.

Rev. F. A. Wightman, in his book on Canada, says: "The fact is, there are few countries in the world, when all things are considered, that have so favorable a climate as Canada. Our country has suffered much from misrepresentation in this respect."

Mr. Luther D. Wisard explains why so many settlers are coming to Canada from the United States, when he says: "Some American farms cost \$60 an acre and yield \$6 an acre, or 10 per cent. Many Canadian farms cost \$12 per acre and yield \$6 per acre, or 50 per cent. The greatest industry of Canada is agriculture. It employs more people than all other industries combined, and the value of its products is greater than the aggregate of all others. If many of the country young men get the idea that they must 'leave the farm' to make their fortune, great disaster must follow.—Onward.

Hadst Thou Stayed.

By Mabel D. Holmes, in "Forward."

Thump! came a knock at the door. Janet Harvey impatiently raised her head from her poring over the fat volume on her desk.

"Come in." Her voice was preoccupied, and two lines of a frown lingered between her eyebrows as she half turned to the newcomer.

"O Jen, have you any chocolate? And your teaspoons, dear—may I borrow them? I'm having chocolate and cake for Lou's mother, and I have only half enough chocolate, and only five spoons altogether. Come along in, and stop your everlasting cramming, won't you?"

All this came in one breath from the rosy, hurried individual in the doorway.

"No, thank you, not to-day, but you're welcome to the chocolate and the spoons, and anything else, only please don't call me 'Jen.' Help yourself—you know where things are," and by the time the door closed Janet was once more chasing an elusive idea through the pages of an exhaustive commentary on the Epistle to the Romans. Dolly was always borrowing; there was no need to be consciously polite to her; and tomorrow was Sunday, with an Association Bible Class to be taught the intricacies of Pauline theology.

It was somewhat a matter of pride with Janet that her Bible class enrolled the largest numbers of all those being held that year. The classes were taught by juniors and seniors, and were the strong point in the work of the Christian Association of Crothers College. Janet was pretty, popular and much in demand with the lower-class girls, who now, in her senior year, had flocked to her standard, more, perhaps, for the sake of an hour's sojourn each Sunday in her pleasant study, than from an eager desire for truth. But Janet was a born teacher, and Sunday by Sunday she lucidly explained to a rapt and attentive audience the doctrines of adoption, justification, predestination and the like.

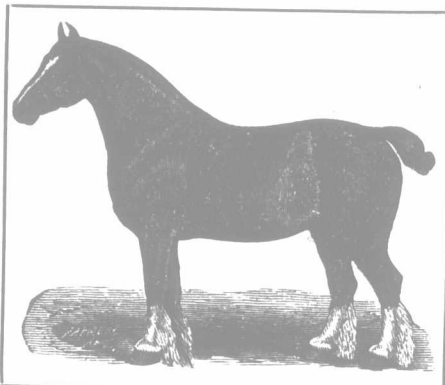
But to-day it seemed for some reason useless and meaningless; the theological discussions of the commentators were dry reading, and her brain refused to work clearly.

Rap! The knock on the door was more gentle than Dolly's. A troubled face looked in.

"Janey, honey, may I interrupt you?" The voice was sweet and southern. "I just can't get this bank statement for Polecon to come out straight. Would you help me a minute?"

Janet's economic prowess was famous among her classmates. The desired explanation, given fully and patiently, consumed half an hour, and when the little Kentuckian departed happily with her papers, she left her benefactor more irritated than before. Yet it was a calm exterior that greeted the homesick freshman who strayed in a few minutes later in search of comfort and cheer. She found it; Janet's rule was to present a serene and leisurely front to all comers, no matter how she felt beneath the surface. And no "Engaged" sign ever rebuffed the friends who sought her. But when the freshman had wept out all her "blues" into a sympathetic ear, and had disappeared smiling, Janet, in despair, gave up her attempt to study Romans, and curled up in a hopeless heap among her pillows, a victim of discouragement, depression and miserable lack of inspiration. She had tried so hard to make the Bible class a success; she had longed so to be a help and inspiration to the girls about her; but it seemed after all that chocolate, bank statements and homesick freshmen must

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mark the limit to her powers. She did not see how large that service might become.

She did not raise her head at all when the next knock came; it made no difference to her who the visitor might be.

"Well, I declare—Janet Harvey doing nothing, and—yes, I do believe she's crying!"

The cheery voice was full of strength and magnetism. Janet sat up as by an electric shock.

"Annette Lowrie!" It was all she said, but the tall, fair girl who had closed the door behind her knew what her welcome was.

"Now what's the matter with you?" Annette sank cosily into the cushioned Morris chair. She was a graduate of three years' standing, whose names stood in the college annals as that of a bright particular star.

"Nothing—everything—I don't know myself—but I haven't any ambition left to do anything for my country."

"You're tired out."

"No—my schedule is light enough, but it's just that I can't make things go—or, to say what's really the matter, I'm trying to teach a Bible class, and the dear young freshman come because they like me, but as for doing them any good—I might as well read them Mother Goose rhymes for an hour each Sunday."

"But I thought you were so interested in that class—and I've heard what a fine teacher you are."

"Well—I do know the subject—just as I know the history and literature that I tutor at seventy-five cents an hour. I could probably get any one of my class through an examination on The Acts and Epistles. But I don't seem to feel any of what I'm telling them—and, of course, they don't either." Janet's voice broke pitifully. "Then to-day has capped the climax"—and she went on to narrate the story of her broken afternoon.

"But bless your heart, child, don't you think those things count—patience and calmness and helpfulness? Three girls you've helped to-day—in practical ways, to be sure, but no less real. They needed you to-day—the others don't need you till to-morrow. And about to-morrow—aren't you thinking a good deal about making a good impression, saying something clever and original? I used to, I know, and it's fatal. You let yourself get in that way of what you're trying to make them see, you know."

"But I have to say something new or they wouldn't come," objected Janet.

Annette Lowrie's face was shining. With all her beauty and charm, with all her popularity and prominence as a leader in student affairs, the quality for which she was best loved and oftenest remembered was her lovely Christianity.

"No—nothing new," she answered now. "There is nothing new. You get on your knees, as soon as I go away, and ask for a new sight of the face of Christ. Then to-morrow, forget all the doctrines and theology you've studied over"—with a glance at the stout commentary—"and you try to make your freshmen see what you've seen—make them fall in love with Him, because you make Him seem so lovely. I know it's old," she added softly, "but it's true—and it's very beautiful."

Janet made no answer. She did not remonstrate when, after a few minutes of silence, her friend rose, with a final loving pat on her shoulder. "I'll see you to-morrow," she said cheerily. "Be good, now, and don't worry."

It was an hour before another sound came to disturb the peace of the room—Annette Lowrie seemed to leave peace behind her when she went. Janet had not moved. With arms thrown up and head resting back on her clasped hands against the pillows, she gazed out across the wintry stretches of campus, beyond the feathery interlacings of the leafless trees, into the cold gray-blue of a January sky—and beyond it. She was seeing the vision, as Annette had called it back to mind—Annette, who had first made her see it. It seemed to come nearer, nearer, as she gazed—to come into her very room—that face of beauty and of sadness. And then—

Clang—it was the gong for half-past five, with warning to dress for dinner. With a start Janet awoke to mundane

things, and chief among them her promise to Rosalie to take dinner with her. Rosalie Blake was the most devoted of the freshmen, and she had set her heart on having her popular senior friend at her table, in the eyes of all the freshmen in the great dining room. Janet sighed at the thought. It would be so blessed to stay here and prolong the hour of inspiration. Would Rosalie, after all, mind so keenly? Would her disappointment be greater than Janet's loss? The vision still lingered, but beside it were Rosalie's grieved brown eyes. A senior guest meant much to a freshman.

Slowly the dinner dress went on; slowly its wearer mounted the stairs to the freshman corridor above, and descended in the elevator, with an enthusiastic, chattering mob, to the dining-room floor. With difficulty she aroused herself to the animation that came usually without effort. The elevator was dark, and Janet was pushed far back to a shadowy corner. Among the pushing girls near the door she heard her name.

"Where was I?" It was the voice of her homesick freshman of that afternoon. "Down in Miss Harvey's room. Yes, indeed, she's lovely. I was the most miserable girl in Maine, I guess, and she pulled me out of it. Talk about Bible classes—she taught me more to-day than I ever heard her say on Sunday."

The speaker was borne away in the crowd. Janet, smiling, followed Rosalie down the long room.

Dinner was over by and by. The half hour before chapel the girls were accustomed to spend sociably in Room X. Standing just inside the door, to watch the chattering crowd, she heard a fragment of conversation between two girls just outside.

"What did your father finally decide, Nancy?"

"Oh, that I have to pass every single thing at midyears, or come home right away."

"Too bad; can you ever do it?"

"I couldn't myself—not possibly. But you know what a help Janet is. I hate to bother her, too; this afternoon she was so busy, and spent a long time straightening me out. But oh, I just can't go home and leave you all. I think 'twould kill me."

Janet was carried away herself, just then, among the crowd. In her heart was a determination to see her southern classmate through her midyears or die in the attempt.

The claims of half-a-dozen friends delayed her, after chapel. At last, walking thoughtfully down the senior corridor, she was met by a trembling girl with a white, frightened face. One shaking hand held out a telegram.

"Why, Dolly, dear, what is it?"

"Read it—it's mother—oh, dear, I don't know what to do first, and you're always good to me—I've been waiting for you to come—I knew you'd help."

The remainder of the evening was a strenuous one—looking up trains in the railroad guide, arranging for a carriage to come in the early morning, packing such things as Dolly needed, and finally managing to coax the poor child into bed, where for hours she lay wide awake, till Janet's strong, steady touch upon her forehead soothed her to sleep. It was long after midnight when she returned, utterly weary, to her room. Her vision of the afternoon seemed to belong to the far, far past.

The room was in dimness, the light turned low. Just for a moment she flung herself down, to think. But she was quite sure that the face would not be there. Nor was it. In its stead, against the black of the outside world beyond her window, were three faces—those of the three girls she had helped that day, whose own words had told her how much her help had counted.

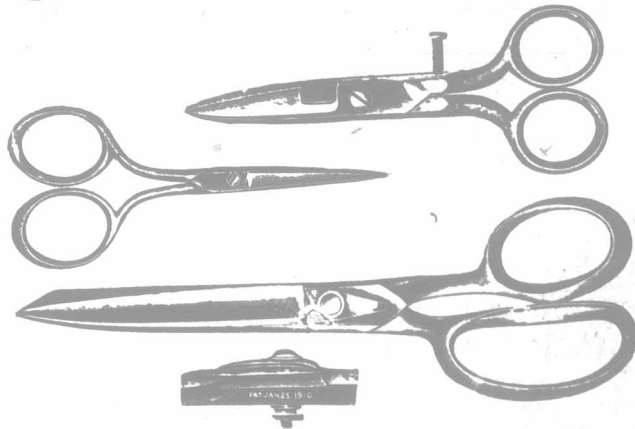
"After all, it was for Him," she pondered. "I can see His likeness in their faces there, though I never could before. He has shown me himself again, only in different form."

Janet told her story to Annette next day, with some fear lest she be laughed at as a sentimentalist and a mystic. But Annette only smiled.

"I know," she said. "Do you remember Longfellow's poem about the monk? and how it ends?"

"Hadst thou stayed, I must have fled. That is what the vision said."

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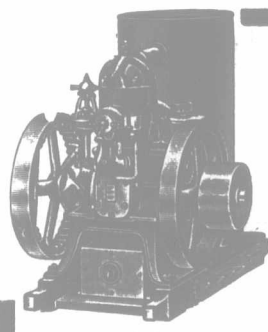


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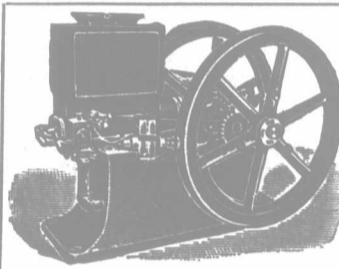
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Sir Thomas Lipton, at a dinner in Chicago, praised Canada's bigness.

"I once heard," he said, "a Saskatchewan farmer talk about the big farms they have up there.

"We have some sizable farms," he said, thoughtfully. "Yes, sir; pretty sizable." "I've seen a man on one of our big farms start out in the spring and plow a straight furrow till fall. Then he turned around and harvested back."

"Wonderful," said I.

"On our Saskatchewan farms," he went on, "it's the usual thing to send young married couples out to milk the cows. Their children bring home the milk."

"Wonderful," I repeated.

"Once," he said, "I saw a Saskatchewan farmer's family prostrated with grief. The women were weeping, the dogs were barking, the children were squalling, and the tears streamed down the man's face as he got into his twenty-mule team and drove off."

"Where was he going?" said I.

"He was going half-way across the farm to feed the pigs," said the Saskatchewan farmer.

"Did he ever get back?" I asked.

"It ain't time for him yet," was the reply."



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Miscellaneous.

ABSORBENT BLISTER FOR THOROUGHPIN.

Some few years ago I saw a prescription in your paper for thoroughpin. I got it filled, and made \$75 on sale of my horse, but have forgotten quantities of drugs. Will you kindly send in next issue? The drugs were: Binioidide of mercury, and, I think, potassium iodide, and water. I would be much pleased to have it again. E. M. W.

Ans.—Probably this is the prescription you saw: Three drams each of binioidide of mercury and potassium iodide, and six ounces of water. Clip off the hair and apply. After four or five applications, cease for a week or ten days till the soreness passes away, and repeat. This is an absorbent blister, and will not make the part very sore. If necessary, repeat the treatment four or five times.

BOOK REVIEW.

FERTILIZERS AND CROPS.

A new book, "Fertilizers and Crops," comprising 710 pages, written by Dr. Lucas L. Van Slyke, Chemist, of the New York Agricultural Experiment Station, has just been published by the Orange Judd Co., of New York. This new book is a timely presentation of facts, not only giving practical methods for using fertilizers in crop growing, but placing special emphasis on the reasons underlying their use, and on the conditions of greatest efficiency. It has been prepared for the use of students in agricultural schools, and especially for the larger class of students directly and vitally interested in the growing of crops. At no time in the history of North America has the growing of crops attracted more attention than at the present, and at no time has there been such eager inquiry for reliable information among progressive farmers. The author has kept in mind the fact that a work treating of fertilizers and their practical use on the farm must be something more than a mere collection of recipes giving the number of pounds of different fertilizing materials to use for any crop. The book is divided into four sections. The first part, of twelve chapters, covers the factors of soil fertility, discussing essential plant foods, how they are obtained by plants, losses involved, relation of water to soils and crops, and methods of soil management. The second part covers the sources and composition of materials used as fertilizers. All kinds of fertilizers are thoroughly discussed. The third division deals with the selection of materials for different crops, and the fourth the practical use of fertilizers on individual crops, including orchard crops, greenhouse crops, nursery crops, as well as all the common crops of the farm. The book contains an immense amount of information on a subject none too thoroughly understood by students or farmers. It may be had through this office at \$2.50, postpaid.

A NEW BOOK ON FRUIT-GROWING. "Beginners' Guide to Fruit-growing" is a new book, by F. A. Waugh, written especially for beginners, as the title implies, and dealing with the simplest questions, which are the ones most often asked. The propagation, planting, management, pruning, spraying, and renovation of the various fruit trees, bushes and vines, are dealt with in separate chapters of the book, which comprises 20 pages of well-illustrated, easily-understood, excellent matter, from a practical viewpoint. It is a work seeking to encourage general good management in place of general neglect. All the various lines of approved orchard work must be applied at once. Attempts at renovating old orchards often fail, but the reason is that the person in charge has a notion that the whole thing can be accomplished by grafting or spraying, or by some other one or two partial reforms. In most cases it is not worth while to undertake any one of these unless the whole scheme is to be put through vigorously and systematically to the end. So it is with all phases of fruit-growing. They must be pushed at all parts of the business. This little book, well bound, concise, simple and complete, tells how. It is published by The Orange Judd Company, and may be had through this office at 75 cents, postpaid.

Doris was radiant over a recent addition to the family, and rushed out of the house to tell the news to a passing neighbor.

"Oh, you don't know what we've got upstairs!"

"What is it?"

"It's a new baby brother!"—and she settled back upon her heels and folded her hands to watch the effect.

"You don't say so! Is he going to stay?"

"I guess so"—very thoughtfully. "He's got his things off."

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It has taken years of field testing to make these presses the best that you can buy. They are that now. The horse power presses have greater capacity than any other horse press of equal size. They are lighter draft and easier on the horses. The step-over is the lowest and narrowest made. They have an adjustable bale tension, which insures compact bales. They are equipped with a roller tucker to turn in all straggling ends, thus making each bale neat in appearance.

I H C motor presses consist of a bale chamber and an I H C engine mounted on substantial trucks. The bale chamber of the motor press corresponds in size to the

bale chamber of the horse press—14x18 inches, 16x18 inches, and 17x22 inches. No time is lost in setting up the machine. It can be moved easily from place to place, backed to the stack or barn, and started to work at once. The engine does not need a man to watch it and there is no danger from sparks. When not baling hay, the engine can be detached. Two extra wheels, an axle, and a belt pulley are furnished, so that with a little adjusting, you have a regular portable I H C engine ready for business 365 days each year. You can operate a small thresher or corn shredder, saw wood, shell corn, grind feed, pump water, generate electricity, or run a cream separator. You thus purchase two useful machines in one. There is profit in the hay press and unlimited work in the engine.

Hay time is drawing near. Be prepared for it. Drop in and see an I H C local agent in your town, or write the nearest branch house for a catalogue.

CANADIAN BRANCH HOUSES:

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At Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton

I H C Service Bureau

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizers, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U S A



WHY WARM AIR HEATING IS BEST

PEASE
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FURNACE

"DEAD AIR IS BAD AIR."
There are comparatively few houses built with any provision for regular ventilation beyond that afforded by doors and windows, and these cannot be left open ALL the time during the winter. Yet the impure air in the different rooms must be constantly carried away. PEASE WARM AIR FURNACE properly installed, changes the air constantly. The warm, fresh air is forced up through every open register and the stale, cool air being drawn out by suction and natural gravitation through the cold air pipes.

Our books, "The Question of Heating," or "Boiler Information" sent free on request.
"ASK THE MAN WHO HAS ONE."
PEASE FOUNDRY COMPANY, LIMITED
TORONTO, ONT.

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PAYS FOR ITSELF BY THE COAL IT SAVES

ONLY EXCLUSIVE FURNACE MAKERS IN CANADA

A CANADIAN SCHOOL FOR BOYS

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St. Catharines, Ontario

Three separate residences; new, specially built and equipped. 1. Lower School for Boys under fourteen. 2. Dean's House, for Boys of fourteen and fifteen. 3. Upper School, for advanced Pupils. Gymnasium and Swimming Baths just erected. Fine Hockey Rink. Athletic Fields and Playgrounds unsurpassed. Eighty acres. Mild climate. University Scholarship won in 1909 and 1910. Boys prepared for Agricultural College.

REV. J. O. MILLER, M.A., D.C.L., PRINCIPAL

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CLYDESDALES AND HACKNEYS

Our winnings at all shows are your guarantee that whatever you buy from us will be the best in the land. You cannot afford to buy without first seeing our importations.
Address all correspondence to Bedford Park P.O., Ont. Telegrams to Toronto. Telephone North 4483, Toronto.

Clydesdales, Imp., Just Arrived Our new importation has arrived safely, and we are now in a position to supply the trade with stallions from 1 year old up to 4, with more draft character, big, strong, flat bone, and better breeding than any other firm in the trade. Prices and terms as favorable as any other importer in Canada.
BARBER BROS., GATINEAU PT., QUEBEC, NEAR HULL.

A Few Choice Clyde Fillies—I am offering several choice and particularly well-bred Clydesdale fillies from foals of 1911 up to 3 years of age, imp. sires and dams. Also one stallion colt of 1911, imp. sire and dam. These are the kind that make the money.
HARRY SMITH; Hay P.O., Ont. Exeter Sta. L-D. Phone,

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Butter Eggs Poultry Honey Beans Apples Potatoes, etc.
Our constantly growing trade demands large supplies of choice farm produce. We need yours. Write for weekly market letter.
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Let us teach you the automobile business thoroughly. Big demand and big pay for chauffeurs, repairmen, demonstrators, and salesmen. Our system of individual instructions by mail enables you to complete the course in 12 simple lessons at home in your leisure time. Previous experience unnecessary. Send TO DAY—NOW—for FREE BOOK, particulars and endorsements of 10 leading automobile makers. We assist graduates to get positions.
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Bill—And you asked the father for his daughter's hand in marriage?
Jim—Yes, last night.
Bill—What did he say?
Jim—He was very angry.
Bill—And what did you do?
Jim—I treated him as I would a king.
Bill—How so?
Jim—Why, I backed out of his presence.

HORSE OWNERS! USE



GOMBAULT'S CAUSTIC BALSAM.

A safe, speedy and positive cure. The safest, Best BLISTER ever used. Removes all blemishes from Horses. Impossible to produce scar or blemish. Send for circulars. Special advice free.

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(Trade Mark Registered.)

SPAVIN REMEDY

THE HORSE CANNOT CURE ITSELF. MONEY MUST BE SPENT. THE PROBLEM IS, TO—SPEND WISELY. MR. L. DECKER, New Paltz, N. Y., writes: "I wouldn't take \$5 for your book alone."

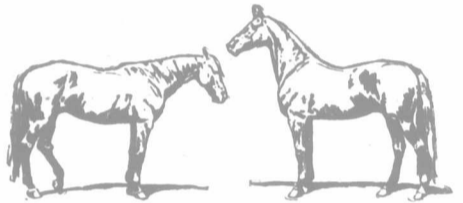
John Diprose, Three Popular Stores, Dundas—Richmond, London, Ont., May 10, 1912

Troy Chemical Co., Toronto, Ont.

I do not want any guarantee; I am satisfied. The horse is now going as sound as ever. It is great medicine. John S. Cummings, 56-58 Dundas St.

Red Deer, Alta., Apr 8th, 1912. The Troy Chemical Co., 148 Van Horn St, Toronto, Ont.

I have used your Save-the-Horse for years and it has always given perfect satisfaction. Please let me know if there is any way to cure.....? Yours faithfully, E. S. Rutter, Box 510.



A retail druggist in a live horse town" within 30 minutes' ride from New York City, writes: "I am selling three times more Save-the-Horse than any other one Veterinary remedy; when they want the GOODS THAT CURES THEY COME BACK FOR SAVE-THE-HORSE."

Write, describing your case, and we will send our —book—sample contract, letters from business men the world over, on every kind of case and advice —all free (to horse owners and managers only.)

Put your horse to work and cure him now. WHETHER ON SPAVIN, PUFF OR TENDON, OR ANY KIND OF LAMENESS results are the same, and every bottle sold with an iron-clad contract to cure or refund money. This contract has \$50,000 paid-up capital back of it to secure and make its promise good. Send for copy.

\$5 PER BOTTLE, with binding contract to cure or refund money. 16 years success and greater to-day than ever. ASK THE DEALER.

Troy Chemical Co., Toronto, Ont., and Brighampton, N. Y.

Druggists everywhere sell Save-the-Horse with a legal contract to cure or refund money.

Don't Cut Out A SHOE BOIL, CAPPED HOOK or BURSITIS FOR ABSORBINE

will remove them and leave no blemishes. Cures any puff or swelling. Does not blister or remove the hair. Horse can be worked. \$2.00 per bottle delivered. Book 6 E free. ABSORBINE, JR., Liniment for man and horse. For Boils, Bruises, Old Sores, Swellings, Gout, Varicose Veins, Varioosities, Allays Pain. Price 75¢ and \$1 a bottle at druggists or delivered. Will tell more if you write. Manufactured only by W. F. YOUNG, P.D.F., 258 Lyman Bldg., Montreal, Ca.

INTERNATIONAL CALL CURE Sold On A spot Cash Guarantee. Cures Horses While They Work or Rest. PRICE 25¢ AT ALL DEALERS. INTERNATIONAL STOCK FOOD CO. LIMITED, TORONTO.

Shires and Shorthorns

In Shire stallions and fillies, from the best studs in England, we are offering some rare animals at rare prices. Scotch Shorthorns of either sex or age of highest breeding and quality. John Gardhouse & Son, Highfield Ont. L.-D. 'phone.

Aberdeen-Angus—A few bulls to sell yet; also females. Come and see them before buying. Drumbo Station.

Walter Hall, Washington, Ont.

Geo. D. Fletcher, of Green Grove Stock Farm, Binkham, Ont., writes: I have sold my imported Shorthorn bull, Spectator, together with all my young bulls of serviceable age, but have a few choice one- and two-year-old heifers to spare, sired by Imp. Benachie —69954—.

GOSSIP.

MAPLE VILLA OXFORD DOWNS AND YORKSHIRES.

Another visit to the famous Maple Villa Farm of J. A. Cerswell, of Bond Head, Ont., and a look over his splendid show flock of Oxford Down sheep and herd of Yorkshire swine, shows the same evidence of his expert care in the matter of selection of breeding animals. Mr. Cerswell is every year making it more evident by his increasing successes at the big shows in competition with all the big breeders, that he is the owner and breeder of one of the best flocks of Oxford Down sheep in Canada, founded, as was the flock, on the best imported stock to be had, regardless of cost, and since headed by the same high-class quality, the flock as it stands, for breed type, size, covering and quality, is all that can be desired. A glance over the flock—headers that have been in use on the flock will have some meaning and interest to intending purchasers, the unbeaten champion, Hampton Hero 4th (imp.); the equally successful champion, Hamtonian 96th (imp.); then came the splendid breeding ram, Sunset (imp.), and after him the Hobbs-bred ram, Hamtonian 222 (imp.). This ram is sire of all the shearings and a few of the lambs. He is a three-shear sheep, weighs 400 lbs., and is covered to the ground, and a sire of showing quality. Mr. Cerswell last fall bought a newly-imported lamb, Oldington Duke, bred by E. Ridley, Salop, Eng. The majority of this year's crop of lambs are sired by him, and having no use for the two rams, Hamtonian 222 is for sale, as are this year's crop of lambs of both sexes, as well as a number of shearing ewes. Parties looking for show material, or flock-header, or flock foundation of the best quality of the breed should see Mr. Cerswell's offering. The farm is easily reached from Bradford, G. T. R., on the east, or Beeton, G. T. R. and C. P. R. on the west, and is also connected with long-distance 'phone from Beeton or Bradford. The large herd of Yorkshires need no further recommending than to say that the breeding stock is practically all of the renowned Summerhill breeding of D. C. Platt & Son, the world's greatest Yorkshire herd. For sale are both sexes, of all ages. A special offering for this fall are a number of young sows bred. Write Mr. Cerswell to Bond Head P. O., Ont.

QUESTIONS AND ANSWERS. Miscellaneous.

BLUE WEED.

I am sending you a weed that has pretty well covered my pasture field.

1. Will sheep eat this weed?
2. What is the best way to get rid of it?
3. Are there no laws about the destroying of weeds along highways? If so, why are they not enforced?

J. S. K.

Ans.—1. The specimen sent is blue weed, sometimes called viper's bugloss, blue thistle, or blue devil. It is an abundant, coarse-growing weed, giving trouble in pasture lands that cannot be brought under cultivation, and in crops, on land not worked under a regular rotation of crops with a thorough cultivation. Sheep are not fond of this weed, and it gives trouble in some sheep pastures by matting the wool. We are not sure whether or not they will eat it at all, but owing to its very rough, hispid, coarse nature, it is very improbable that they would destroy it unless driven to eat it by the scarcity of other feed.

2. Continued close cutting from year to year when the plant is in early bloom, will suppress it in waste places and pastures. Spudding below the crown of the root will kill it. The seeds may lay in the ground from three to five years, so that it is necessary to prevent seeding at least for three years. If possible, plow the field. The weed will soon succumb to cultivation.

3. There are laws covering this matter, but they are not always enforced as they should be.



What Is Soil Fertility? How Does It Interest You?

WHAT is soil fertility? Why is its lack considered so serious a matter? Why is it that authorities on better farming agree in considering it one of the most important questions requiring solution by farmers today? The answer is found in the small average yield of farms in this country as compared with those of other countries where correct fertilizing is practiced, and in the rapidly decreasing quantity of available new land. There are two things that every farmer can do, both of which will make his farm more productive. One is to practice a proper rotation of crops; the other to buy and use an

IHC Manure Spreader Corn King or Cloverleaf

Every farm can be benefited by the use of an IHC manure spreader. It will distribute the manure in an even coat, light or heavy, as may be required. Manure spread in this manner does the most good to the soil at about half the expense and much less than half the work of hand spreading. An IHC manure spreader is a scientific machine, built to accomplish a definite purpose in the most economical manner. It is constructed according to a well-thought-out plan, which insures the best work in the field with the least strain on machine or horses. To take one example of the thoroughness in detail, all IHC spreaders are so constructed that a reach is unnecessary. This construction allows the spreader to be managed handily in small feed lots, backed up to barn doors opening into narrow yards, or turned completely in its own length. Yet the absence of a reach in no way interferes with the strength or field efficiency of the machines.

See the IHC local agent or write the nearest branch house for catalogues and information.

CANADIAN BRANCH HOUSES:

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IHC Service Bureau

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to IHC Service Bureau, Harvester Building, Chicago, U.S.A.



Union Stock Yards of Toronto, Ltd.

HORSE DEPARTMENT

Auction Sale Every Wednesday Private Sales Every Day
Railroad Loading Facilities at Barn Doors

W. W. SUTHERLAND, J. H. ASHCRAFT, JR.,
In Office. Manager.



Shire Stallions and Mares, Shorthorn Cattle (both sexes); also Hampshire Swine. Prices reasonable.

Porter Bros., Appleby, Ont., Burlington Sta. 'Phone.

BLAIRGOWRIE IS OFFERING AT PRESENT:

CLYDESDALE MARES, imported and Canadian-bred, from one year up to 5 years; also a pair of Canadian-bred stallions, rising three years. Young cows with calves by side, and heifers well on or in calf. Children's ponies, well broken and quiet, from 11½ to 14 hands. Myrtle, C. P. R. Sta. L.-D. 'Phone. JOHN MILLER, JR., Ashburn, P.O.

CLYDES, SHIRES, PERCHERONS
Now offering 8 imp. Clydesdale fillies, rising 3 years; 1 imp. Clydesdale stallion 12 years, a good one, and several stallions 2 and 3 years; one Shire stallion, sure foal-getter; two black Percheron stallions, 6 and 8 years, and one Thoroughbred stallion. All will be sold at bargain prices. T. D. ELLIOTT, Bolton, Ont. Long-distance 'Phone.

IMP. CLYDESDALE STALLIONS AND FILLIES
In my late importation of Clydesdale stallions and fillies I have exceptionally choice breeding ideas draft characters; as much quality as can be got with size, and I can under sell any man in the business. Let me know your wants. GEO. G. STEWART, Newick, Que. L.-D. 'Phone.

ORMSBY GRANGE STOCK FARM, Ormstown, P. Que.

My fall importation, which will be the largest yet made by me, will be personally selected, will arrive last week in September. Good colors, heavy bone, best of pedigrees and reasonable prices. Wait for them if you want good ones. D. McEachran.

We still have on hand a few good Clydesdale Stallions with both size and quality, all prize-winners and breeding of the best blood in Scotland. Prices and terms the best in Canada. John A. Boag & Son, Bay View Farm, Queensville, Ont. On the Toronto & Sutton Radial Railway Line. Long-distance 'Phone.

MT. VICTORIA STOCK FARM, Hudson Heights, P. Q.

We have some very choice young stock for sale, both sexes. Clydesdales and Hackneys from champion sires and well bred dams, at reasonable prices. T. B. MACAULAY, Prop. E. WATSON, Mgr.

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Homeseekers' Excursions

July 23 August 6 and 20
September 3 and 17
Via Sarnia or Chicago.

WINNIPEG AND RETURN, - \$34.00
EDMONTON AND RETURN, - \$42.00

Tickets good for 60 days.
NO CHANGE OF CARS

Special train will leave Toronto 10.30 p.m. on above dates, via Chicago and St. Paul, carrying through coaches and Pullman Tourist Sleeping Cars.

The Grand Trunk Pacific Railway is the shortest and quickest route between Winnipeg-Saskatoon-Edmonton.

New Fast Express Service between Winnipeg, Yorkton, Canora and Regina. Smooth roadbed, Electric lighted Sleeping Cars, Superb Dining Car Service.

Lv. Winnipeg,	8.45 am	6.00 pm
Ar. Yorkton,	7.0 pm	9.30 am
Ar. Canora,	8.30 pm	11.45 am
Ar. Regina,	9.00 pm	7.00 am
Ar. Saskatoon,		8.18 am
Ar. Edmonton,		9.00 pm

UPPER LAKE SAILINGS

Sailings from Sarnia for Sault Ste. Marie and Port Arthur 3.30 p.m. Mondays, Wednesdays and Saturdays.

Ask any Grand Trunk Agent for full information, or write

A. E. DUFF, D. P. A.,
Union Station, Toronto, Ont.



SYNOPSIS OF CANADIAN NORTHWEST LAND REGULATIONS.

ANY PERSON who is the sole head of a family, or any male over 18 years old, may homestead a quarter section of available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Lands Agency or Sub-agency of the district. Entry by proxy may be made at any agency, on certain conditions, by father, mother, son, daughter, brother or sister of intending homesteader.

Duties—Six months' residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres solely owned and occupied by him or by his father, mother, son, daughter, brother or sister.

In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead. Price, \$3.00 per acre.

Duties—Must reside upon the homestead or pre-emption six months in each of six years from date of homestead entry (including the time required to earn homestead patent) and cultivate fifty acres extra.

A homesteader who has exhausted his homestead right and cannot obtain a pre-emption may enter for a purchased homestead in certain districts. Price, \$3.00 per acre. Duties.—Must reside six months in each of three years, cultivate fifty acres and erect a house worth \$300.00.

W. W. CORY,
Deputy of the Minister of the Interior.

N.B.—Unauthorized publication of this advertisement will not be paid for.

Messrs. Hickman & Scruby

COURT LODGE, EGERTON, KENT, ENG.
EXPORTERS OF

Live Stock of all Descriptions

Draft horses of all breeds a specialty. Intending buyers should write us for particulars, as we can place before them the most attractive proposition they have yet experienced. We can send highest references from satisfied buyers of nearly all breeds.

NOTICE TO HORSE IMPORTERS

GERALD POWELL

Commission Agent and Interpreter
Nogent Le Rotrou France

will meet importers at any port in France or Belgium, and assist them to buy Percherons, Belgians, French Coach horses. All information about shipping, banking, and pedigrees. Many years experience; best references. Correspondence solicited.

OAKLAND SHORTHORNS I

Present offering is five choice young bulls, from 7 to 22 months old, reds and roans, out of good dual-purpose dams, and sired by our champion Scotch Grey bull 72692. Visitors find things as represented. Good cattle and no big prices.

JOHN ELDER & SON, HENSALL, ONTARIO

Fletcher's Shorthorns

Head headed by (Imp.)—Royal Bruce = 55038 = (89909) a choice lot of Heifers for sale, bred or calves at foot.

Geo. D. Fletcher Binkham P. O. Ont.
Eria Sta., C. P. R.

GOSSIP.

WHERE BUSINESS ABILITY COUNTS IN BREEDING.

That business acumen, coupled with a generous spirit in the purchase of breeding animals, and in the care and feeding after purchase, is the key note of success in live-stock breeding, is exemplified in the great Millgrove herds of Holstein cattle and Yorkshire swine, the property of D. C. Flatt & Son. Nothing can be said to add to the reputation of this great herd of Yorkshires, acknowledged by those competent to speak with authority, to be the best herd in existence in any country, as well as the most extensive, suffice it to say that never before was the herd up to a higher standard of excellence, and this year at the leading exhibitions, and particularly at Toronto, the exhibit will be bigger and better than ever, and the firm prepared to fill all orders with which they may be favored.

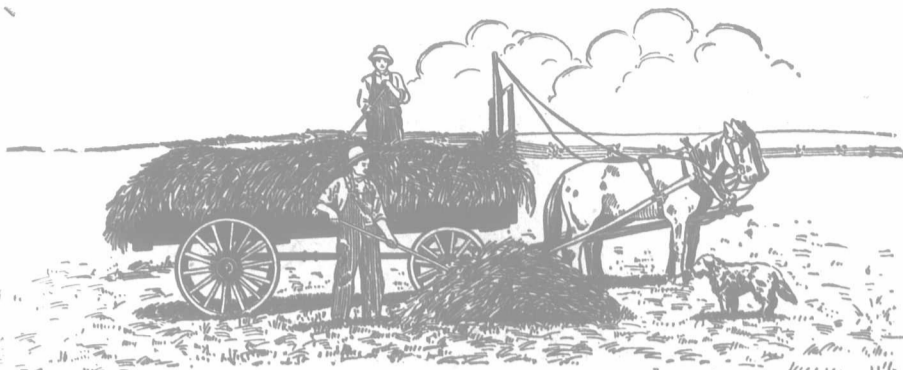
In the herd of upwards of a hundred head of Holsteins are many that have won renown, both in the show-ring and in the official tests. Practically all of those in milk are in the official records, with seven-day butter records varying from 18 lbs. for two-year-olds, 23.76 lbs. for three-year-olds, up to 33 lbs. for mature cows, and every record was made on the farm, including that of the first cow in Canada to make a 29-lb. record, the world's yearly butter record for a two-year-old, the Canadian four-year-old seven- and thirty-day butter record, the Canadian seven-day butter record for a mature cow, and the Canadian thirty-day butter record for a two-year-old. This is certainly a remarkable showing for a herd of but a few years' standing, and one unequalled by any other herd in Canada. In one field were nineteen yearling heifers, daughters and granddaughters of such great bulls as Sir Admiral Ormsby, now at the head of the herd, whose only five tested daughters made seven-day records averaging 26½ lbs., one of them going up to 33 lbs.; the great King Segis; the equally great Pontiac Korndyke, and the renowned Paul Beets De Kol. These heifers are daughters of dams with seven-day butter records from 25 to 33 lbs., and one-day milk records from 80 lbs. for two-year-olds, up to 119 lbs. for mature cows, many of them selected from leading herds in the United States. Second in service is Royalton Hartog 7th, whose dam has a seven-day butter record of 34.60 lbs., and a one-day milk record of 111 lbs. She, with four of her sisters, have one-day milk records that average 108 lbs. In young bulls, for sale, is a calf, out of Royalton Violet, whose one-day milk record is 119 lbs., and one-year milk record 25,560 lbs., with twice a day milking, a feat never before equalled by any other cow, and with it he is sired by a son of the great Pontiac Korndyke. Another, four months old, is out of Francy Bonerges Ormsby, whose seven-day butter record is 29½ lbs., and one-day milk record 96 lbs. He is sired by a son of Daisy Pietertje Johanna, seven-day record 27.16 lbs., butter-fat test 5.11 per cent., and others equally as well bred. For a choice, richly-bred herd—header, or an official-record herd foundation, see their advertisement and consult the Messrs. Flatt.

QUESTIONS AND ANSWERS.
Veterinary.

ERUPTIVE DISEASE.

Last year sow had abscesses on her mammae. Her pigs did not do well all winter, and two of them died from abscesses on their legs. Now one has them on its side, and the sow has taken them on her face. Does this render the pork unfit for use?
G. N.

Ans.—This eruptive disease is a form of blood poisoning, the virus of which appears to be transmissible to the young, either by direct contact, or by the dam's milk. The cases might be successfully treated by freely lancing each abscess and flushing out the cavities three times daily with a five-per-cent. solution of carbolic acid, and giving the pigs 4 to 10 drops of carbolic acid (according to size), well diluted with water, twice daily. The flesh of an affected pig would not be fit for food. If the sow furrows again while in this condition, it is probable the same results will follow.



Buy I H C Wagons for True Economy

YOU cannot farm without a wagon any more than you can keep a house without a stove. It is something you need every day. You work it harder than anything else on the farm, and when the old one wears out you have to get a new one at once. Figure out how many bushels of corn, wheat, or oats, or how many bales of cotton it takes to keep you in wagons, and then see how much you save when you buy a wagon that lasts longer than the average. It is an easy thing to do, even though all wagons which are painted alike look alike. The difference in wagons is underneath the paint. It is the material and workmanship, as well as the paint of I H C wagons

Petrolia Chatham

which make them the best wagon investment for any farmer. We tell you plainly what material goes into every part of our wagons, and we want every purchaser to convince himself before buying, that when I H C wagons are advertised as having birch hubs, maple axles, and long leaf yellow pine box bottoms, these are the materials actually used.

Such care is taken in the construction of the I H C wagons, and in the culling of the materials which go into them, that when a wagon reaches a farmer's barn, that farmer has one of the best wearing, easiest running farm wagons that skilled labor can make or that money can buy. There is no need to speculate in buying a wagon. Wear and tear and length of service are the points to go by. I H C wagons are made for nation-wide uses, with special features adapted to local conditions. Wherever sold they are right, and ready for use in that locality. The I H C wagon agent in your town sells the wagon best suited to your neighborhood. Ask him to go over the wagons with you. Ask him for I H C wagon literature, or write the nearest branch house.

EASTERN CANADIAN BRANCHES

International Harvester Company of America
(Incorporated)

At Hamilton, Ont. London, Ont. Montreal, P. Q.
Ottawa, Ont. St. John, N. B. Quebec, P. Q.

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The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U.S.A.



CANUCK BRAND

Baby Chick Feed and Scratch Feed

Are made up from pure grains in proper proportions to secure best feeding value and most satisfactory results. Write for full information and give name of your feed dealer.

The Chisholm Milling Co'y
Toronto, Ontario

ORCHARD GROVE HEREFORDS



Champions of 1911 shows, winning both senior and junior herds at Winnipeg, Brandon, Regina, Edmonton, Toronto and London; also fifteen championships. Young stock, both sexes, for sale at reasonable prices.
L. O. CLIFFORD, Oshawa Ont.

THIS IS A GOOD TIME, AND I HAVE A GOOD PLACE, TO GET A HIGH-CLASS SCOTCH SHORTHORN BULL CALF by my great Whitehall Sultan sire, or a young cow in calf to him, to start a herd that will be self-sustaining. SHROPSHIRE RAMS AND EWES, too, at low prices. CHILDREN'S PONIES. A CLYDESDALE FILLY, such as I can send you, is one of the best things any man can buy. Just write me and say as possible what you want, and I will surprise you with prices on goods that are genuine. **ROBERT MILLER, STOUFFVILLE ONTARIO**

Scotch Shorthorn Females for Sale I am offering at very reasonable prices, females from one year to five years of age. The youngsters are by my grand old stock bull, Scottish Hero (Imp.) = 55042 = (90085), and the older ones have calves at foot by him, or are well gone in calf to him. Their breeding is unexcelled, and there are show animals amongst them. **A. EDWARD MEYER, Box 378, GUELPH, ONT.**

SALEM SHORTHORNS

Headed by Gainford Marquis, undefeated bull of three countries. See our show herd at the leading fairs, starting at Winnipeg **J. A. WATT, SALEM, ELORA STA., G. T. and C. P. R.**

When Writing Advertisers, Please Mention "The Farmer's Advocate"

The Understudy of the Sun
is an efficient and economical heating apparatus that soon saves enough to pay for its initial cost.
McClary's "Sunshine" Furnace
308

1854 Maple Lodge Stock Farm 1912
Have some **SHORTHORN HEIFERS** two years old from cows giving 50 pounds milk per day, and in calf to my stock bull, Senator Lavender.
Grand young **LEICESTERS** from imp. Wooler of Sandy Knowe, champion at Toronto, and imp. Royal Connaught.
A. W. SMITH, MAPLE LODGE, ONTARIO
Lucan Crossing, G. T. Ry., one mile.

SPRING VALLEY SHORTHORNS
Herd headed by the two imported bulls, Newton Ringleader, = 73783 =, and Scottish Pride, = 36106 =. The females are of the best Scottish families. Young stock of both sexes for sale at reasonable prices. Telephone connection.
KYLE BROS. - - - Ayr, Ontario

Shortshorns, Berkshires, Cotswolds
Nine bulls from 9 to 11 months, cows, heifers and heifer calves; over 50 head on hand. No Berkshires to offer at present. A few shearing ewes for sale.
Chas. E. Bonnycastle,
P. O. AND STA., CAMPBELLFORD, ONT.

GEDARDALE SHORTHORNS—Shortshorns of all ages, pure Scotch and Scotch topped, imp. and Canadian-bred, choice heifers, choice young bulls, also the stock bull Lord Fyvie (Imp.); anything for sale.
Dr. T. S. Sproule, M. P., Markdale, Ontario

Shortshorns of Show Calibre
At present one nice red bull 12 months old (of the Bellona family) for sale at low price. Heifers of breeding age all sold.
Geo. Gier & Son, Grand Valley, Ont.

SHORTHORNS & CLYDESDALES
Write us for what you require.
W. G. PETTIT & SONS, Freeman, Ont.
Burlington Junction, G. T. R.

Clover Dell Shortshorns
Real bargains in females. Dual-purpose a specialty. **L. A. Wakely,** Befton, Ont. Bolton Sta., C. P. R.; Caledon East, G. T. R. Phone.

Shortshorns—Nine bulls and a number of heifers for sale at very reasonable prices.
Robert Nichol & Sons, Hagersville Ont

Some people live entirely for themselves and some live on others.

A girl of 16 can generally cure her broken heart with an indigestion tablet. Many a girl thinks she's a world-beater when she can't even beat an egg.

Conscience keeps almost as many men straight as does the fear of being found out.

CLEAN HANDS



15c a Tin.

Don't let them fool you with a cheap imitation. SNAP is the ORIGINAL and BEST HAND CLEANER. Will remove grease and stains of all kinds.

QUESTIONS AND ANSWERS.
Miscellaneous.

MEASURING CREAM FOR BABCOCK.

We are sending our cream to a butter factory this year for the first, and are not quite satisfied with the way our cream tested, nor with the amount we got for what we sent in the month of June. We know nothing about the Babcock way of testing. Would you kindly tell how to figure your cream? Here are the figures: Inches, 87½; average per cent., 20; lbs. butter-fat, 71½.

D. V.

Ans.—At a few creameries in the Northern District of Western Ontario the oil-test system of measuring the cream by the inch instead of weighing is still followed. It has been found that an inch of average cream in a 12-inch pail will weigh 4.1 lbs. As the party in question had 87½ inches, if this is multiplied by 4.1 it would equal 358.75 lbs. of cream, this multiplied by the test of 20 per cent. gives 71.75 lbs. of fat. The creamery calculation is, therefore, correct.

F. H.

ONIONS FROM SEED.

1. When is the proper time to sow onion seed to raise onion sets?
2. What variety of seed should be sown to produce sets that will produce large onions the next year?
3. Will any variety of seed, sown for sets in the fall, produce the same onion the next year as the seed would if sown in the spring?

J. R. A.

Ans.—1. As early in the spring as the land will work well.

2. Yellow Danvers, Giant Prizetaker, and Red Wethersfield, are good.

3. Onion seed should not be sown in the fall unless it be on very light soil, which retains no moisture during the winter. Sow it in the spring. If sown early, and properly thinned and cultivated, good-sized, marketable onions may be produced the first year from the seed. If it is desired to produce sets, leave the onions thick in the bed, and when of proper size, break down the tops, pull and dry in the sun. Plant these the following year, and the same variety of onions as the seed sown is produced.

RINGBONE.

I have a five-year-old Clydesdale horse that went lame a year ago last spring. Had a veterinary, who said it was a low ringbone; had him blistered several times, and the lameness left for a while. Went lame again last winter, and has been going on three legs ever since. Between the hoof and fetlock, on front foot, it is swelled twice the normal size, and is hard. Had him fired and blistered by a veterinary also. It broke about a month ago just above the hoof, and is discharging a little matter. Do you think this horse will ever be any use to work? He has been too lame to put his foot under him for about five months.

J. L.

Ans.—Firing and blistering removes the lameness in a large percentage of cases. Some cases require a second firing and blistering eight or ten months after the first. The horse very often goes very lame after the operation, and then a cure results. Where this second operation does not effect a cure, the only remedy is to perform what veterinarians term neurotomy, which consists of removing the nerves supplying the limb in the region of the ringbone. It will be necessary for you to employ your veterinarian for these operations, and as he is familiar with the case, he is in a better position to state whether a second firing and blistering would successfully cure the lameness.

Veterinary.

ENLARGEMENT AT NAVEL.

The navel and point of sheath of bull calf, three months old, are enlarged, forming a thin, flabby protuberance.

J. J. M.

Ans.—This is due to some local injury, and is not likely to prove serious. Bathe well three times daily with hot water, and after bathing rub well with warm camphorated oil. If pus forms, lance and flush the cavity out three times daily with a five-per-cent. solution of carbolic acid.

V.

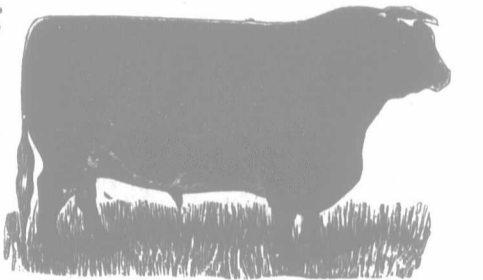
Good Meals at Camp Comfort
The boys at Camp Comfort are using the same stove that they had last year. It was the best they could get. It was a **New Perfection Oil Cook-stove**
This year they got a **New Perfection Oven** Also a **New Perfection Toaster** Also a **New Perfection Broiler**
"Gee, what a difference in the meals a good stove makes," said one of the boys. So they called their shack "Camp Comfort." And they will tell their mothers and wives about the stove, too. For the New Perfection Oil Cook-stove is as convenient for the home as for the camp. It will bake, broil, roast and toast as well as a regular coal range.
THE IMPERIAL OIL COMPANY, Limited
Winnipeg, Montreal, St. John, Halifax and Queen City Division, Toronto

Present Special Offering

- 20 High-Class Scotch Shorthorn Heifers
- 10 High-Class Young Shorthorn Cows
- 5 High-Class Scotch Shorthorn Bulls

At moderate prices, including Marr Missies, Emmas, Cruickshank Nonpareils, Duchess of Glosters, Village Girls, Bridesmaids, Butterflies, Kinellar Claretts, Miss Ramsdens, Crimson Flowers; also a number of the grand old milking tribe, which have been famous in the showing.

ARTHUR J. HOWDEN & CO.
Columbus, Ontario



SHORTHORNS
Have now a choice lot of young bulls to offer; also with something nice in heifers. Catalogue of herd and list of young animals on application.
H. CARGILL & SON, Proprietors, Cargill, Ont., Bruce Co.
JOHN CLANCY, Manager

Scotch Shorthorns FOR SALE. One promising 12 months Imported Bull Calf, a Marr. Flora, recently imported; 12 bull calves from 6 to 11 months old, all by Imported Sire—some good ones among these; also 30 choice cows and heifers in calf, at reasonable prices.
Farm ¼-mile from Burlington Jct. Station. **MITCHELL BROS., Burlington, Ont.**

Spruce Lodge Shortshorns and Leicesters Will price cheap young bull from 6 to 14 months; also 1 and 2-year-old heifers, some from imp. sires and dams. Leicesters at all times of both sexes for sale. Phone. **W. A. Douglas, Tuscarora, Ont.**
Ayrshires of production, type and quality. I can supply Ayrshires that will please the most exacting critic. Young bulls or females of any age, the kind that swell the bank account.
R. M. Howden, St. Louis Sta., Que. L.-D. phone.

STONEHOUSE AYRSHIRES
Are coming to the front wherever shown. Look out for this at the leading exhibitions. Some choice young bulls for sale, as well as cows and heifers.
HECTOR GORDON, Howick, Quebec.

Burnside Ayrshires Champions in the show ring and dairy tests. Animals all ages and both sexes for sale.
R. R. NESS, Howick, Quebec
Long-distance phone in house

City View Ayrshires All from R. O. P. ancestors. Young bulls of January, March, May and July, 1911; also calves of 1912. Right good ones. Males only for sale. Write, phone or call. **JAMES BEGG,** R. R. No. 1 half mile west. **St. THOMAS, ONT.**
Hillcrest Ayrshires—At head of herd is Ivanhoe of Tanglewild, a son of the champion Ayrshire cow, Primrose of Tanglewild, R. O. P. test 16,195 lbs. milk and 625.62 lbs. fat; 60 head to select from. Inspection invited.
F. H. HARRIS, Mt. Elgin, Ont.

Ayrshires and Yorkshires—We have still some good young bulls. Now is the time to buy for the coming season, before the best go. We have females any age, and can fill orders for carlots of Ayrshires. Pigs of either sex on hand.
ALEX. HUME & CO., Menie, Ont.

FIRST CHEQUE FOR \$50 buys a son of Victor Hugo (highest-priced bull of the breed), and from an Uncle Sam dam. How would a bull of this breeding look at the head of your herd? Herd tuberculin tested.
McMILLAN & LEGGAT, TROUT RIVER, QUE.
Bell Telephone, Huntingdon 81-21. Carr's Crossing, G. T. R.; Huntingdon, N. Y. C. R.



THOUGHT SHE WOULD SURELY DIE

HAD PAINS AROUND THE HEART AND SMOTHERING FEELINGS

Mrs. Wm. Lee, Uthoff, Ont., writes:—"I have taken three boxes of Milburn's Heart and Nerve Pills, and am now well. I had such pains around my heart and such smothering feelings that I thought I would surely die. My head used to be propped up with pillows to keep me from smothering. One day I read in a paper about your Milburn's Heart and Nerve Pills, and three boxes cured me."

Milburn's Heart and Nerve Pills are a specific for all run-down men and women, whether troubled with their heart or nerves, and are recommended by us with the greatest confidence that they will do all we claim for them.

Price 50 cents per box, or 3 boxes for \$1.25, at all dealers, or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

SALT

Ask your dealer for

RICE'S SALT

Your butter will bring a higher price if you use Rice's. It's pure and can always be depended upon for household use. The salt in the neat package FOR ALL PURPOSES.

North American Chemical Co., LIMITED
CLINTON, ONTARIO

Mr. Farmer, Listen!

YOU CAN GET A

Wilson Gold Medal Scale

Freight paid by Wilson to your nearest station for less than wholesale prices. 100 styles Hay and Cattle Scales. Easy terms to pay if you

WRITE TO-DAY.

C. WILSON & SON,
79 Esplanade St. E.
Toronto, Can.



Holsteins of Quality

Write us to-day for our proposition, telling you how any good dairyman may own a registered Holstein bull from a Record-of-Performance cow without investing a cent for him.

MONRO & LAWLESS, "Elmdale Farm"
Thorold, Ontario

Maple Line Holsteins and Yorkshires—Herd headed by Homestead Colantha Sir Abbekerk 2nd, whose dam, sire's dam, g. dam, average 99.61 lbs. butter 7 days. For sale at bargain prices, choice bull calves from R.O.P. cows. W. A. BRYANT, Middlesex Co., Cairngorm, Ont.

Ridgedale Farm Holsteins—We have four bull calves left for sale, from high-testing dams; sired by Imperial Pauline De Kol, whose 15 nearest dams average 26.20 lbs. butter in 7 days. Shipping stations: Port Perry, G. T. R., and Myrtle, C. P. R., Ontario County. R. W. WALKER Utica, Ont.

Glenwood Stock Farm 5 BULL CALVES, fit for service, out of big milking strains, at low figure for quick sale. THOS. B. CARLAW & SON, WARKWORTH, ONT. Campbellford Sta.

The man with the strongest opinion sometimes wears himself out backing them up.

Somehow or other the women who feel that they were born to command always get married.

Many a scheme is cooked up that is really a raw deal.

QUESTIONS AND ANSWERS. Miscellaneous.

WART ON COLT.

I have a three-year-old colt with a wart on its leg where the harness rubs it. Have had it cut off by a veterinary surgeon twice, and it is still growing. Could you tell me anything that would cure it? I should like to use it, and cannot until it is removed.

W. J. T. R.

Ans.—Try dressing the wart once daily with butter of antimony, applied with a feather.

LIKELY ROUP.

We have several young turkeys sick. Their heads swell, especially around the eyes; they seem to be choked, and are gaping. What disease have they? What is the cause of it? Kindly state what treatment is necessary.

D. F.

Ans.—The symptoms given indicate a case of roup. It rarely affects turkeys that are not housed, pampered, or overfed, or that do not run with fowls. The prominent cause is exposure to cold and wet. Prevention is the most profitable policy. A turkey with a swollen head is a danger to all other healthy birds, and the most profitable means to employ where one is sure that the disease is roup, is to kill and burn all diseased birds.

SEPARATING RIB GRASS — FLOUR PER BUSHEL OF WHEAT.

1. Is there any method of separating rib grass seed from clover seed?
2. How many pounds of flour, bran and shorts, is there in a bushel of standard winter wheat; also of wheat testing over and under standard weight? When gristing, how many pounds of flour, bran, and shorts, should a person receive per bushel after the toll has been taken off?

C. R. C.

Ans.—1. In a small way, where only a little is to be done, a dampened cheese cloth may be used. The seed is spread out on it, and when dry the clover seed is loose, while the rib grass seed sticks tightly. Dampened sawdust is sometimes used. It is mixed with the infested seed, and the rib grass seed, having a mucilaginous coat, accumulates the sawdust around it, when separation may be made by sieves. There are a number of machines for the purpose in use, but they are slow, and not always a perfect separator.

2. There is no standard amount of flour per bushel of wheat. From 43 lbs. to 45 lbs. per 60 to 61 lbs. of wheat, is generally reached. The remainder is bran and shorts, less a little waste in milling.

PASTURE AND HAY MIXTURES.

1. I have some sharp clay loam in fair condition, at present in barley. I wish to have it in grass pasture for next year. Would it do to plow right after harvest and sow pasture grasses? What mixture would you advise? Would oats and sugar-cane give larger returns?
2. What is the mixture you advise for hay; clover first year, and hay next?
3. What should I put in a small sample of milk to preserve it going to Guelph to be tested?

R. G.

Ans.—1. It would doubtless be more profitable to rely on the annual pasture mixture of 51 lbs. of oats, 30 lbs. Early Amber sugar-cane, and 7 lbs. of red clover per acre, sown next spring. Plow the land and work it well this fall in preparation for the crop. Pasture grasses sown this fall, would not come on well enough to pasture next season. If the grass were not required for next year, a mixture of grasses might be sown with a nurse crop. Red clover, 6 lbs.; alsike clover, 3 lbs.; orchard grass, 3 lbs.; meadow fescue, 3 lbs.; timothy, 3 lbs.; a total of 18 lbs. per acre. This is the mixture recommended by Prof. C. A. Zavitz, O. A. C., Guelph, where one crop of hay is desired, followed by pasturing.

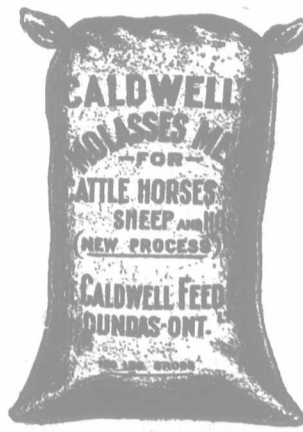
2. About eight pounds of red clover, two pounds of alsike, five pounds timothy, and perhaps a couple of pounds of alfalfa.

3. A small tablet of corrosive sublimate.

97% Digestible

GALDWELL'S MOLASSES MEAL

A Short Cut to Results



"You are a loser if not a user."

ARE you fattening your stock for show or sale?
NOTHING can equal our Molasses Meal for this purpose.
USED by all the larger show men and owners of thoroughbred stock.
PUT up in 100-lb. sacks and sold by the ton. Write for prices and literature to:

The Caldwell Feed Co., Limited
DUNDAS, ONTARIO

LAKEVIEW HOLSTEINS!

Bull calves sired by Dutchland Colantha Sir Mona, and out of heifers sired by Count Hengerveld Fayne De Kol.

Telephone. E. F. OSLER, BRONTE, ONTARIO

Fairview Farms Herd

Is where you can secure a son of Pontiac Korndyke, admitted by all breeders to be the greatest Holstein sire that ever lived. Look what his daughters are doing. Two of them with records over 37 lbs. each. Then, look at the work his sons are doing. HE IS THE GREATEST PRODUCING SIRE OF THE BREED, THROUGH HIS SONS. Every son of Pontiac Korndyke that has daughters old enough to milk is a sire of good ones. We can offer you several young ones that will give you great daughters.

E. H. DOLLAR, HUEVELTON, N. Y.

SUMMER HILL HOLSTEIN CATTLE and YORKSHIRE HOGS

Our senior herd bull, Sir Admiral Ormsby, is the sire of the world's record 2-year-old for yearly butter production. Also sire of the three highest record four-year-olds in Canada. The dam of our junior herd bull made 34.60 lbs. butter in 7 days, and gave 111 lbs. milk per day. Come and make your selections from over 70 head.

In Improved English Yorkshires we have won 95 per cent. of all first prizes at Toronto Exhibition for ten years. We are still breeding them bigger and better than ever.

Buy Summer Hill Yorkshires, the big, quick-maturing kind, and double your profits.

D. C. FLATT & SON, R. F. D. No. 2 Hamilton, Ontario, Bell 'phone: 2471, Hamilton.

Holsteins, Yorkshires, Hackneys

Our herd of over 30 Holstein females, from calves up, are for sale. Come and make your own selection. In Yorkshires we have a large number of young sows, bred and ready to breed, of the Minnie and Bloom tribes. No fancy prices asked.

A. WATSON & SONS, R. R. No. 1, St. Thomas, Ont. L.-D. 'phone from Fingal.

EVERGREEN STOCK FARM HIGH-CLASS HOLSTEINS

Present offering: Two young bull calves; good individuals; nicely marked and well bred; the dam of one of them being Unclay Abbekerk, the cow that topped the consignment sale of the Oxford District Holstein Breeders' Club. Priced right for immediate sale.

A. E. Hulet, Norwloh, Ont.

Maple Hill Holstein-Friesians—Special offering: Bulls from one to fifteen months old. The growthy kind that will give good service. One from a son of Evergreen March, and all from Record of Merit dams. Write for particulars. Bell Telephone. G. W. CLEMONS, St. George, Ont.

IMPERIAL HOLSTEINS

I can supply bulls ready for service and younger ones, also heifers out of R. O. M. cows, and sired by Tidy Abbekerk Mercena, whose seven nearest female relatives have records averaging 27.19 pounds.

W. H. Simmons, New Durham P.O., Oxford Co.

Woodbine Holsteins

Herd headed by King Soffis Pontiac Lad, whose sire's dam is the champion cow of the world. Sire's sire is the only bull that has sired five four-year-olds that average 30 lbs. each. Dam's sire is the bull that has sired two 30-lb. three-year-olds. His two great grand sires are the only bulls in the world that have sired two 37-lb. cows. Bulls and bull calves for sale.

A. KENNEDY, Ayr, Ontario.

The Maples Holstein Herd

offers a splendid lot of bull calves, all sired by Prince Aggie Mechthilde and all from record of merit dams. For pedigrees and prices write

WALBURN RIVERS, Falden, Ontario

Maple Grove Holsteins

Herd headed by King Lyons Hengerveld, the greatest 30 lbs. back butter-bred bull of the breed in this country. For stock of this kind, address:

H. BOLLERT, Tavistock, R. R. No. 5, Ontario

Don Jersey Herd

Offers young bulls and heifers for sale; heifers bred to Eminent Royal Fern.

D. Duncan, Don, Ont., Duncan Str., C.N.R. 'Phone Long-distance Argincourt.

Balaphorene A. J. Jerseys

Foundations stock, St. Lambert, Coomassie, Combination; stock from a grandson of Elm of Dentonia; also a grandson of the great Blue Blood of Dentonia, for sale. W. Wyandotte eggs, \$1 per 13. Joseph Seabrook, Havelock, Peterboro Co., Ont.

Brampton Jerseys

Bulls fit for service are getting scarce. Just a few left. Yearling heifers in calf are in great demand; 6 for sale; 6 now being bred. Brampton Stockwell the sire. A few good cows and some calves for sale. Production and quality.

B. H. BULL & SON, Brampton, Ont.

When Writing Advertisers, Please Mention "The Farmer's Advocate"



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Provide Power FREE for Pumping Water

"The wheel that runs when all others stand still." Strongest, easiest-running windmill made. Self-regulating. Gives steady power and greatest service.

Write for FREE book full of important facts about windmills. Address nearest office.

ONTARIO WIND ENGINE & PUMP CO., Ltd.
TORONTO 108
Winnipeg, Calgary

FARNHAM OXFORDS and HAMPSHIRE FARM

The Oldest-established Flock in America

Our present offering is a grand lot of yearling rams and ram lambs of both breeds. Also a few fitted yearling ewes and ewe lambs by our imported champion rams, and some from imported dams; also 50 fine yearling field ewes. Prices moderate.

HENRY ARKELL & SON, ARKELL, ONTARIO
Phone connection Guelph.

Cattle and Sheep Labels

Size	Price per doz.	Fifty tags
Cattle.....	75c.	\$2.00
Light Cattle..	60c.	1.50
Sheep or Hog..	40c.	1.00

No postage or duty to pay. Cattle sizes with name and address and numbers; sheep or hog size, name and numbers. Get your neighbors to order with you and get better rate. Circular and sample. Mailed free. **F. G. JAMES, Bowmanville, Ont.**

SOUTHDOWNS

Still a few fitted sheep left. Order early if you want a right good ram to head your flock and build it up.

COLLIES

Your choice of a litter of show quality that will make great workers.

ROBT. McEWEEN, Byron, Ont.

Oxford Down Sheep, Shorthorn Cattle, Yorkshire Hogs—Present offering: Lambs of either sex. For prices, etc., write to **John Cousins & Sons, Buena Vista Farm, Harriston, Ont.**

Large White Yorkshires

Have a choice lot of sows in pig. Boars ready for service and young pigs of both sexes supplied not akin, at reasonable prices. All breeding stock imported, or from imported stock, from the best British herds. Write or call on:

H. J. Davis, Woodstock, Ont.
C. F. R. and G. T. R. Long-distance phone.

SUNNYSIDE CHESTER WHITE HOGS—I am now offering some very choice young things of both sexes, of breeding age. A few Shropshire sheep of both sexes. Also Mammoth Bronze turkeys. **W. E. WRIGHT, Glanworth P.O., Ont.**

Customer (in restaurant)—"Look here, waiter, I've found a button in this salad."

Waiter—"That's all right, sir; it's a part of the dressing."

"Mother," asked the little one, on the occasion of a number of guests being present at dinner, "will the dessert hurt me, or is there enough to go round?"



STOP THIS WITH COOPER'S FLY KNOCKER

It pays to keep your stock free of flies—contented cows give 1/2 more milk; horses work harder and on less feed. Costs less than 1/2 cent a head per day. Use Cooper's Fly Kicker and save money. Easy to use—economical—efficient—safe. Quarts (Imperial) 50c; Gallons (Imperial) \$1.25. Special circular free—tells what others say about Cooper's. Any dealer or **WM. COOPER & NEPHEWS - TORONTO**

Sheep Husbandry in Canada.

Coincident with a number of other active agencies designed to revive the sheep-raising industry in Canada, there has been issued by the Live-stock Branch of the Department of Agriculture a new edition of that exhaustive and practical treatise, "Sheep Husbandry in Canada," which received such a warm reception some four years ago. This work of 126 pages, which constitutes a report, as well as a helpful bulletin of instruction, covers the history and condition of the sheep industry in every Province, pointing out the weak points, and offering useful information for the guidance of older shepherds, as well as those who are just beginning, or desire to begin, raising mutton and wool. In this work the author, who is a trained sheep man, brings out clearly the great advantages of keeping sheep from the dual standpoint of direct profit in cash returns, and the even more important indirect one of cleaner farms and better crops. Then there is a special section, "From the Block to the Table," designed to popularize the consumption of mutton and lamb. Other sections deal with weed destruction by sheep, diseases, wool, housing, enemies, breeds and breeding, feeds and feeding, and other important matters. Under "The Industry in the Different Provinces," some startling new facts, concerning the profits made from sheep, are brought out. It is shown that a flock of about 150 ewes worth \$6 each, after housing, feeding and care were charged against them, gave, in 1911, a profit of more than \$600. This occurred on a Manitoba wheat farm.

A special feature of this bulletin is its many beautiful illustrations in sepia tints, many of which are worth framing. A large issue has been printed, to be supplied free to those who apply for it to the Publications Branch, Department of Agriculture, Ottawa.

TRADE TOPIC.

THE WESTERN FAIR, September 6th to 14th.—This ever popular exhibition promises to be more so than usual this year. There will be many new and novel features. The main building will contain many new exhibitors. There will be goods in process of manufacture, as well as the finished product, and many large and costly exhibits. In the Agricultural Hall there will be shown the product of farm and garden, some of the best grains, roots, and vegetables ever seen. Western Ontario is particularly adapted for agricultural products, and the best always find a place at the Western Fair. Judging from inquiries made, there will be a large exhibit of all kinds of live stock this year. The exhibition affords one of the best possible places for buyer and seller to come together. The grounds are taking on the appearance of preparation. The entrance, band-stand, and general offices, have all been painted, giving them a very neat and new appearance. Considerable work has been done to various other buildings, and everything will be in readiness for the opening day. If space is required for exhibits, privileges, or concessions of any kind, application should be made to the Secretary at once. All information regarding the exhibition may be obtained from the Secretary, at the General offices, Richmond street, London, Ont.

Aunt Elvira grew fidgety as she watched her niece pile perfectly unworn garments into the missionary box. "Them there corsets look pretty new to be thrown away like that," she finally ventured.

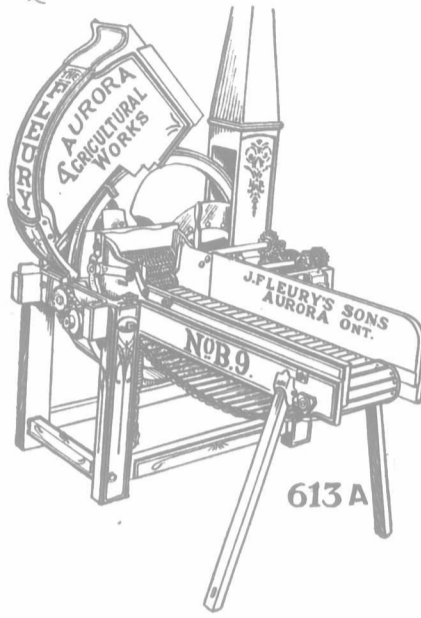
"I admit they're perfectly new," said the niece, "but despite the fact that they were made especially for me, they don't fit."

"Well, of all the extravagance!" said the old lady. "Made to order!"

"She picked them up, looked them over, and then fairly screamed:

"Look here, honey, they's a awful mistake somewhere! Here's a sign that says: 'Made especially for John Wana-maker!'"

The Fleury B9 Blower Ensilage Cutter



is a machine that will give you the satisfaction you want in CORN or STRAW cutting.

Can furnish this Cutter on TRUCK if desired.

One of our customers writes to us as follows:

Whitchurch, April 19, 1912.

I used one of your B9 Ensilage Cutters last fall with my 14 H. P. Engine, and found the machine MOST SATISFACTORY in every respect. I filled a silo 23 feet high at a rate of 12 to 14 TONS per hour, and cut and elevated this WITH EASE.

I have had experience with other cutters, but must say that THIS is the LIGHTEST and EASIEST RUNNING machine I have ever seen used.

WALTER WOOD.

14 inch Mouth, Three Knives, Carrier, Feed Table, Moderate in Price.

J. FLEURY'S SONS
AURORA, ONT.

Medals and Diplomas World's Fairs, Chicago and Paris.
JOHN DEERE PLOUGH CO., LIMITED Western Agents
Winnipeg, Regina, Saskatoon, Calgary, Edmonton.

IMPORTED SHEEP

Those wishing an imported ram, a few choice imported ewes or a few show sheep to make up their show flock, should write me, after this date, to

MOLESCROFT, BEVERLEY, E. YORKS, ENGLAND

C. HODGSON, Brantford, Ontario

Shropshires and Cotswolds!

In SHROPSHIRE I have for sale 35 imp. shearing rams and ewes from some of England's best flocks, a lot of fine home-bred rams and ewes bred from Minton and Buttar ewes. In COTSWOLDS a lot of rams and ewes, and an extra good lot of lambs. A few of each breed fitted for showing. Order early and get a good choice. Prices very reasonable.

Claremont Station, C. P. R., three miles. Picking Station, G. T. R., seven miles.

John Miller, Brougham, Ont.

SPRING VALLEY SHROPSHIRE

I am offering for sale shearing and ram lambs, shearing and ewe lambs, of highest quality and breed type. Prizewinners among the m. Bred from imported stock. Order early.

THOS. HALL, BRADFORD, ONT., P. O. & STA.

Pine Grove Yorkshires

Bred from prizewinning stock of England and Canada. Have a choice lot of young pigs of both sexes, pairs not akin, to offer at reasonable prices. Guaranteed satisfaction.

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Present offering: 6 yearling heifers and several younger ones. All very choice. Of Tamworths, pigs of all ages and both sexes; pairs not akin.

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A choice lot of boars fit for service. WANTED—Twenty dairy calves, seven to twenty days old, grades or pure bred; state price F.O.B.

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Present offering: Seven boars from 6 to 10 months old; boars and sow pigs 6 weeks to 4 months; sows bred and others ready to breed, from such noted stock as Colwill's Choice, Canada's champion boar, 1901, '02, '03 and '05, and Imp. Cholderton Golden Secret. Also a few choice Shorthorn heifers in calf; beef and milk combined. Show stock a specialty. Prices right.

L.-D. Phone. **A. A. Colwill, Newcastle, Ont.**

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is offering Tamworths, either sex, from six weeks to four months old. The true bacon type, having great bone and length. We pay express charges and guarantee satisfaction.

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We offer 30 splendid service boars; 50 strictly choice sows, bred and ready to breed; also ewes of quality bred to imp. rams.

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We have the greatest prize-winning herd of Hampshire Swine in Canada, bred from the best strains of the breed; stock of both sexes not related.

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Yorkshires, Tamworths, Berkshires, Hampshire, Chester Whites, Poland-Chinas, and Duroc-Jerseys. I have constantly on hand both sexes of all ages. Show stock a specialty.

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Ontario's banner herd. Prizewinners galore. For sale are: Young sows bred and others ready to breed, and younger ones. A number of young boars coming on. **JOHN S. COWAN, Donegal, Ont.**

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We are offering for sale 100 head of young Berkshires of both sexes and any sizes required. We can supply pairs or trios not akin; our Berks are noted for strength of bone, length, depth and quality, conforming to bacon type. Show and breeding stock a specialty.

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THE SUMMER COMPLAINT OF INFANTS

Cholera infantum begins with a profuse diarrhoea, the stomach becomes irritated, and in many cases vomiting and purging set in. The child rapidly loses flesh, and is soon reduced to great languor and prostration.

Cholera infantum can be quickly cured by the use of Dr. Fowler's Extract of Wild Strawberry. Mrs. David A. Cleveland, Apple River, N.S., writes:—"Last September my little boy, four years old, and little girl, two years old, were taken one afternoon with vomiting spells, and in a few hours they had cholera infantum. I had Dr. Fowler's Extract of Wild Strawberry in the house, and commenced using it. The cholera got so bad the next day, they passed nothing but blood. I kept on using the medicine, and in a few days they were cured. I always keep a bottle in the house, as I don't think there is anything better for summer complaint than Dr. Fowler's Extract of Wild Strawberry."

Some dealers may try to sell you something else, but for the good of your child's health, insist on having "Dr. Fowler's." It has been on the market for over sixty-five years, so you are not using a new and untried remedy. Price 35 cents. Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

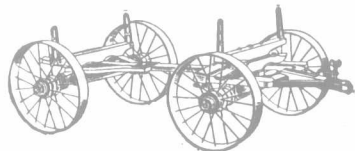


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THE SPICE OF LIFE.

Heck—"Is it true that your wife has an impediment in her speech?"
Peck—"Yes, she gets sleepy about eleven and begins to yawn."

Hard Worker—"Well, Jim, there's a job for you at last. Boss told me to tell you to see him at ten to-morrow, sharp."

Hard Loafer—"Can't go! I've promised to carry the flag in the unemployed procession to-morrow."

A stingy farmer, having married a \$10,000 widow, was congratulated by a neighbor, who said:

"John, I hear you are \$10,000 to the good."

"No," replied Farmer John, sorrowfully. "Not quite \$10,000, not quite \$10,000. It cost \$2 for the license."

Cannon, at a dinner, said soothingly to a young suffragette:

"After all, you know, there is room for both men and women in this world. Men have their work to do and women theirs."

"It is the woman's work to provide for the inner man, and it is the man's to provide for the outerwoman."

Jamie, having come into the possession of considerable wealth through the death of relatives, was thus addressed by one of the neighbors:

"Ah, Jamie, it was a guid thing for you that your rich freens were born before ye."

"Weel," said Jamie, "I'm nae so sure about that—but it was a guid thing that they dee'd afore me."

Pat was a bashful lover; and Biddy was coy, but not too coy.

"Biddy," Pat began timidly, "did yer iver think of marryin'?"

"Sure, now, th' subject has niver interred me thoughts," demurely replied Biddy.

"It's sorry Oi am," said Pat, turning away.

"Wan minute, Pat!" called Biddy, softly. "Ye've set me a-thinkin'."

A bird dog belonging to a man in Mulvane disappeared last week, and the owner suspected it had been stolen. So he put this "ad" in the paper, and insisted that it be printed exactly as he wrote it:

"Lost or Run Away—One livver culered burd dog called Jim. Will show signs of hyderfobby in about three days."

The dog came home the following day.

"Murdered For Her Money: A Thrilling Drama in Seventeen Spasms," had come to the Provincial theater for two nights only.

The first night saw a fair audience assembled, but scene after scene met with a storm of booming and hissing.

At length, at the end of Scene 4, Act 3, the villain muttered to his scoundrelly accomplice, the grocer's assistant:

"Hush—not a sound! Are we alone?"
A voice, smothered in a yawn, came from the back of the pit:

"No, man, not to-night; but you will be to-morrow night!"

In the mountains of bonnie Scotland a kilted Highlander and an American were walking. In due course they came to a basin in the hills from which a wonderful echo could be obtained.

Having explained matters to the Yank, the Scotsman proceeded to demonstrate. He emitted a warlike shout, and after nearly three minutes the echo returned as per programme.

"Mon," said the Scot, "ye can't show anything like that in your country."

But the American was not abashed.

"I guess we can," he replied. "Why, in my camp in the Rocky Mountains, when I go to bed I just poke my head out of the tent and shout: 'Time to get up! Wake up, there!'"

"Yes?" queried the Scotsman.

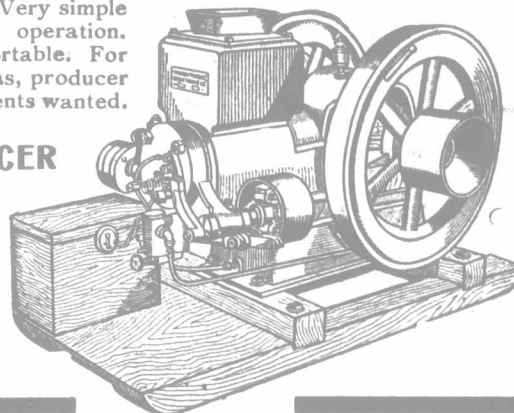
"Eight hours later that echo travels back and wakens me!"

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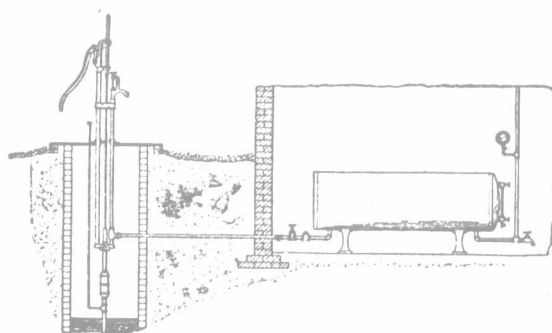
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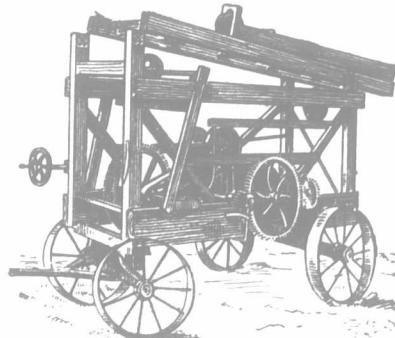
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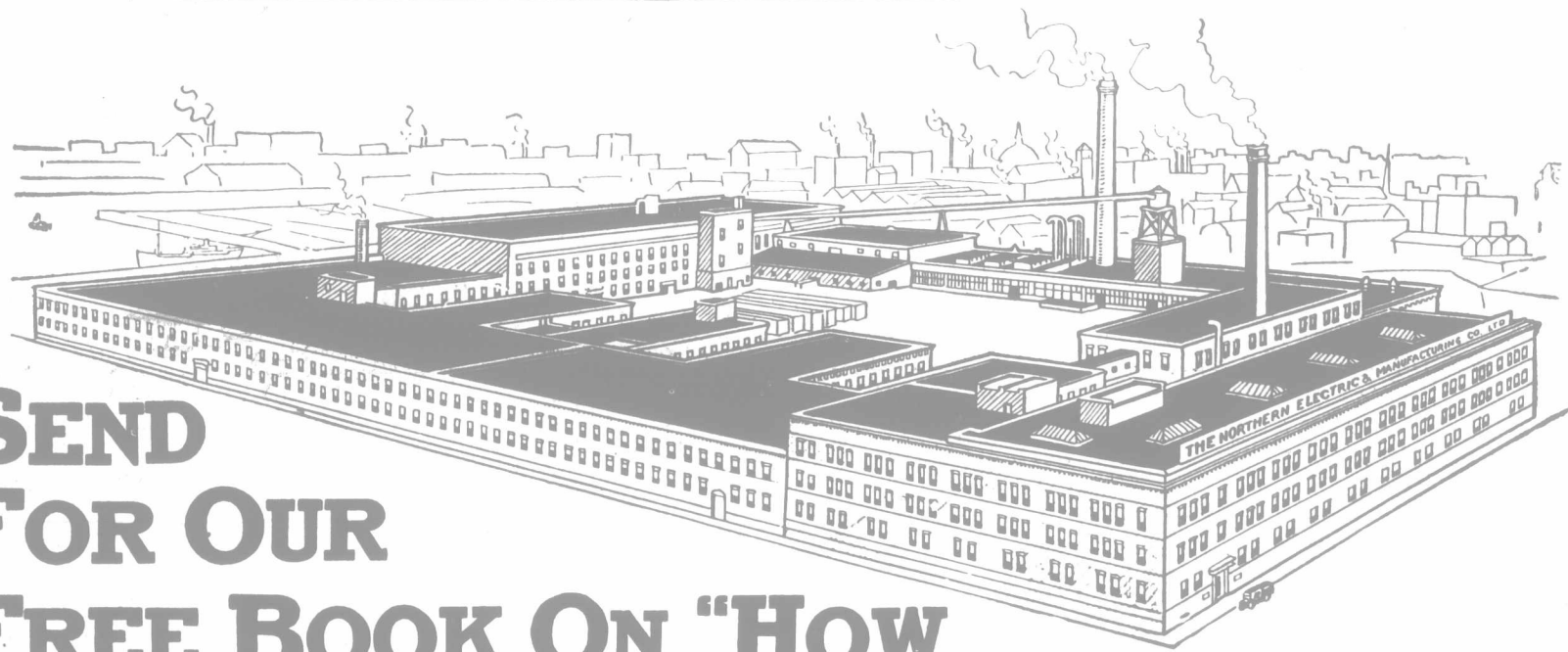
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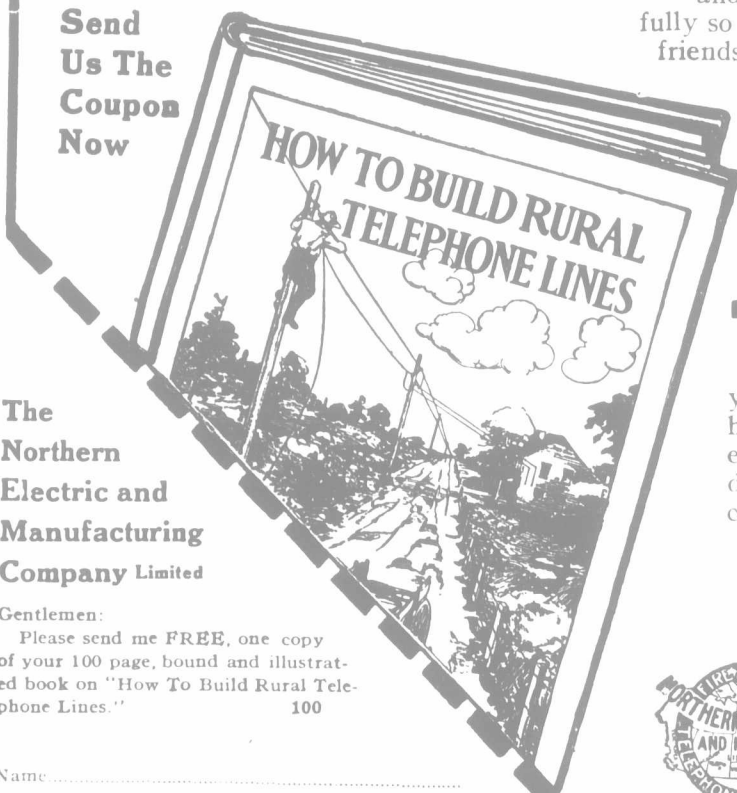
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