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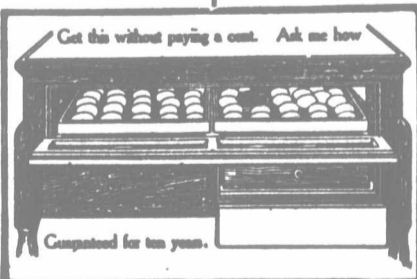
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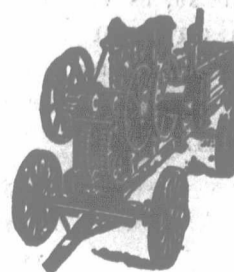
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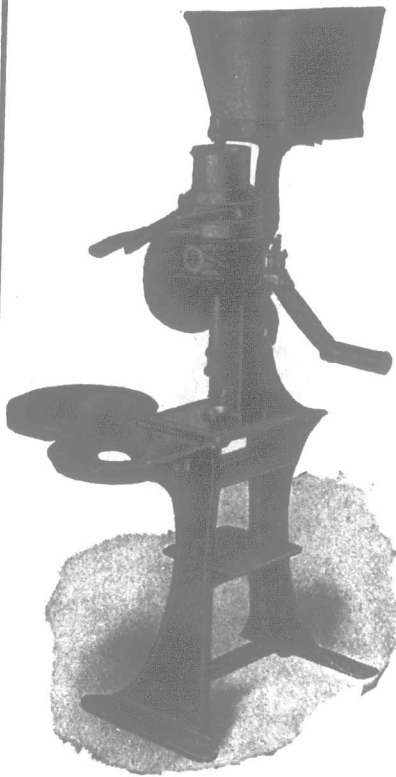
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LONDON, ONTARIO, MARCH 14, 1907.

No. 755

EDITORIAL.

THE WOOD - LOT FROM A BUSINESS POINT OF VIEW.

Human inconsistency yields few stronger illustrations than the arguments with which some farmers defend their short-sightedness in destroying farm wood-lots. On the one hand, they join the universal clamor that high wages have made farming unprofitable. But, if you speak to them about the wisdom of preserving a part of their farm in bush, they will turn around and tell you that, by clearing the land, they can purchase all the fuel they want from the produce of two or three acres in grain. As if it cost nothing to produce that grain! Surely this argument shows curious lack of business reasoning.

Agriculture is not rendered unprofitable by high prices of labor. In proof of this, reflect that, in spite of labor scarcity, farm land is advancing in value, and farmers were never so well off as they are now. By economy of labor, we may prevent this item from bulking more largely in the cost of production than it used to at half the rate per day. Nevertheless, labor is and always has been the greatest factor in the cost of crop production, and should, by rights, be valued equally, whether it is the proprietor's own labor or an employee's. Calculating on a business basis, it is safe to say that not very many farmers make from their holdings more than \$5.00 an acre per annum over and above the cost of their labor and all other running expenses. If, therefore, by leaving some land in bush, they can derive an annual return of \$5.00 per acre, they would be, from a purely commercial point of view, better off than by cultivating this extra acreage. Talking one day this winter with a man who has a good farm near London, which he has been renting for some years, we put it in this way: It is conservatively estimated that an acre of good unpastured hardwood will produce a yearly growth equal to a cord per acre. That cord, standing in your bush, is worth \$4 for firewood, to say nothing of a possible extra value for timber purposes. You are now receiving for the place, buildings and all, a rent of \$2.50 per acre, which may be taken as the returns of the cleared land per acre, over and above expenses of production. Which would you rather have as interest on your money, \$2.50 per acre or \$4.00? He had never thought of it in that light before, but readily admitted the soundness of the basis of calculation. It is true rented farms seldom yield the returns that are obtained by thrifty owners; but, on the other hand, it is certain that, by looking after the wood-lot intelligently, one might insure the production of timber worth several times as much as the valuation allowed for a cord of standing wood. About the only objection to leaving some of the land in woods is the danger of destruction by storms. Cases have been reported where farm woodland worth thousands of dollars has been wrecked in a night, and sold later for a few hundreds. Such instances, however, are quite exceptional, and there are few investments, anyway, that do not involve a risk of some kind. In the case of the woodland, the amount of risk may be minimized by culling often, using surplus young stuff for fuel, and selling some of the larger and straighter sticks for timber. Incidentally, a larger area of woodland would tend to reduce the violence of storms, lessen the force of drying winds, and render the country more productive, more healthful, and an infinitely pleasanter one in which to live, besides the returns, in some cases, from maple syrup and nuts.

It is only a few years since we heard of a man

down along the Detroit River fishing out black walnut and oak logs that had been dumped there twenty years before to get rid of them. Little did the man who thus disposed of them think choice black walnut would command a hundred dollars a thousand twenty-five years thence! There are thousands of people to-day making the same kind of a mistake. Manufacturers tell us that hardwood is already difficult to get and very valuable. In fact, they are forced to find substitutes, and are making larger use of steel. But steel, too, will ultimately rise in price, while the remaining uses for wood, combined with the scantiness of supply, are bound to raise it to such prices that people will set about planting land to forest. It is the rough land which should chiefly be used for purposes of timber production; but so acute will the scarcity soon become that the man with a piece of thrifty hardwood timber, even on good soil, will doubtless make more out of it than he could with plow and cultivator. In Germany, where land is worth several times as much per acre as it is here, there is a larger percentage under forest than in the older parts of Ontario, Quebec and Prince Edward Island. The Germans are awake to the value of forest. They care for it zealously, and never cut a tree without planting one in its place. There is wealth in store for the Canadian farmer who is enterprising enough to grow timber.

Let every man with the vestige of a bush fence it off and keep out stock. Even though it appears quite decayed, and doomed to extinction, a few years' protection from grazing will allow the seedlings to crowd out the grass. After that the old trees revive and make more vigorous growth. A striking case of this was told and illustrated in "The Farmer's Advocate" last winter, and many others have come under our observation. What Nature has done, Nature can do. Give her a chance. First fence out your stock, and, as a further means of inducing neighbors to take up the good work, so important from a public as well as an individual standpoint, use your influence to have the township council pass a by-law according to the act put through at Toronto last winter, exempting from taxation unpastured woodland, to the extent of one acre for every ten in the farm. Do it now.

A CORN PROPAGANDA.

In this issue "The Farmer's Advocate" begins a special series of contributions on the subject of corn-improvement and corn-growing in Canada. Large areas of Ontario and other Eastern Provinces are peculiarly favorable for the production of this magnificent stock-food crop, as the experience of years has amply demonstrated; but, with the characteristic conservatism of Canadians, we have been slow to develop its potentialities. Of late years, the use of the silo for preserving both grain and stalks as fodder for dairy cows, fattening cattle and other stock has given corn-production its greatest stimulus, but when we have to import over \$6,000,000 worth of corn, mostly for feeding purposes, the necessities of the case stand out in bold relief, also the timeliness of a propaganda for increasing the acreage grown. In probably no other crop is there an equal promise of increased profit, and no other leaves the land in equal condition for the crop that is to follow. The grain yield, as well as the growth of fodder, must be a desideratum hereafter. As has been already pointed out, "home-grown" seed corn is the most to be desired, and its production is likely to be best done by specialists in different localities. That more seed will be wanted, is a foregone conclusion, for

the country is going to grow more corn. There is room for very great and general improvement in seed-corn growing and the subsequent care of the crop. We trust that those who appreciate the immense value of corn, and whose experience will aid in the intelligent discussion of the subject, will not be slow to avail themselves of the use of these columns. Meanwhile, in preparing for the approaching season's operations, plan to increase the acreage, secure an early supply of tested seed of a variety best adapted to the locality, and make such improvements in manuring, preliminary cultivation and tillage as will ensure a high-class crop.

FAITH BACKED UP BY MONEY.

It is encouraging to note the interest being taken by well-informed men in the use of some such implement as the drag or leveller for keeping earth roads in condition. On the other hand, it is astonishing how many have never given it any serious consideration. In the office of Mr. A. W. Campbell, Good Roads Commissioner, Public Works Department, Toronto, there was a man recently who had come for advice. He was the reeve of a township which owned several graders, and by the use of these had got its roads pretty well shaped up. Mr. Campbell advised him to have a dozen drags made and scattered over the township, to be used frequently on every beat. It was a brand-new idea to this particular man, but he fell in with it at once, and results may be looked for in that municipality.

There is a question in some minds as to what is the best form of drag. Some fail to see any advantage in the split-log drag over the old-fashioned leveller. The latter implement is used to pare down the roads after they are somewhat dry. When used often enough, it does a vast amount of good, but it is usually difficult to secure a man who will hitch on to it at the season when its use would be most beneficial. Instead of scraping the roads when they are drying up after a rain, farmers are anxious to get in their seeding or cultivate their corn. The road is neglected till hard and dry, by which time travel has worn some sort of a track, and the short-sighted opinion prevails that it is no use scraping then.

The split-log drag, on the other hand, is used to puddle the roads while still muddy, before one can work on his land. In the United States they claim that splendid results have rewarded its frequent use, and it is time we try it more widely in Canada. Confident that we could induce our readers to take hold of it in earnest, "The Farmer's Advocate" is backing its faith with money and action. In co-operation with Mr. A. W. Campbell, Good Roads Commissioner and Deputy Minister of Public Works, we are offering, as announced last week and this, \$100 in prizes to encourage experimentation with this simple device. It is not even necessary to use the two halves of a split log. Square timbers may be used instead, and if a man thinks he can do better work with a couple of pieces of steel rail, he is welcome to try them. Above everything else, we are anxious to secure information. By the co-operation of our public-spirited subscribers, we hope so to advertise and prove the value of dragging roads that township councils may be induced to take up the drag, and do something to keep their roads good after having gone to the expense of grading them up.

LET US TRY THE SPLIT-LOG DRAG.

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

PUBLISHED WEEKLY BY
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JOHN WELD, MANAGER.

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- TERMS OF SUBSCRIPTION.**—In Canada, United States, England, Ireland and Scotland, \$1.50 per year, in advance; \$2.00 when not paid in advance. All other countries, 12s.
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MISUSE OF ROAD GRADERS.

The improper use of road-grading machines has been very apparent on gravel and stone roads where high, square earth shoulders have been drawn to the center instead of turning them outward. We have observed some striking illustrations of the proper and improper use of the grader on gravel roads in Middlesex County. On one highway between two townships several furrows were plowed on the sod shoulder of the roadbed, which just then had a fair crown and was really not in bad condition. Then the grader was put on, and most of the earth and sods were actually heaped along the center, burying the gravelled surface out of sight! The result can be imagined. After every shower, any traffic on the center of the road turned it into a mire, and, as a matter of fact, the traffic for one season, at least, was forced to the sides of the road. This was a sheer waste of money, and an injury to the road.

On a portion of what is called the Hamilton Road the plow was not put on, but several men spent days with a traction engine and grader skimming sods and a mass of dust and loose, unbroken stones into the center of the gravelled roadbed, making it very much worse for the remainder of the season than it was before they touched it.

On the other hand, members of "The Farmer's Advocate" staff observed last autumn a different use of the grader on a five-mile section of the Hamilton Road, immediately east of the City of London. The metalled roadbed had become altogether too wide and flat, in some cases actually hollow in the center, holding the water in pools, and on grades in running streams, so that the heavy traffic kept the road in a frightful condition for the greater part of the time, which was still further aggravated by the masses of unbroken boulders allowed to accumulate on the surface during years of mismanagement. The first step was to put on the plow and turn half a dozen

furrows of the heavy earth shoulders, which a careful use of the grading machine subsequently turned outward into the deep ditches, narrowing the driveway and giving a good crown, so that the heavy rainfall of the season had a free opportunity to get away without ruining the road. The effect was almost magical, and for once in years that portion of the old Hamilton Road was found by the people who use it in a really passable condition. It is doubtful if in any other way it would have been possible so quickly and economically to effect such an improvement. We expect this season to see an equally effective demonstration throughout Ontario of improvement in the condition of earth roads by the use of what is known as the split-log drag, "The Farmer's Advocate" offering \$100 in prizes for a competition with this implement.

OUR MARITIME LETTER.

The Department of Agriculture of Canada has just inaugurated, through Dairy and Cold-storage Commissioner Ruddick, a series of meetings in P. E. Island, having for their object the encouragement of dairying generally—not so much by the multiplication of factories, of which we have enough under present conditions, not even so much by the increase of the cows on the co-operative associations' lists, as by the quantity of milk afforded by those cows already contributed. Mr. Ruddick has sent out a circular in which he outlines the purposes of the Department in this particular. One hundred per cent. of increase, with the same number of cows, is the limit of attainment set before our farmers. He tells us all quite frankly, too, that he purposes to effect this by means of the "cow test," a system he has had in operation elsewhere. Indeed, Mr. Whitley, of Ottawa, the official formally charged with this sort of work, is already here to launch this new plank of salvation to our dairymen. He attended the annual meeting of the Prince Edward Island Dairying Association in Charlottetown, and explained the system fully to the assembled wisdom of Temple Hall. He will now make a tour of the Province and spread the new gospel, which is but another form, after all, of Dean's "Weed, Breed, Feed," assiduously.

This year, under that best-of-all influences—good prices—the dairy industry has taken an upward tendency amongst us. It has fallen off very much from what it was six or seven years ago, but seems to be on the increase again. Our highest mark in dairy production, we know, was only a tithe of what we should be producing in our worst years. But when, from a value of half a million we fell off 50 per cent. in a couple of years, it looked as if the bottom had fallen completely out of the business. There were causes for all this—dry seasons, low prices, ill-lusioned farmers. We have just overed these things. Our cattle, slaughtered because of shortage of feed, are again up to the normal of Provincial herds; the prices are such as to make every dairyman wear a self-satisfied smile, and the disillusioning has been a collateral of flattering prices. There was the stress of labor to be invoked, too. We are running our Province down to, if not below, and far below, in present circumstances, the minimum of possible farm help.

Whilst everybody will admit that the accurate system of the cow-test is the proper thing for any dairying community, few can hope that, in our conditions, carrying on a whole line of mixed farming, and extremely short-handed, this system can be very generally adopted in a moment; and, consequently, even if indirectly an upward influence, and as such to be commended and encouraged, we are not to expect that the generality of our population will, within proximate time, become so systematized as it is and exact. We have had the cow-test going on in our midst by the forward dairymen for some time. They all commend it in the highest; but those using it are our most intelligent, best-trained and painstaking people. The great bulk still follow, we are sorry to say, the Laissez faire in agriculture. We must not expect an old generation, especially with the children all off the farm in many cases—emigrated to the States or Canadian West—to take up matters which involve a good deal of care to be of any value at all. This desirable exactitude would come quickly if we were a dairy-

ing people exclusively, but we have not a score of farmers in the whole Province who are into dairying and nothing else but dairying. The mixed nature of their work, we admit, makes for the most efficient of men, or the most inefficient. An all-round system of farming develops the whole extent of the farmer's intellectuality, if he is really such a one as he should be; but who will say that in a day's walk in any Province of older Canada he can find a community of men, following the farming profession, who have all reached the ideal or who are capable of reaching the ideal in this matter. On the other hand, it is not so difficult to learn and apply all that there is in some one special branch of agriculture. But would it pay here? Under present circumstances, we think not. At least it would be very dangerous to go into it very generally. Only two years ago and our condensed-milk contracts were voided, for want of winter communication, even.

The main thing to do with our dairying, which we must keep up because the fertility of our soil calls for it imperatively, is to stimulate a greater desire on the part of cow-keepers—and this means practically all our farmers—to take greater care of their cattle, to have a much closer eye to their breeding, and to feed them as animals from which milk can be expected should be fed. This done, the weeding process alone can secure a herd which will approach in any degree the standard which must be maintained, even in a mixed farmer's country, to ensure sound financial returns. As we said before, the propaganda which Commissioner Ruddick has now inaugurated, whilst too far advanced for the generality of our farmers, will do good missionary work, and tend generally upward in its indirect influence at least.

Only the other day we heard an intelligent man say, with reference to the new instruction, "Those people are doing us more harm than good; look what they did with those of us who listened to them about housing our cows—now we have them ruined and full of tuberculosis. It is all very well for men with the Ottawa Government behind them to talk about scales and tests, and weighed feed, and groomed cows; we have to make our living; we can afford only ordinary care; that's all the Lord ever intended, anyway." This may be a very indifferent condition of mind, but many of our farmers have developed it, and we must correct it by common-sense methods which appeal directly to them. There has been, doubtlessly, a tremendous amount of "wobble," not to use a more expressive term, in our national teaching on the dairy question in fifteen years, and it is not wonderful that the public mind is somewhat confused.

With fair fodder years, we have to increase our output of dairy products here in Prince Edward Island under the influence of such prices as obtain, and they are likely to be maintained for some time. The loss of cattle in the West this winter must have a slight effect, at least, upon this last condition, too. It is our duty to prepare to get all that is in this business, then. An increase of 3,822,683 pounds of milk given to the co-operative institutions of the Province is registered over last year. This is, perhaps, satisfactory, all things considered. No doubt our people will be better equipped for the work next year than last. The returns from the co-operative factories show a total business in the past season of \$355,788.34. This is far below the high-water mark in co-operative cheese and butter making in 1900, when, at much lower prices, we touched the half-million-dollar mark. This, too, is a small business for a Province such as this—the Denmark of Canada—and should be greatly augmented. Of course, the private production of butter and cheese is large, and its value would go far to double these figures. There is nothing to be done but reduce the entire industry to a system, however, and increase it to its natural dimensions as quickly as possible in the best interests of everybody, and we are glad that Commissioner Ruddick is getting on the ground, and will do all he can to assist the work.

A FIRST-CLASS PIECE OF POCKET CUTLERY

Received acknowledgment of five subscriptions and also one of your "Advocate knives," which is certainly a first-class piece of pocket cutlery. I would not like to be without "The Farmer's Advocate," and will endeavor to pass such a good thing along.

East Hastings, Ont.

W. D. HANLEY.

HORSES.

PREPARE STALLIONS FOR THE SEASON.

The failure of mares to breed, or the production of weak foals by some that reproduce, is not always the fault of the mares. The vigor of the foal when born is dependent in no slight degree on the vigor and constitution of both parents at the time of copulation and conception, and not due entirely to the manner in which the dam has been used during pregnancy, nor to her health during the term. In order that a stallion may give satisfactory results in the stud, as regards not only the number of foals he will sire, but also the strength and vigor of the same, and their likelihood to live and make useful and valuable animals, he must be in good health and vigorous during the stud season. Unfortunately, many sires spend about nine months of the year in comparative or complete idleness. The practice in many cases is to remove his shoes after the season, turn him into a box stall (often a small one), and allow him to remain there, without exercise, until a couple of weeks before the next season commences. The owner has no work or driving for him to do, has no time to give him exercise simply because he should have it, and either has no suitable paddock or lot into which to turn him for a few hours each day, or is afraid to do so on account of the danger of him injuring himself while galloping, etc. The writer has in mind one highly-bred stallion, an excellent individual, that has been used in this way for a great many years. This horse has been bred to the best mares of his class in the section in which he is owned, and travelled during the stud season of May and June, and, while he has sired a few high-class animals, the percentage of good ones is much less than the quality of sire and dams would warrant. A horse that goes practically without exercise during several months of the year cannot have the necessary muscular, respiratory and nervous energy that is necessary in order that he may do himself justice in the stud. The writer has in mind another horse-breeding establishment where a number of stallions of different classes are kept in the stud. The stallions in this stud are too numerous to be given regular exercise either in harness or on the halter without the employment of several grooms, and, as a consequence, no attempt is made in this line, but the owner has several paddocks of an acre or over each, well fenced, and each stallion is turned into a paddock for a few hours every day that is not extremely rough. They gallop around the paddock and have a good time generally, and it is very seldom an accident occurs. In this way the constitutional vigor is kept up, and the percentage of foals produced is much greater and the percentage of weak foals among those produced much less than in the case cited where no exercise is allowed for several months.

It is probable that the experience of all owners of stallions, or of those whose observations have been directed in this line, will be much the same as the above. If this is the case, it can readily be seen that, in order to get the best results from sires, it is necessary to not allow them at any time of the year to become constitutionally weak, either from want of exercise or the necessary food. Stallions in moderate condition have always proved more potent than those either in gross or quite low condition. The question then arises, "How are we going to prepare the stallions that have already stood in idleness the greater part of the time since last season to give satisfactory results the coming season?" The answer is, "Get to work with them as soon as possible." It will only be a few weeks now until they will go on the road for the season, or stand at the owner's barn, as the case may be. Of course, the preparation must be somewhat gradual. Daily exercise should be commenced at once. The manner in which the exercise should be given will depend upon the class and upon the tastes of the groom. Heavy horses can be exercised either on the halter or in the team at light work, or even in single harness at light work or on the road. The lighter class of harness horses will probably be exercised in harness, or, if preferred, on the line beside another horse in the saddle, while Thoroughbreds can be exercised in saddle or beside a saddle horse, or, if educated to go in harness, can be driven. If they can be given the necessary exercise in doing something that has to be done, of course the expense will be less; but exercise they must have in order to give them the necessary tone and power to give satisfactory stud service. A heavy stallion should be given a couple of hours' light work or four to six miles of a walk daily at first, and the amount of work or walking exercise gradually increased until three or four times that amount is given. The lighter classes should be given proportionately more. We consider that when work or driving is to be done, the stallions should be kept at it steadily during the term between seasons, except possibly for a month or six weeks after the season, when it is well to lessen the grain ration, and proportionately lessen the amount of work.

In preparing horses that have been idle for months, of course, regular grooming is as necessary as exercise, and the food should be of good quality and easily digested, and in proportion to the labor performed; but the groom should always be careful to not allow them to become excessively fat. The food to be given under these conditions does not differ in kind or quality to that which should be fed to horses being put into condition for any purpose. The administration of drugs should be avoided. It is a mistaken idea that stallions should be given medicines, stock foods, nerve tonics, etc. Under no circumstances should a healthy animal, whether it be stallion or mare, be given drugs. If any disease exists, recourse should be had to drugs, but those given should be those indicated by the disease existing. Medicines that tend to lay on fat quickly, give a gloss to the coat, etc., are very dangerous, as they cause fatty degeneration and disintegration of tissue, and if continued for any great length of time, permanently injure the constitution. Good food, good grooming, good general care and regular exercise is all that any horse needs or should be given in order to get him in condition. "WHIP."

DENOUNCES THE SCRUB STALLION.

ADOPTION OF A NEW BREEDING SYSTEM.
Editor "The Farmer's Advocate":
I have read with great interest the different items and opinions of writers as regards the stallion and horse-breeding interests, and respectfully ask for space to express my opinion. In the past twelve years I



Baltimore (imp.) (8729).

Hackney stallion; chestnut; foaled 1903. First in class of ten, Ontario Horse Show, Toronto, Feb., 1907. Imported and exhibited by Graham Bros., Claremont, Ont.

have owned and travelled different breeds of horses—roadsters, general-purpose and draft—and own at present a four-year-old registered Shire stallion that I purchased at the London exhibition when a yearling. He is sired by the noted imported English Shire horse, Moulton Rufus. I do not say that all non-registered stallions are unfit for public service, but I strongly denounce the scrub stallion, for they are a great hindrance to the improvement of horse-breeding, that are peddled around the country at such a low fee, calling at each man's barn (which the owner of a good horse cannot do); thus many are induced to use them on that account, finally to their sorrow and loss, and the country here is filled with scrub mares. The breeders seem too short-sighted to see this far ahead, so it is high time that something be done to prohibit the use of the scrub stallion for public service.

I do not approve of the present insurance system of breeding, where payment is made only when mares prove to be in foal. I claim that every man that breeds a mare, and has the service of a good horse for a full season, has a just right to pay a service fee (supposing a \$10 fee is the charge), say to pay \$4 at the close of the season, and the balance, \$6, if his mare produces a living colt. This would induce owners of mares to return mares regularly; also, the stallion to be limited to a given number of mares, according to age of stallion. I think for a three-year-old, 30; a four-year-old, 60; five-year-old, and upward to 12 and 14 years, 70 to 80 mares. The stallion owner could afford to travel his horse for a lower fee, pay his expenses at close of the season, and wait for his profits till the mares produce their foals. I would like

to see all stallion owners adopt this system, and much better results would follow. I do not approve of the Government inspection and license act on registered stallions, but am willing to fall in with anything reasonable for the improvement of our noble animal, the horse.
W. J. NATT,
Algoma, Ont.

PEDIGREE NOT EVERYTHING.

Editor "The Farmer's Advocate":
I have been reading in your valuable paper the letters on this most important question, the license, lien and inspection act. It seems to me it is a rather lean affair. If our unregistered Canadian stallions are to be barred out, to make room for a lot of long-haired, boggy ones that are imported, I think it is a shame. I will give you a little of my experience in colt-raising. I owned a nice, three-quarter-bred mare, which I bred to a Standard-bred stallion, which, in my judgment, was a good one. The colt which I received was worth, at four years old, about \$65, while my neighbor raised a colt from a half-Clyde mare and a mustang stallion which, at three years old, was sold for \$130. Now, I think a long pedigree, even if it be registered, is not of very much account. I might mention many such instances as this. We farmers, on fifty or one hundred acre farms, do not require a big, heavy draft horse, nor yet too small a one. We want a horse that can do any kind of farm work, or hitch to a light rig and not look out of place. If I owned a stallion, I would not like to ask my neighbor to give me a lien of ten or fifteen dollars on the colt. I can imagine the answer he would give me. Suppose I buy an imported stallion for \$1,500, and he gets blemished, will I have to turn him aside? If the Government passes such an act, it is going too far. If we make a mistake, we are the ones that have to suffer. When the inspectors were going through our township, they would not stop long enough for a man to take his horse out of the stable to show him. I met them, having my team with me; they said, "These are the kind of horses we want in this country." I want to tell you that this team can be sold for \$400 any day, and they were bred from a light-bred mare and an unregistered Canadian-bred stallion.

When we want to purchase a horse, we don't ask if his sire is registered or not. If the horse is the kind we want, we buy it. Some people want a certain class of horse, while others want another. If I want to raise a colt, I choose the horse that suits me best, whether registered or not, and will continue to do so. The farmers in this section are interested in raising good horses, and are quite capable of managing it themselves. I have heard the opinion of a great many farmers, and they are not in favor of any such act.
Oxford Co., Ont.
G. H. ELLIS.

CROSSING THE OCEAN DOES A HORSE NO GOOD.

Editor "The Farmer's Advocate":
I have watched with much interest the controversy about the stallion inspection and lien act, and would like to voice the opinion of nine-tenths of the farmers in this locality by saying that, if the act is allowed to go through now, there will be a greater and harder task before the people, in the course of about two years, to repeal it. If the same amount of interest were taken by the Legislature to improve the general run of brood mares, it would be much more to the point. It is the mare that has as much to do with the quality of the colt as the horse—perhaps more. And then, too, if the stallion owner was a little more particular about the kind of mares he breeds his horse to, it would tend to improve the mares of the country as much as any act passed by the Legislature. As for the scrub stallion being hard to eradicate, I don't think we should have to call on an inspector to tell us farmers

which is which. I have seen two of their kind run out of this immediate vicinity within the last six months. And another thing, a stallion does not have to cross the water to be a good one. If that were true, we would soon rob the Old Country, at the rate they are coming. Do the intelligent readers of "The Farmer's Advocate" imagine for a minute that the breeders in the Old Country would allow their best horses to come to Canada at the price the importer is paying? Our Government is pulling on the wrong end of the rope.

Simcoe Co., Ont.

A CANADIAN.

THE HORSE BUSINESS IN NEW BRUNSWICK.

Editor "The Farmer's Advocate":

I am quite interested in the discussion on licensing and inspection of horses, although it does not apply to our locality. There is not much inducement here to buy a pure-bred horse and compete against the low-priced grade horses that are used for service. Most of the mares are scrubs, and you cannot get farmers to use a horse that costs them a \$10 or \$12 service fee on poor mares. A pure-bred horse cannot get as good foals from the scrub mare as if he had a good lot of mares. We want good mares as well as good stallions. I have a pure-bred imported stallion, but have to put the price down so low to compete that it is not a very paying investment.

Carleton Co., N. B.

JAMES MILLER.

LIVE STOCK.

THE SPRING LITTER.

The most important thing to attend to at this season of the year, in expectation of the spring litter, is feed and exercise of the sow. The feed need not be very stimulating or heating, nor should the sow be kept too fat. It is necessary, however, to keep her in a good healthy condition. The diet should consist largely of roots, supplemented by a little cracked grain, with skim milk or swill for a drink. Perhaps the principal item of attention, one which is too often neglected, is exercise; this is one of the great essentials to success in saving the spring litter. The ideal place for the brood sow is in the barnyard, unmolested by other stock. She should be allowed to run there every day for an hour or two, and if the weather be favorable, a half a day is not too long. This exercise is necessary in order to develop the expected litter, that they may be strong and active at birth and able to help themselves. Wood ashes should be kept where the sow may get some every day. The next consideration is a suitable place for farrowing; a piece of studding nailed around the wall horizontally, about six inches from the floor, is a great protection for the little pigs. About a basketful of cut straw makes a good bed; chaff is not good, as it is apt to smother the little ones. As the pig is a very suspicious animal, it is necessary to gain her confidence by kindness, so that when the critical time arrives she will not be disturbed or excited by an attendant or a lantern. It is very easy to do this by making repeated visits to the piggery during the winter evenings. When the time of farrowing arrives, if the sow is restless or rash, and is likely to trample or crush the little ones, they should be taken to the fire and dried, and kept away until the mother is quieted, and then returned. Nothing more can be done now except to supply proper food, which should be very light and in a liquid form for four or five days. At two weeks the young pigs may learn to drink, if a little sweetened milk is placed in a shallow trough while the mother is eating. Last spring, in this vicinity, pigs one month old sold as high as three dollars each; so it pays to be on the alert.

Prince County, P. E. I.

JAMES STAVERT.

FORMALIN PREVENTED WHITE SCOURS.

Editor "The Farmer's Advocate":

In your issue of February 21st you request readers to give their experience with formalin for white scours in calves. During the winter of 1906 all our calves died of the disease. As they were pure-bred Shorthorns, I secured the advice of three veterinary surgeons, but they did not help them. One veterinary said that a calf sucking the cow should not have scours. Last summer I read in "The Farmer's Advocate" of the formalin cure. Have treated eight calves since by applying to the navel cord, as a preventive, a solution of one part of formalin to ten of water. None of the eight showed symptoms of the disease. The calves that died were strong and well until thirty hours old. About that time the disease commenced, and they lived about three days.

Simcoe Co., Ont.

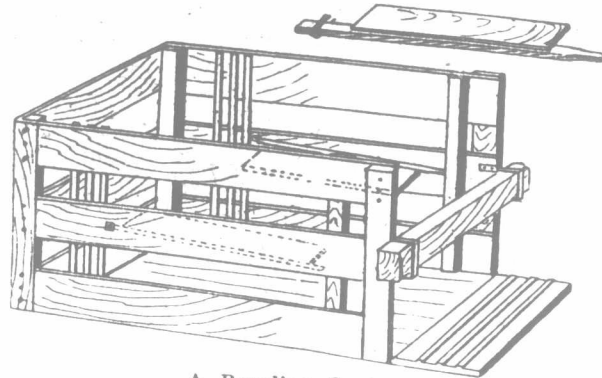
JOHN M. HOULDESHAW.

"On the whole," says the Scottish Farmer, "the bull season of 1907 in Great Britain teaches the old lesson: Breed the best; there's plenty room at the top, and don't spare the knife."

HANDLING HOGS.

The idea prevails that hogs are the most stubborn and contrary of the domesticated animals; so much so, that it is sometimes said that the easiest way to get them where you want them is to attempt to drive them in the opposite direction. There is some ground for this charge against the porker, but the same indictment may be preferred against some humans if an attempt is made to drive them. It is well to study the nature and disposition of the animal in dealing with it, and use a little diplomacy, and, if need be, a little coaxing instead of forcing, in order to reach the desired end. For instance, in trying to get a pig or pigs into a pen, a little grain scattered on the ground and on the floor inside the door will often accomplish the object more quickly and quietly than a dozen men with clubs could do it, and without ruffling the temper of any of the parties concerned. But "pigs is pigs," and sometimes they are too cunning to be trapped, even in this way, but will pick up the last grain outside the door and then turn tail and say, by their actions, "you can't fool me." A handy device to overcome this difficulty is to have on hand a pair of light hurdles, each about ten or twelve feet long and two and a half feet high, made of half-inch by three or four inch stuff, well braced, and hinged together so that they can be brought into the shape of a letter V, enclosing the pig on two sides, the building forming the third side, when, one man or boy holding each hurdle at the opposite end against the building or fence, as the case may be, the animals can readily be driven into the pen. One man may work this device by having a hook or staple in the end of each hurdle a little less than half the height of it, and a hook or staple in the side of the building on each side of the door to fasten the hurdles in place while the hogs are driven in.

The feeding passage of the pen may be utilized for changing pigs from one pen to another by having a small door from each pen to the passage. For crating a pig for shipping, the same passage may be used to advantage, as also for loading one or a number loose in a wagon rack. If the floor of the passage is about the height of the



A Breeding Crate.

wagon bottom, they can be driven directly into it; if not, a sloping platform can easily be arranged to drive them on. Where this is not convenient, a loading chute, with a platform the height of the wagon bottom, and a sloping approach to it, can easily be built in a few hours by sinking cedar posts, boarding on the inside of posts, and with the use of the hinged hurdles the hogs can be guided into the chute and loaded without trouble. This is a convenience which should certainly be provided on every farm from which hogs are marketed.

Where a boar is kept for service, a time and labor and temper saving device is a breeding crate in which to place the sow, and which should be kept in a corner of one of the pens in the piggery—not in the boar's pen, lest he become cross and endanger the safety of the attendant. A breeding crate is made very much the same as an ordinary shipping crate, but with no top cover, and with a slide door in front. It should be about four feet ten inches long, two feet wide, and two feet nine inches high, with side bars of one by six inch stuff, except the top bar, which may be four inches wide, if of good material, and braced to make it strong. A false door, to slide down between cleats, should be provided for use in the case of young or short sows, and taken out in the case of a large or long sow. The hind end of the crate is left open, and when the sow goes in a bar or slat is placed across the end about a foot from the floor of the crate to prevent her backing out (the artist has shown this bar too thick in the illustration). To hold this bar in place, an iron staple with flattened sides is bolted on the end upright post or batten on each side, through which the bar is slid. It is a good plan to have a platform about four or five inches high and three or four feet long to place behind the crate for the hog to stand on in the case of very large sows being bred, and useful, as a rule, with sows of any size. Foot-rests for the boar in the case of breeding young sows to an aged boar are provided to sustain his weight. In its construction, a piece of strong, tough wood on each side is used, two by two inches, rounded at the rear end to fit the holes in the rear posts. Of these

holes there should be three, at intervals of say four inches, in order to raise or lower the foot-rest. The front end of the strip should be left square, and fitted into a square staple which goes through the middle side-board at the distance of two feet eight inches from rear posts, and is secured by nuts on the outside of boards. On the top of the two by two strips nail a six-inch board, about four inches shorter than the strip, leaving the strip extending beyond the board at both ends. These boards are the foot-rests, and also prevent the sow from moving sideways if it is a small sow. In the case of a large sow needing more room, turn down the side rests, which gives six inches more space. To do this, loosen the nuts on the front staples, pull out the rounded end of strip, and change the square of the front end so as to let the shelf fall down. This crate may be made entirely of one-inch stuff, except the rear posts, and strong enough if well braced; and any one at all handy may make it in two or three hours with the ordinary tools, and it will save a great deal of time and worry to the attendant and the animals concerned; and, as time is money, there is economy in having such a device provided and always ready for use when needed.

WATERS FROM CEMENT MANGER.

Editor "The Farmer's Advocate":

We have a cement floor in our dairy stables. We use swinging steel stanchions, gas pipe for stall partitions, cement trough for both feeding and watering. We have no wood in connection with floor, as we consider that wood is an abomination in a dairy stable floor, even as partitions or mangers, absorbing, as it does, liquids and holding them. We have drains away from both the cement gutters and the feed trough, with plugs, and when we wish to water—twice a day—we sweep out feed trough and let water into it. When through we pull plug out and allow what is left to drain away, at same time cleaning trough if it needs it. We use the water to wash the whole floor as often as is necessary, using the drain to carry away the water, but at other times keeping plug in so as not to allow any loss of the liquid manure. We have a large tank placed in the floor of the barn above stable, into which we pump the water by a windmill in the meantime, intending to put pipes from springs direct into our stables in a short time. The tank is protected from frost by double boards, with sawdust packed between. We run pipes from this tank to our cement troughs in front of cows. Our cows are let out only on warm days for exercise. The cost of installing system, over and above windmill, was only the pipes from well to stable, and the tank. The advantages are that cows can be left in stalls continuously during a cold spell; the water is not standing in stable as it usually is where basins are used, but is brought in as needed, and is never very cold; then, the water can be used for cleaning purposes. The time saved is an important item in these days of scarcity of labor. The cows do better to be kept in when it is very cold. The only better plan is to bring water direct from springs with higher head; it is then warmer and purer, stands only in the pipes, and needs no tank for storage. Now, if there is no cement floor and no cement trough, this plan cannot, of course, be adopted, and we would prefer, in that case, a cement trough in a convenient place inside the stable, or in a shed close by, to which the cows are allowed to go twice a day, the water being pumped to this or brought to it in pipes. Do not approve of basins. Water should not stand continually in stables, as it is sure to absorb impurities.

Halton Co., Ont.

"MOUNT DAIRY."

ONE INSERTION SECURED A FIRST-CLASS MAN.

Kindly insert the enclosed advertisement in "The Farmer's Advocate." We advertised a year ago in your paper for a man (one insertion), and received thirty applications. We engaged one, and he has proved a first-class man, and we would have been pleased to retain him for another year, but he is returning to Scotland to bring out his family. Have been interested in the discussion re basement stables and ventilation. We claim we have almost perfect ventilation with the King system—no dampness, warmth, and as light inside as it is outside—in our stable, where we have 40 Jersey cows, 25 heifers and 6 horses.

Brant Co., Ont.

R. & A. H. BAIRD.

FAULT MUST BE IN THE SOW.

Editor "The Farmer's Advocate":

I notice in the Feb. 21st issue an article regarding weak pigs. I think the fault must be in the sow, or a weakness cropping out in her breed. I have three sows (Yorkshire) which have just farrowed, and two of them have 12 strong pigs each; the other has 10. They ran the barnyard all winter, and were fed about the same as those of J. E. W., with the exception of mangels instead of sugar beets.

Ontario Co., Ont.

S. A. NORTHCOTT.

ENCOURAGE OUR SHEEP INDUSTRY.

Editor "The Farmer's Advocate":

The move for an amendment of the "Act for the Protection of Sheep and to Impose a Tax on Dogs," is timely, and should provoke a broad discussion among those interested in the development and protection of our sheep industry. Much of the decrease in Ontario's flocks and the falling off of the industry of sheep-rearing, and the proclivity of many sheep owners at present to abandon the industry, may be traced directly to the existing jeopardy their flocks are held in, owing to the existing numbers of worthless, sheep-worrying mongrels in our Province, and the inadequate protection against same that the law affords as the act reads at present. That the sheep, the most profitable stock, and most adaptable to all conditions existing on our farms, most inoffensive when given half a chance, and most ornamental on our landscape of all our domestic animals, should be eliminated in numbers from our farms, and the number of curs, prized only for their worthlessness, should be allowed free rein, along with their owners, is, to my mind, an injustice to Ontario agriculture.

We are learning each year to value more highly the destruction of noxious weeds and the conversion of otherwise unprofitable areas into very productive fields. Our need of more intensive farming teaches us to prize the worth of the sheep for such purposes more highly. We are nearing more intensive farming each year, and, where kept, the sheep is a great aid to this end.

Our sheep should enjoy a more prominent place in Ontario agriculture; they have a purpose to fill. There are vast areas in our Province that are not adaptable to cultivation, but rather afford excellent sheep pasturage, being high and rocky, or shrubby. From such areas the sheep will pay us most revenue, giving us a dividend twice a year, first from the wool, and later from the lamb crop. Not only do they give us a profit from practically waste lands, but on our most desirable farms, and farms of the highest state of fertility, the sheep is the best-paying class of farm stock. Many of the world's husbandmen paying the highest rents per acre, are doing so with the aid of the sheep. It is for this class of farm stock we seek protection. Are they worthy of it? What industry of the many seeking protection to-day needs it more? We are not asking the Legislature to subsidize us or hide us away behind a tariff wall, but merely to give us legislation that will enable us to protect ourselves. The present law is inadequate. In it there is a weakness, also the proposition advanced by one correspondent to ask sheep owners to insure their flocks against damage wrought by a dog or dogs belonging to a neighbor who is not a sheep owner, and consequently not paying into the insurance fund, is unfair. What we want is that these men share the responsibility of the dangerous and troublesome dogs they harbor, and also that they be obliged to contribute to a fund from which sheep owners may be compensated liberally for any loss sustained through the instrumentality of these worthless curs. The present law on the Provincial Statute Book in this connection discloses through its reading a marked weakness. This has been taken advantage of in many municipalities, and, as a result, the Act stands repealed in about as many municipalities. Not only does this step leave the sheep owners without any protection, but what is worse, there is no provision for restoration upon counter-petition.

Unless the dog or dogs are caught in the actual work of destroying sheep, and their owner can be shown them at their dastardly work, or is fair enough to believe the sheep owner should be the only one to see the work, there is no chance of recovering any damages for loss sustained. This is very poor protection. Let the wording of the proposed amendment read so as to make the act operative in every municipality, with no clause inserted that would grant any right to repeal the act by local by-law.

In many townships sheep are not kept at present in such numbers as would necessitate a tax of one dollar on each dog therein to reimburse the losers of sheep destroyed or injured throughout the year by dogs. The amount to be levied on each dog could be adjusted by the councils to an amount that would seem enough to pay all damages sustained. The point is we want to be guaranteed protection. Let us also have a competent sheep inspector in each municipality to approve damages where sheep are molested, the act reading that not less than two-thirds actual value of animal be awarded those who sustain loss. The appointment of this inspector would obviate any variance between council officials and sheep owners in regard to value of animals destroyed or injured, and would insure the sheep owners just value for the animals killed or injured.

Before our sheep industry can claim the prominence it deserves in our Province, we must have enforced such stringent measures. We are proud of the flocks of Ontario, and their worth is inestimable. Let us encourage their increase by affording owners the protection they deserve. The number of worthless, sheep-worrying mongrels is on the increase, and our flocks and their numbers are on the wane. Let there be an adjustment. Dundas Co., Ont. CLARK HAMILTON.

THE DUROC-TAMWORTH CROSS.

Editor "The Farmer's Advocate":

I noticed in the issue of February 21st an inquiry from R. J. M., about breeding a Duroc-Jersey sow. If space will permit, I would like to make a few statements from my own experience. A number of years ago my father and I went into the business of raising bacon hogs for the market. We started with Berkshires, and bred them for two or three years, then we got some Duroc-Jersey sows and crossed them with a Tamworth boar. We also tried several other breeds and crosses, and after giving them each a fair trial, we find the Duroc sows bred to Tamworth boars gave us the best results, producing, in our estimation, about as near a perfect bacon hog as could be desired. The Duroc sows being good milk producers and careful mothers, also good feeders, when bred to Tamworth boars will usually produce good, lengthy and well-proportioned pigs. We have no difficulty in getting a 220 or 230 pound hog at seven months age, and seldom if ever have a pig that is not active and always able to keep on his feet. I have no hesitation in saying that R. J. M. would do well to give the cross I have mentioned a trial. A. E. BROWN. Kent Co., Ont.

BEEF CATTLE SCARCE IN WELLINGTON CO.

Editor "The Farmer's Advocate":

In a recent issue of "The Farmer's Advocate" I notice an item with reference to beef cattle, and a request from feeders to state what are the prospects for supplies and prices. In this district there never were fewer beef cattle for the spring months, either butcher or export, and what we have are practically all bought up. The prices range from 5jc. to 6c. for choice export cattle, to be delivered in April and May. We usually feed from 20 to 25 head of export cattle. This year we had 19; 16 of these we bought on the 28th of September, and marketed them on the 16th of February. In that time they gained 230 lbs., and were three months stall feeding. For these cattle we realized 5jc. per pound. JOHN CAMERON. Wellington Co., Ont.

THE FARM.

ROTATION-MANURING-FEEDING-BREEDING.

Editor "The Farmer's Advocate":

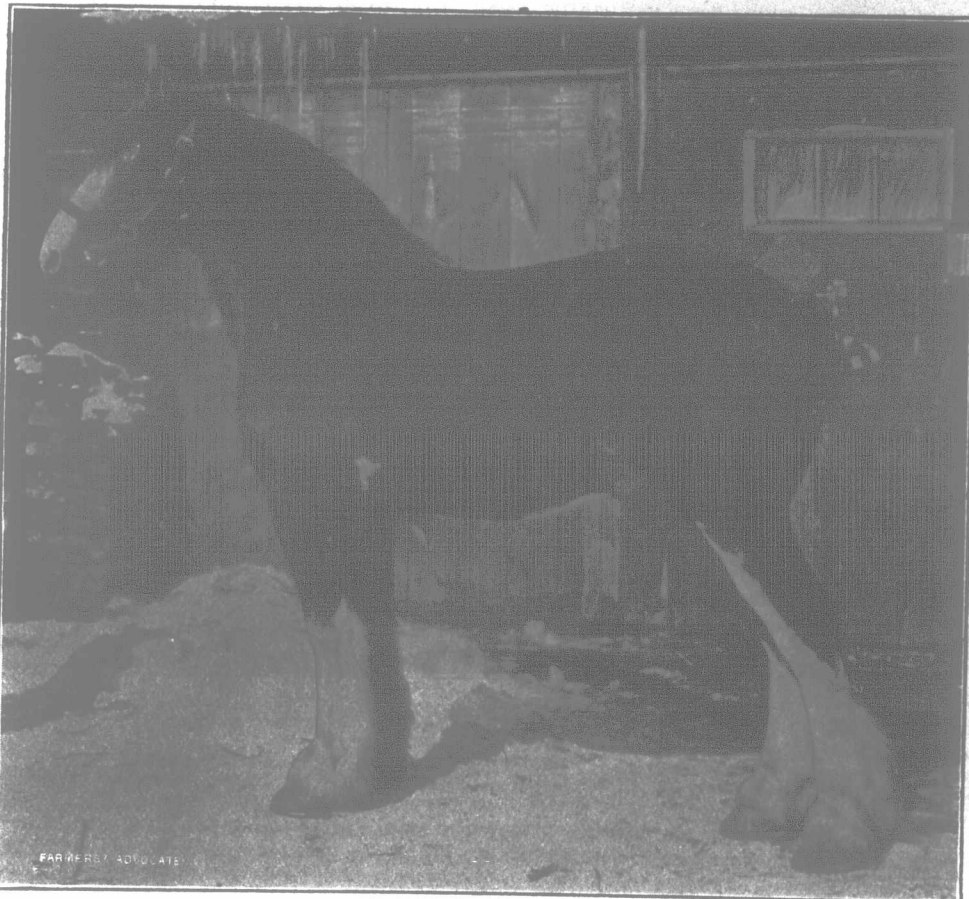
One cannot travel through Ontario with observant eyes and not take stock of what is going on on the farms of the Province. A few such observations I shall endeavor to relate.

Rotation.—A number of years ago Farmers' Institute speakers advocated a seven or eight year rotation of crops. Year by year they have shortened this, until at present we find them generally advocating a three or four year rotation, and I heard one local speaker advise a two-year rotation which he was practicing on his own farm. Whether this is carrying it to the extreme or not, I am not sure, but I do know that the shorter the rotation we follow on our own farm, the better we like it, and it certainly is a great aid in the destruction of foul weeds, as well as increasing the fertility of the soil.

Manuring.—It is evident on every hand that farmers generally do not pay enough attention to the care of manure. On too many farms in Ontario we find it dumped in a loose heap in the yard or put in large, loose heaps in the field. Quite a number are hauling direct to the field and spreading, and this is justifiable under present labor conditions. It certainly is a good system when the manure can be directly incorporated in the soil, as there is something in it then that we never get afterwards. But at this season of the year I think the ideal way is to keep it under cover, spread, mixed and tramped reasonably solid, and it will keep in good condition for any length of time. Suffice it to say that if the farmers of this country would care for their manure better, it would eventually mean an important addition to the profit side of their account.

Feeding.—Never in all my travels have I seen so many poor cattle in the country as this year. This is due, no doubt, to the high price of grain and hay. Does it pay to sustain our cattle largely on the flesh they have put on during the summer, with the result that they go out in the spring lighter and poorer than when stabled in the fall? By feeding our grain, we return to the soil over seventy-five per cent. of the fertility taken out of it by the growing crops. I believe in marketing all our grain and hay on foot, and had I not practiced this I would not be where I am to-day.

Stock-breeding.—Perhaps no other line of farming needs such an overhauling as this one. While there are a few who are progressing favorably, a very large majority have no ideals before their minds, no definite system or aim in type and uniformity. It seems to me we should fix in our minds a certain type, and have all the animals in our flocks and herds conform as nearly as possible to that type, and have them uniform in size and quality. Uniformity counts for more than we



Royal Ardlethen (imp.) [6902].

Clydesdale stallion; brown; foaled in 1904. First in class of seventeen at Ontario Horse Show, Toronto, Feb., 1907. Imported and exhibited by Thos. Mercer, Markdale, Ont.

APPROVES A MILKING RECORD FOR SHORTHORNS.

Editor "The Farmer's Advocate":

About every third farmer around here keeps a registered Shorthorn. I tried buying my cows for two years, but found that no use; farmers generally do not train their heifers to milk for a sufficiently long period to make profitable milkers; they are idle too long. For past three years I have tried training my own heifers, and, if I don't get heavier milkers, I will at any rate have cows that will keep at it for a longer period. In this district the dairy breeds of cattle seem to be decidedly unpopular. I don't know of a single dairy bull in a range of 10 miles. There are Herefords and Polled Angus, but Shorthorns are greatly in the lead. One rarely sees a Holstein, though there evidently have been a few at some time. Jerseys are popular as "town cows." In raising Shorthorns for dairy purposes, a man is greatly handicapped, as it is usually impossible to secure any information of a definite character as to the milking qualities of the ancestors of any animal he may think of buying. I think a milking record of Shorthorn cows would be an excellent thing. Personally, I am quite a believer in feeding and training, but it should go hand in hand with breeding. ALFRED HUTCHISON. Bruce Co., Ont.

may sometimes think. Go into the stables of today, and what do we find? Take cows, for instance. First we have a beef-type Shorthorn, then a Jersey, and a Holstein; then perhaps a grade Shorthorn of good milking qualities, which some call the general-purpose cow; then perhaps some with a general mixture of these breeds, and we wouldn't know what to call it, only it gives milk. When will we farmers learn to stick to line-breeding. Only when we breed continuously along one particular line can we hope to be successful. This lack of uniformity in size and quality is also seen in the feeding cattle. Here we have a big, rough steer, of leggy type, then one of dairy type, and then the low-down, blocky, thick-fleshed sort. If, in our selection of steers to feed, we paid more attention to this important point, it would be worth very much to us when selling. I was struck, while in North Middlesex, at the large number of farms wholly under grass. It occurred to me we could not afford to have such valuable land lying under grass. Perhaps it is due to the scarcity of labor. I think labor conditions will improve as the Western fever is on the wane, and many who are there are going to return to good old Ontario.

Waterloo Co., Ont.

GAVIN BARBOUR.

GOOD WORDS FOR THE MANURE SPREADER.

Editor "The Farmer's Advocate":

In some of your last issues there has been considerable said about the manure and spreader question. I think this subject cannot be too well considered, as it is a very important item to the farmers.

I apply with manure spreader in spring at the rate of twelve loads per acre for top-dressing grain, and eight for meadows, with a medium-sized machine, with good results. This way is better than spreading by hand in winter, as the machine does a better job, covers more ground with same manure, and spreads it more evenly. There is also less loss in this way, because the winter-applied manure will be considerably washed away by the spring rains. It also keeps ground cold and damp in spring, and early-sowed grain is generally the best. I have used a machine for three years, with a cost of \$1.25 for repairs, there being two tires set, and one link or drive chain. The spreader will spread faster than five men, if they will cover as much ground and do as good a job. With a good team you can spread a load in from three to four minutes on an average, with a medium-sized machine, spreading twelve loads to the acre. One load equals about one and one-half ordinary wagon loads. The wheels are five inches wide, and will not cut up fields as bad as a wagon, being a good advantage in a meadow or grain field. The manure is distributed very evenly, and coarse manure made much finer than it can be made by hand with fork. On a hundred-acre farm, where from two to three hundred loads of manure are handled yearly, the spreader will pay for itself in a few years in extra profits, as you can put the manure where you want it most, and with best results. A machine, properly cared for, should last from fifteen to twenty years. I mean by this, well cleaned after using, and put inside; also well oiled when in use. With these remarks I will close, hoping to hear from other subscribers.

Hastings Co., Ont.

GEORGE SHARP.

TEN ACRES CORN TO EVERY 100-ACRE FARM.

Editor "The Farmer's Advocate":

It does seem to me very strange that in this Ontario of ours, where we can grow corn so easily and so abundantly, that so little attention is paid to the producing of that important and valuable crop, as there is no crop produced on our farms that seems to be more acceptable to every class of stock than corn, as mostly everything, from the mouse to the elephant, is very fond of it, and in some districts, both in Canada and the United States, corn meal, in one form or other, forms one of the staple foods for the people. Then, why is it that we, as Canadians, do not produce more of it, instead of importing such large quantities every year? As a money-making crop, it has few equals, where it has had proper cultivation. It has been said that corn can be grown in the Western and Southern States much cheaper than we can grow it, but I think that reason very questionable. I admit that some varieties will ripen better there than in Ontario, but when we compare the food value of our crop with theirs, we must admit that they are not in it for profit.

Having grown corn for the past thirty years, mostly as a grain crop, perhaps a few hints as to our methods, etc., might be helpful to some of our beginners or young farmers who have not given the subject much consideration. In the first place, the land should be thoroughly drained, if of a wet or sour subsoil, as corn will not produce its best on a springy ground. The land, if in stubble, should invariably be plowed deep in the fall, and well manured during fall, winter or spring; better to be applied in winter, and

spread as drawn on the land, and the following spring a wide harrow run over the ground on a dry day to spread the manure evenly, then lightly plowed; or, better still, spring-tooth cultivated, if the land is not too filthy with weeds. This should be done early in May, so that the ground is all ready to plant from the 15th to the 24th of May. Although we have had some fine crops later planted, I do not consider it a safe practice to plant later. As soon as the corn shows above the ground, a light harrowing is beneficial, and a week after get at it with the scuffer; and if you want a bumper crop, keep the scuffer going through it every two or three weeks till the corn is three feet high, when it will usually take care of itself after that.

Clover sod, or even old pasture fields, will produce excellent crops if the ground is properly prepared for the seed and thorough cultivation is kept up through the growing season.

For fodder and silo corn, I think the Leaming and Compton's Early yielded the heaviest crops, but both failed to ripen the corn for seed purposes. The yellow dent has also grown well for silo purposes; but as we grow corn for the grain, rather than fodder, the dent varieties don't amount to much, except for feeding our stock when grass is not abundant in August or September. We have tested the common yellow, King Philip, Early Kent, White Flint, Yellow Danvers, Western Beauty and several other named sorts for the last thirty years, but if I were confined to any two varieties for this district, I would choose Western Beauty first and White Flint next, as the former has yielded the largest number of bushels per acre of any variety I have had for the last fifteen years. We always select the largest and best-grown ears for seed at time of husking, and hang up in a dry, airy place (usually the driving barn) till required for planting. We have no difficulty with our seed corn not growing. Our corn marker makes four lines or rows at one time, the feet being three feet eight inches apart.



A Good Shorthorn Head.

We mark the ground both ways, and plant with a Champion corn-planter at each angle, thus making cultivation easy. All samples of seed should be tested previous to planting, which can readily be done by placing the seeds between two layers of flannel and keeping them moist and warm, 60 to 70 degrees F. In shelling for seed, we do not use the tip rows on either end of the cob, so as to obtain a uniform sample, using nothing but selected cobs for seed.

I think every farm of 100 acres should have at least 10 acres in corn, making a 4-year course, viz.: Corn, with plenty of manure in the land; next wheat or oats, roots and barley, and again seeded. This rotation, if worked out intelligently, will give returns of from 80 to 140 bushels of cob corn per acre, and leave the ground clean for the next crop.

I have tested planting in hills and drilling, but prefer planting in hills as the surest way of getting a big crop. The shotgun and a good marksmen are a necessary adjunct for protection against crows, but this is about all the enemies the corn crop has. In short, manure heavily, cultivate thoroughly and frequently, and use nothing but warranted and tested seed if you want a bumper crop.

Ontario Co., Ont.

R. L. H.

LIST OF STANDARD CORNS.

The Wm. Rennie Seed Co., Toronto, Ont., recommend the following as standard varieties of flint corns:

- North Dakota, eight-rowed, earliest.
- Compton's Early, twelve-rowed, second earliest.
- Longfellow, eight-rowed, third earliest.
- Standard dent varieties:
- White Cap Yellow Dent, earliest.
- Wisconsin, second earliest.
- Manitoba Cuban, third earliest.

NEGLECT OF THE CORN CROP.

Editor "The Farmer's Advocate":

Corn, as one of the leading crops in a rotation on the farm, has been strongly advocated by all our leading agriculturists. In late years, I fear that, owing to a scarcity of farm labor, many farmers in certain sections of the Province of Ontario, at least, have been shortening up their acreages or dropping it out altogether. This is a great mistake, as, if properly handled, no crop on the farm can be better relied on to give a safe return for all the labor expended on it, and the better the corn crop is cared for, the larger the returns. The corn crop fits the land for future crops, and cleans the field from almost all weeds. Corn will do well on sandy loam, clay loam or gravelly soil; in fact, in almost all soils except a heavy, stiff clay, provided the land is well drained.

A clover sod makes the ideal previous crop. If on sandy soil, the clover can be allowed to start, and be plowed under from the middle to the 25th of May, rolling in the evening what has been plowed the same day. On heavier soil it is preferable to plow earlier in the season, and harrow or disk at least once a week until planting time, which should be as soon as the soil is well warmed, from the 20th of May to the 1st of June. There is a difference of opinion amongst growers as to the best varieties for the silo, owing, I firmly believe, to the practice of planting too closely and not working sufficiently. If the crop is not grown so as to ensure a good ear on every stalk, the grower will agree that the large-growing dent varieties are the best; but if grown properly, I have never found a man who has secured a good crop of the leading flint varieties but will say he prefers his ensilage to any he has ever obtained from the larger dents. The flint varieties have one strong point in their favor in every section of the Province of Ontario, except the most southern, and in all of the eastern Provinces, viz., that they are earlier, and will reach the proper stage of maturity at a time to escape early fall frosts. Good seed should be secured early in the season, if possible. Buy in the ear, so you can judge of the crop you are planting from. As a rule, the seed will be stronger and more liable to grow than if shelled early in the season and held in bags. In the flint varieties, Salzer's North Dakota (white), Longfellow, Large Eight-rowed Yellow, and Angel of Midnight and Compton's Early are the leading varieties, in the order named.

To secure good seed in northern sections, if the ears have matured, or come to the glazing stage, select the earliest, smoothest, largest, most compact and well-filled ears. Strip off the most of the husks, leaving a few on to tie the ears together; hang these up in an airy shed or out-house to dry thoroughly before heavy frosts arrive. The land should be well harrowed, then marked in squares 3 feet 8 inches apart each way. If the soil is in proper condition, the grain should begin to peep above the ground in at least a week after planting. A harrow should be run over the field at least once before the corn sprouts are two inches long in the ground. A light harrow or weeder can be used after the corn is above the ground. If properly harrowed, or the cultivator used frequently, very little if any hard work will be required to keep the land clean. If good seed is used, three to five grains to each square is sufficient to plant. The first cultivations should be deeper, going shallower each time, until when the corn is in tassel the cultivator is only allowed to go from one to two inches in depth. The corn should be cut as soon as seven-eighths of the grain is glazed. This applies whether cut for grain or the silo.

If the land is clean and the corn is kept free from weeds, fall wheat can be sown and cultivated in without plowing as soon as the corn is harvested, or the corn crop makes an excellent preparation for oats or barley to follow the next season. In the counties of Essex, Kent, Elgin, Lincoln, Welland and portions of Monck and Wentworth corn can be very profitably grown for the grain, and if cut early and the stalks well cared for, the dried-corn fodder is equal to a crop of hay.

Lincoln Co., Ont.

ROBERT THOMPSON.

GERMINATION TESTS OF CLOVER AND GRASS SEEDS.

Germination tests of grass and clover seeds may conveniently be made between folds of woolen cloth or ordinary blotting paper. The seeds should be kept moist, but not wet, and at a temperature ranging between 68 and 86 degrees F. The time allowed for the germination test of timothy seed is 14 days, and for clover seeds 10 days. One-third of the clover seeds remaining hard and sound at the end of 10 days, should be counted as capable of germination. Clover seeds, in particular, germinate less rapidly directly after being harvested than after having a rest period of a few months.

THE BINDER-TWINE TARIFF.

Editor "The Farmer's Advocate":

I write these few facts concerning the binder-twine industry, as present conditions affect both the manufacturer and the consumer or farmer. It is well understood by the manufacturer, and I presume by the farmer and consumers generally, that binder twine, as well as anything that pertains to its manufacture, is by the present arrangement of the Canadian tariff admitted free or without duty into Canada from the United States or any other part of the world; whilst, on the other hand, binder twine exported from Canada to the United States, which is made wholly or in part of manilla fiber, is subject to a duty of 45 per cent., which is manifestly a discrimination against the Canadian manufacturer, and in favor of the American manufacturer. It would appear only reasonable that the Canadian Government should place the Canadian manufacturer on the same basis as the American manufacturer, by imposing the same duty and restrictions as our neighbors do. It may be said by the consumer that binder twine is a staple article, and every farmer uses more or less of the article; consequently, we want it on the free list, so that we may buy where our in-

terests are served the best, and thus prevent combinations and graft by the Canadian manufacturer. Are the conditions that now prevail likely to bring about such a result? I think it may be safely asserted they are not. It may not be generally known, but it is a fact all the same, that at present—and has been for some time—there are more than enough spindles in the Canadian factories to make all the binder twine that is used in Canada each year, and more. At least in two cities in the Dominion, binder twine is made extensively by convict labor. It is reasonable to suppose, with such conditions prevailing, that the Canadian manufacturer would be unable to force fictitious prices for twine; or, in other words, charge any more for their twine than the actual cost, with a fair margin of profit.

It might now be enquired, with the existing tariff regulations, what are being the results, so far as the Canadian manufacturer and the consumer are concerned? In answer: first, according to a writer in Hardware and Metal, seventy-five per cent. of the twine used in Canada is imported, mainly from the United States; secondly, that of the binder-twine factories that have been in business, seven have been compelled to shut their doors by insolvency, or failure of making

the business a paying investment, and the twelve that are operating are in a languishing condition—truly, not a very encouraging condition, in so far as the manufacturers are concerned. We sometimes hear it said, "Canada for the Canadians"; I think it has been shown that this does not apply so far as binder twine is concerned.

A short time ago a Globe editorial, in referring to the article of binder twine, said that the Government had conferred a great boon on the Canadian farmer, by wisely continuing binder twine on the free list, and that the dumping clause was nugatory, because binder twine was duty free to enter the United States. I suppose the idea of the Globe writer was, in the first assertion, see what a good thing has been done for the farmer, and the second assertion was a sop for the manufacturer. I have stated, which cannot be contradicted, that there is a duty of 45 per cent. on twine made wholly or in part from manilla fiber entering the United States; and, further, I know that American manufactured twine has been sold for a less price in Ontario than the same grades were being sold in some of the northern States.

J. T. Bruce Co., Ont.

Corn Improvement in the Corn States.

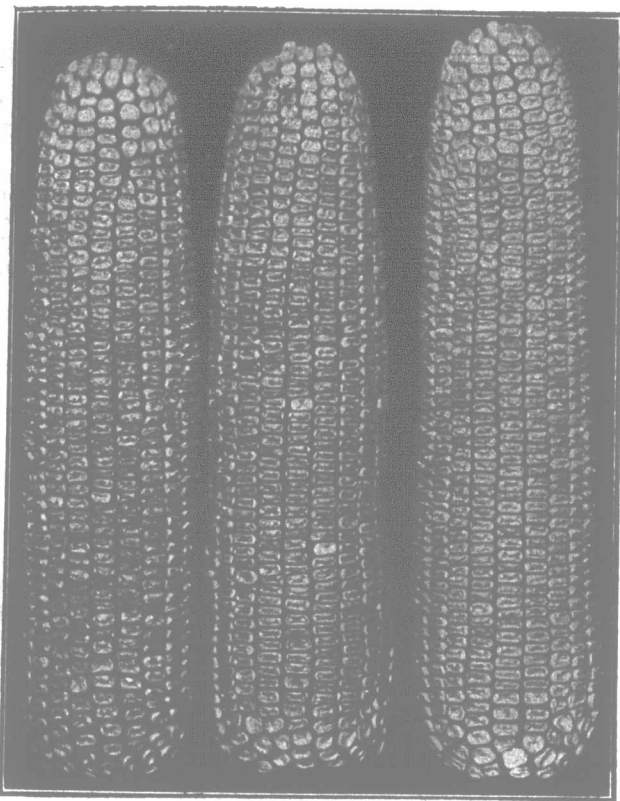


Fig. 1.—Seed-corn ears, almost ideal in type and uniformity.

for two or three years, the date of maturity for the variety will be hastened ten days to two weeks; the corn will become acclimated, and little difficulty will be experienced in securing a satisfactory crop.

SELECTION OF SEED.

Recent experiments have shown the individuality of an ear of corn to be of much importance. Individual ears of corn were planted in individual rows in several plots in different parts of Indiana, and the following figures show some of the results:

YIELDS OF INDIVIDUAL EARS.

Plot No. 11.	Plot No. 12.	Plot No. 21.
Ear No. per acre.	Ear No. per acre.	Ear No. per acre.
22 127	15 102	8 100
17 65	17 62	6 65.8

The above data show the variations in yielding power of individual ears, and indicate the possibilities for corn-improvement by selecting seed from the better ears. The productive power of an ear of corn cannot be told by the eye, but much can be done to discard the weak, undesirable ears when selecting the seed. A good plan is to lay fifty or one hundred ears in a row on a table, or on planks supported by barrels, and, with an ear that most nearly represents the type desired in the left hand, pass down this row and discard all those ears that do not measure up in size, shape and type of ear, color, shape and size of grain. In this way a uniformity of type, shape and size is secured. After this work has been done, the vitality of the individual ear should be determined.

TESTING OF CORN.

The germination test of seed corn is an important and necessary operation. When we remember that only fourteen ears of corn are required to plant an acre, and that with a yield of seventy bushels, each ear planted means five bushels at harvest time, we cannot afford to plant one bad ear. With the following method a man can place to test six to eight bushels of corn in one day, and, under average conditions, he does no work on the farm that returns him more dollars for his labor.

The tester shown in cut can be made from ordinary lumber, and of any convenient size, say about two by three feet, and three inches deep.

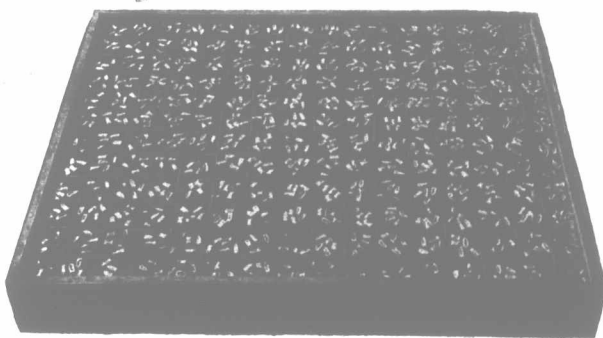
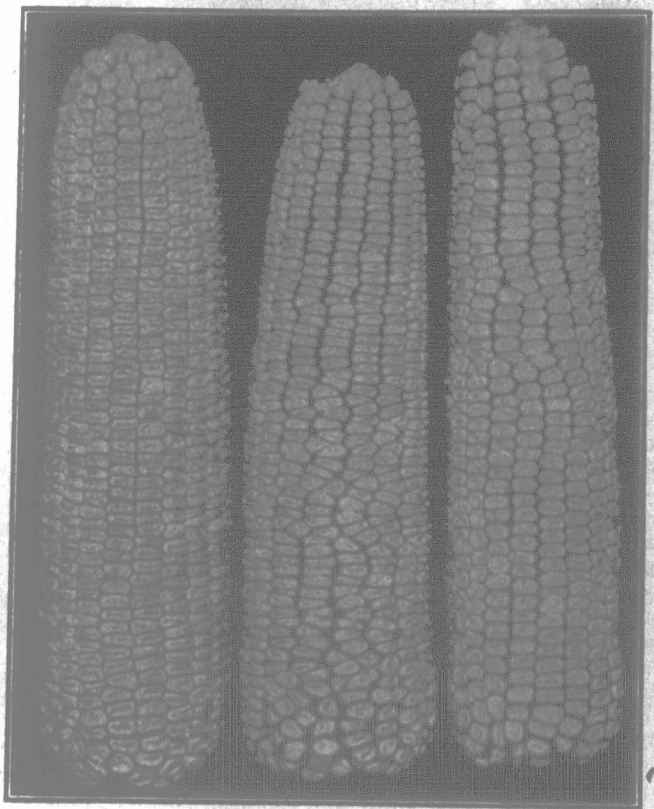


Fig. 3.—Seed-corn Tester.

Through the sides and ends holes are bored about two inches apart, and one-half inch from the top. Through these holes light galvanized or copper wire is strung from side to side and end to end, dividing the box into squares. The tray is then filled up to the wires with sand, garden soil or sawdust, and moistened thoroughly.

The ears to be tested should be arranged in rows on the floor, or in racks, where they will be undisturbed until tested. Remove five kernels from the different parts of ear No. 1 and place



No. 1. No. 2. No. 3.

Fig. 2.—Ear No. 1 is not a good seed ear. The rows are too close together, and the kernels vary much in thickness. The kernels of ear No. 2 are much too irregular in shape. Ear No. 3 has several broken rows, and lacks constitution and strength.

them in the first square in the upper left-hand corner, designating this as square No. 1. Do the same with ear 2, etc., placing the kernels in a respective square in the box. After the kernels have been placed, the tester should be covered with glass or a piece of carpet so as to prevent evaporation of the moisture, and placed in a room kept at a temperature of 65 to 70 degrees F. After five days the tester should be examined, and any ear that does not show vigorous root and stem sprouts from the five kernels should be discarded.

A study of the vitality of corn has shown that no one can pick out all the ears of imperfect vitality by a mechanical examination. Every weak germ means a weak plant and a small yield, and when these can be easily detected by the tester, there is no reason why they should be planted.

GRADING.

After the desirable ears of corn have been selected, the tip and butt grains should be removed and discarded. Tests have shown that it is impossible to secure a high per cent. of stand when the irregular tip and butt grains are planted along with the uniform middle grains.

The following table shows the results of a planter test, in which the whole ear and the uniform middle grains were compared. In each case it was desired to drop three kernels per hill. Records made in 100 drops:

No. of kernels dropped.	Whole ear.	Middle kernels only.
1	1 time.	
2	6 times.	8 times.
3	66 times.	92 times.
4	25 times.	
5	1 time.	
6	1 time.	

After this has been done, one other step in the grading should be taken. Make a lap-board, about two feet square, with raised edges,

Editor "The Farmer's Advocate":

In the 7 States—Ohio, Indiana, Illinois, Iowa, Missouri, Kansas and Nebraska—classed as "The Corn Belt" of the United States, more than 46,000,000 acres of land are planted to corn each year. The average yield of corn over this area for a period of ten years is about 32.6 bushels per acre. The yield has been affected by the soil and soil management, but experiments have also shown that this low yield is due in a large measure to the use of: First, low-yielding varieties; second, seed of low vitality; and third, seed improperly graded for the planter.

VARIETIES.

The varieties of corn usually grown are of the dent type. Some very small amount of flint corn is grown in the northern sections of the States mentioned. The number of varieties or strains of varieties of dent corn are almost innumerable, but the most prominent and those most generally used are Reid's Yellow Dent, Leaming, Gold Mine, Riley's Favorite, Boone County White, Iowa Silver Mine, and Johnson County White. These have furnished the basis for the many local-named varieties which are found throughout the country.

IMPORTING SEED CORN.

Owing to the fact that corn is readily affected by the soil and climatic conditions, it is impractical to import seed corn from a distance. The most satisfactory results are being obtained where home-grown seed or seed from the immediate community is used for the major portion of the crop. Corn for seed may be moved greater distances east and west than north and south.

When a new variety or strain of corn is brought from a distance, it should be planted over a limited area, and on soil of medium fertility. In the early fall, before the time of frosts, the corn should be inspected, and those ears which show signs of maturity by the brown husks should be picked and hung up in a dry place where each ear will be exposed to a free circulation of pure air, and where they can be kept dry during the winter. If this method of selecting the seed is followed up

or use a sieve from the fanning mill. On this board or sieve shell each individual seed ear. If for any reason a bad ear has been overlooked in the previous operations, it is caught here and can be discarded. Broken grains, irregular-shaped and other undesirable kernels can be easily removed by hand. When the corn is on the lap-board or sieve, the shape and size of grains can be noted, and the deep-grained ear placed in one box, while the shallow grains are placed in a separate receptacle. It is almost impossible to have the planter drop uniformly the required number of kernels when the deep and shallow kernels are mixed, but when they are graded and the planter plates adjusted the stand of corn can easily be increased twenty to thirty per cent.

G. I. CHRISTIE, B. S. A.
Purdue University Experiment Station, Ind.

THE SPLIT-LOG DRAG COMPETITION.

RULES AND PARTICULARS.

1. Two sets of three cash prizes are offered, one set for Eastern and one for Western Ontario, an imaginary line running due north from Yonge St., Toronto, being the dividing line. The first prize in each case will be \$25, second prize \$15, and the third prize \$10.00.

2. Any subscriber to "The Farmer's Advocate" may enter who will notify us on or before March 27th, 1907, of his willingness to construct a drag, as explained below, and use it at least five times during the summer before October 15th, at his own discretion, on a mile of ungravelled earth road of his own selection, preferably the mile from his gate towards the nearest town. Applicants must give full name, post-office address and railway station or stations.

3. On behalf of the Provincial Government, Mr. A. W. Campbell, Good Roads Commissioner, has agreed to co-operate with us by doing the judging. Each piece of road will be inspected as early as possible in the spring, and again after the conclusion of the trial on October 15th. The awards will be made according to the results evident from the use of the drag. To make a good showing, it may be well to choose a bad rather than a good piece of road, though no limitations are imposed in this respect. Each competitor will be required to keep and present in writing to the judge a statement showing the amount of time spent in dragging his beat and the dates on which it was done. This statement will not be used in making the awards, but is desired for purposes of information, and in some cases for publication.

The results of the competition will be written up and illustrated with halftone engravings in "The Farmer's Advocate."

Send in your name at once. Let us have dozens from every county in the Province. We are offering our time and money in the cause of good roads. Will you help?

Remember, the time for entering the competition closes March 27th. Address your letters, as per rule 2, to "The Farmer's Advocate," London, Ont."

HOW TO MAKE AND USE THE DRAG.

The two halves of a split log, ten to twelve inches thick, are set on edge thirty inches apart, both flat sides to the front. The cross-pieces are wedged in two-inch auger holes bored through the slabs. In other respects the cut is self-explanatory. If working a clay or gumbo road, it is advised to put iron (old wagon tire, or something of that sort) on lower edge of drag at end of six months; for softer soil, at end of twelve months.

The inventor has prepared the following road-dragging "catechism," telling how to make and work the drag:

Would it not be better to plow the road before dragging?

No. Plowing gives a soft foundation. Plowing the middle of the road is a relic of the old dump-scraper days.

What do you do when there are deep ruts in the road?

Drag them. If you drag when the surface is quite loose and soft, you will be surprised how soon the ruts will disappear.

How do you get the dirt to the middle of the road?

By hauling the drag slantwise, with the end that is toward the center of the road a little to the rear of the other end.

But suppose the road is too narrow?

First drag the wheel tracks. After three or four rains or wet spells, plow a shallow furrow just outside the dragged part. Spread this over the road with a drag. Only plow one furrow. You may plow another furrow after the next rain. At each plowing you widen the roadbed two feet.

How many horses do you use?

Two, generally; three if it is just as handy; four when breaking colts—a good solid team in the center, and a colt on each side; two men on the drag, one to drive, the other to control the colts.

How do you drain the road?

If the earth is pushed in the middle of the road continually, the road will drain itself.

Why not make the drag out of plank?

You can, and do good work, but the split log is the best. The plank drag is not so stiff.

Why not make the drag of heavy, sawed timber?

Because drags so made have a tendency to slip over the bumps.

Don't you grade up the road first?

No. The grading is done with the drag, gradually. By so doing, the road is solid all the time, and is built on a solid foundation.

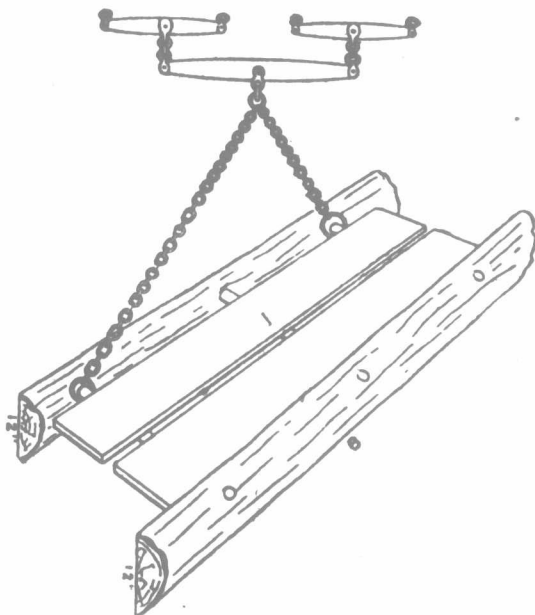
What does it cost to drag a mile of road a year?

The cost is variously estimated at from one to three dollars.

How do you keep the drag from dodging around sidewise?

By not loading it too heavily. If a drag dodges around the earth you are moving, it is because it is overloaded.

Will the dragged road stand heavy hauling?



Yes and no. A dragged road will stand more heavy hauling than an undragged road, but not so much as a macadamized or well-kept gravel road.

Don't drive too fast. Don't walk; get on the drag and ride. Don't be particular about material; almost any log will do. Don't try to drag with only one piece; use two.

APPLICATION OF STABLE MANURE.

Editor "The Farmer's Advocate":

In a recent editorial you referred to your recent deliverances on the care and application of stable manure through your different correspondents, and suggested that the subject wasn't yet threadbare. With this I quite agree, for in my experience as an Institute worker, I have noticed, both from discussions and observation, that there is great diversity of opinion, as well as practice, in securing the best results.

Some of the leaks are being corrected in saving the liquid parts with the solid through the use of concrete floors and of absorbents. More cut straw and chaff of pea straw, alsike and clover hay, etc., are being used than formerly for this purpose, while much of the long straw is being used in the box-stall management of stock, where large quantities may be used to the best advantage.

To help simplify the work, the manure spreader is being largely used as a labor-saving device. In many parts it cannot be used to advantage during the winter months. Often in the spring, too, work is of such a pressing nature that a great deal of stable manure is left most of the summer to leach and heat in the heaps or farmyard before it is handled with the spreader. There is unquestioned loss in this method. The more careless methods will entail a loss of fully one-half its virtue, as compared with its application when green to the land.

So far as my experience and observation have gone, I still maintain that green manure, applied on a meadow which may be plowed, after the hay is removed or after pasturing it, for fall wheat, or a hoe crop, is one of the best ways. Or it may be applied to fall-plowed lands intended for hoe crops, and worked in with the soil in the spring, or lightly plowed in, at any rate. The only loss of any extent I can see in handling the manure in this way is when it is applied to the surface of ground full of water and frozen hard. A winter rain or spring freshet which would carry the colored water into the drainage system would certainly mean loss, and may easily be avoided. Occasionally we hear farmers who have tried the winter system of application and the spring system of plowing it in after applying it, say that

they have had better results from the latter practice. When we come to analyze it, however, it is more a question of climatic or moisture conditions than in the methods of manurial application.

The system of putting the manure out in small dumps is still very common, and has nothing to recommend it. It increases labor, localizes the strength of the liquid part, which in itself should show that there cannot be much waste when spread, if the land around the dump will absorb the strength which is washed out.

I have nothing to say against the system of piling the green manure in heaps on the higher portions of the fields sufficiently large that they will not freeze very much, and then applying in the early spring when there is still sleighing. It means a little extra labor, it is true, but overcomes any objection of the deep snow on the fields. Nor have I any objection to handling it in sheds, or in a large pile in yard, where it is prevented from heating and leaching. It is a mistake to try to kill weed seeds in that way, as the loss of nitrogen is too great, as well as in a reduction of humus content, which process of decomposition is better to take place in the soil.

In any case, my experience goes to prove that the nearer stable manure can be kept to the surface, the better are the results, taking one year with another. Apply it as fresh as possible and in limited quantities, and good results are bound to follow.

T. G. RAYNOR.

THE DAIRY.

MILK AT TEN CENTS A QUART.

The possibilities that lie in the direction of producing a superior quality of dairy products for home consumption are illustrated by the Silver Springs Dairy Farm, at Deschenes Station, P. Q., on the Hull Electric Railway, and but a few miles up the Ottawa River from the capital city. While attending the Eastern Ontario Dairy-men's Convention, in January, a member of our staff went out to see the farm. They were then milking some 83 Jersey and Jersey-grade cows, retailing about 580 quarts of milk a day in the City of Ottawa, at 10 cents a quart, and refusing orders from would-be customers day after day.

The proprietor, Mr. P. Clarke, was formerly an up-river merchant who had come to Ottawa to live. Inquiring of Prof. Jas. W. Robertson one day where he could get a first-class supply of milk, he was advised to keep a cow. This suggested the possibilities of running a dairy farm to supply a fastidious trade, at extra prices. Prof. Robertson spoke favorably of the idea, which forthwith took root in Mr. Clarke's mind and grew. He went over to the United States three or four years ago, visited some of the best dairy farms and pure-milk-supply firms, picked up all the information he could, and came back to Ottawa determined to sell 10-cent milk. His friends laughed at him. They said he would never get Ottawa people to pay over 6 cents a quart. But his was the faith that bears success. He invested \$18,000 in a 200-acre farm, and to this expenditure has since added another \$10,000 in buildings and farm improvements, and 152 head of stock. The cows now at the place are fine, deep-bodied animals, with more size and substance than the average of the breed, and give evidence of being generous producers. Three high-class registered bulls are kept, and the whole herd is being selected and bred along producing lines, keeping constitution in mind, as the basis of success.

The proprietor threw his heart into the business in the way in which a business man who takes to farming from choice generally does. He picked up pointers wherever he could get them, subscribed for "The Farmer's Advocate" and other leading farm and dairy papers, corresponded freely with firms manufacturing goods that might be useful in his business, and has spared no pains to produce and deliver first-class, pure milk. He began by charging 6 cents a quart, later increased it to 7 cents, then 8 cents, and last fall the price was raised to 10 cents, and more could be had if demanded; but Mr. Clarke has not everything to his taste yet, and does not consider his milk worth more, although he intends to further perfect his facilities and produce milk worth 12 cents or over.

Ten-cent milk must be good, or customers would refuse to pay the price. Mr. Clarke sees that it is good—not most of the time, but every day in the year. To begin with, it is rich. The extra high percentage of fat is of no particular advantage from a dietetic standpoint, but well-to-do people want milk for the taste of it, more than for the sake of its nutriment, and gladly pay an extra price for creamy Jersey milk. The standard is 5 per cent. fat in the milk, and 25 per cent. in the cream. It often runs a little over this guaranteed percentage, but he sees that it never falls short. The milk is kept pure and sweet. Every precaution is observed in the stables, and as fast as drawn the milk is swung down to the dairy, several rods away, in 4-gallon cans sliding on a cable. It is cooled immediately

to 38 degrees F., except in winter, when a somewhat higher temperature is preferred so as to reduce the trouble from freezing while on the way to the city.

Very great stress is laid on the importance of cooling the milk just as soon as possible after coming from the cow, so as to arrest at once the development of those bacteria which, in spite of the best of care, will get into the milk. The cooled milk is bottled with a patent bottling machine, which fills about a dozen bottles at once, and, in the hands of a careful operator, spills scarcely a drop.

The bottles are placed in cases, loaded into wagon or sleigh, and hauled to the city, where in summer the milk is iced again, and then taken in hand by the route drivers and delivered in attractive wagons or sleighs specially made for the purpose, reaching the customers at a temperature of about 40 degrees. Needless to say, it is always sweet and good. Milk produced at Silver Springs, cooled immediately and bottled, has been kept sweet for eighteen days in the heat of summer. No pasteurizing is done, and the only preservatives are cleanliness and prompt cooling.

The farm, when purchased, had an ordinary basement barn, none too light or sanitary. The basement stable is still used for bulls and a little other stock, but two long, one-story cow barns have since been built. The proprietor is an intelligent student of the stable question. He does not like basement stabling, which is too dark and hard to ventilate, but the next cow barn which he purposes building will have a hay or straw loft overhead. His idea is to build stable walls of some good non-conducting material, such as several layers of boards and paper, in order to minimize loss of stable heat by conduction. Then he wants a free system of ventilation to admit as much fresh air as possible. He does not believe in too high a temperature, arguing that 40 degrees is better in the long run than 60 degrees. He insists on having his stable doors thrown open for at least two hours every reasonably nice day. The men demur, arguing that it will decrease the day's flow of milk, but the reply is, "Well, supposing it does, we'll make it up in the end." In other words, overstimulating for the sake of immediate production is not the best way to secure ultimate profits. The general effect on the health and hardiness of the herd must not be lost sight of. In this Mr. Clarke has been somewhat in advance of leading dairy thinkers.

The newest cow barn on Silver Springs Farm is 38 x 104 feet, is well lighted, and holds 50 cows in two rows facing. They are fastened with swinging stanchions, and the manger front consists of a drop from the feed-alley floor. Cows and stable are kept spick and span, lime being sprinkled freely in the gutters and on the passage behind after the stables are cleaned. Land plaster might be better to save the nitrogen of the manure, but lime is a first-class deodorizer and disinfectant. The walls consist of four thicknesses of lumber and two of building paper, outside and inside layers of lumber being matched. A complete system of ventilation is in use. There are eight 2 x 24-in. intakes on each side. They open on the outside at about floor level, and, leading inside the wall, are conducted in boxes to the roof. Half of them open at the plates, and half are continued across to a point directly over the heads of each row of cows. This system of intakes helps to diffuse the air. The outlets lead from near the floor behind the cows up to the roof, having openings at the plates. The outflow of air is regulated by dampers. Water is before the cows in basins, and a system of warming it as it flows into the stable is in contemplation.

The basis of the cows' ration is corn silage, which is grown in a three years' rotation of spring grain, clover and corn. Alfalfa has been grown on some few acres of rolling land, with marked success. Three cuttings a year have been secured, the yield being 5 to 7 tons of hay per acre, and the quality of the feed unsurpassed. Last winter, however, was very severe, killing out alfalfa as well as clover and timothy. Twelve acres more was sown last spring, and the area under this crop will be increased to 20 acres. The past summer a splendid crop of corn was grown on the field where the alfalfa had killed out, demonstrating the soil-improving virtue of this nitrogen-gathering legume.

INTERESTED IN THE DAIRY RECORDS.

Editor "The Farmer's Advocate":
I have been reading your paper every day the past few weeks, and I must say I am very much pleased with the way those farmers have kept account of their cows, and to see such a large yield from each cow. I feel satisfied there is money in good cows, and I am trying to find out the way there is the most. To my mind, it looks as if the farmer could make a larger profit out of his cows by separating his milk and shipping his cream to Toronto, and feeding the skim milk to young, growing pigs or calves. I think pigs will pay best, but have not tried it yet. Hoping to

hear from some others on this subject, and the breed of cows that will pay the best when separating and shipping cream, I would agree with the man that signs "Lazy Farmer," if he can make as much out of his cows by letting his calves suck, as it is cheaper.
Ontario Co., Ont.

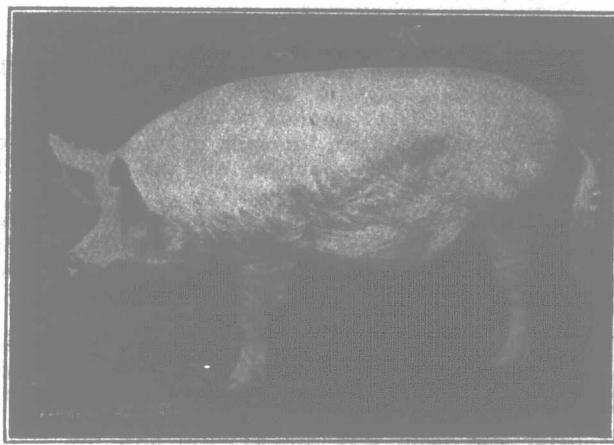
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STRONG DAIRY COURSE AND STRONG CLASS.

The attendance at the Ontario Agricultural College Dairy School Short Course is about the same as last year, but there is every probability that a larger number will remain for the final examinations, which begin March 20th. Our students come from a very wide range of territory this year, as we have one student from Japan, one from Switzerland, two from Scotland, several from England, one from B. C., and two from Alberta, eight from the States of Vermont and New York, and the remainder from the Province of Ontario. The instructors are as follows: Messrs. A. McKay and C. H. Ralph in the Cheese Department; R. W. Stratton in charge of separators; C. W. McDougall, churning; G. R. Taylor, milk-testing, and Miss Rose in the Farm Dairy.

The lines upon which we are laying special emphasis this year are the making of cultures, or what are commonly called starters, in the cheese department, where we have installed a special box for holding the culture cans, with hot and cold water connections, etc. This is a great convenience, and one which Mr. McKay is recommending very strongly to the men who are going into cheese factories. We have also had the curd sink lined with tin in such a way that the tin may be removed, and the instructors and students are very much pleased with this form of curd sink and consider it a great improvement over anything they have seen in this line before.

The hand separators are receiving considerable attention this year, as our factory classes are



Broomhouse Hercules (7551).

Three-year-old Yorkshire boar, winner of silver medal and championship, Edinburgh, 1906. Exhibited by W. B. Wallace.

spending half the time allotted to cream separators in the Farm Dairy, in order to become familiar with the eight different makes of machines which we have there. We have found it necessary to make this change in our work, owing to the large number of creameries which now receive cream from patrons who use the hand separators in the butter department.

We are, as usual, laying special emphasis on the importance of pasteurization, in order to make a uniform quality of butter. We have persistently and consistently preached and practiced this plan for about twelve years, and we know of no method of making butter which will give such uniformly good results as following the system of pasteurization.

We have not made very much sweet-cream butter during the term, because it is not convenient to do this in connection with other classwork.

Milk and cream testing are receiving considerable attention in the milk-testing laboratory. Dairy Chemistry and Dairy Bacteriology are in charge of Profs. Harcourt and Edwards, of the regular College staff, and our students are taking more interest than usual in these subjects this year.

In the Dairy Lectures we have laid special stress upon the importance of milk cows and proper care of them in order to obtain profit in the dairy business, as we feel that the dairy cow and her management is the foundation of all success in dairy work.

The experience of our students ranges from one to thirteen years, and I think we may safely say we never had a class which took so much interest in dairying as the students in attendance at present at our Dairy School.

H. H. DEAN.

Ontario Agricultural College.

MICHIGAN DAIRYMEN'S ASSOCIATION.

The annual convention of the Michigan Dairy-men's Association, held in Saginaw last month, was attended by the following Canadian dairymen: Messrs. R. Johnston, Woodstock; Geo. H. Barr, London; Mr. Elliott, Woodstock. Mr. Barr gave an address on "Export Cheese, and How to Secure It."

The discussions on cheesemaking were interesting to Canadians; not so much regarding advanced ideas in making cheese as in regard to making so many different kinds of cheese, such as Soft Michigans, Porous Michigans, and Michigan Cheddars.

Statements were made that a pound of soft Michigan cheese had been made from 7½ pounds of milk. This, of course, was used as an argument in favor of this style of cheese. On the other hand, many of those present thought the trade was making a mistake in continuing to manufacture this class of cheese, as the production of cheese in the State was increasing rapidly, and these soft cheese could not be disposed of outside the State of Michigan, and they advised making cheese of firmer body, so that they could be disposed of on any market.

Their methods of making cheese are scarcely as up-to-date as the Canadian or Wisconsin methods. No one seemed to know anything about the acidimeter. The Marshall rennet test and the hot-iron are the tests used principally. "Handling Overripe Milk," was the subject of one speaker, and Canadian makers would be surprised to hear a setting temperature of 90 degrees advocated.

From 2 to 2½ pounds of salt per 1,000 of milk seemed to be the general amount used even for soft cheese. This would indicate that they leave a large amount of moisture in the curds, as that is about as much as we use in export cheese.

The whey tank came in for criticism, and it appears that they have unclean whey tanks in Michigan as well as we have in Ontario. Cement had been tried in a number of cases, and had not proven very satisfactory. One gentleman claimed that if the whey was never allowed to become sour, cement tanks would stand all right.

One of the methods advocated for distributing the whey among the patrons was to have a barrel at the factory for each patron, have these all set along in a row, with a trough along the top of them, so that the whey could be run along this trough, and the proper amount put into each barrel each evening, and in the morning each patron empties his own barrel of whey into his milk cans. This would scarcely do in Ontario, where there are 180 patrons at a factory in some cases.

The butter sessions were interesting, Prof. McKay, of Ames, giving two splendid addresses. Moisture in butter came in for discussion. It seemed to be the general opinion that from 14 to 15 per cent. moisture was a safe amount. Prof. McKay stated that in his own creamery the overrun was maintained almost constantly from 18 to 22 per cent., and so far as he was concerned, he was not at all afraid of the large central creamery plants.

There seemed to be considerable feeling between the private creamery men and the large central plants. There was apparently no effort made to make a display at the Dairy Exhibition. The butter was all put up in tubs, and was placed, apparently, in any old way. Only about a dozen cheese were on exhibition, and they were boxed and piled up.

The display of dairy utensils, dairy machinery, etc., was a creditable one, although the space was somewhat crowded. The dairymen of Michigan are good entertainers, and the Canadians felt that they had been treated right well.

ENDORSES OUR WORDS' RE RECORD OF PERFORMANCE TESTS.

In a letter containing some notes on the Dairy Course at Guelph, Prof. Dean says: Allow me to congratulate you on your excellent editorial in the Feb. 21st issue of "The Farmer's Advocate" regarding the importance of proper supervision of records of performance. Your words were wise, and I trust that the points raised will receive due consideration by all persons concerned. It is very important that work of this kind shall be done in such a way as to merit the confidence of the public, and this can only be done with proper supervision by disinterested parties. No more important line of work could be taken up by any government than emphasizing the value of testing cows. I agree with you that the farm where these cows are being tested should be visited at least once a month, and the man having his cows tested should be required to take composite samples and have these tested monthly by a competent person. Having had several years' experience now in connection with this work for the Canadian Holstein Association, I feel like endorsing very heartily the main points of your editorial.

DAIRY RESEARCH.

The habit of cleanliness in the production of market milk is very clearly emphasized by illustration and argument in a recent bulletin, No. 42, from the Storrs Agricultural Experiment Station. Mr. W. A. Stocking, Jr., Bacteriologist at the Station, is the author of the bulletin, which is entitled, "Quality of Milk Affected by Common Dairy Practice." In a graphic way the author illustrates the teachings of his experiments in his tests of the bacterial content of milk produced and handled under various sanitary conditions. The adulteration of milk and milk products, and various sanitary requirements relative to the marketing of milk, have received Legislative attention, but an improvement in the practice of producing and handling milk on the individual farm is yet to be sought. The bulletin contains some practical common-sense suggestions, which, if followed should materially lead to such an improvement with, in truth, little or no increase in the cost of production.

Milk, as a disease-communicating medium, has been receiving much study of late, and physicians agree that impure milk is more or less directly the cause of death in many cases of young children, infants and invalids, and that the danger in these instances lies, not in adulterants or preservatives, but in the presence of injurious bacteria, which, through careless handling, very readily find an entrance into milk and thrive and flourish therein. "It is in the stable that milk usually gets its greatest bacterial contamination," and a study of the bacterial content under different conditions reveals some interesting facts, and suggests the desirability of cleanliness in the habits of the stableman, and the necessity of proper sanitary precautions being taken to preserve purity in the atmosphere of the cow barn.

The practice of feeding cows just before or during milking time is a custom that results in a serious contamination of the milk as it is being drawn, according to Mr. Stocking's report. An increase of more than 80 per cent. was noted in the count of the number of bacteria present in the milk under such conditions, over and above the normal number present when milking was done before feeding. The more dusty the feed, and the greater the disturbance in the air, the more bacteria will be found to be present. When cows become accustomed to the practice of milking before feeding, they will usually stand more quietly, notwithstanding current opinion, than with feed in their manger, and; it may be added, many of our best dairymen have adopted this system. The feeding of corn stover just before milking was found to be an even more prolific source of evil, as the increase in bacteria amounted to almost 200 per cent. We cannot but be reminded, in reference to the above, of the prevalent custom in many stables of throwing down litter from the barn floor above and of bedding the cows at milking time. The dust in itself is probably harmless, but it bears with it elements which will at least serve to destroy the wholesomeness of the milk, and which may possibly breed disease as well.

In the filth and dirt, however, which accumulates at the roots of the hair on the skin and about the udder of the cow will be found a more fertile source of contamination. The author conducted a number of experiments in which he tested the germ content of milk drawn from cows whose udders previous to milking had been carefully wiped off with a damp cloth, and of milk from cows whose udders had not been wiped. It was remarked that the cows tested in these experiments were kept in a condition cleanly above the average, but, even so, the results are striking. There were almost ten times as many bacteria present in the milk taken from the cows whose udders were unwiped as from those whose udders were wiped. In an unsanitary stable the result must have been much worse, and the experiment teaches the desirability of the frequent and thorough use of the brush upon the skin of the cow, and of the use of the damp cloth to cleanse the udder at milking time. It was found, however, that brushing the cows just at milking time resulted in an increased germ content of milk, and the author advises that this work be done at some other period of the day.

It was found that the first two or three streams drawn from the udder contain relatively rather a large number of bacteria, but it was found that the rejection of this fore milk did not appreciably lower the average bacterial content of the whole product, and it was thought decidedly unwise to advise the rejection of the fore milk because of the loss which such rejection would entail. It was found, however, that milk left in the udder at a previous milking tended toward an increase in the germ content of the milk at the next, and a thorough stripping of the cow gave, therefore, uniformly the best results. The careful milker, then, will find a satisfaction in a way that probably he has not thought of before.

An interesting phase of the experiment appears in the test of the individual milkers. Two regular attendants were pitted against two students who had had some training in dairy bacteriology. The

same instructions were given to all, but without exception, the students were able to present a much more creditable record than the regular attendants, in that the germ content of the milk drawn by them was decidedly lower than that drawn by the others. Cleanliness, therefore, in the habits of the milkers and intelligence in their method of work are important considerations in the effort to preserve the wholesomeness of the milk supply.

The record of the experiments in this bulletin are very suggestive. There is a vital relation between the purity of this food product and the general health of the people, and a wholesome interest is aroused in any movement making for greater intelligence in the method of its production. Mr. Stocking's conclusions are reasonable and sane. We could wish for a more widespread knowledge of the injurious influence of the presence of bacteria in the stable, and of the corresponding benefit of cleanliness, sanitation, ventilation and sunlight. There is merit in a knowledge of the conditions of health. There is a virtue in the practical application of such knowledge.

BRUCE.

P. E. ISLAND DAIRY ASSOCIATION ANNUAL MEETING.

The annual meeting of the Prince Edward Island Dairymen's Association was held in Charlottetown on the 21st of February. There was a good attendance of the representatives of the dairy stations. The address of the President, as well as the report of the Secretary, were decidedly optimistic. The increase in the dairy output last season over that of 1905 was considerable, and the high price realized for cheese and butter made the season's business very profitable. President Simpson, in his address, said the tide had turned, and dairying was again becoming popular after the setback it had suffered. It was now established on a firmer basis, and would be more intelligently and profitably carried on in future. The following figures are from the excellent report of the Secretary, John Anderson, and showing, as they do, the very material increase in the cheese business, are inclined to make patrons of the factories hopeful for another season:

Last year there were manufactured, from 22,299,012 pounds of milk, 2,116,456 pounds cheese; in 1905, 17,035,417 pounds of milk yielded 1,641,780 pounds cheese, an increase in milk supply for cheese of 5,263,595 pounds, and an increase in cheese itself of 468,676 pounds.

The gross value of the cheese for 1906 was \$257,370.13, and for 1905, \$177,291.09, an increase of \$80,079.04. The net value to patrons was \$205,692.78 in 1906, and \$137,396.93 in 1905, an increase of \$68,295.85.

In butter, the showing was not quite so good. In 1906, 9,675,718 pounds milk gave 418,350 pounds butter; in 1905, 11,116,303 pounds milk gave 481,699 pounds butter. The gross value of butter for 1906 was \$98,412.21, and for 1905, \$104,633.24, a decrease of \$6,221.03. The net value to patrons for 1906 was \$73,905.36, and for 1905 was \$78,464.37, a decrease of \$4,559.01.

Taking butter and cheese together, there has been a net increase in the total milk supply of 3,822,683 pounds; in the gross value of the output a net increase of \$73,458.01; and in the net value to patrons a net increase of \$63,636.62.

The report of Inspector Morrow showed that the factories were well managed and the quality of the output was excellent, and that, notwithstanding the extreme heat of last season, our cheese reached the English market in good condition. He said our cheese were of an excellent quality and uniform in make, and that we should now turn our attention to producing greater quantities of milk at the least possible cost.

The afternoon session was given up to a discussion of the present dairy situation, and how to still further improve and increase the business. The principal points brought out were: Improving the dairy herds by weeding out non-producers; better and cheaper feed all through the year; more liberal feeding of dairy cattle; the absolute necessity of keeping records of each cow's production; raising the production per cow to a profitable standard; keeping the temperature of curing-rooms down to near 60 degrees F.; better boxes for cheese; milk-testing (nearly all our cheese factories are run by the "butter-fat-casein test"); and freight rates on cheese, which, by the way, have nearly doubled the last two years on the P. E. Island Railway.

The old board of directors were elected. The evening session opened with an address by Professor Whitley, of the Dairy Commissioner's staff, illustrated by lantern slides giving us views of dairy stations all around the world, and giving us an idea of the methods of our competitors in the dairy business, and also of the different types of milk cows of the different countries.

The next item on the programme was a paper by Walter Simpson on "Some Pressing Needs of our Dairy Industry." The most pressing need was the production of more milk within reasonable distance of the factory, so as to cheapen

manufacture. Mr. Simpson stated that at the factory with which he was connected it cost one cent per pound of cheese to draw the milk. Another pressing need was some means to keep down the temperature of curing-rooms during July and August. Some curing-rooms, during those months last season had gone as high as 80 degrees. He advocated the shortening of the cheese season by making butter in June and October, so that our bacon industry might go hand in hand with our dairy business, as skim milk was very valuable in spring and fall to give young pigs a start.

This was followed by a most interesting and instructive address by Walter Lea, of Victoria, a noted Holstein breeder and dairyman. Mr. Lea said that, by weighing the feed of the milk cow, and valuing it at market prices, he had no trouble to get back from the cow more than its value in milk. His cows are giving him a good profit all the year round. He spoke strongly of the necessity of feeding the calf liberally in order to develop it into a profitable cow; breed would not do without feed and care.

J. R. Edwards, one of our foremost dairymen, in an address, told us how he had brought up a herd of 27 ordinary cows, of no particular breed, by good care and liberal feeding, to give him a profit of \$58 each for a year. He had done this by noting the best producers, and sending those not paying him to the butcher. Mr. Edwards buys his cows, and selects the best he can get. He also finds it profitable to buy feed when his farm does not produce enough.

The addresses of such practical men will have the effect of convincing farmers that it will pay them to feed their dairy cattle liberally, and if all the patrons of our dairy stations were convinced of this, our dairy output would soon be doubled, and the milch cows would be the best moneymakers on the farm.

There were a number of the members of the Legislature present at this meeting, and addresses were delivered by Hon. F. L. Hazard, who is interested in the condensed-milk factory here. Mr. Hazard spoke strongly on the matter of increased milk supply, and advocated the growing of mixed grain as the best food for the milk cow.

Mr. J. D. McInnis, a member of the Legislature, delivered a lively address on dairying and hog-raising.

Mr. Theodore Ross, Secretary of Agriculture, also spoke encouraging words of the dairy industry.

Your correspondent gathered from the tone of the different addresses that P. E. Island dairymen were hopeful of the future, believing that the worst was now past, and that the experience gained from their successes and failures of the past years would be a great help to them in the future in their effort to make the dairy business profitable and permanent.

"FIVE POUNDS OF FOAM."

Editor "The Farmer's Advocate":

The North Oxford Cow-testing Association is being continued a second year, the same officers being reappointed at a meeting called at the conclusion of our annual cheese meeting, held on Feb. 12th. Although the interest manifested is not so general as one would expect in a dairy section so long established, there is evidence that it is growing, that the general public is awaking to the importance of knowing just as definitely what each cow is making, or what the herd on the whole is doing. One thing that seems to work against the more general adoption of testing in this particular Association is the fact that this factory always has and is likely for some time to pay for milk on the pooling system. For that reason, too, many do not yet see any need for knowing the amount of butter-fat contained in their milk. It is gratifying to know, however, that the members of the Association who have taken an interest in weighing, independently of testing, have found that they cannot guess very accurately how many pounds a cow gives by the amount of milk which seems to be in the pail. One member puts it very pertinently when he said he had two cows, both of which filled a large pail. But when he began weighing, he found that while one gave twenty-five pounds of milk, the other gave twenty pounds of milk and five pounds of foam or air.

From my own experience for two seasons, and by careful inquiry from others, I would say that the time taken for weighing and testing each cow's milk should not exceed one-half minute each time of milking, or three minutes per month, or thirty minutes for each cow for a season of ten months. That amount of time, and, including a few minutes each month for copying sheets, figured at the present high rate of wages, should not exceed seven cents per cow per year.

Here, and I understand in other sections also, the general public do not clearly understand the object of the cow-testing associations. The individual must be got to see thoroughly that he is doing it for his own personal benefit, and not for that of the other fellow, and it certainly rests with you editors of agricultural papers to see that it is done.

A. DUNN, Secretary.
North Oxford Cow-testing Association.

THE PROBLEM OF BREEDING.

From a paper by Prof. H. H. Dean, before the Eastern Live-stock and Poultry Show.

How to profitably increase the production of the average dairy cow, is an "oft-repeated tale," yet not necessarily a "long tail." The process may be summed up in three short words—Breed, Feed, Weed.

We shall discuss in detail only the first point—Breed. We use the term in the sense of to procreate, to beget, and not as applied to some special strain of cows. There are men who become excited as soon as the term "breed" is mentioned. Men who, under ordinary circumstances, are quite sane, become insane at the very mention of "breed," hence on public occasions it is seldom advisable to discuss breed in the ordinary acceptance of the meaning of the term. Judging from the way some men talk and write, we shall soon need special lunatic asylums for persons suffering from breed mania.

This is an age of inquiry. Not many years ago the "common people" accepted as the truth what was taught them in the synagogue and elsewhere, and no one questioned the authority of the teacher. Maxims and sayings that have stood for the truth during many years are now being questioned. Have not many of us written the maxim, "Honesty is the best policy," many, many times in the old-fashioned copy-book, or as a penance for some misconduct at school? But in these modern times we are told that honesty is not a "policy"; it is a principle or axiom. The word "policy" has degenerated in its significance, now meaning much the same as "diplomacy," which latter term someone has defined as "polite lying."

At the meeting of the Eastern Dairymen's Association, held in the Capital City, January, 1907, we were told by an eminent authority that "a little learning is not a dangerous thing." We can fancy how Pope must have writhed in anguish of spirit as the truth of this saying of his was questioned.

This brings me to the discussion of the maxim which has long been considered the keystone of the breeder of domestic animals, viz., "like produces like." In a discussion of the truth or otherwise of this maxim, it is not necessary to become excited, or to say hard things of anyone who questions the wisdom of that which has so long been regarded as truth. Let us look at the facts in a calm, inquiring manner, and as seekers after the truth.

A prominent biologist tells us that everywhere he went in the domain of biological science, he was met with the barrier, "No thoroughfare.—Moses." In these modern times we frequently see barriers such as, "No thoroughfare.—Tradition." "No thoroughfare.—Public Opinion." "No thoroughfare.—Prominent Men." "No thoroughfare.—Text-books." "No thoroughfare.—Government." Notwithstanding these barriers, we make bold to question the truth of the maxim, "Like produces like."

First, we may inquire what is reasonably meant by the term. We think it fair to infer, a something which we can comprehend with our senses produces or begets a second something, which exactly corresponds with the first something in form, color, etc. If this maxim were true, there would be no variety or improvement in nature. Nature abhors sameness, but loves variety. We have only to open our eyes to realize the truth of this statement. If "like produces like," then the theory of descent, transmutation or evolution falls to the ground. According to Haeckel, "The Theory of Descent or the Transmutation Theory affirms that all organisms (viz., all species of animals, all species of plants which have ever existed or still exist on earth) are derived from one single or from a few simple original forms, and that they have slowly developed from these by a natural course of gradual change."

One of the fundamental principles involved in explaining the varied forms of life about us is "change." The poet says, "Change and decay in all around I see." A recent writer on the subject of breeding animals recognizes this principle, and seeks to explain it by what he calls "The Law of Variation." This seems a misnomer. One might as well speak of "The Law of Luck" or "The Law of Weather." We recognize that there are great variations in animal and plant life, but the causes of these are not well understood.

To bring the question more particularly to the point, we may be allowed to cite a few instances in support of the statement that good cows do not necessarily produce good milkers, which is the experience of nearly all dairymen. We may call them facts which indicate that "like does not produce like" in dairy cows. We shall give the

names of the cows, but not the breed, for reasons already mentioned.

Name of cow, and daughters or granddaughters good milkers:

Artis Kassie.—None. One daughter sold, said to have been good.

Beauty of Norval.—One that promises well.

Lisgar's Rose.—None.

Mercena 2nd.—Two.

Margaret 4th.—Two daughters, two granddaughters, and one great-granddaughter.

Patience.—None.

Rena Burnett.—One granddaughter.

All these cows, which represent three different breeds, have stood out prominently in our herd as large producers, but we see how few of their progeny have similar characteristics. Some may say this was due to the use of poor sires. That may be true, but we were supposed to be using good males.

There is great need of careful study and wise experiments on this question, which is the greatest of all dairy problems at present. Looking about for a theory or hypothesis as a starting-point, we feel that Weisman's "Germ Plasm Theory" is the best. All good practice is the result of theory, "which must always be regarded only as an approximation of the truth. It must be understood that it may be replaced in time by another and better-grounded theory. But in spite of this admitted uncertainty, theory is indispensable for all true science. It elucidates facts by postulating a cause for these."

In a word, the "Germ Plasm Theory," which may be defined as the hereditary or transmissible-stuff theory, says that before any permanent change for the better or worse can take place in animals a change must be brought about in the "germ plasm" which is transmitted from one animal to another. The possible explanation of the fact that it is difficult to get good milkers from good milkers, is that this "abundant milking quality" is an unstable characteristic—a sport. It has not become a permanent characteristic, or, in other words, has not permeated the "germ plasm" or hereditary stuff.

If this theory be correct, the only way known at present by which the dairy farmer may be reasonably sure of obtaining good milkers is to breed for the purpose and have the environment suitable for the development of desired characteristics, and continue until this acquired characteristic becomes fixed. Personally, we think that a careful study of this matter will enable the scientist to discover the laws of improvement in milking qualities of dairy cows by breeding. The science of Embryology we believe to be the key that will unlock the secret. Who will study it, and give the results of their study to the people? The main difference in results between the old and the new theory will be that good milkers will produce better milkers, in contradistinction to having poor milkers producing poor or sometimes good milkers, and good milkers producing sometimes good but more often poor milkers, as we have them at present.

NOTES FROM THE EASTERN DAIRY SCHOOL.

The Long Course of the Eastern Dairy School, Kingston, Ont., opened Jan. 2nd and closed March 7th. The staff this season is the same as in 1906, viz.:

J. W. Mitchell, B. A., Superintendent, and Lecturer in Dairy Science.

G. G. Publow, Instructor in Cheesemaking.

J. W. Stonehouse, Instructor in Buttermaking and Separators.

J. F. Singleton, Instructor in Milk-testing.

J. H. Echlin, Assistant Instructor in Cheesemaking.

J. Buro, Assistant Instructor in Separators.

Jas. Irwin, Assistant Instructor in Buttermaking.

Dr. W. T. Connell, Bacteriologist.

Dr. W. L. Goodwin, Chemist.

J. A. Craig, Engineer and Instructor in Boilers and Engines.

The staff has lately suffered a loss in the person of Mr. Irwin, who enters a new field of action as general agent for an American Separator Co.

The total registration during the course numbers seventy-one students, fifteen of whom were engaged as Syndicate Instructors during the season of 1906. There are also many very experienced makers in the class.

The students have all taken a live interest in the work during the entire course. They have received a very thorough, practical training in each department of the school, together with lectures dealing with the work of each department, as well as with general dairying, dairy bacteriology and dairy chemistry.

One of the attractive features of the course is a literary and debating society, organized at the beginning of the course, and meeting once a week.

Between forty and forty-five students are taking the practical and written examinations which are now being held. Those who are successful will be awarded a diploma by the school upon demonstrating their ability to operate a factory successfully.

WESTERN DAIRY SCHOOL NOTES.

There are thirty students registered at the Western Dairy School, Strathroy, this year, as compared with twenty-eight last year. The students are taking a decided interest in course, particularly during the closing months. They are given a written examination each two weeks in the work already gone over, and the marks received are counted in the final examination.

The examinations in practical work began March 1st, and will continue to March 22nd, when the final written examination will be given.

Special emphasis has been laid on using gram scales for weighing out the samples of cream to be tested; also the use of moisture tests for butter, in order not to get too much moisture. Webster's and Prof. Gray's methods are used. These tests for moisture have been found of great benefit to dairymen on account of their quickness, and also accuracy, compared with the drying method formerly used.

The experience of the students in cheesemaking varies from one to eight years, except in three cases of beginners; and in buttermaking, from one to six years, except in four cases.

The names of the instructors are: G. H. Barr, Superintendent; Frank Hems, instructor in milk-testing; Jas. Burgess, instructor in cheesemaking; Fred Dean, instructor in buttermaking; E. N. Hart, instructor in cream separators; Robt. Green, instructor in engineering and mechanics.

GARDEN ORCHARD.

TREATMENT OF GIRDLED TREES.

(From an address by Prof. W. T. Macoun, before the Ontario Fruit-growers' Convention, November, 1906.)

If a tree is badly girdled by mice it usually dies. If as soon as the wound is noticed it is cleaned and covered with grafting wax or some paste, such as cow dung and clay, and wrapped with cloth to exclude air and prevent the wood from drying out, there is a possibility of saving the tree if the girdle is a small one, as the sap which rises through the wood will continue to do so, and returning through the inner bark in an elaborated condition will cause growth to be made all around the upper part of the wound, and if the latter be not too large there is a chance of its healing over. If, however, the wood becomes dry before the bandage is put on, the tree will almost certainly die, although it may continue to grow throughout the season. When the wax and bandage are applied the tree should be headed back considerably to lessen the amount of transpiration of moisture, as there will not be as much sap rise as if the tree were uninjured, and the wood will thus dry out sooner than if it were headed back. If the girdle is near the ground, in addition to covering the injured part with wax, or cow dung and clay, it is advisable to mound up the soil about the tree to cover the wound, and thus help to prevent the wood from drying out.

Girdled trees are frequently saved, and more surely saved than by the above method, by connecting the upper and lower edges of the girdle with scions, which are inserted all around the trunk. The more scions that are used the quicker they will grow together and form a new trunk, but two or three scions successfully grafted on a small tree will carry enough sap to keep the tree alive. The larger the tree the more scions should be used. A slanting cut is made at each end of the wound in the uninjured wood in which the scions are to be inserted. Strong, plump scions of the previous season's growth—not necessarily from the same tree, nor even the same variety—cut a little longer than the distance between the slanting cuts, are made wedge-shaped at each end. They are made a little longer than the distance between the cuts, in order that when inserting the ends into the cuts it will be necessary to bend them, and thus have them under pressure, which helps to keep them in position. When inserting, some of the inside bark of the stock should come in contact with some of the inside bark of the scion, as it is here or at the cambium layer where union takes place. As soon as the scions are all placed, the wound, but especially about the ends of the scions where inserted in the stock, are covered with melted wax. The ends are also at the same time bandaged with a cloth around the trunk, to aid in keeping the scions in place, and to exclude the air. The tree should then be well headed back. The scions, if properly made and inserted, should soon unite with the stock and then carry the sap to the top of the tree.

Another method of bridging is to cut back the uninjured bark evenly all round the trunk and insert the wedge-shaped scions underneath the bark at the upper and lower ends of the wound. There are other methods also employed, such as using a scion bevelled at each end. Also, boring holes with an auger at each end in the uninjured bark, and shaping the scion at each end so that it will fit into it. One of the most satisfactory methods of utilizing the girdled tree is to cut it off close to the ground and insert a scion of some good variety. This graft should grow at least three feet in height the first season, and make a nice young tree.

HORTICULTURAL PROGRESS.

Prepared for "The Farmer's Advocate" by Prof. W. T. Macoun, Horticulturist, Central Experimental Farm, Ottawa.

The Culture of the English Walnut, by C. I. Lewis, Oregon Agricultural Experiment Station, Corvallis, Oregon; Bulletin No. 92.

This bulletin, under the title of "The Walnut in Oregon," is well illustrated, and treats of the culture of the English walnut (*Juglans regia*), and while the recommendations made therein are intended for the fruit-growers of the State of Oregon, something may be learned by Canadians who live in those parts of British Columbia where the English walnut can be grown with success, and in south-western Ontario, where this tree, though not quite hardy enough, is occasionally grown as an individual specimen.

The English walnut is a native of Persia, but has long been cultivated in Europe. It is not grown commercially in England to any extent, as its common name might indicate. It is not a hardy tree, and, while it stands considerable cold in the dormant condition, it is very easily injured by both cold and heat when growing; hence the districts where this fruit can be grown successfully must be without late frosts and not very hot in summer. Both leaves and young nuts are injured by great heat. The walnut will stand the winter in some parts of New York State and in the most favored parts of south-western Ontario, but at Ottawa this tree kills to the snow-line practically every year, although trees have been grown from seed imported from a cold district in Russia, from Turkestan, and from a mountain district of north-western India.

The commercial culture of the English walnut in America is confined mainly to California, but it is gradually being grown further north on the western coast, until now there are English walnut orchards of from eighty to one hundred acres in the western part of the State of Oregon. Most of the trees are still young there, but they began to bear when from four to ten years planted, and the older ones are producing good crops of nuts.

In the past many of the trees were grown from nuts of a good variety. These came fairly true from seed, but not being uniform in this respect, are not so desirable as those grown from grafted trees, hence grafting is recommended. It is recommended to graft on the black walnut or California walnut, which are hardier trees.

The soil for the English walnuts must be deep, but well drained. Stunted trees result if they are planted in shallow soils. The trees should be planted from fifty to sixty feet apart. Other fruits may be grown between the walnut trees when young. Once the trees are properly headed, practically no pruning is necessary, but good culture should be given. "The yield of nuts the first year is very light—probably four or five nuts to the tree. The second year, two to five pounds, and trees from fifteen to twenty-five years old yield as high as three bushels on the average, while old trees yield from fifteen to twenty bushels." The price paid for California walnuts in 1906 was thirteen to twenty cents a pound. The hardiest varieties are of French origin. They are Mayette, Franquette and Præparturiens, the last variety being rather dwarf, and an early bearer. The first two sorts are late bloomers, which is an advantage, as they are more likely to escape spring frosts. The English walnut can be grown successfully in some parts of British Columbia, and those who are interested in the culture of walnuts there will find this bulletin useful.

Station Novelties in Truck Crops, by Byron D. Halsted; Bulletin No. 199, New Jersey Agricultural Experiment Station, New Brunswick, N. J., U. S.

A considerable number of new varieties of vegetables have been originated at the New Jersey Agricultural Experiment Station by cross-breeding, and during the past few seasons some of these have been distributed for test. In this bulletin are described six new varieties of sweet corn, four of tomatoes, two of eggplants, and one of squash, which are considered worthy of introduction. Two cabbage and lettuce-like Chinese plants are also described. Seeds of eleven of these crosses are offered free to anyone who applies in writing, and also seed of the two Chinese vegetables. Only four packages will, however, be sent to each person, namely, one of corn, one of tomatoes, one of eggplant, and one of the Chinese plants.

The most promising corn appears to be the Malamo, a cross between the Malakhov, a very early Russian variety, and the Premo. The Malamo is almost as early as the Malakhov, and produces ears large enough for market, the Malakhov being a little too small. At Ottawa the Malakhov has proved the earliest variety tested. It is very productive, and of good quality, its fault being the small size of the ears.

The Magnerosa tomato is a cross between the Magnus and Ponderosa, two pink varieties, and is a smooth, well-shaped, pink tomato, evidently the best of the four described.

The Jersey Belle is an early-ripening eggplant spoken highly of.

There is a promising squash, a cross between the Delicious and Bay State.

The Chinese plants are called Pak-Choi and Pe-Tsai. These are loose-headed, cabbage-like plants, with leaves which blanch like cabbage-lettuce. They are prepared like cabbage or cauliflower, or may be used raw in salads. They grow well in the autumn. The Pak-Choi seems to be the better of the two.

MONEY IN APPLES.

"Do you believe in spraying?" was a question asked M. S. Schell, M. P., of South Oxford, Ont., while addressing a meeting on the subject of cold-storage warehouses. "Certainly," was the unhesitating reply. While in some seasons we may grow pretty fair fruit without spraying, as a general thing it is absolutely necessary for the production of good fruit. In his own orchard he had 700 barrels of apples, running 80 per cent. No. 1, and bringing over \$1,000. He believes orcharding pays, and, with a general system of cold storage, it would pay much better. There are great possibilities in the despised apple orchards of Southern and Western Ontario.

POULTRY.

A YOUNG WOMAN'S METHOD OF GETTING WINTER EGGS.

Editor "The Farmer's Advocate":

My hens are doing so well this winter that I believe it is owing to my method of feeding. I have only had a few years' experience, but always have had the old reliable breed of Barred Rocks—not prizewinners, but breadwinners. My pullets start to lay when about five months old, and continue throughout the winter. I find April and May the best months for hatching chickens. I have about 65 hens, consisting of yearling hens and pullets. At night, after the hens are on the roost, I scatter one handful of oats to every three hens, and sprinkle clover chaff over it, so as to make them work for their breakfast. In the morning they get all the warm, separated milk they wish to drink, and I hang mangels on nails so they will have to reach for them. At noon they get a warm mash of mixed grain, boiled potatoes and meat scraps, mixed very dry. Then, at four o'clock, one handful of barley to each hen, scattered in the litter. They always have fresh water before them, and I also give them old plaster. They are now (March 1st) laying an average of two dozen a day. In two weeks I sold 28 dozen for \$8.40. I find regularity, cleanliness and careful attention very important features in feeding hens for profit.

Wentworth Co., Ont.

SINGLE STICK.

INCUBATING DUCK EGGS.

Editor "The Farmer's Advocate":

May I answer a question that was asked in "The Farmer's Advocate" a little while ago, in regard to applying moisture to duck eggs that were being hatched in an incubator? The question was asked by "Wrinkles."

In incubating duck eggs, I sprinkle them once a day, being very careful that there is no drops of water left on them when I return the eggs to the incubator. With hens' eggs, to ascertain if they require any moisture, I wet the end of my finger and touch an egg, and if my finger sticks I apply some moisture; usually take a sponge and put in warm water, squeeze nearly dry, and then place in the incubator. If the above helps anyone in hatching, I will be very glad.

Missisquoi Co., Que.

E. H. MORGAN.

THE FARM BULLETIN.

CANADIAN ABERDEEN-ANGUS ASSOCIATION.

The second annual meeting of the Canadian Aberdeen-Angus Association was held in Brandon, Man., on February 20th, 1907. The President, the Hon. Walter Clifford, occupied the chair. There was a fair attendance. The Secretary's report for the year 1906 was in part as follows:

At the Executive meeting held in August last, the following resolutions were passed:

1. "That all animals passing inspection, that have been recorded in what was known as the Canadian Polled-Angus Record, may be recorded in the Canadian Aberdeen-Angus Record free of charge, by members resident in Canada, prior to January 1st, 1907, after which date the fee shall be \$1 per head."

The spirit of this resolution was carried out. Owing to some herds not having been inspected in time to allow the owners to apply for registration before the date specified, exceptions have been made in such cases, so as to place all members on an equal footing.

2. "That transfers should be issued free, when presented for record within ninety days from the date of sale, and that for transfers presented for record

after ninety days from date of sale, a charge of \$1.00 each would be made."

Mr. James Bowman, of Guelph, Ont., having been recommended as official inspector, under clause 9, reported at the August meeting upon all work done up to that date, principally in the West, and at the February meeting he submitted what is practically a final report of his inspections throughout Canada. The individuals in every herd containing animals recorded in what was known as the Polled-Angus Herdbook of Canada, have been personally inspected by Mr. Bowman, and careful notes made of the characteristics of each animal. From these notes, forms (as per sample) were filled out, giving name, sire, dam, and their numbers, breeder and owner, age and markings, and the notation "eligible" or "not eligible," as the case might be. These reports were then finally passed on by the Executive, and returns made to the Registrar for his guidance. In doing this work, the inspector tried to keep the future of the Angus breed constantly in mind, and to be absolutely impartial. He was, perhaps, most severe on young bulls, culling out animals of even fairly good individuality when descended from parents lacking in modern Angus characteristics. With young females he was not so severe, and much more lenient still with old animals, especially when the progeny were possessed of fairly good form.

The number of breeders visited by Mr. Bowman was 86, and the number of individual animals reported on 693, of which 199 were rejected, and 497 were recommended for registration.

The Registrar reports for the year ending December 31st, 1906, 103 registrations, and 1,171 recorded ancestors to complete pedigrees, making a total of 1,274. The membership for the year totals 44.

The financial statement of accounts for 1906, which was adopted, showed: Receipts, \$391.72; expenditures, \$38.12; leaving a balance on hand of \$353.60.

Summary of members by Provinces: Alberta, 8; Manitoba, 18; Saskatchewan, 6; Ontario, 12.

The Secretary read a letter from Mr. James Sharp, of Rockside, Ont., calling attention to the fact that a fee of 25 cents was being charged by the Registrar for certificates of all animals that came in for free registration under the constitution. The Live-stock Commissioner explained that this fee went towards the expenses incurred in the Registrar's office, and was customary under similar circumstances with all other record associations.

On motion of Mr. S. Martin, seconded by Dr. Elliott, clause 21 in the constitution was amended to read as follows: "That for transfers presented for record after 90 days from date of sale, the fee shall be \$1.00."

Mr. Martin moved a resolution, that clause 6 in the constitution be amended, limiting the time for free registration of animals now recorded in the American Herdbook until the end of 1907. This was seconded by Mr. Collyer and carried.

ELECTION OF OFFICERS.

President, S. Martin, Rounthwaite, Man.; Vice-President, Jas. Bowman, Guelph, Ont. Directors—Hon. Walter Clifford, Austin, Man.; J. D. McGregor, Brandon, Man.; Chas. Ellett, Strathcona, Alta.; Jas. Sharp, Rockside, Ont.; J. F. Collyer, Welwyn, Sask. Representatives to the Canadian National Live-stock Association—The President, S. Martin, and the Vice-President, Jas. Bowman. The appointment of Mr. Jas. Sharp by the Eastern breeders as representative to the Toronto Fair Board, was unanimously endorsed.

A PROSPEROUS, HAPPY PROVINCE.

Editor "The Farmer's Advocate":

Here are some of the things I noticed in travelling through Ontario on Institute work: That farmers are appreciating their inheritance and concentrating their intelligence and energy to produce a better quality of finished product in live stock and dairy. In that way they improve the fertility and production of the soil, and make Ontario a more desirable country to live in. It is now considered that this Province has as many of the necessities for comfortable living as any part of this country, if not the world, and by producing more money it will retain its own people as well as attract others. By reason of its great motor-power opportunities and mineral wealth it will sustain a very large population to consume its agricultural products, and in that way always be as it now is, the Banner Province of this great Dominion.

In dairying districts the advanced-register cow is popular, and many dairymen are largely increasing the profit in their business, by better breeding, as well as feeding and caring for the cows. Alfalfa is being grown for soiling, pasturing and hay for cattle and hogs. Everywhere the horse is popular, being considered a necessity as well as a profitable product. The draft horse is the class most desired, and the majority of farmers are seeking the Clydesdale, believing the high-class Clyde the most desirable animal to produce for use and profit.

Bruce Co., Ont.

J. STANDISH.

According to the annual report of the Bureau of Industries for Ontario for 1905, the market value of farm crops in Ontario for the five years, 1901-1905, was greater than that for the five years, 1896-1900, by fully \$150,000,000. Prosperity in agriculture means prosperity for the people as a whole.

STIRRING REPLY TO MR. KIPP.

Editor "The Farmer's Advocate":

It was with considerable interest that I read Mr. W. H. Kipp's paper on "Rural Public Schools," published in February 28th issue. As one who is engaged in public-school work, and who knows something of the work, I beg leave to make a few remarks in reply to Mr. Kipp.

First of all, he speaks of the expense of sending a child to a high school. He says that it will cost about \$400 for the high-school course! Well, if it is not worth \$400, and many times that sum, for the education he receives to better fit him for life, no matter what his vocation, it is not worth a cent. What use is a man, even a farmer, without an education? Our grandparents, and perhaps parents, could do without a high-school training, but in this great commercial age the educated man is the one who leads and is most respected, and in the future the need will be greater than in the past. So, I say, if at all possible, give the boys and girls a year or two, and more if possible, in the high school. The broad education of such a school exactly meets the requirements of life in its varied aspects.

Next, he speaks of the need of the child being at home during these formative years. To this I would say, that when the high school is from five to six miles from home, the pupil nearly always goes home on Friday night and stays till Monday morning. He is thus about one-third of his time at home during the school months, and all the holidays. Besides this, a great majority of the pupils of the school are from the country, and they are not going to cast aside the country, home and parents as "too slow." Instead of that, they are proud of their homes, and quite frequently take their less-favored town friends out on Friday night to spend Saturday and Sunday with them. Is this not the case? I think our worthy correspondent was stretching his imagination when he said that high-school pupils consider father and mother and home "too slow."

Now, with regard to the remedy he suggests—from his letter I should judge him to be either a bachelor or else a husband without children, for he certainly seldom visits the school. The idea of him suggesting that the rural teacher bring pupils to a standard qualifying them to teach a public school, when the cry is that even high-school trained pupils are often incapable of giving the necessary and all-important guidance needed to train these young lives entrusted to their care, especially when 90 or 95 per cent. of them never get any more schooling! What we want is the very best qualified teachers we can get, and that is why the Government passed the familiar law in 1906, to retain the services of these men and women in the teaching profession, who, on account of their ability considered themselves worth more than from \$275 to \$400 a year. No, no, we don't want public-school pupils teaching in our public schools. Just think what the outcome would be!

Mr. Kipp speaks of high-school pupils "being compelled to waste their time on useless subjects, as Latin, French, and a host of other things." In this connection I may say that before one can properly understand the English grammar and literature which he speaks about, he must have some knowledge of the grammar and literature of other languages, and especially the languages he mentions, since so many of our words come from them. And much more before he can teach the English subjects, he must acquaint himself with the foreign ones. I would like to ask Mr. Kipp, how a child who has had two or three years in a public school after passing the entrance examination, and at the age of fifteen or sixteen, is able to teach bookkeeping, commercial law, mathematics, etc., etc. (these subjects which he suggests)? His suggestion is nonsensical.

And now, in closing, I would like to say that if Mr. Kipp knew anything at all of the work now required of the rural teacher, with all the classes from the first to the entrance class, he would not suggest giving any of this high-school work he mentions. I would suggest that Mr. Kipp take a half holiday once in a while and visit the local school. It would do him ever so much good. "MAC." Middlesex Co., Ont.

FIFTY YEARS A THRESHER.

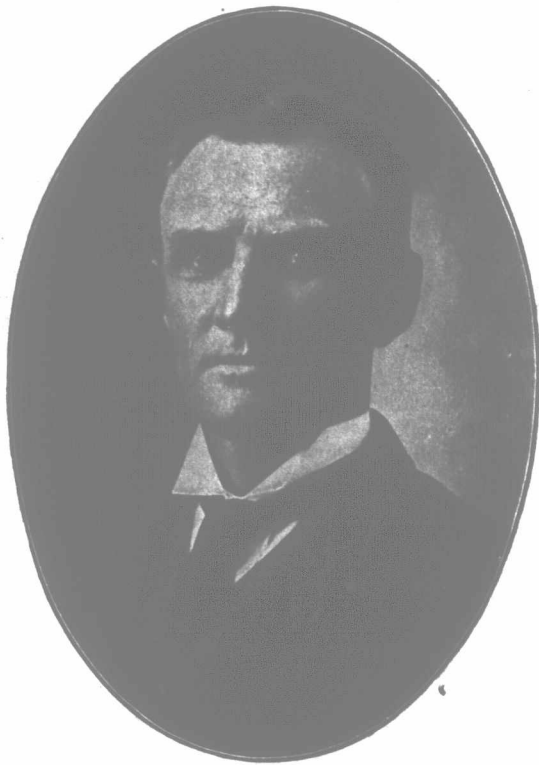
To have served his community in the capacity of a thresher for fifty years, without accident to the life or limb of himself or his workmen, and without accident to the property of his patrons, is the splendid record of Charles McMonies, of the Township of East Flamboro, County of Wentworth, Ontario. Mr. McMonies was among the earliest to introduce the steam thresher into the community. Before starting to use the engine he spent considerable time in the shops of the builders learning its construction and the best method of its operation. This, together with his untiring vigilance, enabled him to use one engine for twenty-seven successive seasons, and to put it into winter quarters at the close of last season in as efficient a condition as it was a quarter of a century ago. In everything Mr. McMonies has been very cautious, on the principle that an ounce of foresight is worth a ton of regrets. He was a successful farmer also, and a reader of "The Farmer's Advocate" almost since its founding. He has been a man of his word, and punctual in his engagements; accordingly, his patrons honored him by giving him a fine banquet. The one hundred and fifty

guests discussed the spread as only hearty farmers and their wives can. The supper over, Mr. and Mrs. McMonies were presented with an appreciative address and two easy chairs. Mr. McMonies' reply was characteristic of the man, full of true feeling and to the point. "If ever there were any clouds in the threshing business," he said, "I see the silver lining to-night. I have been with you all these years, and I don't believe that I have an enemy in the world." J. A. Wentworth Co., Ont.

KING'S COUNTY, N. B.

Like our friends in the West, we are having a pretty hard winter. With the exception of about two weeks at Christmas of mild weather, it has been all winter right through, with snow enough for hauling, so that farmers have their wood up and ice stored in good time.

The shortage in last year's crops is now seriously felt. Hay is scarce and high; a good many carloads have been brought in, mostly from Shepody and Westmoreland marshes, and sold from \$11 by the car to \$15 as a retail price for the greater portion of it, and farmers are buying a lot of it; some that have never bought any being required to purchase from 20 to 40 tons rather than sacrifice their stock. Millfeeds are also high, the long haul down from Ontario and the West adding to the price, making middlings \$26, and other feeds in like proportion. Oats are selling at about 50c., and as there was a large shortage a good many will be required for seed as well as feed. Nothing is doing in potatoes. Farmers are getting 30c. per two-gallon can for milk for St. John trade, and butter from 24c. for dairy to 26c. and 28c. for creamery best. Hens are not doing so well as some other years, owing



William Laidlaw, Guelph.

President Ontario Fairs and Exhibitions Association.

no doubt, to the high price of eggs, but are starting in now to do better. Not much is doing in horses at present, more than a general trading, with good ones always in demand. Our Government have decided to import a number of brood mares to improve the stock of the Province, but do not seem to have fully decided on the class of horses to buy as yet. Good beef is now hard to find. Common sells readily at \$7 to \$8 per hundred, with pork at \$9 to \$10.

In closing, some mention of the retirement of Mr. J. D. Frier from the management of the Maritime Dairy Co. may not be out of place. Mr. Frier came here some years ago but a youth, and from the first made a place for himself in dairy work and business circles. He seemed tireless in creating factories where there seemed to be at best but a poor prospect for milk, but John D. went ahead and made money, and woke the farmers up to do better work than they had ever done. More cows were kept, more interest taken in stock, more work done, stock was better cared for, more milk made, and more money too, and farmers realized in many back places that, although their lumber was going or gone, they could make their cows largely take its place, and bought separators, so that to-day there are hundreds and hundreds in use in the territory he covered. As manager of the Maritime Dairy Co. he pushed its business, not only over his own Province, but also Nova Scotia and Newfoundland as well. Mr. Frank Tilley, the new manager, is too well known all over the Province to need any recommendation as to his capability of managing this company.

The Provincial Dairy School is now in session, under Messrs. Mitchell and Daigle. X.

NEW SCHOOL LAW.

Editor "The Farmer's Advocate":

Great discussion and criticism have been called forth by the new school law in the recent amendments to the public school acts. No doubt the amendments are open to improvement. Possibly they may be a trifle arbitrary and drastic in the sudden demand for such expensive equipment and improvements, which some inspectors may unwisely push to an extreme this first year. It would seem fairer that the teachers' salaries should be graded, not solely by the assessment, but also by the attendance, and by the efficiency and qualification of the teacher; but certainly it is a forward step in the right direction, and one that was absolutely necessary to maintain the standard of our schools.

The farmer invests money ungrudgingly in barns and houses, with up-to-date improvements; he knows it will not pay to engage the cheapest untrained workmen to design or build these structures; he has the latest and most expensive agricultural implements to work his farm; surely he should not grudge the few extra dollars revenue required to engage the most efficient teacher to educate and build up the characters and minds of his boys and girls!

If necessity demands it, he pays heavy bills to doctor or druggist, to nurse or dentist; to the teacher or minister who strive to meet the intellectual and spiritual needs of his family, he doles a pittance, while if the teaching and guidance of these two faithful public servants had been carried out, there would have been a wonderful saving in the former bills. But humanity is so short-sighted it values physical comfort and indulgence more than higher development and education; and many prefer to pay from \$1 to \$10 to a doctor to come in and give an opiate to ease suffering, that might have been avoided by a common-sense observance of the laws of hygiene as taught by a wise teacher in our public schools.

In proportion to the cost of education and proper equipment, no profession meets with so little financial return and appreciation as that of the teacher, or the minister of the gospel, and yet what would our country be, or stand for, without our schools or churches?

We cannot expect men and women of culture and ability to stay in a profession at the salary of a day laborer. The cost of living is higher now, and a teacher cannot keep up and meet the demands of his work without books, outside helps, and the wider outlook, gained by conventions, travel and study. As a people we Canadians are too practical, look so closely at the dollars and cents that we lose the beauty and the pleasure that comes from the development of the true man. So practical that we are impractical, for those men and women who have done the most for the world, who have best advanced its real interest, have been those who have had the highest ideals, who have patiently pressed on in face of opposition and discouragement to the highest principles of truth and right. May our Canadian people to-day stand firm for the highest interests of the home.

A CANADIAN MOTHER.

TOO MANY LOOKING TO SCHOOL TEACHING.

Editor "The Farmer's Advocate":

Letters lately published in "The Farmer's Advocate" force one to conclude that to some people the teachers' salaries question has been exceedingly interesting. Vox Populi, whether or not he considered himself Vox Dei, could not have been so far astray in his attitude toward the law as his opponents imagined, seeing the Government decided to change it considerably. When the wages of any trade or profession are below the natural level, the trouble is that too many have been attracted to the line. When a number get disgusted with the low wages and quit the work for something that "pays better," the wages of that occupation rise as the supply of workers is diminished. Does not "One School Ma'am" support this theory, by her remark that in some places salaries have been raised because teachers could scarcely be procured?

If the Government forced teachers' salaries above their natural level by fixing the amount, too many young people would be tempted to prepare to be teachers by the chance of the prize, while the number of schools would remain the same.

If there is no money in school teaching, and if it costs so much to become a teacher, why do so many men use this means to obtain money to put themselves through University? What is the reason that a number of young men are working in city stores for low wages, when they might earn more at something else? They are paying a big price for the dignity of a white shirt. Many young persons have put a premium on school teaching, and have paid dearly for it, while the demand in some other lines is not nearly supplied.

If it is money you want, go where you get most. Your occupation can make you neither better nor worse than you really are.

Sandy Fraser says he "kens weel that silence is the most effectual way o' disposin' o' a troublesome creetic," but in this case he has not taken the most effectual way, according to his own statement.

Vox Populi's opponents seem to think that school teachers are the only ones who begin on small salaries. I had a friend in Toronto who had a good education and some experience, yet when I first knew him he paid his whole salary out for board, and the Government did not say a word.

I fail to see how the law would have made better

teachers. It does not prove that a man will be a good teacher because he is willing to spend his lifetime teaching if he can make five hundred a year at it. Neither will a man be necessarily a poor teacher because he intends to use the profession as a stepping-stone to something better.

The remarks of "One School Ma'am" bring to mind what was once spoken by an Irish philosopher: "If other people could see themselves as we see them they would make fewer blunders." She tells us that Vox Populi either forgot or never studied Euclid, and with the same penful of ink writes: "Wages have increased because teachers could not be got." But the law of supply and demand. Tut! "Plato thou reasonest well." A little further on she reasons thus: "Wave a red rag at a bull, but don't talk boarding-house to a teacher." Fine logic. I once tried the experiment with a bull, and it lowered its head and began to bawl. Some day I'll experiment with a teacher. She tells us to think of the moral qualities of a teacher. If we can get teachers with good morals we will, and their morality is a valuable asset, but the same rule applies to many other callings. What about the hired man on the average Ontario farm, with whom the farmer's children, especially while young, spend considerable time when playing about the fields and farmyard? Are not most farmers willing to pay a few dollars more per year to the man who is a decent fellow and a fit companion for his children in their early days?

'Tis true teachers have their troubles, and I do not envy them their jobs at any price, and I hope the young people will not in the future be so struck on teaching, but take up some other lines that pay better. Then the salaries of teachers will naturally rise, and they will be able to make a good living without any humiliating hand-out from the Government.

Perhaps it is ungentlemanly for a man to attack a lady through the press, but "All's fair in war, and—er—a—some other things." HAYSEED.
Brant Co., Ont.

DEVELOPMENT PLANS IN TEMISKAMING.

Editor "The Farmer's Advocate":

Development of this district is engaging the attention of the average settler. Here at present the question is, which is the best and most economical plan possible for development. Several of the settlers advocate the amalgamation of four of the present six-mile square townships into one township. This, I believe, would be favorable for economy of administration, as it certainly would require less per capita to transact the business. Another question will be how we are going to procure the actual settler, the man who can be relied upon to become a permanent settler? The method we are proposing generally is to persuade the Ontario Government to so amend its laws that

every farm in every organized township be assessed equally for all statute labor and improvements, erecting of schoolhouses, etc. This means exempt taxation on improvements, and so encourage more improvements. This method would entice the laggard or the non-progressive to start and improve. If the non-resident did not pay his taxes for the first or second year, it is proposed to allow the municipal councils to attach the back taxes with interest to each farm in arrears, with proper notification. If taxes still were not met, let those farms be sold for the indebtedness against each by the homestead inspectors. This plan would be the means of getting each farm to pay its equal share, and the development of each township marching forward. Under this scheme, how about the permanent settler? This can be arranged by the settler who has friends that wish to get a farm here. Let them vouch for the intending purchaser as being worthy or capable of receiving the application. Let other good men that wish a location be vouched for by the mayor, reeve, etc., where their present abode is situated. No matter what country the applicant for land came from, he would find here residents from that country, who could inquire or examine his credentials. This system may be applicable to all those townships which have been previously located, but for the other townships that have not as yet been located, I believe that the best plan would be to abolish the six months a year residence clause, and substitute permanent residence.

Temiskaming, Ont. NEIL A. EDWARDS.

Eastern Ontario Live-stock and Poultry Show.

On Tuesday, March 5th, His Worship, Mayor Scott, of Ottawa, in a neat speech declared the Eastern Ontario Fat-stock and Poultry Show open to the public. The show this year, for the first time, was held in the new steel and concrete building, in Lansdowne Park, a building that has cost the people of Ottawa many anxious moments, and many good Canadian dollars, but, in spite of its two collapses, it is certainly up this time to stay. The building is 125 by 245 feet, two stories and a basement—a perfect structure for the purposes for which it was intended, with ample floor space for the various exhibits of live stock, and leaving abundance of room for thousands of visitors, while the lighting, heating and ventilation is perfect, and with the large space now used for operatic purposes thrown into an arena, no more ideal building could be imagined for the holding of a combined fat-stock, poultry and horse show, something we expect to soon see an accomplished fact. Approximately the building cost \$40,000, a sum that could surely be raised in Toronto for the erection of a similar building for the holding of the annual horse shows, and other purposes. Wake up, Toronto! The second floor is used entirely for the poultry show, declared by those who know to be far away the best show ever held in Eastern Ontario, some 1,700 birds being on exhibition, representing aristocracy of all the various breeds of poultry in its giddiest forms, many of which were from Western Ontario.

The cattle exhibit is on the first floor, which is of concrete, and a better arrangement for the health and comfort of the animals, and the cleanliness and ease of inspection of exhibits we have never seen. All told there were some 280 head of cattle on exhibition of the various breeds, including the pure-breds for sale. In the beef classes there are 18 Shorthorns, 15 Aberdeen-Angus and Galloways, and 25 grades or crosses; many of them high-class animals, a number of the others of the nondescript sort. In these classes the prizes were awarded as follows:

PURE-BRED SHORTHORNS.—Steer, 2 years and under 3, 1st, 2nd and 4th to Shortridge & Armstrong, Fergus, and 3rd to Reid & Co., Hintonburg. Steer, 1 year and under 2, 1st, 3rd and 4th to Shortridge & Armstrong; 2nd to Reid & Co. Steer under 1 year, 1st to Shortridge & Armstrong; 2nd to Reid & Co. The female classes were decidedly a stronger lot. Cow or heifer, 3 years and over, 1st to Shortridge & Armstrong; 2nd to James Leask, of Greenbank. Heifer, 2 years and under 3, 1st to Peter White, Pembroke, on a beautiful roan, fit to grace any show-ring; 2nd to Shortridge & Armstrong. Heifer under 1 year, again Peter White brought out an easy winner, in the Toronto junior winner of last fall; 2nd, J. Leask.

HEREFORD AND ABERDEEN-ANGUS CLASS.—No Herefords came out for honors, but Shortridge & Armstrong had out a really nice bunch of Aberdeen-Angus. There being no other competitors, they of course carried off all the prizes.

GALLOWAY AND DEVON CLASS.—No Devons were out, thus leaving a bunch of Galloways, shown by Col. McCrae, of Guelph, to appropriate all the awards, but competition would have had to be exceedingly strong to take away honors from the hardy blacks, so high a class lot were they.

GRADES OR CROSSES.—In this class competition was the strongest of the beef classes, and some really good stuff was brought out. In steers, 1 year and under 2, J. Leask had things his own way on a pair of nice, smooth steers, winning 1st and 2nd. Steer, 1 year old, 1st and 2nd to J. Leask; 3rd to Shortridge & Armstrong; 4th to R. Reid & Co. Steer under 1 year, Leask again secured the first and second awards, 3rd went to Reid & Co. Cow or heifer, 3 years and over, 1st and 3rd, J. Leask; 3rd, Shortridge & Armstrong; 4th, Reid & Co. Best 3 export steers—this

class brought out some nice, smooth, growthy steers—1st and 2nd went to Shortridge & Armstrong; 3rd and 4th to Reid & Co. Special for grade steer, sired by a pure-bred Shorthorn bull, prize donated by the Shorthorn Breeders' Association; all the prizes went to J. Leask. Judges—James Smith, Rockland, and B. Slattery, Ottawa.

SWINE.

The swine exhibit was probably the strongest of any of the classes. Comfortably housed in the basement, where everything was conducive to their comfort, with plenty of room and light for the judges and spectators, the situation was quite a contrast to what we have experienced at Guelph. Numerically, there were 18 Berkshires, 54 Yorkshires, 21 Tamworths and 16 Chester Whites, besides 41 grades or crosses. The awards, as handed out by Messrs. R. H. Harding, Thorndale, and Wm. Jones, Zenda, appeared, from the surface at least, to give general satisfaction, and were as follows: Three export bacon hogs (pure-breds), 1st, 3rd and 7th, J. Brethour, Burford; 2nd, 4th and 8th, J. Featherstone & Son, Streetsville; 5th, D. Barr, Jr., Renfrew; 6th and 9th, R. Reid & Co. Three bacon hogs, grades or crosses, 1st and 4th, H. Stewart, Burford; 2nd and 5th, Featherstone; 3rd, Robt. Clarke, Ottawa. Three best export bacon hogs, pure-breds or grades, J. Brethour. Special offered by the Wm. Davies Co., Toronto, for best pen of four Wiltshire bacon hogs—1st, J. Brethour; 2nd, J. Featherstone; 3rd, Robt. Clarke.

BERKSHIRES (pure-breds).—Barrow, 6 months and under 9—Snell & Lyons, Norval, won all the prizes. They also won all in class for barrow under 6 months. Sow, 6 months and under 9—Snell & Lyons, 1st and 2nd; Reid & Co., 3rd and 4th. Sow under 6 months—Snell & Lyons, 1st, 2nd and 3rd; Reid & Co., 4th and 5th.

YORKSHIRES (pure-breds).—Barrow, 6 months and under 9—1st and 2nd, J. Featherstone & Son; 3rd and 4th, J. Brethour. Barrow under 6 months—J. Featherstone, 1st and 2nd; J. Brethour, 3rd and 4th. Sow, 6 months and under 9—Brethour, 1st and 4th; Featherstone, 2nd and 3rd. Sow under 6 months—Brethour, 1st and 4th; Featherstone, 2nd and 3rd.

TAMWORTHS (pure-breds).—R. Reid & Co., being the only exhibitor, secured all the prizes. The same thing happened in the Chester White class, Robert Clarke, Ottawa, being the only exhibitor.

GRADES OR CROSSES.—Barrow, 6 months and under 9—Featherstone, 1st; H. Stewart, 2nd and 3rd. Barrow under 6 months—Featherstone, 1st and 3rd; Stewart, 2nd. Sow, 6 months and under 9—Featherstone, 1st and 2nd; Stewart, 3rd and 4th. Sow under 6 months—Stewart, 1st and 2nd; Featherstone, 3rd and 4th.

SHEEP.

For strictly high-class stuff, the sheep exhibit easily won out, but, strange to say, every exhibitor was a Western Ontario man. Just why the sheep-breeders of Eastern Ontario—and there are not a few of them, and some of the best flocks in Canada within reasonable distance of Ottawa—should decide to stay at home, and let their fat-stock show look out for itself, we are unable to understand, but this holds good in the cattle classes as well—certainly this is not as it should be. Cooperation among the Eastern breeders, and a determination to make the Ottawa show a success, will not assuredly result in a show second to none.

SHORTHORNS brought out some choice representatives from the flocks of John Jackson, of Abingdon, and Telfer Bros., of Paris. The awards, as handed out by Prof. Day, of Guelph, were pretty evenly distributed with a slight balance in Telfer Bros.' favor. Best 3 export steers, R. H. Harding, of Thorndale, his own way, and, of course, carried off

a pocketful of the coveted red, blue and white ribbons. G. and W. Parkinson, Framosa, being the only exhibitor out with Lincolns and Leicesters, had no one to quarrel with over the ribbons. Same in Hampshire; Telfer Bros. looked lonely, as they hauled the meek and lowly lambs out before the critical eye of the judge. Again was the same thing repeated in Oxford Downs, with W. E. Wright, of Glanford, as the only exhibitor, and in Cotswolds, with Snell & Lyons continually holding out the hand for a ribbon. In Shropshires the monotony of single blessedness was broken by a little competition between W. E. Wright and Lloyd-Jones Bros., Burford, with the latter getting a trifle the best of it in the female classes, and Wright evening things up in the wether classes. In the grade classes Lloyd-Jones won one first, two seconds and one third; Parkinson won two firsts, and A. G. H. Luxton, of Milton, one third.

As an educational feature of the show, and one that commanded great deal of attention, was a display of noxious weeds, and seeds of the same, from the Department of Agriculture, Ottawa, including a large number of dried and mounted weeds (all of which are disturbers of the peace of mind, and a destroyer of the revenue of the Ontario agriculturist), with the common and technical name of each attached. The Seed Department was well filled with exhibits of the various grains, grass seeds, seed corn and potatoes.

To say that the show was a success is saying no more than the conditions warrant, and there is no reason why the Ottawa show should not grow to the same proportions and importance as the Guelph show, and with the energy, ability and push of such a man as Mr. J. C. Smith at the head of affairs, we certainly look for improvement all along the line another year.

THE DAIRY-COW TEST.

The entries of cows for the two-day dairy test were fewer than usual at this show. In all fifteen entries were made, and only 11 head made sufficient points to qualify them for prize money. Only one Ayrshire and one Shorthorn were shown, and neither of these reached the requirements for the premium. It was expected that a carload of Ayrshires would be sent to the show from Howick, Que., but an important sale transaction changed the programme. The cows which qualified for prizes included three Holstein cows, four grade cows and four grade heifers. The highest score was made by the Holstein cow, Lady Colantha De Kol, owned by Mr. N. Sangster, of Ormstown, Que. She gave in the two days 134.7 lbs. of milk, testing 3.1 per cent. of fat. The following table shows the product of each in the competition:

Name.	Owner.	Lbs. milk.	% fat.	Points.
Holstein cows, 42 months and over—				
Lady Colantha De Kol	N. Sangster, Ormstown, Que.	134.7	3.1	130.78
Midsummer of Maple Grove:				
N. Sangster, Ormstown, Que.		141.6	2.8	129.16
Boutje Paul	N. Sangster	435.5	2.9	126.52
Grade cows, 42 months and over—				
Roan	Reid & Co., Hintonburg	111.3	3.2	109.3
Pale Face	Reid & Co., Hintonburg	95.3	3.7	109.32
Jane	T. A. Spratt, Billings Bridge	74.2	3.6	89.42
Flora	T. A. Spratt	71.7	4.0	88.86
Grade Heifers—				
Maggie	N. Sangster	87.1	2.6	83.92
Gip	T. A. Spratt	77.9	3.2	80.08
Minnie	Reid & Co.	76.8	3.4	78.88
Tena	N. Sangster	76.7	2.9	71.50

DRESSED CARCASSES.

Probably oftener than usual the animals that won the highest awards alive also won in the dressed carcass classes. In the pure-bred cattle classes, 1st, 2nd and 3rd went to Shortridge & Armstrong; 4th and 5th to R. Reid & Co., all being Shorthorn carcasses. In grades or crosses, 1st, 3rd and 4th again went to Shortridge & Armstrong; 2nd to J. Leask (second here won first alive); 5th went to J. Barnett, Brooklin (this was not placed alive).

SHEEP CARCASSES.—Snell & Lyons won in Cotswolds; Parkinson in Lincolns and Leicesters; R. H. Harding in Dorsets; Telfer Bros. in Hampshires. In Southdowns, Jackson won 1st; Telfer Bros. 2nd (these were the same as alive). In Shropshires, W. E. Wright won 1st; Lloyd-Jones 2nd and 3rd, and A. G. H. Luxton 4th. Grades or crosses went exactly the same.

SWINE.—Three pure-breds—1st and 9th went to J. Brethour, the first being the same that won alive; 2nd and 3rd to R. Reid & Co. on Tamworths, that won 6th alive; 5th and 8th to D. Barr; 6th and 7th to Featherstone, they being 2nd alive. Three grades or crosses—1st and 2nd to H. Stewart; 3rd to Robt. Clarke, and 4th and 5th to Featherstone. Sweep-stake for three best, any breed, went to J. Brethour.

LECTURES.

The lecture programme was this year for the first time given in a building planned and constructed for the purpose. Since the public were generally informed of this, it was expected that there would have been a large attendance throughout the fair, but until the afternoon of the third day the audiences were very slim indeed. The addresses were usually interesting and well delivered, and appreciated by those who heard them. Unfortunately, the lecture room is situated in close proximity to the poultry department, and separated from it by only a wooden wall. This arrangement will have to be remedied before another fair is held, because the noises of the fowls very often quite drowned out the voices of the speakers, to all except those in the immediate front seats. The pavilion is exceedingly well planned, and without the annoyance of the fowls would have proved an exceedingly suitable place for the addresses.

A review of the lectures will appear next week.

EXPERIMENTS WITH FARM CROPS.

The members of the Ontario Agricultural and Experimental Union are pleased to state that for 1907 they are prepared to distribute into every township of Ontario material for experiments with fodder crops, roots, grains, grasses, clovers, and fertilizers. About 2,000 varieties of farm crops have been tested in the Experimental Department of the Ontario Agricultural College, Guelph, for at least five years in succession. These consist of varieties from nearly all parts of the world, some of which have done exceedingly well in the carefully-conducted experiments at the College, and are now being distributed free of charge for co-operative experiments throughout Ontario. The following is the list of co-operative experiments in agriculture for 1907:

Table with 3 columns: No., Experiments, Plots. Lists various crop experiments like 'Three varieties of oats', 'Three varieties of six-rowed barley', etc., with corresponding plot numbers.

The size of each plot in each of the first twenty-seven experiments, and in Nos. 29 and 30, is to be two rods long by one rod wide; and in No. 28, one rod square.

Any person in Ontario who wishes to join in the work may choose any ONE of the experiments for 1907 and apply for the same. The material will be furnished in the order in which the applications are

received until the supply is exhausted. It might be well for each applicant to make a second choice, for fear the first could not be granted. All material will be furnished entirely free of charge to each applicant, and the produce will, of course, become the property of the person who conducts the experiment.

C. A. ZAVITZ, Director.

Ontario Agricultural College, Guelph.

THE WOODSTOCK CLYDESDALE SALE.

The auction sale of Clydesdale mares and fillies, at Woodstock, Ont., on March 8th, recently imported by Messrs. Innes, Schaefer & McClary, was largely attended. The importation was of very creditable quality, the bidding for them brisk, and fair prices were realized, considering that a considerable number were quite young. Capt. Robson cried the sale, and disposed of the stock in short order, the demand for mares evidently being greater than the supply. There were not buyers present for the stallions, and these are held for sale privately. Following is the sale list:

Table listing various Clydesdale mares and fillies with their ages and prices, such as 'Lady Niven, 2 years; E. Dennis, Maplewood...\$480', 'Miss Guild, 4 years; J. Johnston, Ingersoll... 440', etc.

38 mares and fillies sold, average ...\$287.10

ARTHUR JOHNSTON'S SALE.

The dispersion sale, on March 6th, of the noted Greenwood herd of Shorthorns, belonging to Mr. Arthur Johnston, of Greenwood, Ont., attracted a very large attendance of breeders and farmers from many districts. The cattle were in excellent condition, and of a superior class, fully realizing the expectations of prospective buyers. The sale was admirably conducted by the proprietor and the auctioneers, Captain Robson and Mr. Geo. Jackson, the bidding was brisk throughout, and the prices, on the whole, satisfactory, the forty head sold totalling nearly \$8,000, and averaging close to \$200 each; the highest price being \$485 for Lavender 47, purchased by Hon. W. C. Edwards, Rockland, Ont. Generous hospitality was dispensed by Mr. Johnston, and the host of friends who honored him with their presence at the sale, evidenced by their patronage their appreciation of his useful work in the interest of the noble breed of cattle he espoused in the years of his early manhood. Following is the sale list:

Table listing various Shorthorn cattle with their ages and prices, such as 'Carnation Queen (imp.), 5 years; Peter White, Pembroke...\$330', 'Lady Anne 8th (imp.), 4 yrs.; John E. Disney & Son, Greenwood... 300', etc.

Table listing various other cattle breeds and their prices, such as 'Lavender 43rd, 6 years; Reid Bros., Walter's Falls...\$290', 'Lavender 47th, 1 year; W. C. Edwards & Co., Rockland... 485', etc.

Total prices for females sold at the sale...\$6715.00
Average price for females ... 209.85

BULLS.

Table listing various bulls and their prices, such as 'Royal Bruce (imp.), 3 years; R. J. Doyle, Owen Sound...\$360', 'Lord Clare, 2 years; William Smith, Columbus... 115', etc.

Average for 8 bulls sold ...\$147.50
Average for 32 females ... 209.85
Average for 40 head sold ... 197.25

MERCER'S CLYDESDALE SALE.

At the auction sale of imported Clydesdales, the property of Mr. Thos. Mercer, at Markdale, Ontario, on March 7th, a large attendance of farmers assembled, and the demand for heavy-draft mares and fillies was keen, and fairly good prices were realized. The three-year-old stallion, Ardlamont, was sold for \$1,570 to A. McMillan, Prince Albert, Sask. Following is the sale list of mares and fillies:

Table listing various Clydesdale mares and fillies with their prices, such as 'Lady Wilson, 2 yrs.; John McKenzie, Chatsworth...\$600', 'Bess of Drumaston, 3 yrs.; John Spier, Maple Lane... 405', etc.

18 fillies sold averaged ...\$355.50

DEFENDS THE MANURE SPREADER.

Editor "The Farmer's Advocate": I am a subscriber to your very valuable paper, and having noticed J. E. M.'s opinion on the manure spreader, I thought I would like to give mine. I invested in a large size manure spreader, and will say I never invested money on any farming implement that gave so much satisfaction; have never had to put three horses on it to do the work, and think with the manure spreader one man can draw out as much manure as two men can the old way, and is much more satisfactory, as it is spread so much more evenly; and not only as a manure spreader, but for drawing roots it cannot be beat. There is a crank goes with it which I use for unloading, and can unload in less than a minute. Mr. J. E. M. thinks it cannot be used in winter. Now, I have been keeping my yard cleaned out all winter with the manure spreader, and have used it every winter since I got it. I have had mine four years, and up to now have only laid out one dollar for repairs. I think I am right in defending the manure spreader as a farm implement, one that no farmer should be without, and I also think, by taking care of it, twenty years will find it still doing the work. Thanking you for space, and wishing "The Farmer's Advocate" every success. RICHARD YELLOW, Huron County, Ont.

NOTES FROM IRELAND.

THE NEGLECT OF WINTER DAIRYING.

Agriculturally speaking, one of the things we stand most in need of in Ireland is the more extensive adoption of winter dairying. With the alert industrious Danes at our very doors, and further away the enterprising colonies—not the least notable of them being Canada, which promises to contribute a special display of dairy produce to our forthcoming International Exhibition at Dublin—all equipping themselves to increase their position in the British markets, farmers in the Old Country can ill afford to pay longer the penalty of a prolonged periodic curtailment, if not complete absence, of butter supplies to the English centers for a time each year. By his backwardness in this matter the Irish farmer is a heavy loser. His indifference is accompanied by inevitable disadvantages, prominent among which are: (1) that he is out of the market at a time when prices are highest, and (2) that when he does return in the spring after a few months' absence, he has to spend his time and energy—or, rather, the eventual seller has—looking for new openings each time into markets which, in the meantime, had been surrendered to the outside producer.

For several weeks past the various aspects of the subject have formed the theme of a most instructive discussion in the columns of the agricultural press. In the course of this controversy the argument as to the increased remuneration directly obtainable has been called in question, it being urged that if the winter supply of butter be increased, market quotations will be correspondingly reduced. This, on the face of it, appears logical enough, but considering that there is always a spirited demand for the home-produced article in preference to the imported, it would not be wise to press this objection too far. Hundreds of tons of Irish butter would be willingly bought up by British dealers if only it were forthcoming. With regard to disadvantage No. 2, nothing but unanimity of opinion exists.

Why, then, do not our farmers go in more extensively for winter milk and butter production? The replies might be grouped under two headings, viz., that the blame attaches (1) to the conditions, economic and industrial, in which the farmer finds himself, or (2) to the lack of energy that prevails among the farmers themselves. Of course the whole question is closely associated with the more general raising of home-grown feeding stuffs, which, in turn, opens up the much more formidable subject of the extension of tillage. It will thus be seen that the winter dairying difficulty strikes at the root of the present Irish agricultural system, but it is not too much to hope that, with the progress of the country's main industry as a whole, the

dependent adjunct of milk and butter production will undergo reorganization.

GRADING UP THE CATTLE.

The past few years have witnessed a striking improvement in the character of the cattle kept on most Irish farms, and for this happy result much credit must attach to the beneficent scheme of cattle improvement originated and sustained in operation under the auspices of the Department of Agriculture. As indicated in some former letters, the main direction in which this scheme operates is the subsidizing of approved bulls of various breeds, the owners of which agree to place the subsidized animals at the disposal of a fixed number of the smaller-class farmers in his district during the year. Now is the time, just preceding the breeding season, that these bulls are being "selected." This is done at shows and sales organized at various places throughout the country, while not a few animals are brought over to take part in the scheme by Irish breeders who attend the big English and Scotch sales at Birmingham, Perth, Aberdeen, and other places. An important event inaugurated "the premium season," viz., the Royal Dublin Society's annual show and sale, which took place at Ballsbridge about the second week in February. It attracted over 160 bulls, made up of 105 Shorthorns, 38 Aberdeen-Angus, and 20 Herefords. The Department's inspectors selected for the coveted premiums 33 Shorthorns, 19 Aberdeen-Angus and 6 Herefords. At the sale which followed, these animals were bought up by new owners from different parts of the country, at prices ranging up to 40 gs. and 50 gs., which, if not high, must be regarded as very useful.

TO CANADA IN THREE AND A HALF DAYS.

There is no knowing where we will stop in the reduction of distances! Doubtless the details of the scheme by which it is proposed to reduce the journey from this country to Canada to three and a half days are by this time familiar to many of our readers. Certainly the project is arousing considerable interest and excitement in Ireland, as if it materializes there can be no doubt that the country will benefit to a large extent from it. The idea—perhaps some may not be quite acquainted with it—is to build a pier, etc., at a magnificent opening on the western Irish coast, named Blacksod Bay, and to run from this point a fleet of fast liners to Halifax—an ocean journey that can be accomplished in the short period of 3½ days. It is proposed to build a new line of railway through the Western Province to connect the harbor with the existing Irish lines, while it is also suggested to have the mail train from London "ferried" across the channel and "run up" on Irish soil to continue uninterrupted its progress to the liner's side at Blacksod Bay. A very influential body is said to be behind the scheme, and Parliamentary notice has been given of a bill in connection with the project. So far as the preliminaries have gone it is not for a layman to prophesy success or failure, but we will all await with keen interest its development, if for no other reason than that it will so directly connect the two countries in which we—reader and writer—are mutually interested.

EMERALD ISLE.

THE FARM COMING TO ITS OWN.

During my Institute work this winter I have been strongly impressed with the optimistic view taken by farmers concerning their occupation and its prospects in the future. Ontario farmers realize as they never did before the commanding position their occupation holds in the industries of the country, and they note with satisfaction that with the great increase that is going on along all lines, agriculture still leads, and that on successful agriculture depends the success of all. Perhaps this has been brought more forcibly to my mind from the fact that the last time, some six years ago, that I attended Institute meetings in the counties of Perth and Huron the very opposite conditions prevailed. At that time farm property was decreasing in value, prices were low, and no one had a good word to say for farming. I find that in the counties mentioned great interest is being taken in the breeding of heavy horses, and that the trend of the stock interests lies more along the line of beef than dairying. I suppose this has come about, first, from the increased demand and prices paid for horses, and in the case of cattle, from the scarcity of labor; farmers finding it requires less help to raise beef than to run a dairy. While there is still a great demand for farm help, I do not think the situation so acute as it was last year. This has come about partly from increased immigration, and more particularly, I think, from the fact that many of our best and most enterprising young men have come to the conclusion that their chance is just as good on the farms of Ontario as in the West, and that the privations and hardships they have to endure as pioneers in a new country overcome, or, at least, balance all the advantages the West holds out.

One line of agriculture, I am sorry to say, seems to be on the wane—I mean fruit-growing. There used to be many good orchards in South Huron, but taking the average, nothing else is so neglected as the orchards. Farmers say there is no money in fruit. There will never be any money in fruit if more care is not taken of the trees, and a better system followed in disposing of the crop. I saw Northern Spies that would take a prize at almost any fair in the Dominion, and still the growers say they cannot sell them to any advantage. But, with a few exceptions, like those mentioned, agriculture along all lines is progressing. More thought and study is being given to the systematic cultivation of the soil, to the more careful breeding of live stock, and to that most important subject to farmers, the improvement of the roads and the beautifying of the grounds around the farm homes, and in those homes one sees the comforts and conveniences of the city, and on their tables the luxury and profusion that the city man never dreams of.

Lincoln Co., Ont. JAS. SHEPPARD.

GOSSIP.

GUELPH PROVINCIAL SALE.

Following is the sale list of pure-bred stock disposed of at the Provincial Sale at Guelph, Ont., on February 27th:

Shorthorn bulls.—College Patriot, by Jas. Auld, Eden Mills, to W. T. Hambly, Drayton, \$80; Nelson Prince, R. & G. M. Anderson, Eden Mills, to Peter Onn, Arkell, \$60; Lilly's Prince, R. & G. M. Anderson, to J. Sherrer, Meiklenburg, \$35; Inverurie, James Auld to Geo. Dodd, Gordonville, \$110; Canadian, C. N. Blanchard, Appleby, to Menno Madu, Hrisbane, \$67.50; Skidoo, C. M. & G. W. Blyth, Marden, to A. Barber, Guelph, \$60; Matheless Bruce, C. M. Blyth, to Drew Bros., Guelph, \$55; Alma Prince, A. Burnett & Son, Alma, to Henry Watson, Kirkwall, \$35; Roan Duke, A. Burnett & Son, to O. D. Cameron, Mountsberg, \$50; Westervelt, J. W. Cleg-horn, Mosboro, to J. W. Young, Harrison, \$65; Ramsden Laddie to J. W. Cleg-horn, \$50; Senator Loree, John Currie, Eramosa, to Wm. Hepton, Ayton, \$120; Rupert Rantin, J. J. Elliot, Armstrong's Mills, to W. A. Livingston, Durham, \$75; Willow Brook Chief, W. R. Elliot & Sons, Guelph, to W. S. Elliot, Morrisburg, \$65; Woodfield Lad, J. L. & T. G. Gibb, St. Catharines, to J. H. Robinson, Anderson, \$100; Count of Woodfield, J. L. & T. Gibb, to J. L. Wilson, Gorrie, \$100; Fairmount Jupiter 2nd, G. R. Gies, Heidelberg, to M. Ferguson, Harriston, \$75; Montrose, Wm. Hendrie, Hamilton, to W. Hamilton, Bright, \$50; Lord Minto, Wm. Hendrie, to J. T. McNiven, Ancaster, \$55; The McIntosh, Wm. Hendrie, to J. R. Mickie, Eden Mills, \$35; Ora Buckingham, Wm. Hamilton, Bright, to Jno. McIntosh, Marden, \$102.50; Ramsden Boy, J. L. Howard, Sutton West, to D. K. Mc-

Donald, \$70; Ramsden Lad, J. L. Howard, to S. Millson, Eramosa, \$60; Sherring, R. Harvey, Guelph, to H. Keen, \$55; Ronald, J. M. Irwin, Branchton, to A. Hales, Guelph, \$35; Butter King, J. M. Irwin, to A. Thompson, Fergus, \$35; Dumfries, J. M. Irwin, to W. F. Barber, Guelph, \$27.50; Seddington Hero, J. E. Meyer, Gourcock, to D. E. Slatters, Holy-wood, \$65; Myrtle Chief, T. C. McAvoy, Balsam, to Geo. McGill, Guelph, \$70; Daisy's Royal, T. C. McAvoy, to J. W. Taylor, \$65; Captain's Pride 2nd, John McAninch, Crief, to W. Stallibrass, \$85; Roan Hampton, Jno. McFarlane, Eden Mills, to Jared Marcey, Valens, \$50; Victor's Beau, Alex. McIntosh, Pentland, to A. Barber, \$60; Sir John E. Parkinson, Eramosa, to W. H. Schultze, Puslinch, \$65; Royal Oak, A. Robinson, Eden Mills, to A. W. Rosson, Valens, \$57.50; Ramsden Laddie, T. Scott & Son, Sutton West, to Geo. Zettell, New Germany, \$40; Reward, Alex. Stewart, Clyde, to W. H. Patterson, Moffat, \$80; Hillcrest Beau, D. Talbot & Son, Everton, to E. Cressman, New Hamburg, \$67.50; Grange Senator, D. Talbot & Son, to W. H. Newlove, Macville, \$105; Senator Chesterfield, D. Talbot & Son, to W. S. Whale, Goldstone, \$75; Primrose Matchless, Herbert Wright, Guelph, to Alex. Wilson, Sand Hill, \$90; Royal Primrose, H. Wright, to W. McKenzie, Rockwood, \$95; Royal Primrose, D. W. Wright, Ponsonty, to A. McCormack, Killeen, \$52.50; Golden Sirenet 2nd, A. & W. Whitelaw, Guelph, to Hugh Ross, Aberfoyle, \$47.50; The Boss, D. Campbell, Clifford, to Geo. Bennett, Carlisle, \$30. Females.—Pearl Buckingham, Wm. Hamilton, Bright, to Kye Beas, Ayr, \$50; Princess May, John McAninch, Crief, to A. W. Beattie, Black, \$62.50; Sutton Belle 7th, T. Scott & Son, to J. R. Thompson, Carberry, \$50. Hereford bulls.—Wm. Stutt,

Forest, to Wm. Hamilton, Guelph, \$52.50; Bobs, Wm. Stutt, to Wm. Hamilton, \$50.

Aberdeen-Angus bull.—Whithouse Boy, R. W. McKinnon, Coningsby, to M. I. J. Scott, Killeen, \$75.

Mr. James Snell, Clinton, Ont., offers for sale in his advertisement two extra good young Shorthorn bulls, sired by Imp. Scottish Peer, a Western Fair winner, and a bull of exceptionally good type and quality. These young bulls should find ready buyers now that the price and prospects for beef cattle are so good. The indications are that beef cattle are going to be scarce and dear, and, as usual, the best are in demand and sell highest. Farmers should make it a point to improve their cattle by using good bulls, and these can be secured now at very moderate prices.

J. A. BOAG & SON'S CLYDESDALES.

There certainly is not a man in the business of importing Clydesdales to Canada that better knows the class of horse most needed in this country to increase the size of our drafters than John A. Boag, of Ravenshoe, Ont., who needs no introduction, he having officiated as judge in the leading Canadian show-rings for many years, a man whom neither fear nor favor can influence in his judgment. His various importations are recognized by competent judges as among the best that lands on our shores, combining size, character and quality, with true, straight action. Just now, he has on hand three stallions and seven fillies, an exceptionally choice lot. The stallions are: Lord Newlands (imp.) 6468, by Good as Gold, dam by Rosedale. He is a bay, rising three, and cannot be better described than to say that last summer,

at Lesmahagow, he won first and the silver medal as the best horse on the grounds. He is an exceedingly thick, smooth colt, full of character. Ardnahoe (imp.) 4501, by Pride of Blacon, dam by Mountain King, grandam by Gold Dust, is a bay, rising three, that has several firsts to his credit in Scotland, and will make considerably over-a-ton horse, having style, character, quality, and the best possible kind of underpinning—a rare good colt. Forclen Chief (imp.) 4529 is another bay, rising three, by Hillhead Chief, dam by Prince of Carruchan, grandam by Darnley Hero. He, too, will make over-a-ton-weight horse, being very powerfully built, with a wonderful amount of style and quality, one of the very best colts brought out last year. All these colts are true, straight actors, and are just the kind needed in this country. The fillies are the get of such noted sires as Lord Londonderry, Mar-nion, Sir Mark, Frivolty, Garty Brand, Jubilee Lord, and Sir Everest. As a big, quality lot, they stand unexcelled by any importation last year, their conformation and underpinning being as nearly perfect as they are grown, and what is of more importance to intending purchasers, they can be bought for less money than they would fetch at an auction sale. In fact, Messrs. Boag's motto is a quick turnover, with a small profit. They also imported the exceedingly richly-bred Hackney stallion, Blanch Surprise—368—(8715), a chestnut rising four, by the champion Rosador, dam Blanch Primrose, by Garton Duke of Connaught. Last year, in a class of 50, at London, he was placed fifth, which speaks stronger than words as to his individuality, character, style and action. Write Mr. Boag, to Ravenshoe P. O., Ont. His station is Brown Hill, G. T. R., four miles, on the east, or Newmarket, 14 miles, on the west.



Life, Literature and Education.

[Contributions on all subjects of popular interest, whether relating to the Literary Society discussions or not, are always welcome in this Department.]

A TRIUMPH FOR CANADIANS.

Canada must rejoice in the success of Canadians wherever and however gained. Regarding the latest triumph of the Dominion's children, that of the Mendelssohn Choir in New York, the New York Independent, a high-class journal, and one of the least effervescent of American publications, says:

"Enthusiasm almost without precedent filled Carnegie Hall on the evenings of February 12th and 13th, when the Mendelssohn Choir, of Toronto, and the Pittsburg Orchestra gave two joint concerts. The Orchestra and its conductor, Mr. Paur, while they acquitted themselves with credit, especially in the ninth symphony of Beethoven, were not the main objects of this enthusiasm; New York has better things in that line; but what astonished and delighted everybody was the way the Canadian choir sang Liszt's 'Thirteenth Psalm,' Gounod's cantata, 'By Babylon's Wave,' the final choruses from Wagner's 'Meistersinger,' and other things. It was electrifying.

"Who has not at some time or other dreamed of a body of singers, selected and trained as carefully as the members of a permanent orchestra, producing effects altogether beyond the reach of the usual chorus of amateurs? England has such 'vocal orchestras,' as one might call them, and so have a few German cities; but New York has none, wherefore the song of the Canadians came as a revelation. The conductor, to whom most of the credit is due—Mr. A. S. Vogt—is a Canadian who was educated in Germany. Apart from his personal gifts, he has a method which explains his success. He limits the choir's membership to 220, and the constitution of the society requires that the chorus disband after each season's work, and that a complete reorganization be made annually. In this way superannuated singers are easily eliminated. The choir has been in existence eleven years. It is to be hoped that its visits to the metropolis will become annual: such concerts are as refreshing as spring breezes."

PRESIDENT ROOSEVELT ON EDUCATION.

The President of the big country over the border often says things that are well worth hearing. The following, from his recent address at Harvard University, will recommend itself to all who appreciate education of the right kind:

"If your education and the pleasant lives you lead here," said he, "make you so fastidious and over-refined that you cannot do the hard work of practical politics, then you had better never have been educated at all. The weakling and the cow-

ard are out of place in a strong and free community.

"Like most other things of value, education is good only in so far as it is used aright, and if it is misused, or if it causes the owner to be so puffed up with pride as to make him misestimate the relative values of things, it becomes a harm and not a benefit. There are few things less desirable than the arid cultivation, the learning and refinement which lead merely to that intellectual conceit which makes a man in a democratic community like ours hold himself aloof from his fellows and pride himself upon the weakness which he mistakes for supercilious strength. Small is the use of those educated men who in after life meet no one but themselves, and gather in parlors to discuss wrong conditions which they do not understand, and to advocate remedies which have the prime defect of being unworkable. . . . The educated man who seeks to console himself for his own lack of the robust qualities necessary to bring success in American politics by moaning over the degeneracy of the times, instead of trying to better them, by railing at the men who do the actual work of political life instead of trying himself to do the work, is a poor creature, and, so far as his feeble powers avail, is a damage and not a help to the country."

RAMBLES ABOUT THE OUTSKIRTS OF ONTARIO.

HERON BAY.

When a schoolboy, my village formed a centering point for a half-dozen wagon roads that ran like white ribbons into a rolling, green country of fenced fields and bush-lots. From the "Big Hill," of a summer afternoon, it looked pastorally beautiful, its houses buried amongst the elms and maples, above which, however, shot the two church steeples and the mill stack. Between it and this vantage point, a bare, smoothly-sloping hill, the river meandered quietly, shaded, like the village, by elm trees.

The orchards had not lost all their white bloom and cattle were reveling in new pasture, when the chances of life, a few years later, dropped me of a C. P. R. train far from this home spot at Heron Bay. I remember watching it as a parting friend until it swung out of sight, and then, turning to investigate the new surroundings, as a community, I don't know what term would rightfully apply—town would be ironical; village an undue exaggeration. The inhabitants called it a "place." Certainly, the little red railway station and its scattered following of some half-dozen log and wooden houses looked insignificant enough, and very lonely and remote, seeming what in reality it was—an outpost of civilization. The gray line of railway, disappearing either way among the hills, appeared a slender connection with that Ontario I had left not two days ago. Every where were big bits of gray rocks, thinly covered with a starved growth of bushes. Down the track to the east lay a swamp of evergreens, strikingly black and conical topped.

The quiet of the swamp and the hills seemed to be settled down,

with the departure of the train. The post-office man went off with a particularly empty mail bag hanging limply over his shoulder. The station agent rattled a hand-truck load of baggage over the platform, and, chatting easily, three or four women went off to their houses. But I was in the Indians' country now. A dozen aborigines lounged about on the platform, stolidly eyeing the new arrival and his luggage, or talking a guttural, unintelligible tongue. Aimless-looking fellows, surely. They stared in the window of the station office at the agent clicking off telegraphic despatches, or shuffled, moccasin-shod, over to the little stove. Not the eagle-eyed savage of story these slouching fellows in baggy, ragged white man's clothing and shapeless felt hats. The squaws were even less pleasing in appearance. One very old woman, cadaverous as a mummy, sucked a short, discolored pipe.

Until evening I was actively busy putting up a tent in a field back of the station. Before sunset I climbed a ridge-like hill that rose sharply 200 feet or more a short distance back from my camping ground. Taking a well-worked path part of the way, I came upon a spring of quite cold though brown-looking water, lacking the sparkle and whiteness of the springs in a limestone country. It supplied all the houses. I disturbed a couple of Indian boys loitering there, who hurriedly filled their two pails and shied off the path like wild creatures. A few steps more and the foot of the hill, or cliff—for it rose very steeply—was reached. It was quite bare of soil, except in the cracks that seamed its face. At a distance it had looked gray, but the rock, at close range, was a dull green, quite fine-grained and slate-like, and unlike any of the big boulders to be seen in the fields of southern Ontario. In places small patches of quartz gleamed snowy white, wherever a crevice held even a handful of soil, something grew—a clump of grasses and flowers, a Juneberry bush, or a scrubby little spruce tree. The Juneberry bushes were covered with white bloom—festal spots against a desolate ground. So, too, were the blueberries, but their humble little white bells were not visible at any distance. Half-way up the slope grew steeper, so that it became necessary to follow ledges and scramble up with the aid of the bushes that held tenaciously to the surface inequalities. Then it became gentler, and I found myself walking over curiously smooth, rounded rock surfaces, as clean and free of soil as if newly swept. The bare hand laid repeatedly upon it took no impression of dust.

Ahead and on either side, as far as visible, stretched a rough succession of rocky hills, not much higher than my standpoint, and covered in the same thin manner. Patches of evergreen forest filled the hollows. There was no sign of life or habitation. Turning around and looking downward, Heron Bay's little houses looked smaller and lonelier than ever, scattered over the meadow-like patch of level ground the railway traversed. On the south the same naked hills rose, but less sharply. Except to the southeast, where the spruce

swamp extended to Lake Superior, the little meadow was quite enclosed by rocks—like a little green lake in the midst of an endless wilderness of hills. The sun had just disappeared, and an orange glow slowly faded to yellow and pale blue. A party of Indians moved single file toward the swamp, presently becoming lost to view. Lights appeared in the windows of the houses below. It had grown very still. From among the bushes near-by came a bird whistle, clear, beautifully modulated, and plaintive. "Oh, how dreary, dreary, dreary it is!" as if the gray rocks and the spruce woods had given to his spirit their sad tone, without disturbing their serenity. After a pause, another bird, farther off, replied, fainter and even more musically. Three or four of them kept up their responses till it grew cold. The first singer, disturbed by my attempts to see him, stopped whistling, uttered a short, sparrow-like remonstrance, and flew away, giving me a glimpse of a gray body, with some white markings on the throat.

It had now grown dark, the houses were indistinct black spots, but my tent still gleamed, ghost-like, on the field below. What brought and kept these people here? It was not altogether apparent then. One old gentleman, who had come to live with his son, was more at a loss than myself, I found out next day. He had been a farmer "down in Ontario," and felt out of place among the Indians and rocks. He spent much of the time digging and planting in a little plot beside the station, but without much enthusiasm. The frosts lying on the planks every morning made him shake his head doubtfully. A great expectation was fulfilled, however, when, one day, a freight car was backed in and a cow unloaded and transferred to the little field. The new arrival liked her environment even less, and never lost an opportunity to break through the fence, leading her old attendant a lively chase. From these runs he would come in warm and breathless, but radiant. No doubt the tenant's retreating heels were reminiscent of good days on the farm. The old gentleman had become wonderfully cheerful before my visit terminated, and had resurrected an old scythe, which he tinkered at daily in anticipation of the haying.

C.
Of the Geological Survey of Canada.

THE LOTUS EATERS.

In these days, when the "strenuous life" is so much lauded, even the farmers are in danger of suffering with weariness from it. Farmers' Institute lecturers are turned loose on us by the score, all spurring us up to make two or possibly three blades of grass grow where only one grew before. We have been so busy doing this and forking the extra blades of hay that we fail to see the beauty in the wonderful sights that nature is continually spreading before us. The Women's Institutes are not much better. On lovely June afternoons, when the ladies could revel in a walk in the glorious woods or wander by some sylvan stream, they, instead, assemble in some hot room and exchange recipes for puddings. The most of the agricultural

papers follow in the same strain, till from it all we turn to the magazine part of "The Farmer's Advocate" to rest our weary spirits and think of the beautiful things of life.

Now, don't let any reader suppose that I am belittling the life of toil and earnest endeavor. The parent trying to provide for his family, the toiler in the humblest walks of life, who patiently and bravely faces and overcomes difficulties, is worthy of our highest respect and admiration. But having, to the best of our ability, performed our duties, let us try to develop the other side of our nature and have a little rest and meditation.

Some say that it was in a moment of weakness that Tennyson wrote "The Lotus Eaters." This, however, is only a shallow view to take of it. The poet takes as a background the siege of Troy, with its ten years of toil and danger. How weary they were with

"Sore tasks to hearts worn out with many wars,
And eyes grown dim with gazing on the Pilot stars."

How often on a lovely May or June Sunday afternoon have we wished for a land

"In which it seemed always afternoon."

Fancy how restful it would seem to the tired warriors—

"All round the coast the languid air did swoon,
Breathing like one who hath a weary dream."

Were any more beautiful lines written than

"There is a music here that softer falls
Than petals from blown roses on the grass,
Or night dews on still waters between walls
Of shadowy granite, in a gleaming pass.
Music that gentler on the spirit lies,
Than tired eyelids upon tired eyes;
Music that brings sweet sleep down from the blissful skies."

In the second verse of the "Choric Song" we are asked a question that it is well for us to consider:

The Quiet Hour.

THE GLORY AND BEAUTY OF WOMANHOOD.

The King's daughter is all glorious within: her clothing is of wrought gold.—Ps. 45: 13.

So shall the King greatly desire thy beauty.—Ps. 45: 11.

"We, too, would wear unspotted
The garments of the King,
Would have the royal perfume
About our path to cling,
And unto all beholders
A filled beauty bring."

The love of beauty is an instinct of our nature—something we inherit from our Heavenly Father. We only need to look about us in God's universe to know that He delights in beauty. Think of the varied beauty of the sky, by night and by day. Think of the beauty spread out before us in mountain, meadow, and water, in each tiny flower, bird and insect God has made! And much more does He delight in a spiritual beauty—the beauty of holiness. If the King greatly desires our beauty, may we not earnestly pray: "Let the beauty of the Lord our God be upon us." We can see the beauty of our King—the wonderful beauty of His life of perfect holiness and self-sacrifice for His people—and it is our part to reflect His beauty. Every true woman longs to be beautiful, and before each one lies the possibility of obtaining the greatest beauty of all—a beauty which will not fade with age, but will increase and be a glad possession in time and in eternity. Probably the outward beauty of the resurrection body will be dependent on the way soul-beauty has been persistently cultivated

"Why are we weighed upon with heaviness,
And utterly consumed with sharp distress,
While all things else have rest from weariness?"

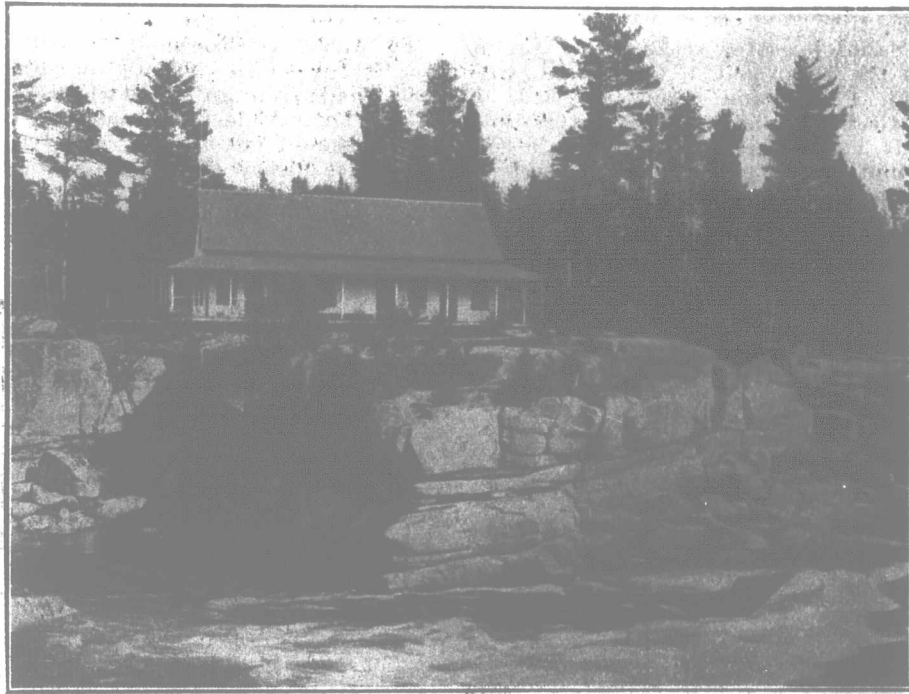
All things have rest; why should we toil alone,
We only toil, who are the first of things,
And make perpetual moan."

In the third verse we see how easily and quietly all things in the woods fulfil their mission.

In the eighth verse we are given a picture of the conception the heathens had of their gods, and in this place it is good for us to think how different is our idea.

If any reader of "The Farmer's Advocate" turns to his bookshelves for Tennyson, remembering that the poet first took his warriors to the Siege of Troy before he gave them the Lotus Eaters' glorious rest, he will see a wonderful beauty in the poem, and will often turn to it for rest and refreshment.

JOHN D. MCGREGOR,
Halton Co., Ont.



Canadian Views.—On the Nepesquit, Bathurst, N. B.

RE BERTOLET ON "THE EDUCATION OF THE FARMER'S DAUGHTER."

Mr. Editor.—In reading Bertolet's essay on "Education of the Farmer's Daughter," one is forced to the conclusion that the farmer's daughter of to-day needs be a many-sided woman. She must begin young and continue long to obtain that proficiency which he indicates.

He quotes Ruskin's acquaintance was with the upper classes of England, and to them he referred; hence his remarks have literally no bearing on the life of a daughter of the Canadian farmer. Is it necessary that the wife of a barrister or a physician should study the profession of her lord and master, that she be able to sympathize and help him in his work? Or that the wife of a blacksmith should help her husband with the shoeing of horses in a busy season? Why, then, should the farmer's wife go out and help to do the labor of the farm?

I admit that in the partially-civilized nations of the world the women go out into the fields and work like

beasts of burden, but in this fair Canada of ours it should be a phantom, a nightmare of the past. If the farmer's daughter is unfortunate enough to know how to "drive the machinery," "build a load of hay," and "feed all kinds of stock," I should think it would "hurt" her very much when the time came for her to do so. Moreover, how could she know how to do all this, except by very dear experience? After having fed forty head of cattle, as many swine, etc., we can imagine the farmer's wife or daughter sitting down to play the piano, or, perhaps, if she preferred painting, to paint. I am sure she would be able to prove her "genuine ability" at such a time. It was merely an oversight on the part of Bertolet not to have mentioned that the farmer's daughter should be proficient in the handling of an axe. Many farmers' wives have to procure their own kindling and light the fire, in the summer months at least.

We are informed that three-fourths of the women in the asylums for the insane in Canada come from the farm. Why? Because, while they are keeping a house in order and attending to a large family of young children, they must also go and help their "overburdened husband" in the hayfield or elsewhere. Under such conditions, the outdoor life she leads is not quite so beneficial as might seem.

When we are educating the farmer's daughter of to-day, we are educating the mother of our future sons and daughters—the rulers of our noble empire—and, therefore, to obtain the best result, she must be carefully reared and sheltered from the coarsening effect of drudgery. And drudgery will numb a woman's best aspirations, thus causing her to degenerate; this, in a few generations, would produce class distinction.

Space does not permit of my pursuing this painful subject, Mr. Editor, so I must needs close, trusting my letter has not been all in vain.
DONALD MacCALLUM,
Frontenac Co., Ont.

Study No. VI., "Tintern Abbey," will appear next week.

here. Even now the soul is steadily moulding the body, and a holy, joyous soul can hardly fail to continually add attractions to the house it lives in.

Since God stooped to take our nature, honoring woman by choosing her to be the connecting link between Himself and man, everyone who calls himself a Christian should honor her too. But even before the Incarnation woman was placed by God in a very high position. How full of poetry the account of her creation is. The man, feeling his loneliness, looks vainly among the creatures surrounding him for a soul to meet his need. Then God, who knows the hunger of the soul for real communion with a kindred soul, gives him a sweet and lovely wife to satisfy his heart-hunger and help him in his struggle Godward. She could help him, and surely she did in the end, though once at least she used her influence to tempt him out of the straight path of righteousness. And woman has great influence still. That is part of her glory—or should be. When God gave woman to man He intended her to be a helper, not a hindrance, in his upward climb. And beauty is a very important part of her power—both physical and spiritual beauty. If you want to help men to be noble and good, then recognize the possibilities of your womanhood, and cultivate them to the utmost extent of your ability. There is no need to be extravagant in dress, but a woman who always looks clean and fresh and neat has far more influence than one who goes about looking slipshod and slovenly, with hair in curl-papers, and a skirt and waist that are continually drawing apart. Orderliness has a beauty of its own, though some women are so desperately tidy that they sacrifice greater things to their idol, and make the whole family low down meekly, because it is ordered was intended to

minister to man's good and happiness, and no one has a right to sacrifice his comfort for the sake of having everything always in its place. Martha was a good housekeeper and busy, bustling and enthusiastic in her work; but she sacrificed spiritual beauty to material. We can generally find time to attend to the things which seem to us of greatest importance, and Mary's hunger for spiritual beauty was, as our Lord declared, a choosing of the "good part"; she reached out after a beauty which should be lasting instead of fleeting in its nature—which shall not be taken away from her.

And our Lord was not unique in His commendation of Mary. Many a man, coming home tired from his work, would rather find his woman-kind with leisure to enter sympathizingly into his interests than have them too busy to spare him a moment's attention. The idol "work" drives its votaries with unsparing severity, and often builds an invisible wall of indifference between a man and his wife which is very hard to break down. Sometimes it is not only the present work but the after-result of past work that does the mischief. A woman who, without real necessity, has been overdriving her poor body all day is very angelic, indeed, if she can keep sweet and bright in the evening. Often she gets cross and snappish, or, at least, looks weary and spiritless, failing to present the attractive beauty of a bright face, cheery words and becoming dress. She is "too tired" to change her dress or exert herself to make the evening pleasant, unless some stranger is likely to appear—then she will probably make the effort. But is the work that has tired her out always as important as the influence for good she is throwing away by allowing herself to become a down-trodden drudge, chained like a galley-

slave to the oar? Work, like fire, makes a good servant but a bad master, and many women in this age of "rush" sacrifice unnecessarily beauty of spirit, heart and mind—yes, and of body too—for things of far less value. They have no time to read or think or talk about the realities of life, and scarcely take time for necessary rest. God help them if they secure no time for prayerful communion with the Lord and Giver of life. I am not speaking of those who are forced, by sternest necessity to work beyond their strength. God can and does give to such patient heroines a martyr-beauty of fortitude and endurance, which brings the brightening touch of romance even into their dark lives.

What a wonderful beauty there is in girlhood! Sweet sixteen should be always charming. But is it always? When I see girls on the city streets behaving roughly and rudely, attracting attention by their loud talking and noisy bursts of silly laughter about nothing, I sometimes wonder whether the gentle, modest dignity of maidenhood is only a sweet dream of the past. Our girls all want to have their rightful share of beauty; surely they know that a woman's best adorning does not consist in showy clothes and a bold, loud manner, but in a "meek and quiet spirit," which is "of great price" in men's eyes, as well as in the sight of God. As there is nothing women admire more in a man than "manliness," so there is nothing men admire more in a woman than "womanliness." They know what men are like, and they don't want their woman friends to be poor imitations of men; they look to them for the mysterious inspiration which is the natural effluence of a holy, shining soul—a soul which veils itself in maidenly modesty instead of boldly thrusting itself into notice and flaunting like a gaudy poppy in gay and con-

spacious costumes. Loud talking and up-to-date slang—which is often almost or quite profane—can never be anything but ugly and uncomely in a woman. We live in an age of freedom, when women are not kept down as they used to be, but that is all the more reason for guarding womanly dignity with jealous care. A man will hardly dare to take any unseemly liberty with a woman if she honors the glory of her own womanhood. There is no need to talk about one's dignity, for when the secret temple of the soul is kept in sacred purity and no unwomanly thought is allowed there, men recognize it instinctively and respect it involuntarily. And there is one thing that is most unlovely in a woman—heartlessness. When a woman deliberately uses all her powers to win a man's heart, drawing him on by every art she knows, just for her own amusement and because she is flattered by his attentions, throwing him carelessly aside when some new admirer comes in sight, she is doing a most terrible wrong to her womanhood, and working mischief which she can never undo. In David's lament over Jonathan he says: "Thy love to me was wonderful, passing the love of

women." Evidently he had a high opinion of the faithful tenderness of a woman's heart; and it is a shameful thing when a woman's falsity destroys an honest man's ideal of faithfulness. Only God knows the awful harm she can do by treating the sacred mysteries of the heart with light and careless irreverence.

In these days women are reaching out in all departments of work, but it is as true as it ever was that God intends most of them to find their chief happiness within a quiet home circle. Women are not built for fame, and find it very unsatisfying; and their sympathies are not, as a rule, world-wide. But within the limited circle where God places them they exert tremendous influence, which may be world-wide, and will certainly be eternal in its results. Then the friendship of women for other women is a very beautiful thing, and not nearly so rare as many people think. It is not often proclaimed to the world, but is no less faithful for that, and faithfulness is as much a part of woman's glory as purity and tenderness. Only God can count the number of women who are patiently and faithfully serving those

they love, year after year, without looking for reward or even knowing that their lives are beautiful and full of glory. It seems to be quite sufficient reward for them if the love they pour out so unstintedly—often on a very unworthy object—meets with some love in return. C. F. Dole says:

We have seen women with the plainest faces, without grace of outward form, perhaps bent, thin, and worn, sometimes broken down with disease, in whose eyes, nevertheless, shone such a light of love and devotion, in the rugged lines of whose faces was written the story of such lofty character, that their womanhood was transfigured in spiritual beauty. Little children and strong men alike loved the charm of their presence. Whereas we have seen beauty and natural grace in all the perfection of health changed to repulsion and ugliness, and the fair face spoiled, through some inward and moral distemper, by the harsh and cruel lines of a growing arrogance, bitterness, envy, jealousy, or selfishness. The instrument, the piano or violin, ought to have a case that fits it; but what is the use of the most finished case, if the instrument itself is mean or out of tune? It is

no use having the clothing "of wrought gold," unless the King's daughter seeks to be "all glorious within." The beauty and glory of womanhood must shine from within outward, if it is to help and not injure the world.

HOPE.

TRUE BEAUTY.

What matter, though enshrined in plainest casket,
If a pure gem within that casket lies!
What matter, though a face is plain and homely,
If a pure soul is shining from the eyes?
We never give a thought unto the casket,
If but within the gem is pure and fair;
We never gaze as critics on the features,
Of those we love, if the true heart is there.
We grieve not though the gem has plainest setting,
If but the life with deeds of love abound;
We care not for the earthly fading beauty,
If but God's image in the heart is found.
—Ellen Ling.

About the House.**RECIPES.**

Apple Pudding.—Pare and cut into pieces enough apples to three-quarters fill a pudding dish. Sweeten and spice to taste, adding a very little water. Mix up 1 cup flour, $\frac{1}{2}$ cup sugar and butter size of an egg until like crumbs. Sprinkle this over the apples, bake until light brown, and serve with any good pudding sauce.

Economical Shortening.—Get some fresh beef fat (not the suet), run it through a meat grinder, fry it out in the oven, being careful not to let it burn, and strain the grease off into a crock. This may be used (with a little salt) instead of butter for any kind of pastry.

Yeast Rolls.—(From Boston Cooking School): Soften a yeast cake in half a cup of scalded and cooled milk. Add a pint of scalded and cooled milk (lukewarm), and $2\frac{1}{2}$ cups flour. Beat well until the batter is very smooth. Cover, and let stand to become light; then add $\frac{1}{2}$ cup melted shortening, a level teaspoon salt, and about $3\frac{1}{2}$ cups (level) of flour to make a soft dough. Knead the dough about 15 minutes, cover, and set aside to become light. Next shape into small rolls about 2 inches wide and $4\frac{1}{2}$ long. Set close together in a buttered pan, giving room to lengthen uniformly. When very light, bake about half an hour. Glaze with slightly-beaten white of an egg when nearly baked.

Potato Biscuit.—One and one-half cups flour, 1 teaspoon baking powder, $\frac{1}{2}$ teaspoon salt, 1 cup mashed potato. Mix all with a little milk to moisten to the thickness of baking-powder biscuit; roll out, cut in cakes, and bake 20 minutes in a hot oven.

Apple Chutney.—Pare and core 12 sour apples. Peel one onion. Seed one cup raisins, and extract the juice of four lemons. Chop apples, raisins and onion very fine, and season with a dash of cayenne. Add 1 pint vinegar and half a cup currant jelly. Let simmer very gently one hour, stirring often. Add 1 pint cider vinegar, 2 cups sugar, 1 tablespoon each of salt and ground ginger, and cook another hour, stirring very often. Put in sealers.

Creamed Parsnips.—Scrape and boil till tender. Drain and cut in small pieces. Place in a kettle, add enough milk to cover, and when it boils thicken slightly with a little flour wet to a smooth paste with cold milk. When like cream, add butter, salt and pepper, and serve hot.

Brown Sauce.—To serve with boiled meats, poultry, etc.: Stir 1 tablespoonful sifted brown flour into $\frac{1}{2}$ cup melted butter. Put into a saucepan with 1 tablespoon chopped onion, 3 of cider, 6 of water, 3 of tomato catsup, and a little pepper

and salt. Boil until thickened sufficiently.

Sauce for Stewed Beef.—To $\frac{1}{2}$ pint of the soup add 1 tablespoon catsup, 1 teaspoon made mustard, a little flour, and a bit of butter and salt. Boil all together for a few minutes, and pour round the beef.

Spanish Hash.—One cup any kind of cold meat, minced, 3 potatoes, 1

ture, rinse well in plenty of clean water, and hang out.

To Wash a Crocheted Shawl or Fascinator.—Into a tub of warm suds, made from any good white soap, plunge the article to be washed. The water should not be hot, and there should be plenty of it. Do not rub, but gently squeeze and work with the hands. Squeeze out the dirty



Canadian Views.—Distress Falls, on Big East River, Muskoka, Ont.

onion, 1 stalk celery, all chopped fine; 1 cup canned tomatoes, 1 egg, pepper and salt. Mix thoroughly, put in greased muffin pans and bake brown.

Apple Snow.—Pare and core six good-sized apples and steam them in two tablespoonfuls water, with a little lemon peel, until quite soft. Add $\frac{1}{4}$ pound finely-sifted sugar, let cool, and whip in whites of two fresh eggs. Beat well, without stopping, to a stiff snow, and serve heaped up in custard glasses, with a star of red currant jelly on top.

Baked Apples.—To bake in their skins, wash and wipe, and place in earthenware or graniteware baking dishes, as tin or iron injures the flavor of the fruit. They should be baked until they form a frothy, pulpy mass, and if there is any danger of the juice burning on the baking dish, add a little water. Eaten with cream, they form a delicious dessert.

HOUSEHOLD TIPS.

To Wash Without Boiling (recommended)—Boil about $\frac{1}{2}$ bar common soap in 1 gallon water, and when well melted stir in 3 tablespoons turpentine and 3 of ammonia. Put this in a tub, and pour in enough water to cover the clothes, then put clothes in and soak overnight. In the morning wash with the same mix-

water, then rinse in clean soft warm water, put through the wringer, then spread on a folded sheet upon the table, pull into shape, and leave to dry, preferably in the sun.

When darning large holes, it is often a great help to first baste a piece of thin net over the hole and then proceed in the usual manner. The mesh of the net makes the groundwork for the darn. Old veils and bits of old lace may be used.

Cut a small white turnip in half and rub the griddle with it. It causes no smoke, no smell, taste or adhesion, and will be found better than butter or grease.

Here is something to do away with that dangerous paraffine can. Save all the orange peel you may have. Dry it in a cool oven, and store away in paper bags. Then, some morning, when the fire won't burn, throw a bit of the peel on, and watch the effect.

In cases of inflammation of the stomach and bowels, try cloths wrung out of hot water in which a tablespoonful of turpentine has been put.

Seventeen milling firms in Manitoba and Saskatchewan have united under the name of The Canadian Consolidated Flour Mills Co., Ltd. The capital is \$2,000,000.

Current Events.

The new Transvaal Ministry was sworn in at Pretoria on March 4.

Russia is making plans for rebuilding her shattered navy at an early date.

France and Spain will build three railroads across the Pyrenees within the course of the next ten years.

The resignation of Governor Swettenham, of Jamaica, has been announced in the British House of Commons.

On March 1st Sir Charles Tupper, as the sole survivor of the Confederation Conference, was presented with a portrait of himself in oils.

Premier Campbell-Bannerman has promised to support the bill presented by W. H. Dickinson, M. P., to give the suffrage to women.

To connect London with Vladivostok by rail, is the dream of those who are advocating a tunnel under the Channel between England and the Continent.

It is reported on good Continental authority that Emperor William is considering the closing of the Baltic to foreign fleets as a measure of protection for his own coast.

Mr. Andrew Carnegie has offered \$50,000 towards the building fund of McGill University College, of British Columbia, on condition that a similar sum be raised within a specified time.

The Hon. L. J. Tweedie has been appointed Lieutenant-Governor of New Brunswick, as successor to the late Governor Snowball. Hon. Wm. Pugsley has succeeded to the Premiership.

The second Russian Parliament met on March 5th, and was opened without a speech from the throne. The chief interest of the session will center about the question of a responsible ministry.

A bill in equity to obtain an accounting of the financial affairs of Mrs. Mary Baker Eddy was filed in the Superior Court of Merrimack County, on March 2nd, by Mrs. Eddy's son, George W. Glover, of Deadwood, S. D.; his daughter, Miss Mary Baker Glover, and George W. Baker, of Bangor, Me. The bill is directed against Calvin A. Frye, Alfred Farlow and other trustees of the

Christian Science Church in Boston, Lewis C. Strang, and Herman S. Herring, first reader of the Church in Concord. Besides demanding an accounting of all transactions relative to Mrs. Eddy's affairs, the bill asks for restitution in case any wrongdoing appears; for an injunction during litigation against interference with her property and business, and for a receiver.

LORDS AND COMMONS.

The British House of Commons still continues to introduce measures which will be as certainly vetoed by the House of Lords, but even in so doing, it is heaping up fuel against the day when, yielding to popular opinion, the Upper House must submit to reorganization. Among these measures may be mentioned a resolution in favor of the disestablishment and disendowment of the Church of England, a bill to provide that the portion of the funds now supplied to schools by local authorities and expended in denominational instruction be returned by the managers of the schools, and a bill legalizing marriage with a deceased wife's sister. The last measure has been passed by the Lower House 18 times, and has each time been rejected by the Lords. Simultaneously, in anticipation of coming events, a movement for reform has been begun within the House of Lords itself, where a bill has been introduced by Lord Newton, providing that the number of life peers appointed by the Crown be limited to one hundred, the other peers to be elected or to receive appointment because of distinguished service in some important Government office. The bill also provides that any hereditary peer may be elected to the House of Commons.

DEATH OF DR. ORONHYATEKHA.

Dr. Oronhyatekha, Supreme Chief Ranger of the Independent Order of Foresters, died of heart disease at Savannah on March 3rd. Dr. Oronhyatekha was born Aug. 10th, 1841, at the Six Nations Indian Reservation, near Brantford, Ont., and was of pure Mohawk lineage. He began his school life at the Industrial School on the Reservation, and attended successively the Wesleyan Academy, Wilbraham, Mass.; Kenyon College, Ohio, and Toronto University, where he studied medicine. In 1860 he was invited by the chiefs of the Six Nations to present an address to the Prince of Wales, now King Edward VII., who in that year made a tour through Canada, and, through the influence of the Prince, who was much impressed with him, he subsequently attended Oxford University, where he studied medicine under Sir Henry Ackland. On his return to Canada, he practiced as a physician at Frankford, near Belleville, at Stratford and London, but finally abandoned his profession that he might give all his time to Forestry. In addition to his offices in that body, he rose high among the Masons and Good Templars, was president of the Union Trust Co., and Farmers' Co-operative Harvesting Machine Co., and held the offices of Justice of the Peace and Consul-General in Canada for the Republic of Liberia. Dr. Oronhyatekha, shortly after his graduation, married Miss Ellen Hill, also of the Mohawk tribe, and a great-granddaughter of the famous Joseph Brant. He is survived by only one son, Dr. Ackland Oronhyatekha, and a daughter, Mrs. Percy Johnston. His body, after lying in state in Massey Hall, Toronto, was interred on the Mohawk Reservation, near Deseronto.

THE HAGUE TRIBUNAL.

One of the most striking changes

that have come over the world within the course of the last century is the growth of a marked sentiment in favor of peace. One hundred years ago the tendency was to exalt military prowess. In those days, Nelson, Wellington and Napoleon were considered the highest type of heroes. To-day, not the man who conquers in war, but the man who, standing before his nation, skillfully avoids it, is considered the truest hero.

True, the upbuilding of navies and the extension of armies have gone on. Only within the last two years have Dreadnaughts made their appearance. But here is the point: Preparation has reached its high tide; it is seen that, unless some contra step be taken, nothing except financial exhaustion can limit the great competitive struggle for huge navies and endless armaments; people are tired at the outlook; the reaction has set in. As a consequence, in the coming Peace Conference at The Hague the question of first importance is likely to be that of limitation of armaments. Germany and Austria will, it is said, oppose the discussion of this question, but Great Britain, the United States, Spain and Italy will form a strong quadrangle in favor of it. Great Britain has already, by the reduction

of the estimates for naval expenditure for the coming year, and her voluntary proposal to permit her building of Dreadnaughts to be regulated by the Conference, shown that she is intensely in earnest in this matter. As Sir Henry Campbell-Bannerman says: "We already have given an earnest of our sincerity by considerable reductions in our naval and military expenditure, and we are prepared to go further if we find a disposition in other quarters. Our delegates, therefore, will not go to the Conference empty-handed."

The Hague tribunal has already shown that the adjustment of international disputes by arbitration is no longer theoretical, but intensely practical, hence results greater than may at present appear may hinge on its discussion of this new topic.

RECIPES.

White Cake.— $\frac{1}{2}$ lb. butter, $1\frac{1}{2}$ cups sugar, 1 cup lukewarm water, 2 cups Five Roses flour. Beat well, then sift in $\frac{1}{2}$ cup flour, in which has been sifted 2 teaspoons baking powder. Stir in beaten whites of 4 eggs and 1 teaspoon vanilla.

Short Bread.—1 cup butter, 2 cups sugar, enough Five Roses flour to mix. Roll $\frac{1}{4}$ in. thick, cut in squares and bake.

Children's Corner.

[All letters for Children's Corner must be addressed "Cousin Dorothy," 52 Victor Ave., Toronto. Otherwise they will not be published.]

A SHORT SPIDER STORY.

(Concluded.)

A great yellow and black wasp was flying about in search of a nice spider for his Sunday dinner. "I'm too hot and tired to hunt any more," he was saying. "I'm afraid I'll have to put up with something plainer, as there are no spiders to be seen." But just then he caught sight of the corner of Madam Spider's web, and darted off in that direction. The lady was not to be taken by surprise this time, for she heard the rustle of his wings, and hid herself as quick as wink under her sitting-room floor. Not a bit too soon, either, for at the same moment the wasp dashed into the web, broke it all to pieces, and thrust his fangs down right over Madam Spider's head. In a great fright, she fell off the bush, but a thread of silk tied to the branch kept her from falling very hard, and she slipped safely away through the grass, and was soon far away from the angry wasp. But her new web was all spoilt, and it took hours to make another one.

Not long after this, Madam Spider decided to lay her eggs. First, she had to

subject, I hope we shall have several discussions upon it. (It is about Canada, Lorne.) I think that Canada has a very kind feeling toward the United States, and that if our friends needed help, she would be very willing to give her assistance. When the San Francisco earthquake and fire occurred, our Government gave a large sum of money to help that stricken city. This proves her affection toward that nation. One of the readers says, "If Canada feels in this way, why does she not join with the United States?" But, as proved to me in last week's discussion, I say "Great Britain first, always."
FRED BLACK.
Orillia, Ont.

Dear Cousin Dorothy,—I, too, am an interested reader; but can no longer keep still when there is such a deep discussion going on. To tell the truth, I was heartily sick of hearing of cats and dogs. Canada, as a rule, is very friendly to nearly all countries, but especially towards the United States. I think she helps all nations in trouble, for she sends missionaries to Japan and China. She offered money to the stricken people of Jamaica, and she gave a large sum to the people of San Francisco, when they were homeless and with no food. The United States is her greatest commercial market. But, in regard to fishing in the Great Lakes, I half think that the Yankees are a little sly when they slip on the Canadian side, as they did a year ago, you remember. But Canada has great patience, and we hope will live and work on forever.

Before going, could I ask for some girl correspondents of about my own age (13)? If any would be so kind as to write me first, I shall be very grateful to them.
ETHEL CAMPBELL.
Harwich P. O., Ont.

Any other letters on this subject will be printed next week. C. D.

THE LETTER BOX.

Dear Cousin Dorothy,—We live upon a high hill in the country, in Oxford County. Our farm is called Spring Hill. It is named this because of the great number of springs in the hill. I think the country is the best place to live. The cheese factory is a quarter of a mile from our place. A little cousin lives with us. He has great big, brown eyes, red cheeks and curly hair. He is very mischievous, and we have great fun with him. He will be two years old next March. Good-bye.
JONOVAN.

Dear Cousin Dorothy,—Our school is situated near the shore of Lake Ketchebedogobog. In the winter, we have good fun playing on the ice, coasting, snowballing, and sliding. In the months of April and May, we have great times picking all sorts of wild flowers back of our school in a large grove and maple-sugar bush.
VIOLET IVORY
Dalrymple, Ont. (age 9).

Dear Cousin Dorothy,—I have got quite interested reading the letters of my Farmer's Advocate cousins, and thought I would like to enter the list. We live on a farm. I have just got to go across the road to school. I have seventeen White Leghorns, and am trying to make them beat my father's Barred Rocks. The Leghorns beat in January, but, since the first of February the Rocks have had the best of it.
CARL LEO BARKER
Mt. Vernon, Ont. (age 10).

Dear Cousin Dorothy,—I have never seen any letters from any of my schoolmates, and, perhaps, if I start they will follow. My father has never taken "The Farmer's Advocate" until this year, and I wish he had started taking it sooner. I think that if China was to make the progress Japan has in the last few years, and the two countries unite, they would conquer the world. I must close, wishing your paper success.
ROY ROBERTSON (age 13).
Robcaygeon, Ont.

Dear Cousin Dorothy,—I greatly enjoy reading the Children's Corner. My father has taken "The Farmer's Advocate" for three years, and he thinks it is one of the best papers published. I am fourteen years old, and will end with some riddles:

What is the most like a horse's shoe?
Ans.—A mare's shoe.
Of what pain do we make light?
Ans.—A window-pane.
What is the closest relation to a tree?
Ans.—Its branches.

HERBERT BARKER.
New Lowell, Ont.



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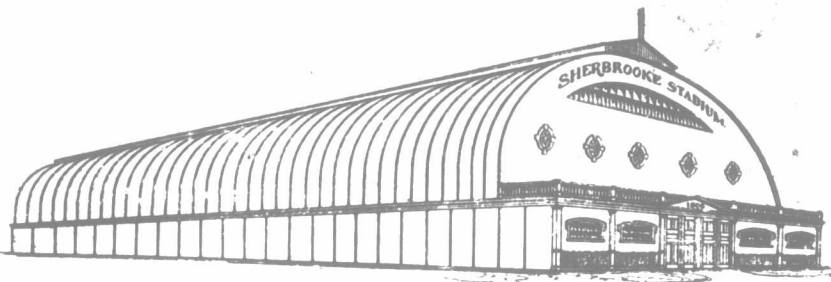
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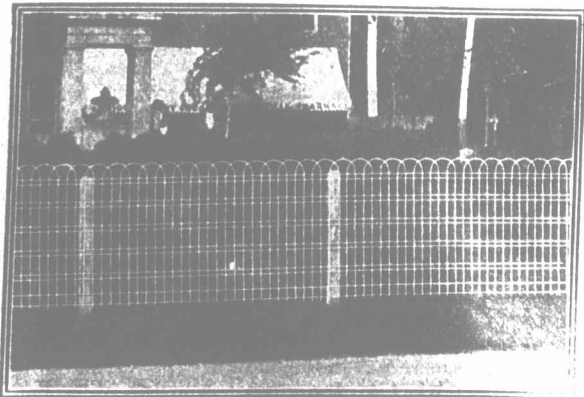
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A CHAT ABOUT THE FASHIONS.

If you have been in town lately, it must have occurred to you that half the women have gone clothes crazy. Weeks and weeks ago, to cite just one example, our house, which shelters a half-dozen females of all ages, was inundated with pique, and dimity, and net. Indeed, as early as the middle of February, Penelope—she's one of our "females"—came in from a favorite down-town store—hat awry, hair flying, and a generally rakish, through-the-mill appearance quite foreign to her. "I declare," she said, "the women down there are like ravening wolves! The new dimities were on sale this morning, and it was as much as your life was worth to get near the counter!" "And did you get what you wanted?" we chorussed. "Yes, I did—just the sweetest barred piece ever!" So we shrewdly guessed that our usually decorous Penelope had cast her propriety scruples aside, and done her share of the elbowing.

After all has been said, however, this habit of buying spring and summer things early has its advantages, which should not be overlooked, especially by country people. In March and early April, there is usually plenty of time for sewing, and it is surely a comfort to have things made before gardening and housecleaning come on.

Having decided upon beginning at once, the next question is what to buy. Sometimes, in going over the fashion books, one gets somewhat confused, there are so many beautiful things, and those paper ladies in floating robes, and trimmed cloaks, and "French-effect" hats, do look so enticingly lovely. However, if we country folk are wise, we will stop to consider. In the first place, it is absolutely necessary that these elaborate costumes, if they are "to look like anything at all," be made by first-class dressmakers, dressmakers who charge anywhere from \$12 to \$30 or more for making a gown, and they are by no means to be found in the country. Better, by far, the simplest gown well made than the most elaborate spoiled. . . . In the second, such costumes have been designed solely for society people, who can afford to have costumes to suit every occasion—simple ones for morning wear and for travelling, more elaborate for the afternoon, more elaborate still for the evening, or for functions extraordinary. Country people, as a rule, must choose designs that will suit various occasions, and so will do well to fix upon those in which the ruling note is simplicity. A simple gown, well made and quiet in coloring, is never in bad taste, and may be worn a long time without inviting comment; an elaborate one, worn here, there and everywhere, may often be out of place, and seldom fails to mark a woman out as invariably as does a striped stick a barber's shop.

Besides, simplicity seems to suit the country, its lack of artificiality, its usual atmosphere of genuineness and unity. In the rural districts, there is very little sense of caste built upon money values—no strata upon strata of society, the top one able to live in fine palaces and dress continually in purple and fine linen, the next forced to do with less, yet a little discontented in the process and aping with all its might, and so on down and down the social ladder. Of course, this sweeping assertion does not apply to everyone in the city—it would be very foolish to imagine that there are not many sweet, and sensible, and good people in the cities, who are contented to go their own way, and let others go theirs; but we speak of the general tendency, a tendency which has brought about all too many bankruptcies, and introduced a discordant element into all too many homes. So the country, if it is wise, will drive far from it—the over-laborateness, which only brings worry and the putting of false values upon things, and will hold dear the simple life which so many of the best minds would give much to possess.

Last of all, by choosing simple styles, it is quite possible to do much of one's own dress-making. Many women, even in the cities, are trying this of late, and report results as quite satisfactory. Of course, it is impossible for a woman without the necessary training to make a good tailor-made suit, but, armed with a good new pattern, not a pattern of 2 years

ago—there is nothing to prevent her from making her blouses and separate skirts, and muslins, quite as well, perhaps even much better than the ordinary sewing girl. As regards patterns, I have talked with some women who have had much experience in sewing, and find that they unhesitatingly pronounce the New Idea patterns, which may be bought for ten cents each, as the most reliable of those which they have tried.

And now for a hasty sketch of what spring styles are to be. For suits—the suit which seems so invaluable in spring and fall, and on cool days throughout the summer—light-weight tweeds, Panama cloth, serge, Venetian cloth, broadcloth, and dark "invisible" plaids are all used. These suits may be very well made at home, if good patterns, in Eton or Norfolk (not tailor-made effect) styles are chosen. For the long, loose summer coat, which will be worn quite as much as last year, light-weight tweed, pongee and linen will be in most demand. Some of the new Eton and pony coats show half-fitted or loose backs, but as yet these look extremely ugly.

For summer dresses, fine, pliable materials seem to take the lead, shepherd's plaid, chiffon voile, foulard, cashmere, poplin, and rajah silk in the heavier materials, with dimity, Swiss, mull, Persian lawn, and finely-woven linen in wash materials. Even the gingham this year are semi-transparent and very pliable, while the fine, light-weight pique is a very different material from the old, stiff species, which was such a bugbear in the laundering. Some beautiful new checked dimities, resembling somewhat the old cross-barred muslin, are shown, all ready for making up into the prettiest white shirt-waist suits imaginable. Polka-dots are also in favor, while plain materials, perhaps embroidered by hand, will again be in much favor, thus giving girls who have plenty of time on their hands a chance to be handsomely gowned at comparatively little expense. One girl, whom I know, is embroidering herself a fine white linen gown. The waist is a simple shirt-waist, buttoned at the back, with plaits towards the shoulders, somewhat in Gibson effect, and an embroidered front, with insets of thick white net. The skirt is 15-gored, perfectly plain, with embroidery and insets of the net all round above the facing. The stamping cost her very little, and she is making the whole gown herself.

Skirts must still be very flat about the hips, and flare considerably from the knees down. The tendency is to make them longer, but Paris still decrees two inches from the ground for all walking dresses. Lining is not used at all, and when skirts have the upper portion plaited, the cloth beneath the stitched-down plaits is often cut out to give as flat an effect as possible.

Sleeves, so fashion decrees, must now be long or half-way below the elbow for all plain waists. For dressy wear, they will still be elbow length. When the hot weather comes, however, the chances will be that elbow-length will hold sway for all muslins, dimities, or other very sheer materials. Jumper waists promise to be very fashionable, and the style will be found invaluable in making over old gowns. They are simply sleeveless waists, cut very low in the neck, and worn with a guimpe and sleeves of white, or of a contrasting color. Sometimes caps of the same material as the waist are worn over the undersleeves.

Leaking Pipes.

I noticed in Jan. 31st issue a short article, written by G. F. G., stating how to put pipes together to keep them from leaking. Well, this may be all right where the pipes run up straight, but this doesn't stop the flow, nor the bad smell. Here is a remedy which will stop the flow and lots of worry and work. Take the first or second pipe above the stove-out, and take it to a tinsmith. Get him to cut a hole in the middle about three inches in diameter. Now get him to put a band around this pipe, five inches wide, with a hole in it same as in the pipe. Now use this as a damper. When you shut the stove damper, open the pipe damper. This will let the air in from the room, and stop the trouble at once. This was taken out of an American paper, and tried by different parties, and works No. 1.

JOHN J. WETLAUFER,
Osborne Co., Ont.

Our Girls—Devil Cake.

Dear Dame Durden,—I have just been reading "again" the criticisms given on "the young women," and, also, "what makes the ideal woman."

Perhaps I am away late with my "uninteresting ideas." Am I? Well, I have been "thinking some" during these weeks, since I received Jan. 24th number of "The Farmer's Advocate," and wondering, too, what the other Chatters thought of this "serious" topic. I am glad you put a little footnote in, Dame Durden, and that you believe all girls are not of the frivolous, dowdy, unthinking type.

It is certainly true that there are heaps of girls who answer those criticisms, and who do not even try to do better. Who is to blame in this? Do you think the girls are altogether to blame? Don't you think that the mothers are, in many ways, the cause? You know that some think it is the "whole thing" to dress their daughters up, shove them out into the society of young men to get a "beau," and then get them married. Their ambition is at its limit then, and it is a matter of importance as to whether the girl can "housekeep," etc., or not. The girl has been brought up "extravagantly," without a knowledge of economy, etc., and what can be expected of her now, when supposed to superintend the duties of her new home? What follows?—constant heart-break for both the husband and wife—breaking up of home. Of course, this is not always the cause, but am I not right in saying it is sometimes?

I think, too, that some girls don't care whether they do anything in the home or not. "Self" is very important, and often poor mothers have to do the slavery and work that they should not do. But, girls, how glad we should be that not all are like this. Even though we come short of the mark, we can try to cultivate those beings of ours, and have some of the graces of the "ideal woman," that will rid us of our faults, and help us to live more according to the ideal before us. Life is short at best, and we want to make our lives as sunny and helpful as possible, and not have such criticisms passed about us as we read in the first part of Ingle Nook Chats (Jan. 24).

Do you know, Dame Durden, those criticisms made me feel rather heart-sick. I thought it was rather hard, hard on the poor girls, but I have been discussing this important question with others, and they said it was too true.

Say, "ye farmer girls," that doesn't hit us in regard to "breadmaking and cooking as a lost art." Now, does it? And, on the farm, one can't be always "pinked up" at all kinds of work—not dowdy. No, we certainly must not be that. But, I will tell you, girls, we "country lassies" do not know the temptations and snares of town and city girls, and we have a better chance, I think, in so many ways.

Have I bothered you too long, dear Dame Durden? But, I have a failing when I start to write, and hardly know when to stop. I do enjoy the letters of the Ingle Nook so much, I always hunt it up first thing when "The Farmer's Advocate" comes.

Would you kindly give me a recipe for dark cake? Some would call it devil's cake. Will now say good-bye.

Middlesex Co. DARLING.

Devil's Cake.—Cream together 2 cups brown sugar and 1/2 cup butter. Add 2 beaten eggs, and beat well; then add 1/2 cup sour milk. Put 1 teaspoon soda in 1/2 cup boiling water, and pour over one bar chocolate (grated). Mix with other ingredients, and beat in 2 cups flour, and, last of all, 2 teaspoons vanilla. Bake in a moderate oven, and, when cold, ice with white icing.

Another Wedding.

My dear Ingle Nookers,—This is my first letter. I am very much interested in the Ingle Nook. I read Helponabit's letter about a wedding. My dear uncle has just been married to a very fine girl whom I like. I will tell Alma about the wedding breakfast. It was a double wedding, my uncle and aunty, her sister and husband. After the ceremonies the people gathered in the dining-room. There were two tables decorated with silver leaves. On the brides' and bridegrooms' table there were jellies, olives, wedding cake, bride's cake, a glass of water, and two knives and two forks at

each plate. The first course was turkey, potato balls, cabbage salad. The waiters then brought bread, butter, celery, cherry jelly, and cream, coffee and chocolate. The cakes were then served, the wedding cake, bride's cake, and cream puffs.

The brides came in attired in their travelling gowns; then the brides and bridegrooms started to the station on their wedding tour.

I hope this isn't too long, and will be helpful to Alma, and perhaps to others. I like "The Farmer's Advocate" very much. We have taken it about seven years. I am, your new writer, Elgin Co., Ont. BLOSSOM.

Keeping Girls at Home.

Having been a satisfied farmer's daughter, and being now a busy, contented farmer's wife, I feel inclined to express a few words regarding keeping girls at home in the country. Wrinkles' suggestions are good, to teach them the value of money and instil a businesslike interest in the home. Did she mean for personal pocket money or clothing, etc.? According to profits, I presume.

Please allow me to tell my opinion on pleasure necessary to young people. Encourage them to take an interest, and try to be one of them, not becoming displeased if everything does not exactly go to suit your feelings.

This afternoon a village lady, a neighbor, and myself drove quite a distance to a Women's Institute meeting. The village lady said, "You country women do not imagine the pleasure of being able to get a horse and get away for a bit." Now, I really think that letting girls have a horse is quite an enticement towards keeping girls at home. In my experience I know of few girls with that privilege who leave home.

I wonder how many readers do not candidly think that an afternoon's drive with nature's pictures in view, and a pleasant companion beside them, is not more healthy and refreshing than a street-car ride for which you have to pay and often not get a seat? How many careworn, unhealthy, tired-looking people one sees when viewing the crowds who throng the city, behind the counter and in the streets!

Now just a little word of advice to these girls who have fathers or brothers who say, "Oh, no, girls are too nervous," or "not strong enough." Girls can learn almost any other occupation if it does not require too much masculine strength, and they can learn to drive too, unless the horse is extremely vicious. Be kind, firm, calm, practice self-control and authority, and learn the nature of the animal. Pat him, help to hitch and unhitch, getting him used to a woman. Then if the men are still unwilling, watch your chance. Some time, when they are very busy, say, very kindly, that you could help them a bit by raking, going an errand, or many other things. Such work, if the girl can get time (make time) is healthy, and well repays if you succeed in mastering the splendid friend—our king of the barnyard. Of course, if you win, do not impose on the men's good nature and want to go too often.

If this is not too long, will you allow me the favor of having the following topic discussed: Two little girls had a quarrel. One, the one girl of a society woman and ex-school teacher; the other, a child of a family of six or seven, smart, intelligent children, with a good mother, but lacking the special education required to teach school. The former said: "I have a smarter mother than you have; she was a school teacher." I would enjoy hearing the opinion of some of the Ingle Nookers very much indeed, unless, D. D., you think it not wise. Hoping I have not tired you too much, I am, "OBSERVANT."

Simcoe Co., Ont.

Cleverness is not all an outcome of "school" education. We know very many clever people who have had very little schooling. I think of one now, of whom I heard it said, "It's easy enough to see that 'she' had a college education," and yet the one referred to had never gone beyond the public school. She was an all-round woman, a good house-keeper, interested in young people and social life, and much given to keeping up with the times and reading good literature. Of course "schooling" is a help to any woman, but the resolute mind may go a great way towards making good the deficiency.

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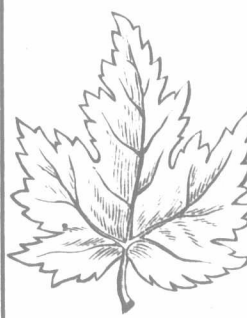


WHAT'S SO GOOD for children as pure, nutritious bread? Makes 'em grow strong and sturdy. You can bake that kind of bread from PURITY FLOUR, because it is produced entirely from the finest Western Canada Hard Wheat by the most scientific milling.

Best bread flour in the world—tasty and wholesome.

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Gilt Edge—650 ft. Pure Manilla Gold Leaf—600 ft. Manilla Silver Leaf—550 ft. Standard Manilla Maple Leaf—500 ft. Standard

Good Material; Bright, Clean, Smooth, Even Cord, of Unusual Length and Strength. Specially treated to make it "Insect Proof."

Every Ball Guaranteed.

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For Sale by Reliable Dealers Everywhere.

"FOR PROFIT, BUY A U.S."

100% 8 Months

CARTHAGE, Mo., Oct. 30, 1906. From Mar. 1st until Oct. 30, 1905, I milked 5 cows and sold all of my butter at 20 cents per pound, and the sale amounted to \$126.90. On Mar. 1st, 1906, I bought a U. S. Separator No. 7, and from that date until Oct. 30, 1906, from the same cows I sold \$197.85 worth of butter. I consider that my separator has paid its first cost already, as it made a clear gain of \$70.95 in eight months with only five cows. For profit buy a U. S. — every time.

I. N. HUSSEY.

Dairymen: there's a straight tip "from Missouri." For profit, buy a U. S. Money talks. Does that \$70.95 say anything to you? You want the best separator, sure. It's cheapest in the end. And there is no earthly reason why you should n't have it, when a U. S. Separator will pay for itself. It always does. Simply a question of how soon, and that depends mostly on how many cows you have.

Let us send you right away our new large free catalogue telling you plainly by word and by picture everything about the construction and operation of the U. S. Please say, "Send New Catalogue No. 110", and write TODAY, postal card or letter, addressing

VERMONT FARM MACHINE COMPANY Eighteen Distributing Warehouses. 463 Bellows Falls, Vt.

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More profitable than poultry. Experience unnecessary. We give advice free. Our new 50c book, "Money in Canaries," tells all about it. With book we send free, if you name this paper, a 10c packet BIRD BREAD. Also, "How to Raise Birds of Lice," and "Bird Magazine." Send 50c to-day; stamps or coin. Refunded if you buy birds from us. Birds shipped anywhere any time. Write us before buying. Address:

COTTAM BIRD SEED 28 Bathurst St., London, Ont.

\$12 WOMAN'S SUITS, \$5

Suits to \$15. Clean, stylish, shirts and waists at same hot-water prices. Send for samples and full list. Southeast Suit Co., Dept. W London, Can. Send for our catalogue, which lists everything you can buy.

Please Mention this Paper

Allegheny General Hospital

TRAINING SCHOOL FOR NURSES

Offers to young women of education and refinement, between the ages of 21 and 30, a three-years course of nursing in a hospital of the first-class under State supervision.

Apply for particulars to Superintendent of Hospital, Allegheny, Pa.

NATURALLY one looks for Quality In An Organ

You have simply to see and hear

A SHERLOCK-MANNING

to be convinced of its superiority.

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THE SHERLOCK-MANNING ORGAN CO., London, Ontario.

ALBERTA Offers Opportunities.

Northern Alberta is the garden land of the West. The district around MILLET is unsurpassed. The town presents many chances for business openings. For full information write:

P. J. MULLEN,
Sec. Millet Publicity Committee.
MILLET, ALBERTA.

Young Shorthorn Bulls!
Am now offering 3 grand ones from Scottish (imp). Will make show animals. A few choice boar pigs 3 months old. Also Lincoln
JAS. SNELL, Clinton, Ont.

GOSSIP.

Messrs. R. A. & J. A. Watt, Salem, Ont., near Guelph, advertise for sale the trotting-bred stallion, Regal Perfection. Look up the advertisement, and write for particulars.

Messrs. H. J. Whitteker & Sons, North Williamsburg, Ont., write: "We have about 60 Buff Orpington hens and pullets. For October, we sold 23 dozen for \$4.15; November, 20 doz. for \$4.40; December, 16 doz. for \$3.92; January, 36 doz. for \$9; February, 42 doz. for \$10.50, besides what we used in our family of five. Total eggs sold was 141 dozen; total amount received, \$31.97."

Mr. W. Thorn, Lynedoch, Ont., breeder of Ayrshire cattle, has ordered a change of his advertisement, having sold the yearling bull and ducks in his last special offering, and now offers heifer and bull calves from his heavy-milking strain of cows. Write him for prices.

Mr. D. Allan Black, Kingslow, Ont., advertises for sale young Shorthorn bulls, cows and heifers, bred from stock purchased from Messrs. Watt, of Salem, and which will be sold cheap, as he is going up breeding beef cattle and going into dairying. Two young Ayrshire bulls, bred from imported sire and dam, are also offered in the advertisement, which see, and write for prices and particulars.

Remember the dispersion sale, on Tuesday, March 19th, of the herds of Aberdeen-Angus and Jersey cattle belonging to Mr. John O'Brien, West London, Ont., three miles out from the city. Good representatives, registered and prizewinners of these excellent beef and dairy breeds, respectively, are included in these herds, and they will be sold without reserve, as the owner is retiring from farming. Some good work horses and roadsters are also in the sale.

Six Clydesdale brood mares, in foal, and fillies, belonging to the estate of Mrs. B. Smillie, Hensall, Ont., are advertised in this paper to be sold by auction, together with other farm stock, at the farm, one mile from Hensall Station, G. T. R., north of London, on Friday, March 22nd. These should be worth looking after, as Hensall is a well-known center for heavy-draft horses of the best sort.

MEHAREY'S CLYDESDALE SALE.

The auction sale to take place at Ottawa, on April 2nd, of 20 imported Clydesdale mares and fillies, the property of Mr. Wm. Meharey, of Russell, Ont., should attract the attention of breeders and farmers desiring to improve their stock. These young mares, two to four years old, were personally selected from the best breeders in Scotland, and are said to be a choice lot, large, and with the best quality of feet and legs, and very choicely bred, being sired by such noted stallions as Baron's Pride, and some of his best sons, and other high-class horses. These mares should readily find homes on Ontario and Quebec farms, or those of the more-distant provinces east and west. Make a note of the date, and plan to be present at the sale.

At Myrtle (C. P. R.) Station, on Friday, March 29th, the Myrtle Sales Association will hold their annual sale of pure-bred stock, comprising 15 Shorthorn bulls, 15 Shorthorn heifers, 20 Yorkshires of both sexes, and a number of Clydesdale fillies, imported and Canadian-bred, and a few Clydesdale stallions, Canadian-bred. Every animal will be registered in the Canadian National Record, and will be inspected before being accepted, and no culls will be offered. Among them are a number of show animals. The Myrtle Sales Association is an incorporated body, the object of which is to establish a biennial sale of pure-bred stock of the various breeds. The sale will be held under cover. Shortly a large sale pavilion will be erected, which will make this one of the leading and best-equipped pure-bred stock sale associations in the Dominion. Myrtle is centrally located in the County of Ontario, with both C. P. R. and G. T. R. connections. The terms are cash, or six months' on bankable paper, with six per cent. per annum. Single return fare on both railroads, and half fare for shipment of animals bought at this sale. Fuller particulars in our next issue.

HOLSTEINS BY AUCTION

H. E. George, Crampton, Ontario,

Will sell by public auction at the

TOWN OF NAPANEE, ONTARIO,
Friday, Mar. 29, '07,
COMMENCING AT 2 O'CLOCK, SHARP,

35 Registered, Imported Holsteins and Home-bred

Of these 25 are young cows, fresh or due to calve soon, or calves by their side; also 5 yearling heifers and 5 imported bull calves. Several of the cows have large official records. Catalogues with breeding and records, etc., on request.

I propose making this a yearly event. Am offering a very choice lot. All will be sold without reserve.

Terms—Cash or bankable papers at 8 months' credit, with interest at 6 per cent.

Reduced rates on all railways.

H. E. GEORGE, PROP.,
Crampton, Ont.

Shorthorns, Clydesdales, Yorkshires BY AUCTION

Under Cover at MYRTLE, C. P. and G. T. R., on
FRIDAY, MARCH 29th, 1907.

THE MYRTLE SALES ASSOCIATION will hold their second annual sale of registered Shorthorns, Clydesdales and Yorkshires, comprising 15 Bulls from 10 months to 2 years of age, 15 Females from 1 to 4 years, 15 Yorkshire Sows, and 5 Yorkshire Boars, several imp. and Canadian-bred Clydesdale Mares and Fillies, and a few Canadian-bred Clyde Stallions. The Shorthorns are Scotch and Scotch-topped, representing the Wedding Gifts, Miss Ramsdens, Crimson Flowers, Stamfords, Symes, Beauties, Princesses, and Lavinias. From the leading herds of Ontario. Show stuff will be sold. Terms—Cash, or 6 months on bankable paper, with 6 per cent. per annum. Single return fare on both railroads, and half price for shipment of stock.

Wm. Smith, President. **John Bright,** Treasurer. **A. Quinn,** Secretary.
JAMES BISHOP, Auctioneer.

Imp. Clydesdale Fillies by Auction

20—From 2 to 4 years old—20
At OTTAWA, ONTARIO.

I have personally selected in Scotland 20 of as good fillies as ever came over for size, quality and breeding. Sired by Baron's Pride and his best sons and other noted sires. A number prizewinners. Sale at one o'clock.

APRIL 2nd, 1907,
At Butler House, OTTAWA.

Terms cash, or two months on bankable paper.

WM. MEHAREY, - **Russell, Ontario.**

Amatite Should cover every FARM BUILDING

If you are looking for a substantial and satisfactory ready roofing you will find that Amatite answers your requirements better than any other.

You will also find that it costs considerably less than most of its competitors. Other roofings add to their cost every year or two, because they require constant painting. Amatite costs nothing to keep up. It has a real mineral surface on the outer side, which



takes the place of the usual waterproofing coat of paint. You do not have to examine your Amatite roofs every year for leaks, or paint them after a hard winter. Amatite will protect your buildings thoroughly and perfectly year after year, winter and summer, without any attention or bother after it is once laid.

If you have roofings now on any of your buildings that require painting every year to keep them in good repair, the cheapest thing to do is to cover them over completely with new roofs of Amatite as soon as they begin to leak. Amatite is easy to lay and costs so little that it is better economy to put it on and be free from bother, than to worry along with the kind of roof that requires constant attention.

FREE SAMPLE Let us send you at once a SAMPLE of AMATITE and a Booklet of information about it. We want you to see how much better it is than the kind that has to be painted.

Address nearest office of the

BARRETT MANUFACTURING CO., New York, Chicago, Philadelphia, Cleveland, Cincinnati, Boston, Minneapolis, Kansas City, St. Louis, New Orleans, Atlanta, etc. Barrett Manufacturing Company, Ltd., Canadian Agents, Toronto and Montreal.

POTASH

may be obtained from all the leading fertilizer dealers in the highly-concentrated forms of

MURIATE or SULPHATE of POTASH

For Tobacco, Sugar Beets and Potatoes apply Sulphate of Potash. On all other field crops, as well as in the Orchard, Muriate of Potash will give entirely satisfactory results. Potash is not merely a stimulant, it is a direct plant food, and has a beneficial after-effect. As a rule, to secure best results, Potash ought to be applied along with a Phosphatic Fertilizer early in spring. Any reader of "The Farmer's Advocate" desiring to obtain copies of the publications: "The Importance of Potash in the Culture of Sugar Beet," "The Improvement of Poor Permanent Pastures," "The After Effects of Fertilizers," or "Potash for Tobacco and Tomatoes," and other similar publications, may secure the same **GRATIS** by addressing

THE DOMINION AGRICULTURAL OFFICES OF THE POTASH SYNDICATE,
Rooms 1102-1106 Temple Building, TORONTO, CANADA.

Dispersion Sale of Pure-bred Aberdeen-Angus and Jersey Cattle, Grade Cattle and Horses.

Property of Mr. John O'Brien, London West, Ontario, 3 miles from the City of London, on **TUESDAY, MARCH 19th, 16 Aberdeen-Angus Cattle**—3 bulls and 13 females, **14 Jersey Cows and Helpers, 1 Pair Grade Clydesdale Geldings 6 and 7 years old, 1 Heavy Draft Gelding—3 years, 2 Carriage Fillies by Hildenby, 1 Filly and 3 Foals (general purpose) by Lennox.** This herd of Jerseys has produced many prizewinners. Spot Cash's Ella was champion at Western Fair, London, in 1900, and is dam of four in sale. Four cows, of same breeding as heifers in the Field, made an official average record of 24 lbs. 8 ozs. butter in 7 days. The Aberdeen-Angus cow, College Bloom, winner of second at Western Fair, and several daughters, are in the sale. **TERMS**—8 months' credit on approved joint notes; 6 per cent. per annum off for cash. Sale to commence at 1.30 p. m.

CAPT. T. E. ROBSON,
Auctioneer.

JOHN O'BRIEN, Prop.,
LONDON WEST, ONT.

By an oversight, a few issues ago, we stated that the "Southdown" sheep of Messrs. McFarlane & Ford, of Dutton, Ont., were wintering well. It should have read "Oxford Downs."

An important auction sale of registered heavy-draft Clydesdale mares, in foal, fillies, geldings and stallions, are advertised to be sold on Tuesday, March 19th, by D. & R. McGeachy, of Coleraine, Gore of Toronto, near Elder Station, 20 miles north of the city, on the Toronto to

Owen Sound branch of the C. P. R. The registered seven-year-old stallion, Star of Peel (3264), is included. He has proved an exceptionally good sire of the quick-selling sort. The brood mares, of which the number is a dozen, are big, drafty animals, worth from 1,000 to 1,800 lbs. The mares are well known as first-class breeders and have probably raised more heavy horses than any other brood mare company. All will be sold without reserve, including cattle, implements, etc., as the owners have retired from the business.

GOSSIP.

SALE DATES CLAIMED.

March 19th.—John O'Brien, London West, Ont., Aberdeen-Angus and Jersey cattle, and farm stock.

March 19th.—D. & R. McGeachy, Coleraine, Ont., Clydesdales and cattle.

March 29th.—H. E. George, Crampton, registered Holsteins, at Napanee, Ont.

April 2nd.—Wm. Meharey, Russell, Ont., imported Clydesdale mares, at Ottawa.

March 29th.—Myrtle Sales Association, Myrtle, Ont.

HOLSTEINS BY AUCTION.

On March 29th, at Napanee, Ont., will be sold thirty-five registered imported and home-bred Holsteins. The breeder, Mr. H. E. George, of Newton Lodge Stock Farm, Crampton, Ont., is sparing no efforts to make this sale a complete success. Those who realize that this breed of cattle has taken the leading position as milk producers and money-makers, since checks have reached such an exorbitant price, will be pleased to have the opportunity to purchase some good cows by public auction on the date mentioned, and Easter rates on all railways will greatly reduce the expenses in procuring them. A choice lot will be offered for sale, as the owner purposes holding this sale annually. Therefore, it will be to his interest to hold in view the buyer's interests, as well as his own, and offer for sale only such cattle as will be of sure profit to the purchaser. Mr. George has spent several years in testing the merits of the Holstein cow, and owns a large herd of this breed. Thirty-five will be sold without reserve, 25 of these being young cows fresh or due to calve, or having calves by their sides; 5 yearling heifers and 5 bull calves complete the number. Several of the cows have large official records. Catalogues, containing breeding and records, will be sent on request.

MR. COLQUHOUN'S IMPORTATION.

The well-known Clydesdale exporter, Mr. William Colquhoun, Mitchell, Ont., says the Scottish Farmer, sailed with four big weighty stallions, purchased from Messrs. A. & W. Montgomery, Netherhall and Banks, Kirkcubright. These were Blackhand (11623), Mac of Newfield (12667), Royal Ennisk (12720), and Worthy of Baldayie (13241). Blackhand has been prominent at the stallion shows for several years past. He is an exceptionally big, weighty horse, and never has failed to obtain recognition when exhibited. He was got by the Highland and Agricultural Society's champion horse, Prince Thomas (10262), which was sold by public auction for 900 gs., and has bred some of the most valuable horses and mares of recent years. Blackhand is an ideal Canadian horse. Mac of Newfield is an exceptionally well-bred horse. His sire was the 1,000-guinea horse, Montrave Mac (9958), whose sire was the champion Macgregor, and his dam the Cawdor-Cup champion mare, Montrave Maud, whose sire was the renowned Prince of Wales (6775), and her dam the invincible mare, Moss Rose (6203). The dam of Mac of Newfield was got by the celebrated Prince Robert (7135), which won first at the Royal Jubilee Show at Windsor in 1889, and at the Glasgow Stallion Show in 1892. He was sire of the renowned Hiawatha (10957). The granddam of Mac of Newfield was by Lothian King (6985), whose sire was the Glasgow premium horse, Young Duke of Hamilton (4122), and his dam the celebrated Danley champion mare, Louisa Royal Ennisk is another phenomenally well-bred big horse. His sire was McMeek (9690), the sire of many good-selling animals in Cumberland, as well as in Scotland, and his dam was got by Patricia (8095), a son of Prince of Wales, and first at Ayr when a three-year-old. Royal Ennisk's pedigree contains eight crosses of the best old Gallo-way Clydesdale blood, with such sires as the Danley horse, Ensign, and the noted Jacob Wilson (2178), which won the cup at Glasgow when a two-year-old, beating Macgregor, which was then a three-year-old. Worthy of Baldayie is a younger horse than these. He is a well-colored, thick fellow, with the blood of the champion Royal Garty (9844) in his veins, and plenty of strength and substance in the back crosses of his pedigree. This lot of horses should sustain and enhance Mr. Colquhoun's well-established reputation in Canada.

Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted, Pet Stock, and miscellaneous advertising.

TERMS—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

BUY rich farming and grazing lands in the Edmonton District, the most fertile district of Alberta. Pendleton Co., Lamont, Alta.

EMPLOYMENT wanted for about 4 1/2 months on good fruit, stock or general farm, for or preferred (Christian home), by young man, Canadian, aged 19; some experience in general farm work; healthy and willing; good references; state wages. Start about April 15. Write: "Work" Box 581, London, Ontario.

FORTY leading varieties of strawberry and cane berry plants. Seven varieties of seed potatoes. Catalogue free. Jno. Downham, St. Catharines, Ont.

FOR SALE in Saskatchewan—A1 section of first-class land; 300 acres ready for crop; 80 acres fenced for pasture; house, barn and well; \$16 per acre for quick sale; \$3,850 down, balance time. Box 31, Vonda, Sask.

FOR SALE—To settle up the estate of the late John Brown, the farm of 40 acres, near Freelon, will be sold. Possession April 1st. For particulars apply to Jas. A. Gray, agent for the administrator, Freelon, Ont.

FOR SALE—Two-story brick house. Ten rooms. With six acres of land. One hundred fruit trees. Outskirts of town. Three thousand population. Great Bargain. Drawer F. Clinton, Ont.

IMPORTANT to stockmen—Humanized delinquent applied to your calves will effectually dehorn them. The operation causes no pain, and is uniformly successful. Fully guaranteed. Price \$1 per box, prepaid. Write for literature, G. H. Tully, box 86, Bracebridge, Ont.

SEED POTATOES—The great 8-otch potato, Evergood—the potato that doesn't rot. Grown last season from imported seed. Fine flavor, great producer, rot proof. Good shape, shallow eyes, perfect keeper, midseason, especially adapted to heavy soils. Five pounds, post-paid \$1. W. Hargrave, Linwood, Ont.

STRAWBERRY plants—Best varieties; first-class plants; prices lower than most growers; send for list. H. D. Clemenson, W. Linton, Ont.

WANTED—A willing, clean, intelligent young man, who likes to milk and care for cows, and to work at general dairy farm work. We are willing to pay the highest wages for a man of this kind. In first letter please state wages wanted for a year, age, experience, and whether you use liquor or tobacco. R. & A. H. Baird, Chesterfield P. O., Ont.

WANTED—by North of England farmer—position as farm manager on stock or dairy farm. Had two years experience in Ontario. Single. Age 40. 5 ft. 11 ins. Applying wages, to R. Verity, immigration agent, 57 Simcoe St., Toronto.

WANTED—Ladies in rural districts desirous of engaging in profitable business will do well to write the Robinson Corset & Costume Co., London, Ont.

Special—Several first class farms; ready for crop; close to elevator. Fourteen dollars per acre. Also several choice unimproved three-hundred-and-twenty-acre farms near Moose Jaw. Ten dollars. These exceptional bargains. **A. & F. MAYBERY,** Moose Jaw, Sask.

NO P. O. ADDRESS.

E. Watson, who enquires about a row of spruce trees, omitted to give his or her post-office address. Such questions are not answered in this office. Read the announcement on the second page of reading in each paper.

FOR SCOURS IN CALVES—POTATO SCAB.

1. What is the best remedy for scours in young calves? Would mouldy silage, fed to the cows, be apt to cause it?
2. Do you think a cow is more likely to have heifer calves if bred just after milking, or is there any rule to go by?
3. How would you treat potatoes to prevent scab?

F. W. B.

Ans.—1. In ordinary cases of scours in calves, the best treatment is to first give a dose of castor oil—two to four table-spoons, according to age and size of calf—to remove any irritation in the bowels, reduce the amount of milk given for a few days, always feed milk warm, give a raw egg (shell and all), once or twice, broken in the calf's mouth. In cases of white scours, or chronic scours, try the formalin treatment referred to in "Stock" department of this issue. Yes, mouldy silage is apt to have that effect.

2. We have no faith in any of the theories as to controlling sex.

3. Soak the tubers before planting for two hours in a solution of commercial formalin (formaldehyde), 8 ounces to 10 gallons water, or 1 ounce to 2 gallons. When dry, cut up for planting. Do not place them on floor or in pails where scabbed potatoes have lain.

GOSSIP.

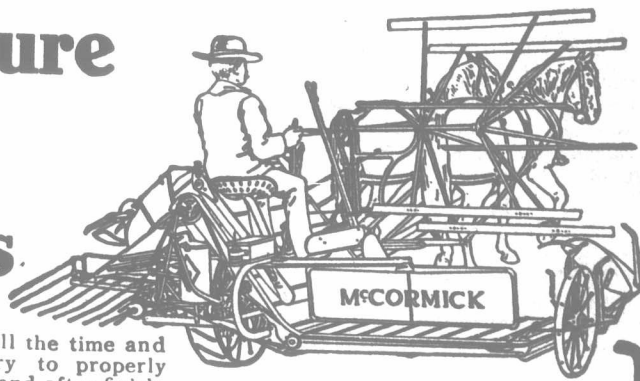
GRAHAM & RENFREW'S CLYDESDALES AND HACKNEYS.

The only company in Ontario doing business as importers, breeders and dealers of Clydesdale, Hackney and Standard-bred stallions and mares, high-class harness and saddle horses, polo ponies, etc., under a provincial charter, incorporated by the Provincial Government, is the Graham & Renfrew Co., Limited, Bedford Park, Ont., gentlemen whose reputation as expert judges and horsemen extends from the Atlantic to the Pacific, and beyond the seas. In business barely two years under the present firm name, their trade already extends practically from ocean to ocean, and is continually increasing and extending, and, although they have sold and shipped a very large number of horses, in not one case have they been asked to give a written guarantee, so firm is their hold on public opinion for strictly straight dealing. Lately, they have purchased some 40 acres of the McGillivray farm, at Bedford Park, on Yonge St., north of Toronto, together with the buildings, which are being remodelled throughout, which, when completed, will make one of the best and most modernly-equipped stables on the continent, containing some 40-odd box stalls.

Just now in their stables are about 45 head of Clydesdale stallions and fillies, Hackney stallions and fillies, high-class harness horses, and a few ponies, including the Boston and Toronto first-prize winner, Plymouth Horace (imp.) 8969, sired by Sir Horace, dam Lady Kate, by Sir George. This is acknowledged to be one of the best all-around ponies for conformation and action that ever stood in America. He is a brown four-year-old, and 13.1 high. Another is Bathgate Swell (imp.), a brown, rising four, 13.3 hands high, sired by Woodlands Eaglet, dam Woodlands Buttercup, by Sir Christopher. He won second at the H. A. S. S., Scotland, and first at Toronto last year in his class. In Hackney stallions, there are several, among which are some high-class show horses and winners, notably Brigham Radiant (imp.), a bay, rising four, by the mighty Rosador, dam Brigham Belle, by Revival. This horse won first at the Royal in 1906, and reserve champion; first at Toronto and reserve champion, and first at Chicago. He is one of the sweetest-turned and highest all-round actors alive. Another of the real good ones is Coveney Marmion (imp.) 329, a chestnut, rising four, by Witcham Marmion, dam Lady Mayoress, by Comet. This horse won third at Toronto last fall in invincible company. Cliff Royalist (imp.) 326, a brown, rising three, won third at Brackenhead, sired by Ganymede, dam Lady Winal, by Winal, grandam by Lord Derby. Here is an exceedingly sweet colt, and one of the coming wonders. Americus 346 was bred in the United States, sired by the twice New-York champion, Fandango, dam Stella, also twice champion at New York, by North Star. This horse has also won several firsts. Those mentioned are only a sample of the several high-class Hackneys now in their stables. Space will only permit the mention of one of the Hackney mares, and she is representative of the others. My Honey (imp.) a chestnut, rising five, by Bonny Danegelt, dam Kiss Me Quick, by Yorkshire Post. She has to her credit as winnings in England, one first, one second, and one third. At the time of our visit, there were about an even-dozen Clydesdale stallions in the stables, every one selected for individual excellence and fashionable breeding, with as strong a combination of size and quality as could be procured in Scotland, a few only of which we can mention. Evandar (imp.) 6079, by Elator, dam by Prince of Cathcart, is a bay, rising four, and won first and champion at Aberdeen, and first at Chicago last year, a model of Clydesdale perfection. This horse, together with the Scotland and Canadian champion mare, Lanark Queen, and the three-times first-prize-winning (at Toronto) mare, Thorncliffe Duchess, are sold to go to Virginia, United States. Flash Baron (imp.) 6076, the great son of Baron's Pride, that won first at Castle Douglas, first at Toronto, and first at Chicago, goes to a stock company at Brandon. Alpine Duke (imp.) 6075, the three-year-old son of Marmion, that the only time shown won first at Kirkeudbright, goes to Capt. T.

(Continued on next page.)

Make Sure of Success.



AFTER spending all the time and money necessary to properly prepare the soil, and after finishing the work of seeding, you cannot afford to take any chances on harvesting the crop.

The great element of safety and success in this work depends upon selecting the proper harvesting machine.

Taking everything into account, the McCormick binder will meet the most exacting requirements.

This is true not only because of the cutting and binding capacity of the machine, but also because of its easy draft, ease in handling and its remarkable strength and durability.

It is impossible in this small space to set forth the meritorious features of the McCormick binder in detail.

Someone in every community has a McCormick. Before you buy a binder ask this man about it.

Ask him if it has not given better service than any other binder he ever owned.

Ask him if it has not always been ready for work, and if it has not worked well in all kinds and conditions of grain.

CANADIAN BRANCH HOUSES: Calgary, London, Montreal, Toronto, Regina, St. John, Winnipeg, Ottawa.

INTERNATIONAL HARVESTER COMPANY OF AMERICA, (INCORPORATED) CHICAGO, U. S. A.

It has been well said of the McCormick that "You see them wherever you go, and they go wherever you see them."

This is a well deserved compliment to the reliability of the McCormick.

The McCormick line of harvesting machines is complete and includes, besides grain and corn harvesting machines, binder twine, mowers, tedders, sweep rakes, side delivery rakes, hay loaders, stackers. Also a complete line of tillage implements and seeding machines, comprising disk drills, shoe drills, hoe drills, cultivators and seeders, smoothing, spring-tooth and disk harrows, land rollers and scuffers. Also gasoline engines, cream separators, hay presses, wagons, sleighs and manure spreaders.

The McCormick line is the O. K. line and is stenciled with the seal of excellence.

For detailed description of any or all of these machines, see illustrated catalogues.

Call on the local McCormick agent for information, or write nearest branch house for catalogue.

A Bargain.

For Sale in Saskatchewan—320 acres of good land, adapted for mixed farming, 90 acres ready for crop.

House plastered, with a stone cellar and fuel; situated within one mile of G. T. P. town site, and in a good locality. Stock and implements may be had on premises. Owner wishes to move to Southern States. For immediate sale, \$16 per acre. Terms arranged. Correspondence solicited. Apply

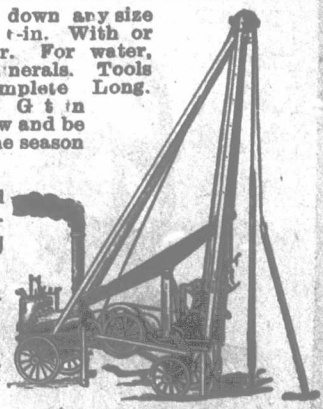
F. D. Burns, 506 McIntyre Block, Winnipeg.

PURE WATER

Our drills put down any size hole. 3 1/2 in. to 6 in. With or without power. For water, oil, gas or minerals. Tools and ropes complete. Long, rapid strike. Get in your order now and be ready when the season opens.

Catalogue C Drilling and fishing tools. Crown Drilling Machine Co., AKRON, O. IO. A. R. Williams Machinery Co. Ltd., Toronto, Winnipeg, Vancouver.

Williams & Wilson, Montreal Agents for Canada.



WHEAT LANDS

Good values in wheat lands (improved and unimproved) in tested districts, near railways, elevators, churches, schools, etc., where water is easily obtained and homesteads are yet available. We have what you want. Write for particulars. Prompt attention given to all enquiries.

PEOPLE'S REALTY CO.

Box 737. REGINA, SASK.

Here's a Snap for a Syndicate!

5,000 acres a few miles south-west of Vermilion, \$7 per acre. Terms: one-tenth cash, balance 9 years at 6%.

Nobody Can Beat This!

W. 3-9-10-3, west of third. Price, \$8.50 per acre; \$6.40 cash, balance in 4 years, 6%.

This is rated A1 first-class farming land. One of the best half-sections in the West. Only seven miles from the station.

DAVID REID & CO.,

Room 22, Stanley Block, WINNIPEG.

Advertise in the Advocate

Tudhope Carriages

have been made better carriages every year since 1855. Constant study is given every detail—and each improvement is carefully considered and tested before it is adopted. Whenever an idea presents itself, that will make Tudhope Carriages easier in running, stronger in construction, smarter in durable style, more satisfactory in every way—that idea is developed and proved.

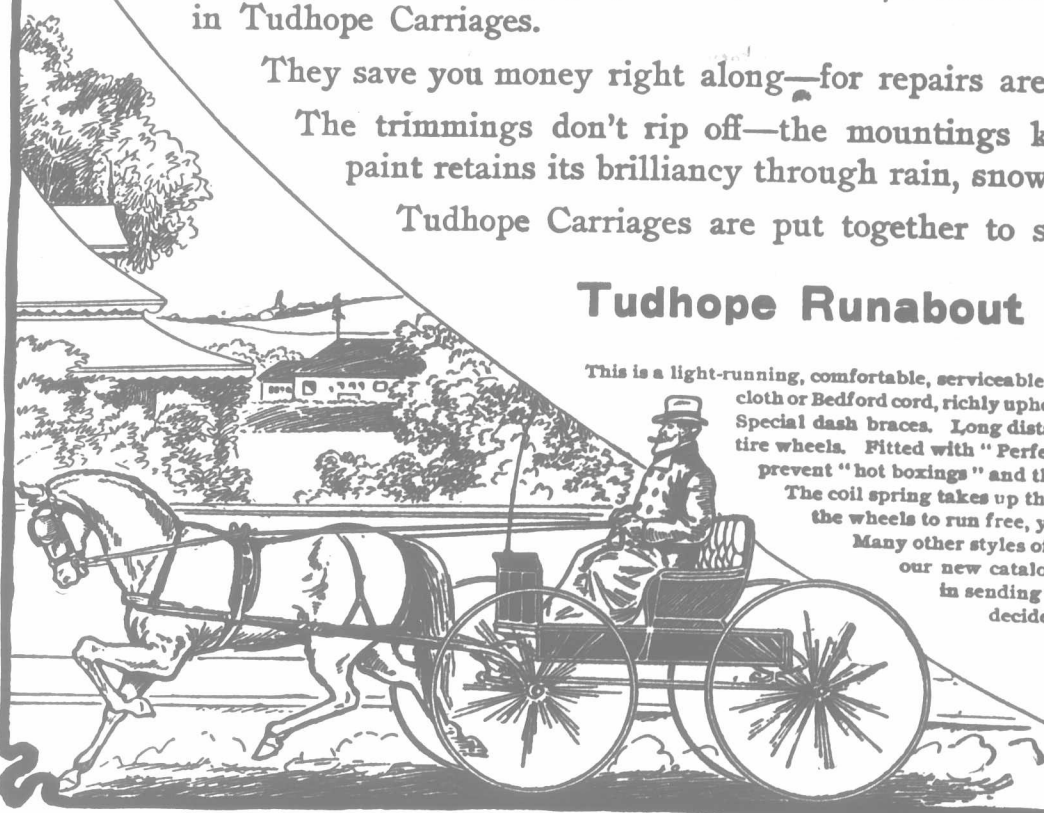
Little wonder then that people, all over Canada, find such thorough excellence in Tudhope Carriages.

They save you money right along—for repairs are few and far between.

The trimmings don't rip off—the mountings keep bright—and the paint retains its brilliancy through rain, snow and mud.

Tudhope Carriages are put together to stay together.

Tudhope Runabout No. 12



This is a light-running, comfortable, serviceable trap. Trimmed with green wool cloth or Bedford cord, richly upholstered. Divided driver's cushion. Special dash braces. Long distance steel axles. Rubber or steel tire wheels. Fitted with "Perfection Steel Nuts" that absolutely prevent "hot boxings" and the annoyance of wheels rattling. The coil spring takes up the wear of the washers and allows the wheels to run free, yet noiseless.

Many other styles of Tudhope Carriages are shown in our new catalogue which we will take pleasure in sending you free. Write for it before you decide on the new buggy.

The Tudhope Carriage Co. Limited, Orillia, Ont.



WM. RENNIE, SR.
PIONEER OF CLEAN FARMING

Among the thousands who are now using Rennie's Seeds, in this and other lands, I see with pleasure that many are still on the list who were customers thirty-seven years ago.

Wm Rennie

Farmers and Gardeners of acknowledged standing—men of intelligent discrimination—have used

RENNIE'S SEEDS

every year for thirty-seven years, each year's results proving convincingly the wisdom of their selection.

Dependable quality—certain germination—and expert selection, have thus gained for Rennie's Seeds the confidence of Canada's premier agriculturists.

Remember this when deciding on seed supplies for 1907.

In the meantime, write our nearest address for a free copy of the Rennie Seed Annual.

Wm. Rennie Co. Limited
TORONTO
and
190 McGill Street . . . Montreal
278 Main Street . . . Winnipeg
66 Hastings St. West, Vancouver

FREE to RUPTURED
A QUICK NEW CURE

I have made new and important discoveries in the cure of Rupture, and for the next thirty days will give every ruptured person who follows these directions a chance to try this remarkable home cure. FREE. Mark on the picture the location of your Rupture, answer the questions, and mail this to DR. W. S. RICE, 85 CHURCH ST., BLOCK 906, TORONTO, ONT.
Age.....Time Ruptured.....
Does Rupture pain?.....
Do you wear a Truss?.....
Name.....
Address.....

When Writing mention this Paper.

E. Robson, of London. He is a show horse all over, and will certainly be heard from next fall. The balance on hand are equally as high a class lot, winners at the leading shows in Scotland and Canada, as well as at Chicago; the sons of Baron's Pride, Black Rod, Baron Solway, Pride of Blacon, and Argus; ten horses among them, with quality and action to spare. Nowhere can a better class of horses be found, and nowhere can they be bought cheaper, but now is the time to choose, as they are going rapidly. There is long-distance telephone connection at Bedford Park, North Toronto.

TRADE TOPICS.

RAISING CALVES WITHOUT MILK.—Blatchford's calf meal has been on the market for a very long time, and a pamphlet is issued by the manufacturer, giving full directions how to use it, and, also, containing testimonials from a great number of farmers as to the results obtained. It is easy to prepare and use, and the testimonials state that it rapidly matures young stock, that it prevents "scouring," and is particularly well adapted for the young animal. Write to the well-known firm of J. A. Simmers, Toronto, Ont., for information concerning this calf meal.

SUPPLIES FOR HOUSE-BUILDING.—Gordon, Van Tine & Co., Davenport, Iowa, U. S. A., have issued a new, highly-illustrated catalogue of their manufactures, which may be had on application. All builders' supplies are handled by this company—art glass, balusters, building paper, columns, doors, hardwood floors, mouldings, sashes, railings, stair work, windows, tar felt, and every accessory, in short, that goes to the building of a modern house. A book of house-plans will also be sent on payment of ten cents. Everyone contemplating building during the coming season should find these sources of information valuable. Apply to Gordon, Van Tine & Co., Davenport, Iowa, U. S. A.

A PROGRESSIVE FIRM.—Among the other places of business at which our representative has called during the past couple of weeks is that of Tolton Bros., Limited, of Guelph, Ontario. He was very pleased to see everything running full force, and business seemed to be in a very flourishing condition with them. All hands were busily employed putting up machines to fill orders for hay carriers, harrows, pea harvesters, pulpers, etc. He also learned that during the last three years their business has increased fully fifty per cent., which speaks very forcibly regarding the high quality of the machinery they are turning out. People are more convinced than ever that it is more economical to pay a fair price for good goods than to buy the low class for less money. It might be worthy of note to say that our representative was more than surprised at the valuable improvements being made in the different implements they are manufacturing, which will tell in bringing them many orders for their goods. The present season bids fair to be more active than any in the history of the firm, and we feel assured that a bright future is ahead of them.

GOSSIP.

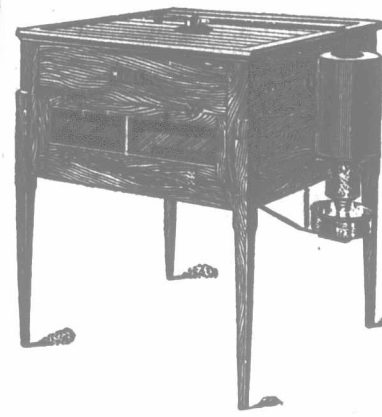
The well- and widely-known firm of Dunham & Fletcher, Wayne, Illinois, about twenty miles from Chicago, the noted importers and breeders of Percheron and French Coach horses, advertise in this paper over 300 head, and claim to have the best collection of stallions of these breeds in America. They mail their fine catalogue free, and offer to pay freight and buyer's fare, so sure are they that they can suit and satisfy their customers.

The manager of the Moreton Lodge herd writes: "We wish to call attention to the fact that the Hereford cow, Sweet Bar, bred and owned by The F. W. Stone Stock Co., Moreton Lodge, Guelph, and awarded first prize at the Toronto National Exhibition, 1906, had a fine bull calf, Dec., 1906. The above may be of interest to the Hereford breeders who exhibited at that time, and, more especially to the party who made the statement that the cow never had a calf, was not in calf, and never would be."



Most economical and durable roof covering known. Easy to put on; requires no tools but a hatchet or a hammer. With ordinary care will outlast any other kind, covering any building. Also best for ceiling and siding. Fire-proof and water-proof. Cheaper and more lasting than shingles. Will not stain rain-water. Makes your building cooler in summer and warmer in winter. Absolutely perfect, brand new. \$1.75 is our price for our No. 15 grade of Flat Semi-Hardened steel roofing and siding, each sheet 24 ins. wide and 24 ins. long. Our price on the corrugated, like illustration, sheets 22 ins. wide x 24 ins. long, \$2.00. At 25c per square additional we will furnish Beaded Ceiling, per square, \$2.25. Can also furnish standing seam or "V" crimped roof. **WE PAY THE FREIGHT TO ALL POINTS IN CANADA**
Satisfaction guaranteed or money refunded. We will send this roofing to any one answering this ad C. O. D., with privilege of examination if you will send us 25% of the amount of your order in cash; balance to be paid after material reaches your Station. If not found as represented, you do not have to take the shipment and we will cheerfully refund your deposit. Ask for Catalog No. W6848. Lowest prices on Roofing, Eave Trough, Wire, Pipe, Fencing, Plumblings, Doors, Household Goods and everything needed on the Farm or in the Home. We buy our goods at the lowest prices from the manufacturer. **CHICAGO HOUSE WRECKING CO., 32TH AND IRON STS., CHICAGO**

OUR MODEL INCUBATORS AND BROODERS



Are the only panacea for failure past, present and future. Just take a few minutes and read the following two of many hundreds of unsolicited testimonials from our satisfied customers:

Bayham, Ont., Jan. 31, 1907.
After using Model Incubator for one year Mrs. Mitchell writes us: "I would not be without my Incubator for the price of two if I could not get another of the Model Incubators."
Yours truly, MRS. W. MITCHELL.
Orangedale, N. S., Feb. 11, 1907.
Sirs,—No trouble to run your Model Incubator, as I was away from home for 11 hours each day and machine run itself, temperature of cellar changing 26 degrees in 12 hours; temperature of machine did not change in the least only the last days showed an upward tendency of half to one degree. Ran machine at 103, hatched 148 chicks from 178 eggs. There was only one chick dead in the shell in the rest. Eggs were very dark-shelled, making safe testing very difficult.
JOHN D. McNEIL.

OUR CATALOGUE MAILED FREE.
MODEL INCUBATOR COMPANY, LIMITED, 193 River St., TORONTO, ONT.

HOMES

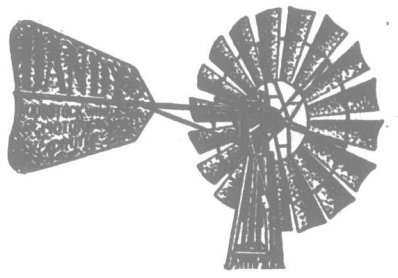
For Settlers
IN
WESTERN ONTARIO
MANITOBA
SASKATCHEWAN
ALBERTA

How Made and How Reached
Write for free copies of
SETTLERS' GUIDE giving full particulars of special train service for settlers travelling with live stock and effects to the North west in March and April, with passenger and freight rates.
WESTERN CANADA Up-to-date description of the west and western conditions. 80 pages of information invaluable to settlers. Useful maps and statistics.
TIME TABLES showing double daily passenger train service to Winnipeg and Calgary.
TOURIST SLEEPING CARS
Leave Toronto daily. Comfortable, roomy berths at moderate rates. Fully equipped with bedding, cooking range and every convenience. Berths should be reserved (through nearest C.P.R. Agent) at least two weeks before departure.
Write to-day for free books and anything you want to know about the west and how to reach it. Address
C. B. FOSTER,
Dist. Pass. Agt., C.P.R., Toronto

AUCTION SALE
Of Farm, Farm Stock and Implements, including
6 Pure-bred Clydesdales 6
Mares in foal and fillies
Must be sold to wind up the estate of the late Mrs. B. S. Millie. These animals have massive size, lots of quality, true action. Bred from imported stock. High-class pedigrees.
One mile north of Hensall G. T. R.
Friday, March 22, at 12:30 p.m.
WM. MOIR
BENJAMIN SMILLIE, Executors.
Write for particulars.
B. SMILLIE, Hensall, Ont.

TELEGRAPHY
Is the first step towards positions paying from \$5,000 to \$15,000 per annum in railway service. You can become a good operator in six months if you study in the Central Telegraphy School, 3 Gerrard St. east, Toronto. The finest school in Canada. Write for particulars.
W. H. SHAW, Pres. T. R. JOHNSTON, Prin.

WINDMILLS



Grain Grinders, Tanks, Water Boxes and Foundry Supplies. Write for our free catalogue. Estimates cheerfully given.
WOODSTOCK WIND MOTOR CO., Limited.
Woodstock, Ont.

WHY NOT

Be a telegraph operator and earn from \$45 to \$125 monthly P
Send to-day for Free Booklet "K," which tells you how.
CANADIAN SCHOOL OF TELEGRAPHY,
Cor. Yonge and Queen St., TORONTO.
Oldest Telegraph School in Canada.

SHIP NOW

Consign your BUTTER, EGGS and POULTRY to
QUEEN CITY PRODUCE COMPANY, LTD.
100 Front St. E., TORONTO.
Prices good. Quick returns.

TESTED SEED CORN

The White Cap Yellow Dent is the most popular variety of corn in Ontario for the silo, and equal to the best for husking. After 15 years of continuous and careful selection I offer for sale a thoroughly acclimatized typical 5-ain, two weeks earlier than imported seed and, having early harvested and carefully stored the crop last autumn, it has shown in all the tests I have made 100% of vitality. For price, send to
EDGAR M. ZAVITZ, Coldstream,
Middlesex Co., Ontario.

FARMER'S ADVOCATE "Want and For Sale" Ads. bring good results. Send in your ads, and you will soon know all about it. The Wm. Weld Co., Ltd., London, Ont.

Excited Nerves, Twitching Muscles

System Exhausted by Worry and
Loss of Sleep—Perfect Health the
Result of Dr. Chase's Nerve Food.

Such cures as this make it impossible to doubt the restorative influence of Dr. Chase's Nerve Food.

Mrs. E. J. Vanderburgh, of Eastern Welland Avenue, St. Catharines, Ont., states: "For twenty-one years I was badly afflicted with heart trouble, nervousness and cramps in the limbs, also twitching of the muscles and nervous headaches. I became weak, debilitated and emaciated. My condition was distressing, and I was made worse through worry and loss of sleep.

"I tried a hundred remedies in vain, and reading about Dr. Chase's Nerve Food I decided to try it. After having used half a dozen boxes of this preparation, my old trouble had entirely vanished, and I was enjoying better health than I had since girlhood. I am now past middle life, and am in perfect health. I would not take words to-day and go back to my former state."

Dr. Chase's Nerve Food, the great blood-builder and restorative, 50 cents a box, 6 boxes for \$2.50, at all dealers, or Edmanson, Bates & Co., Toronto.

SASKATCHEWAN LANDS

Wild and improved, in one of the best districts in the West. Write:

J. F. MIDDLEMISS,
Wolsley, Sask.

Seldom See

a big knee like this, but your horse may have a bunch of bruises on his Ankle, Hock, Stifle, Knee or Throat.

ABSORBINE

will clean them off without laying the horse up. No blister, no hair gone. \$2.00 per bottle, delivered. Book 8-C free. **ABSORBINE, JR.**, for mankind, \$1.00. Removes Soft Bunches, Cures Varicose Veins, Varicocele, Hydrocele, Ruptured Muscles or Ligaments, Enlarged Glands. Allays Pain. Mfd. only by

W. F. Young, P.D.F., 73 Monmouth St., Springfield, Mass.
Canadian Agents: Lyman, Sons & Co., Montreal

Tuttle's Elixir

Well nigh infallible cure for colic, curb, splint, spavin and other common horse ailments. Our long-time standing offer of

\$100 Reward

for failure, where we say it will cure, has never been claimed. All druggists sell it.

Tuttle's Family Elixir, the great household remedy. Tuttle's American Worm Powder cures. American Condition Powders, White Star and Hoof Ointment 100 page book, "Veterinary Experience," free. Be your own horse doctor. Makes plain the symptoms, gives treatment. Send for a copy.

TUTTLE'S ELIXIR CO.,

66 Beverly Street, Boston, Mass.
Canadian Branch, 22 St. Ursula St., Montreal, Quebec

For Sale—Ohio Improved Chester Whites, the largest strain, oldest established registered herd in Canada; young sows in farrow choice young pigs, six weeks to six months old, pairs not akin; express charges prepaid; pedigree and safe delivery guaranteed. Address:

H. D. GEORGE, Putnam, Ont.

Clydesdale Stallions for Sale—Two imported, five and seven years old; first-class animals; also two Canadian-bred, registered, rising three years old. For further particulars apply to **JAMES PATON,** Flesherton Sta., C.P.R. **Swinton Park,**

We Will Import Welsh Ponies and Shropshire Sheep.

Write for terms and prices.
Lloyd-Jones Bros., Burford, Ont.

CLYDESDALES AND SHORTHORNS—Canadian-bred, registered. One stallion, rising 3, by Imp. Macqueen Tw stallions, rising two, by Imp. Primrose. One filly, rising 2, by Imp. Macqueen. These are a choice lot. Show stuff among them. Also my stock bull, Gilbert Logan 36424; roan; weighs 2,500; seven years old. Safe and sure. **W. D. PUGH,** Clarendon P. O. and Station.

QUESTIONS AND ANSWERS Miscellaneous.

REGISTRARS AT OTTAWA.

Would much oblige by giving in your next issue the name and address of the Registrar of pure-bred live stock, as when occasion required I always communicated with Mr. H. Wade, but since his demise, which I saw reported in "The Farmer's Advocate," I don't know who fills his place.

J. F.

Ans.—The regulations of the National Record Board require that all correspondence regarding registration of pure-bred stock, or for blank forms of application for registration, be addressed to Accountant, National Live-stock Records, Department of Agriculture, Ottawa. All drafts, express and post-office money orders should also be made payable to the Accountant, as above. Letters and other mail matter in this connection, with the registration of stock, addressed to the Accountant, go postage free.

AVOID ALFALFA IN ORCHARD-ING.

I have a young orchard planted four years; has had hoed crop each year. Am thinking of sowing it to alfalfa this spring. Would it be injurious to the trees, which are apple, plum and pear?

W. H. K.

Ans.—By its long roots and vigorous growth, alfalfa so exhausts the soil of moisture and plant food that trees are stunted of their supply, so that they turn sickly and begin to die off. We have known many orchards seriously injured in this way, and only saved by plowing up the alfalfa and cultivating the land. Some orchards have been entirely ruined. Never sow alfalfa in an orchard, unless it be as a cover crop, to be plowed under the following spring.

STEER WHEEZING—UN SOUND-NESS.

1. Two-year-old steer wheezes when he breathes; appears to be in good health.
2. Is a horse that cribs unsound? Kindly answer through "The Farmer's Advocate."

H. B.

Ans.—1. As long as the steer is in good health and doing well, we do not think it necessary to give him any treatment.

2. While cribbing is not an unsoundness, to constitute which there must be some alteration in the structure of the animal, whereby it is rendered less able to perform work and less salable, or else there must be some disease; still, looked upon from a practical point of view, both cribbers and wind-suckers should always be deemed unsound, for the practice of their vice will, in the ordinary course of events, render them unsound and unsalable, even if it has not already done so. Besides, it will diminish their usefulness. The fact of a horse being a cribber should always be mentioned in the veterinary certificate.

THE SPENCER SEEDLESS NOVELTY.

I have been reading your editorial, "Warning to the Unwary," and wondered if you had the Spencer seedless apple in mind. I have been greatly interested in this apple, believing it to be the greatest advance in apple culture ever known, if the claims made for it are true. Please give us your opinion regarding it. Do you believe it will grow in Canada? Is the company in Toronto true and reliable?

H. I. L.

Ans.—"The Farmer's Advocate" has, at various times, published considerable information about the Spencer seedless apple, including the report of the committee appointed by the Ontario Fruit-growers' Association in convention at Toronto, November, 1906, to investigate and report upon specimens of the apple then on exhibition in Massey Hall. Their report, which may be found in full in our issue of November 15th, 1906, page 1778, concludes by saying, "We believe that our inspection warrants the advice that the trees of this apple should only be purchased as a curiosity." We believe this opinion is generally shared by expert horticulturists. The hardness of the tree in Canada, only experience can prove; for commercial planting, we cannot recommend it. We believe the Canadian Company handling this apple stock is reliable. It includes men of high standing in business circles.



Whether it is a fresh bruise, or strain of back, shoulder, whifle, fetlock, pastern, or coffin joint—or an old swelling,

Fellows' Leeming's Essence

For Lameness in Horses

takes out all the soreness and stiffness—strengthens the muscles and tendons—and cures every trace of lameness.

10 50c. a bottle. At dealers, or from

National Drug & Chemical Co., Limited - Montreal.

323 PERCHERONS FRENCH COACHERS

Best Collection Stallions in America
Most Reasonable Prices
Safest Guarantee

4 IMPORTATIONS SINCE JULY 1, 1906.

SEND FOR CATALOGUE.

WE PAY FREIGHT AND BUYERS' FARE.

DUNHAM & FLETCHER, Wayne, Ill.

40 WAVERLY HACKNEYS 40

Imported Stallions and Fillies.



Every one a high-class actor and a show animal. Splendidly-matched pairs and singles. Positively the highest class lot of Hackneys to be found on any one farm in America. All ages. Also 4 imported Clydesdale fillies. A big, flashy lot, full of style and quality.

ROBERT BEITH,
Bowmanville P. O. and Station.
Long-distance Phone.



LANGTON STOCK FARM CO., LTD.

BRANTFORD, ONTARIO.

Breeders and Importers of Hackneys, Clydesdales, Shropshire Sheep, Berkshire Pigs and Scotch Collie Dogs.

2 Choice Hackney Stallions for Sale.

Hackney fillies and mares for sale. Three young Berkshire sows in farrow for sale. We are booking orders for March and April by Danesfield Denovan and from our imp. sows. We have a beautiful litter of puppies, two weeks old for sale, from Hollywood Rose, sired by Niwel Conqueror; also one beautiful puppy half grown.

W. C. KIDD, LISTOWEL, ONT.

Importer of Clydesdales, Shires, Percherons, Belgians, Hackneys, Standard-breds and Thoroughbreds

of highest possible quality and richest breeding. Have sold as many stallions the last year as any man in the business, with complete satisfaction in every case. I have always a large number of high-class horses on hand. My motto: "None but the best, and a straight deal." Will be pleased to hear from any one wanting a rare good one. Terms to suit. Long-distance phone.

Imported Clydesdale Stallions and Fillies

My new importation comprises 3 stallions, two 2 years old and one 1 year old, by Everlasting, Baron Buchyville and Ascott, and 5 fillies, from 1 to 4 years old, by Baron's Pride, Elisor, Favorite's Heir and Ascott. They are a high-class lot, as good as ever crossed the water. Come and see them. All are for sale at living prices.

A. MITCHELL, Guelph P.O. and Sta.

Clydesdale Stallions!

first-class Hackney.

I have on hand for sale another choice lot of Clydesdale stallions, newly imported, ranging in age from two to six, with plenty of size, style and good true action. Also one

Wm. Colquhoun, Mitchell, Ont.
'Phone to residence.

Gombault's Caustic Balsam

The Worlds Greatest and Surest

Veterinary Remedy

HAS IMITATORS BUT NO COMPETITORS!

SAFE, SPEEDY AND POSITIVE.

Supersedes All Caustery or Firing. Invaluable as a CURE for

FOUNDER, WIND PUFFS, THRUSH, DIPHTHERIA, SKIN DISEASES, RINGBONE, PINK EYE, SWEENY, BONY TUMORS, LAMENESS FROM SPAVIN, QUARTER CRACKS, SCRATCHES, POLL EVIL, PARASITES.

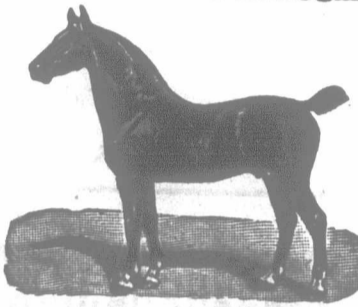
REMOVES

BUNCHES or BLEMISHES, SPLINTS, CAPPED HOCK, STRAINED TENDONS.

SAFE FOR ANYONE TO USE.

We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin mixture ever made. Every bottle sold is warranted to give satisfaction. Write for testimonials showing what the most prominent horsemen say of it. Price, \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.

The Accepted Standard VETERINARY REMEDY
Always Reliable. Sure In Results.



None genuine without the signature of **The Lawrence-Williams Co.** Sole Importers & Proprietors for the U.S. & CANADA. CLEVELAND, O.

THE BEST FOR BLISTERING. I have used GOMBAULT'S CAUSTIC BALSAM quite a good deal, and for a blister it's the best I ever used. I wish your remedy every success. CHAR. MOTT, Manager, Mayfield Stud Farm, Leesburg, Va.

CURED CURB WITH TWO APPLICATIONS. Have used your GOMBAULT'S CAUSTIC BALSAM to cure curb. I blistered it twice, and there is no sign of it any more. The horse is as good as ever. — DAN SCHWAB, Englewood, Ill.

Sole Agents for the United States and Canada.
The Lawrence-Williams Co.
TORONTO, ONT. CLEVELAND, OHIO.

QUESTIONS AND ANSWERS.
Miscellaneous.

SALT ON GRASS CATCH AND OATS.

Does sowing salt injure or harm in any way a catch of seeds?

2. Does sowing salt benefit a crop of oats?
ENQUIRER.

Ans.—1. I have never known salt to injure a new crop of grass or clover seeds, though the salt should not be applied after the seeds have germinated. If the salt is applied to the land just before the crop is sown, I do not think there would be any danger of injury.

2. Whether salt will benefit a crop of oats depends largely upon circumstances. I have seen cases where the sowing of salt seemed to effect a marked improvement in the crop, whereas in other cases no improvement was visible. Salt is not a direct fertilizer, that is to say, it does not supply, to any appreciable extent, at least, plant food for the crops. Its action is generally regarded as that of an indirect fertilizer, that is, a substance which tends to act upon the plant food already in the soil, and to make it somewhat more available for the use of the crop. It is believed by some that salt also tends to retain moisture in the soil, and it is quite likely that this is true. Owing to the fact that it does not supply plant food directly, its beneficial action is always more or less uncertain, a good deal depending upon the condition of the soil to which it is applied, and upon the season.
O. A. C., Guelph. G. E. DAY.

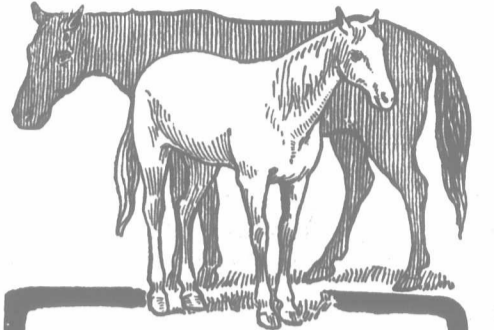
UNFRUITFUL CHERRY TREES.

I have two of the so-called Standard cherry trees, bought in spring of 1894, that have never had any cherries, excepting one year one of them had two cherries, but they did not come to full ripeness. The trees bloom every year, but are false, or they form, remain a short time and drop. The trees are vigorous and healthy and of good size, as large as any ordinary trees, and the foliage is a very dark green, and abundant. What do the trees need? When scions are taken off for grafting, what time of the year is the best for taking them? We have a pear tree that does not bear but blossoms.
P. F. T.

Ans.—You have omitted to give two very important items which might enable us to determine the cause of unfruitfulness in your cherry and pear trees. You have not mentioned the names of the varieties, either of cherry or pear, nor do you mention the section of the country where you are growing them. It is just possible you may have varieties too tender in the fruit bud to stand your climate, although, from the fact that the trees bloom every year, it would appear that this could hardly be the cause of unfruitfulness.

There are other conditions, however, which may be the cause of unfruitfulness. It may be that the varieties are self-sterile; that is, that their pollen is not able to fertilize their own blossoms. If this is the trouble, it will be necessary to introduce, by means of grafting or growing near them some other varieties which will furnish pollen to bring about proper fertilization of the blossoms. Then, again, unfruitfulness may be due to lack of insects to distribute the pollen. The most active agents we have in distribution of pollen in fruit trees are the honey bees, and I have frequently noticed that the most productive orchards in this Province are those where the honey bees are regularly kept. In view of these facts, you may be able to ascertain the cause of the trouble yourself. If not, let us know all the particulars you can regarding it, and we will be glad to give you further assistance, if possible.

Scions for grafting may be taken almost any time before the time for doing the work, although it is best to take them off at least a week or ten days before time for grafting. In this way, the bark shrinks sufficiently to set firmly to the wood, and does not peel easily when the scions are prepared for grafting. They may, however, be taken any time in the fall or winter, but should be carefully stored in damp moss or sand so that they will not dry out too much.
O. A. C., Guelph. H. L. HUTT.



Begin the Horse Right

if you would have the right horse. Don't handicap a promising colt with unwise management during the first few months of growth. Make the grain and feed he gets more beneficial by giving a little of Dr. Hess Stock Food. It increases digestion by supplying the system with bitter tonics, iron for the blood, nitrates to expel poisonous material from the system; such ingredients being recommended by Professors Winslow, Quitman, Finlay Dun and all the noted medical writers.

DR HESS STOCK FOOD

the prescription of Dr. Hess (M.D., D.V.S.) is especially designed to make market stock take on flesh more rapidly and cows give more milk, besides curing and preventing stock disease.

Sold on a Written Guarantee.
100 lbs. \$7.00 25 lb. Pail, \$2.00
Smaller quantities at a slight advance. Duty paid.

Where Dr. Hess Stock Food differs in particular is in the dose—it's small and fed but twice a day, which proves it has the most digestive strength to the pound. Our Government recognizes Dr. Hess Stock Food as a medicinal tonic, and this paper is back of the guarantee.

If your dealer cannot supply you, we will.
DR. HESS & CLARK, Ashland, Ohio, U.S.A.
Also manufacturers of Dr. Hess Politory Pan-a-cos-a and Instant Louse Killer.

Dr. Page's English Spavin Cure.

For the cure of Spavins, Ringbone, Curbs, Splints, Windgalls, Capped Hock, Strains or Bruises, Thick Neck from Distemper, Ringworm on Cattle, and to remove all unnatural enlargements. This preparation (unlike others) acts by absorbing rather than blistering. This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin, or money refunded, and will not kill the hair. Manufactured by **Dr. Fredrick A. Page & Son, 7 and 9 Yorkshire Road, London, E. C.** Mailed to any address upon receipt of price, \$1.00. Canadian agents: **om**

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Imp. Clydesdale Fillies!

Have now on hand about a dozen, nearly all imported. A high-class lot and very richly bred. Combine size and quality, and all in foal. Also one-year-old stallion. Write me, or come and see them.
Nelson Wagg, Claremont P.O. & Sta.

Imported Clydesdales

Two 4-year-old and two 2-year-old stallions; one 2-year-old and two 1-year-old fillies; positively the best bunch I ever imported; richly bred, full of quality, abundance of size, and nice, true actors. Will sell them right. Terms to suit.
Telephone con. Geo. G. Stewart, Howick, Que.

IMP. CLYDESDALES

Three stallions, rising 3, and 7 fillies, rising 3; the big heavy kind, full of character; a superior lot, every one a show animal; will make over-a-ton horses, and breeding the most fashionable. Prices a little below any of the others.
J. A. BOAG & SON, Ravenshoe P.O. Brown Hill Sta.

When Writing Please Mention this Paper



THOS. IRVING

Winchester, Ont.

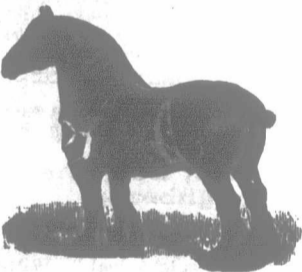
Established for over 30 years. Importer and exporter of

HACKNEY, CLYDESDALE and SHIRE STALLIONS and MARES.

New importation of winners just arrived. 90 miles west of Montreal on C. P. R.

HODGKINSON & TISDALE,

BEAVERTON, ONT.



Importers and Breeders of Clydesdale and Hackney Horses. We have on hand at present the choicest specimens of Clydesdale fillies in Canada, also a few extra fashionably-bred young Clyde stallions. People wanting good ones should see these before buying. Our farm, "Simcoe Lodge," is situated near Beaverton, on James Bay and G. T. Railways. Long-distance phone No. 18. Visitors will be met at Beaverton on notification.



Graham & Renfrew's

CLYDESDALES and HACKNEYS

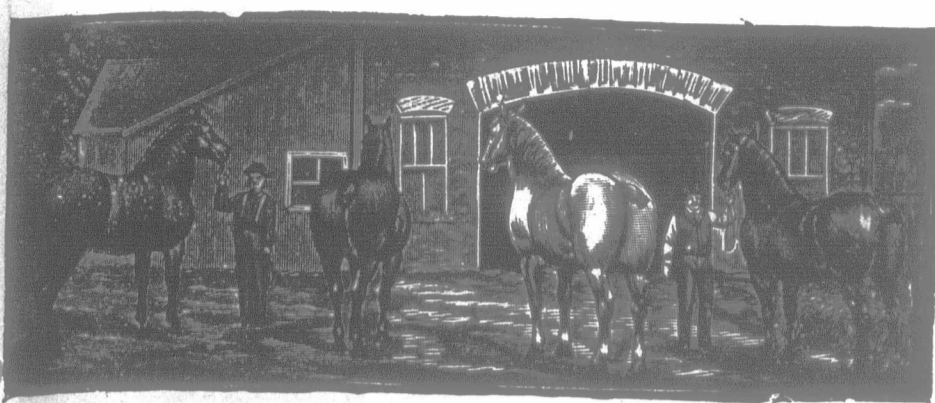
Our Clydes now on hand are all prizewinners, their breeding is gilt-edged. Our Hackneys, both stallions and mares, are an exceedingly high-class lot. We also have a few high-steppers and carriage horses. Yonge Street cars pass the door every hour. Phone North 4488.

GRAHAM & RENFREW, BEDFORD PARK, ONT.

CLYDESDALES AND FRENCH COACHERS, IMP.

Scottish and Canadian winners, stallions, mares and fillies. The Clydes represent the blood of such famous sires as Baron's Pride, Up-to-Time, Royal Favorite, Ethiopia and many others. They combine size, quality and action. The French Coachers are a big class of high-stepping lot, and are winners in both France and Canada. Our prices are low, and our horses good as the best. Long-distance telephone.

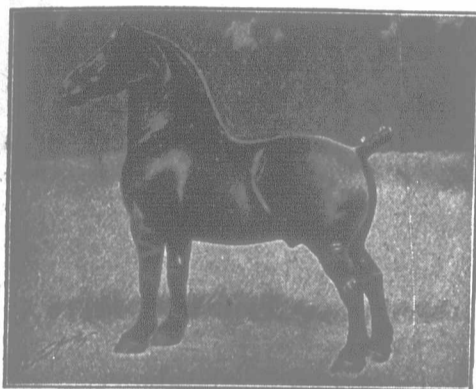
ROBT. NESS & SON, Howick, Quebec.



30 PERCHERONS

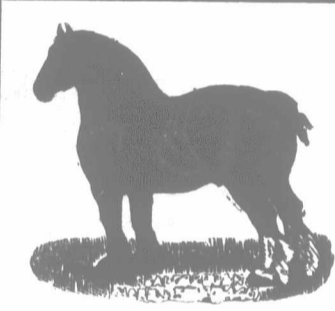
Also Shires, Hackneys and Clydes and 12 Percheron Mares (2, 3 and 4 year old) have just arrived with our new importation from Scotland, England and France, of high-class stallions and mares. Many of them prize-winners in their native lands. Bred by the best breeders. Percherons, blacks and grays, weighing 1,500 to 2,000 pounds. Shires at two years old weighing 1,700 pounds. Clydes, bays and blacks, 4 and 5 years old, weighing 1,800 to 2,000 pounds, bred by the best in Scotland. Our Hackneys are bays and chestnuts, combining size, quality and breeding that cannot be beaten. These horses can be seen at Toronto and London fairs, and all for sale at reasonable prices.

HAMILTON & HAWTHORNE, Simcoe, Ont.
22 miles south-west of Toronto on the G. T. R.



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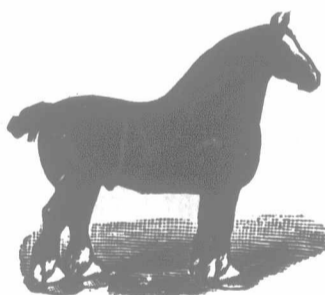
J. Crouch & Sons, Props., La Fayette, Ind.
Largest importers in America of German Coach, Percheron and Belgian stallions. Over 200 head on hand at all times. All have the best of bone, style and action, and on which we will put a gilt-edged guarantee they must be satisfactory, sure breeders. Won more prizes in the American show-ring in 1906 than all other importers combined. Our guarantee is the best. Terms to suit buyers. Importations arriving every few weeks in large prospective buyers a large selection from which to make a purchase.
J. CROUCH & SON, La Fayette, Ind.
La Fayette is but six hours' ride from Detroit via Wabash Railroad.



IMP. CLYDESDALES & HACKNEYS

Stallions and fillies of both breeds, representing the best blood of England and Scotland, combining size and quality and faultless action. If in want of something exceptionally choice, come and see me. You will not be disappointed. Prices right.

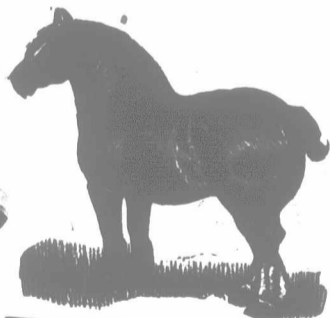
DUGALD ROSS, Streetville, Ont.
Write for catalogue.



GRAHAM BROS.

"Cairnbrogie," CLAREMONT,
IMPORTERS OF
HACKNEYS and CLYDESDALES

Established 80 years, and winners at all large shows in Canada and United States. Best of stock always on hand for sale. New importation of Royal winners just arrived.



T. H. HASSARD

Millbrook, Ont.

Has on hand 40 head of Clydesdale, Percheron and Hackney stallions, and 25 Clydesdale fillies, representing Scotland, France and England's richest prize-winning blood and most noted sires. An essentially high-class lot. Will be sold on terms to suit purchaser.

MILLBROOK P.O. AND STATION
Long-distance 'Phone.

DUNROBIN STOCK FARM

BREEDERS OF
CLYDESDALES, SHORTHORNS and YORKSHIRES

Besides our high-class Clydesdale fillies, we are offering some well-bred SHORTHORN HEIFERS at reasonable money for a quick turnover.

DONALD GUNN & SON, BEAVERTON P.O. & STN.
Farm Three-quarters of a Mile from Station.

SMITH & RICHARDSON, COLUMBUS, ONT.,

have now on hand a choice selection of Clydesdale Stallions, combining size and quality with straight, true action. Breeding unsurpassed. Individuality unexcelled. Scotland prize-winners. Also a few Canadian-bred stallions, and imp. and Canadian-bred fillies.

Long-distance 'Phone Myrtle Station, C. P. R.
Brooklin or Oshawa, G. T. R.

QUESTIONS AND ANSWERS. Miscellaneous.

STATIONARY ENGINEER EXAMINER.

Please give me the address of a holder of a first-class certificate, in Toronto or Simcoe County, by whom I could be examined for a stationary engineer, and how long would it take to write on it.

A. G.

Ans.—Write for full information to the following address: W. G. Blackgrove, Registrar, P. O. Box 182, Toronto.

MOON BLINDNESS.

Is periodic ophthalmia or moon blindness in horses catching, either when the eye is running water or not?

HORSEMAN.

Ans.—It is not considered contagious or infectious, but rather hereditary, or due to dark, ill-ventilation of stables, and to direct light in front of stalls. Light should come from behind.

RAILWAY EXPROPRIATION.

A lives in the village. He owns a farm of 200 acres, and B and C live on his farm as renters. Last summer, a company constructed a railroad on his farm. B and C sold a part of this farm to the company for the passage of the railroad, at such a price, without the permission of A. They signed their name for this price, and A is not satisfied with this price. He asked a higher price of the company. They will not give more than the price that B and C have signed for.

1. Do B and C have the right of selling this land without A's permission?
2. Are B and C's signatures worth anything?
3. There is no water on the side of the railroad where the cattle pasture. B and C have to spend an hour every day to water the cattle. Has A the right of claiming any damages from the company for this trouble? If so, what should he do?
4. Some of the neighbors have been paid for their land. A asks the same price for his land, and he has not been paid yet. What should he do to be paid?
5. A has forbidden the company to work on his farm before buying the land, and they have worked just the same. Have the company the right to work before they buy? OLD SUBSCRIBER, Ontario.

Ans.—1. No.
2. They are not binding on A.
3 and 4. A is entitled to receive compensation from the company for lands taken and incidental damages, and he should, without delay, instruct a solicitor to obtain same for him.
5. It is probable that they have.

CORROSION OF WATER PIPES.

Some years ago, I piped a small spring on my farm. In four or five years' time, some peculiarity in the water destroyed the pipe. I would like to pipe it again, but would have your opinion as to what effect, if any, it would have on galvanized piping. Please tell me, if you can, what mineral is in the water that causes it to destroy piping in so short a time.

J. B. S.

Ans.—There are so many substances in natural waters which attack piping, both iron and lead, that it is scarcely safe to make any definite statement as to the cause in this case, without first submitting the water to analysis. Common salt, for instance, is an active corrosive. Again, certain peaty waters are frequently slightly acid, and these in the course of time have a marked effect upon piping. Some waters are rich in dissolved oxygen, and these rapidly "scale" iron piping, causing them to gradually fill with rust, reducing the flow until finally they become entirely choked. Judging from experience with the Ottawa River water, the additional cost of galvanized piping is more than compensated for in the increased life of the pipe. A very excellent plan, but one rather difficult to carry out by the farmer, is to coat the inside of the piping with pitch or tar, which forms a most effective covering. Such piping is practically unattackable by all classes of waters.

It is well to remember that pipes but partially full of water are more rapidly attacked than those kept constantly full. This is a matter that can frequently be arranged for in laying the pipe.

FRANK T. SHUTT,
Chemist, Dominion Experimental Farms.

Fistula and Poll Evil

Any person, however inexperienced, can readily cure either disease with Fleming's

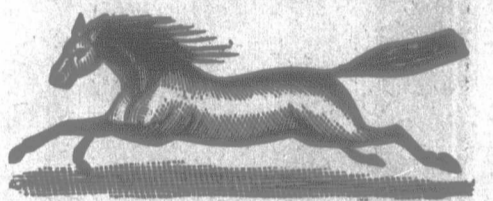
Fleming's Fistula and Poll Evil Cure

Even bad cases that skilled doctors have abandoned. Easy and simple to apply; just a little attention every fifth day—and your money refunded if it ever fails. Cures most cases within thirty days, leaving the horse sound and smooth. All particulars given in Fleming's Vets-Post Veterinary Adviser. Write us for a free copy. Ninety-six pages, covering more than a hundred veterinary subjects. Durable bound, illustrated and illustrated.

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45 Church Street, Toronto, Ontario

The Repository

BURNS & SHEPPARD, Props.



Cor. Simcoe and Nelson Sts., Toronto

Auction Sales of

Horses, Carriages, Saddles, Harness, etc., every Tuesday and Friday, at 11 o'clock.

Special Sales of Thoroughbred Stock conducted

Consignments solicited. Correspondence will receive prompt attention.

This is the best market in Canada for either buyer or seller. Nearly two hundred horses sold each week.

Bawden & McDonnell

EXETER, ONT.,

Have arrived home from Scotland with another importation of

12 Clydes and 2 Hackneys

selected from the best breeders in Scotland, and sired by Baron Frise, Montrose Mac and other noted horses. We have in all about 20 stallions in the barn—Clydes, Shires and Hackneys. Intending purchasers will do well to inspect, as these horses are all high class, and cannot be beat for true breeding quality and size.

Largest Stud in the World of American-bred

Percheron Shire and Hackney

STALLIONS AND MARES.

Have won more gold medals and championships than any other exhibitor. Stallions two to four years old, and mares in foal three to six years old.

Stallions \$700 to \$1,000; on easy terms.
Mares \$300 to \$600 for choice.

LEW. W. COCHRAN,
Crawfordville, Ind.

For Sale: A Registered Clydesdale Stallion First-class, coming 3 years. Color, rich brown; small stripe and little white on two feet. Sired by Imp. Pioneer [11131] (3374), of Darnley breeding. Dam out of the imp. prizewinner, Chalmers Lass (3212), and granddaughter of old Prince of Wales (373), sired by Imp. Queen's Own (7176) [1708], winner of several gold medals in Canada. A promising colt, of the very choicest combination of breeding, with near ancestors leading winners in keenest competitions. Price very moderate for quick sale. JOHN CAMPBELL, Fairview Farm, Woodville, Ont.

SHETLAND PONIES!

P. McDougall & Son, Breeders and Importers of Shetland ponies, Markdale, Ont. We showed 8 ponies at Toronto Exhibition in 1906, and got 8 prizes: 3 firsts, 4 seconds and 1 third. All our ponies are imported. Our stallion, Foxglove, took first prize at Toronto. Our mare, Bessie, took first prize, and their foal, Bruce, took first prize also. Good accommodation for mares sent from a distance to breed. Ponies for sale. Our address: Markdale P. O., Ont. The ONTARIO VETERINARY COLLEGE, Ltd.

Temperance St., Toronto, Canada. Affiliated with the University of Toronto. Patrons—Governor-General of Canada and Lieut.-Governor of Ontario. The most successful Veterinary Institution in America. All EXPERIENCED TEACHERS. Fee, \$65 per Session. Session begins Oct. 17th. Apply to Principal. ANDREW SMITH, F.R.C.V.S., Toronto, Can.

THE METALLIC ROOFING COMPANY LIMITED
CORRUGATED IRON
TORONTO

Good Reasons WHY OUR Corrugated Iron Is Preferred by Those Who Know

- We use only best Apollo or English sheets.
 - The corrugations are pressed one at a time—not rolled—fitting perfectly, both at ends and sides without waste.
 - No scale, pin holes or other defects are ever found in our goods.
 - The galvanized sheets are coated on both sides with all the galvanizing material that can adhere to them.
 - The painted sheets are coated on both sides with best quality paint.
 - We furnish any size or gauge required—either curved or straight.
 - If you desire durable quality and certain economical satisfaction, send us your specifications or write for further information.
- NO CHEAP TRASH** 39

QUESTIONS AND ANSWERS. Miscellaneous.

IMPORTING WESTERN RANGE HORSES.
Please let me know, through "The Farmer's Advocate," if there are any restrictions on bringing Western range horses into Ontario for sale. If so, what are they? A READER.

Ans.—We are advised from the office of the Veterinary Director General that there are none.

CAPPED HOCK.
I have an imported filly. She has a capped hock as large as a hen's egg, and hard. They say that she got it coming on the ship, three or four months ago. Would you be kind enough to let me know what is the best treatment for it? A. B. M.

Ans.—It sometimes takes a good deal of time and patience to remove an enlargement of this kind. The daily application of compound iodine ointment, with smart friction, will generally reduce it in time. If not effective, repeated blistering will remove it in time.

REFRIGERATOR.
Could you give us some descriptive plan of a refrigerator, so that a handy farmer could build one for his own use? Ontario County.

Ans.—We give a few of the principles on which refrigerators are built, from which you may be able to design something suitable. 1st.—Ice must be in upper part, as cooled air is heavy and descends. 2nd.—Water formed by melting ice must be run off to some receptacle in lower part, or out altogether. 3rd.—Inner walls, inclosing cool chamber, should be of some kind of sheet metal—a good conductor. 4th.—Outer walls, between which and inner there should be space for circulation of cooled air, should be thick, with air spaces, and be of wood or other non-conducting material. T.

LAYING-OUT HOGPEN, ETC.
As we intend building a hogpen, I would like to know if it would be best to run the cement foundation walls up above the level of the floor, a foot or two, so that the sills would not rot, or the hogs could not eat them. How would be the best way to lay out a pen, 20 x 32 feet, leaving room for a feed room and stove? How much cement would it take to lay floor about four or five inches thick? Have some pigs that weigh 75 or 80 lbs. There are a couple that do not seem to grow as well as the rest. What would be good to give them? There are 14 together. Would it be best to divide them? G. S.

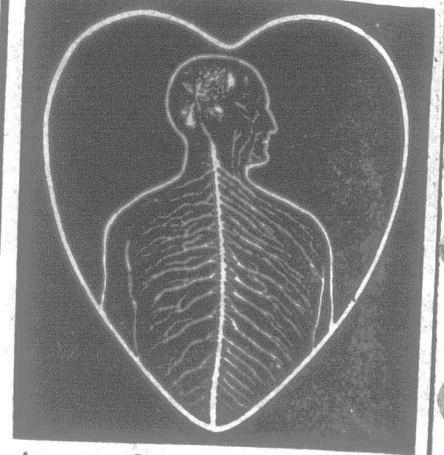
Ans.—By running a three- or four-foot passage through center, lengthwise, a row of three pens, about 8 x 8 feet, could be left on each side, and two of the same size at one end for feed-room and stove. If larger and fewer pens are required, run the alley along one side. Directions for building walls and floors have been repeatedly given in these columns. We would certainly divide the pigs into two lots, and try a change and greater variety of feed.

SILO-BUILDING.

- Will a silo, 15 x 30 feet, feed 30 head of cattle over winter?
- How many loads in a cord of sand or gravel?
- How many barrels of cement would be required?
- Is a silo of that size strong enough for one foot in thickness?
- How many days would a man and his tender take to build it?

Ans.—1. A round silo, thirty feet high and fifteen feet in diameter, will, allowing three feet for settling, contain ninety-five tons. That will supply thirty cattle with forty pounds of silage each per day for 158 days.
2. Contractors frequently haul one-third of a cord at a load, but most farmers find a quarter cord enough.
3. For a round cement silo of size mentioned above, and twelve-inch wall, fifteen cords of gravel, and fifty barrels of cement would be required, if mixed one to nine. A square silo, of same dimensions, would require one-third more.
4. We think wall of round silo would be perfectly strong with a thickness of ten inches, or even less, at bottom, and six inches at top, if plenty of stout wire hoops were imbedded in concrete.
5. Cannot say. T.

MILBURN'S Heart and Nerve Pills.



Are a specific for all diseases and disorders arising from a run-down condition of the heart or nerve system, such as Palpitation of the Heart, Nervous Prostration, Nervousness, Sleeplessness, Faint and Dizzy Spells, Brain Fag, etc. They are especially beneficial to women troubled with irregular menstruation.
Price 50 cents per box, or \$ for \$1.50. All dealers, or THE T. MILBURN CO., LIMITED, Toronto, Ont.

The Sunnyside Herefords.
To reduce the herd I will sell six breeding cows with heifer calves at foot. Prices reduced 20% from now until March 1st. Some choice heifers and a few bulls under 2 years old. Don't wait and miss this opportunity of procuring closely-bred high-class stock, but write for prices or come and see them. MALCOLM H. ORNBIL, SOUTEGATE, ONT.

Shorthorns, Berkshires & Lincolns
A number of heifers and cows with calves at foot. Four bulls from 7 to 13 months, the right sort, at prices to suit the times. Berkshires of both sexes; also the Lincoln ram, Ronald 13801, by Dean & Sons (imp.) 10803.
F. Martindale & Son, Caledonia Sta. York P.O.

Broxwood Herefords
Cows, heifers and calves For Sale.
R. J. PENHALL, Nover, Ont.

DEHORNING STUPS
Cattle with horns are dangerous and a constant menace to persons and other cattle. Dehorn them quickly and with slight pain with KEYSTONE DEHORNER. All over in minutes. Not a harsh method. Leaves a clear, clean cut. Cows give more milk; steers make better beef. Send for free booklet. R. H. McLennan, Fictus, Ontario, Can.

FOREST VIEW FARM HEREFORDS
Four bulls from 8 to 12 months old; praiseworthiness and from praiseworthy stock. Several heifers bred on the same lines; choice individuals for sale. JOHN A. GOVENLOCK, Forest Sta. and P.O.

RAILWAY VIEW STOCK FARM SHORTHORNS
Herd headed by Lord Lieutenant, imported, 50550. Present offering: Four young bulls, from 6 to 8 months old. Cows and heifers, imported and home-bred. Prices reasonable.
M. O. Ry., P. M. Ry. Stations.
SCOTT BROS., Highgate P. O., Ont.

HEREFORDS—We are now offering a few thick, smooth young bulls and a number of females—a low-down, even, beefy lot. If in want of something extra good, correspond with us. We can please you.
J. A. LOYERING, Coldwater P.O. and Sta.

Angus Cattle The kind that get market topers. We have for sale 7 young bulls from 9 to 16 months old; also females all ages. All eligible for the American Herdbook. From good families and good individual merit. J. W. BURT, Aberdeen Farm, Coningsby P. O. 3 1/2 miles from Erin stn., C.P.R.

2 GOOD YOUNG SHORTHORN BULLS
and some heifers for sale, very reasonable. They must be sold, as we have disposed of part of the farm.
D. BARTLETT & SON, Smithville, Lincoln Co.
Breeder of Shorthorns and Dorsets.

Aberdeen-Angus—Our herd in 1906 won all principal prizes at Toronto, London, Dom. Exhibition, Halifax, and Provincial at Charlottetown, Prince Edward island. Also, we got the largest share in our class at Provincial Winter Fair, Guelph. Stock of all ages for sale.
JAMES BOYMAN, Elm Park, Guelph.

SMITHFIELD STOCK FARM Shorthorns & Yorkshires
Present offering: Young stock of both sexes, sired by the Missie bull, Aberdeen Beau, by (Imp.) Scottish Beau. Also young Yorkshire sows.
R. E. WHITE, Balderson, Ont.

SHORTHORNS AND LEICESTERS
Present offering: 4 choice young bulls from 8 to 13 months old. All sired by Rosierucian of Dalmeny (imp.) 46290, and from grand milking dams. Prices away down for quick sale. Also a grand lot of young registered ewes now bred to our stock ram, and a few good rams at reasonable prices. Address:
W. A. DOUGLAS, Caledonia Station, Tuscarora P. O.

Shorthorns & Berkshires
For sale: Young bulls and calves; also a few young sows and fall pigs.
John Racey, Lennoxville, Que.

Brown Lee Shorthorns—Present offering is 9 young bulls from 1 to 15 months old, a nice straight, good-doing lot, sired by Ebenhelm Stamp; also females of all ages, daughters of Imp. Sir Christopher and Imp. Beauvamp. Prices very reasonable.
DOUGLAS BROWN, Avy P.O. and Station.

For Sale: Scotch Shorthorn
Young bulls and heifers.
H. G. GIBBARD, THEDFORD, ONT.
Sibley's Cattle Stock Farm

Glen Gow Shorthorns
Our present offering is 9 bulls, from 6 to 14 months of age, sired by Imp. Ben Loman and Imp. Joy of Morning, and out of Imp. and Canadian-bred cows. Also a number of very choice heifers. No fancy prices asked. Long-distance phone.
WM. SMITH, Columbus P.O.
Brooklin & Myrtle Stns.

ROCK SALT for horses and cattle, in box and car lots.
TORONTO SALT WORKS, TORONTO

Shorthorns, Gotswolds and Berkshires.
For sale: 3 yearling bulls, cows, heifers and calves. Over 50 head to select from. Nothing to offer in Gotswolds or Berkshires.
CHAS. E. BONNYCASTLE, P. O. and Stn. Campbellford, Ont.

White Hall Shorthorns
Missies, Cecillas, and Lady Victorias. 4 young bulls, 1 heifer, and a few older females. Bred right and will be sold right.
N. A. Steen, Meadowvale P. O. and Station, Peel Co.

WILLOWBANK SHORTHORN HERD
ESTABLISHED 51 YEARS.
FOR SALE: Young bulls and heifers from imp. sires and dams, of most fashionable breeding and type; exceedingly choice. Prices to suit the times.
JAMES DOUGLAS, Caledonia P. O. and Sta.

Shorthorns, Clydesdales and Shropshires.
In Shorthorns we have 100 head to select from, of both sexes and all ages. No fancy prices asked. Several choice young Clyde mares and fillies. 75 Shrop. lambs of both sexes. Small profits and quick returns is our motto.
EDWARD E. PUGH, Clarendon P. O. and Station. Telephone connection.

Maple Hill Shorthorns: For immediate sale are two yearling bulls—one a Crimson Fuchsia, the other a Duchess of Gloster; both by Imp. Royal Prince, and both herd leaders. Also a number of heifers that are strictly high-class. Send for catalogue.
DAVID BIRRELL, Greenwood P. O., Pickering, G. T. R. Clarendon, C. P. R.

Cattle and Sheep Labels
Send your name and address for circular and sample. It costs nothing. Write to-day. Address:
F. G. James, Bowmanville, Ont.

ARLINGTON SHORTHORNS AND LEICESTERS
Present offering: 2 bulls 8 and 11 months old, by Christopher's Heir 45459; also a few females of different ages, some from imp. sires. No sheep for sale at present. Stock guaranteed as represented. John Lishman, Hagersville P. O. & Sta.

Belmar Parc Shorthorns

WE think we have as great a lot of young show animals as has ever been on one farm in Canada. Our herd is large, the individuals are choice and of the richest Scotch breeding, and our prices are moderate. 15 young bulls, 25 heifers under three years. A splendid group of breeding and show matrons. Mostly in calf to the champion Marigold Sailor = 53258 = and the prizewinning Nonpareil Archer (imp.) = 45202 =. Pembroke is on the main line of the C. P. R. and the Canada Atlantic Division of the G. T. R. You can leave Toronto 11 a. m., arrive Pembroke 12.05 p. m., see the herd, and arrive Toronto next morning at 7.20. We prefer you to see the cattle, but if you can't spare the time we take special pride in filling mail orders satisfactorily.

John Douglas, Manager.

PETER WHITE, Pembroke, Ont.

R. A. & J. A. WATT

OFFERS FOR SALE THE
CHESTNUT TROTTER-BRED S'ALLION, REGAL PERFECTION
Right in every way. He is a handsome horse; a sure winner in any company.
Elora Station, G.T.R. & C.P.R. SALEM, ONTARIO.
Visitors always welcome.

Special Offering of Scotch SHORTHORN BULLS
3 just past two years old; 15 just over one year old; 7 just under one year old.
The best lot we ever had to offer in individuality and breeding, and prices are right. Catalogue.
John Clanoy, Manager. H. CARGILL & SON, Cargill, Ont.

AT "MAPLE SHADE"

Our young bulls are the best that our herd has ever produced. We can furnish Cruickshank bulls of high quality to head the best herds, and some that should produce the best prime steers. We have a bull catalogue. Send for one.
JOHN DRYDEN & SON, Brooklin, Ont.
Stations: Brooklin, G.T.R. Myrtle, C.P.R. Long-distance telephone.

Queenston Heights SHORTHORNS

Special offer now: Several choice Scotch bulls, two of which are show bulls, a roan yearling and a red two-year-old by Derby (imp.) = 89069 =. Their dam is Bessie's Maid = 47779 =, by the great sire Royal Prince = 26062 =. There is no better breeding. Also some young cows and heifers at low prices for prompt sale.
HUDSON USHER, Queenston, Ont.

GEORGE D. FLETCHER,

Breeder of Scotch Shorthorn Cattle and Yorkshire Pigs.
Our herd of the most noted Scotch families is headed by the \$9,000 Duthie-bred bull, Joy of Morning (imp.) = 89070 =, winner of 1st prize at Dominion Exhibition, Toronto. A few very choice young bulls from 4 to 9 months old, also females for sale. In Yorkshires are a choice lot of either sex, 7 months old, from imp. sire and dam. Sows bred to imp. hog if desired.
BINKHAM P. O., ONT. ERIN STATION AND TEL.

JOHN LEE & SONS, Highgate, Ont.

SHORTHORNS & LINCOLNS
The champion herd of Elgin, Kent and Essex counties.
For Sale: 6 choice young bulls, 3 reds and 3 roans, of grand type and quality; also good selection of young cows and heifers. Visitors welcome.

Six Red Shorthorn Bulls

15 to 15 months old, got by Proud Gift = 50077 = (imp.); also cows and heifers, imported and home-bred. Inspection solicited. We think we have as good Shorthorn cattle as we have Lincoln sheep. 14 firsts out of a possible 19, our record at Chicago, 1906.
J. T. GIBSON, Denfield, Ont.

Shorthorns and Clydesdales

I am now offering 6 young bulls from 8 to 20 months old, all Scotch-bred, two of them from extra good milking families, and a few registered fillies of good quality.
JOHN MILLER, Brougham, Ont.
Claremont Sta., C.P.R.; Pickering, G. T. R.

Pure Scotch Shorthorns

WE ARE OFFERING FOR SALE IMP. SCOTTISH PRIDE = 36108 =.
3 bulls just two years old. 6 bulls one year old. 7 bull calves from 8 to 12 months. (12 of these bulls are from imp. cows.) Choice females of all ages; 100 to choose from. 2 Imp. Yorkshire sows due to farrow in March. 10 young sows 5 months old. Write for catalogue and prices. Our farms are only one-half and one and one-half miles from Burlington Junction, G. T. R. Long-distance telephone in residence.
W. G. Pettit & Sons, Freeman, Ont.

HOLLYMOUNT SHORTHORNS

Pure Scotch, Imported, and the get of imp. stock.
25 HEAD
Anything for sale, 1 young bulls. Breeding gilt-edged and unsurpassed. A few heifers. Prices right.
W. J. Thompson, Mitchell P. O. & Sta.

Clover Lea Stock Farm SCOTCH SHORTHORNS

Superior breeding and individual excellence. For sale: Bulls and heifers—reds and roans, some from imp. sire and dam. Visitors met at Ripley station, G. T. R.
R. H. REID, PINE RIVER, ONTARIO.

STRUAN SHORTHORNS

For sale: Choice young bulls from four to ten years old, sired by Scottish Bean (imp.) = 30021 =, also cows and heifers of different ages. Write for prices, or come to see my herd.
N. E. ROBERTSON, Ontario

12 SHORTHORN BULLS FOR SALE
from 1 to 12 years old. Several of them are prize winners in Toronto. Write for catalogue. J. & W. RUSSELL, Woodmont Hill, Ont.

QUESTIONS AND ANSWERS. Miscellaneous.

SAND FOR CONCRETE.

Having purchased a quantity of inclosed material, which I wish to use for concrete basement, I would like your opinion whether it would be satisfactory for that purpose or not, also what amount of Portland cement to use in proportion.
F. M.

Ans.—The sample of sand you send, though fine, is clean and sharp, and should make good cement concrete. For the foundation of wall below ground, one part of good Portland cement to 12 of sand may be used. If you have them, bed in plenty of field stone, and thus save on the quantity of concrete. In the two feet of wall, just at and above first line, better use 1 part cement to 7 of sand, and for the rest of the wall, 1 part to 9 of cement will suffice. A saving of the cement concrete can be made by bedding small stones in the wall, if available, no stone to come nearer than one inch to face of wall on either side. For bottom of floor, use 1 part cement to 10 of gravel or coarse sand, and for the finishing coat, 1 to 3 of sand. Mix very thoroughly dry, before applying any water.

SEEDING ALFALFA FOR SOILING AND PASTURE.

I have a strip of land adjoining my house, which I wish to lay down with alfalfa. Part of this strip I want to use as pasture for a cow after the first year. Part of it I shall cut up into feed. The land is clay loam, part of it a little on the heavy side, and part lighter; the area of the strip being about three acres. Will you kindly give me the following information:

1. Had I better sow the alfalfa with a cover crop, such as spring wheat, or will it do as well or better if I sow it without the cover crop.
2. Would you recommend sowing the alfalfa seed alone at the rate of, say, 35 lbs. to the acre, or would you sow orchard grass with the alfalfa on the portion intended for pasture, or on the whole of it.
3. The land is not in the best of condition. I propose to have it plowed fairly deep, and well cultivated, but am satisfied it will need a liberal dressing of manure to be successful. Stable manure will not be easy to get. Can you advise me as to what artificial manure I had better use, in what quantities, and how it should be applied to get the best results.

SUBURBANITE.
Ans.—1. The chances of a successful seeding will be better without than with a cover crop.

2. On the part intended for hay and soiling purposes, sow alfalfa alone. If the seed is good (this may be determined by a simple germination test), 25 lbs. of seed per acre will be ample. On the portion intended for pasture, it would be wise to sow a mixture of alfalfa and grass seed, say 15 lbs. of alfalfa 2 lbs. timothy, 4 lbs. of orchard grass, and 4 lbs. of tall oat grass or meadow fescue. Alfalfa pasture sometimes bloats stock. The danger is obviated by introducing a mixture of grasses into the meadow.

3. One load of lime and one load of wood ashes per acre will contribute greatly to success in seeding with alfalfa. Fallowing either of these, the simplest and easiest thing to do would be to try two loads of the other. A light top-dressing of manure would also help greatly in getting a catch. Once the alfalfa is established, however, it is economical to depend upon mineral rather than barn-yard fertilizers.

Bog Spavin

Cure the lameness and remove the bunch without scarring the horse—have the part looking just as it did before the blemish came.

Fleming's Spavin Cure (Liquid) is a special remedy for soft and semi-solid blemishes—Bog Spavin, Thoroughpin, Splint, Curb, Capped Hock, etc. It is neither a liniment nor a simple blister, but a remedy unlike any other—doesn't irritate and can't be limited. Easy to use, only a little required, and your money back if it ever fails.

Fleming's Vest-Pocket Veterinary Adviser

describes and illustrates all kinds of blemishes, and gives you the information you ought to have before ordering or buying any kind of a remedy. Mailed free if you write.
FLEMING BROS., Chemists, 45 Church Street, Toronto, Ontario

ANNANDALE FINE STOCK FARM TILLSONBURG, ONT.

Premier sire, Prince Posch Calamity, whose dam and sire's dam average in official test 86 lbs. milk in 1 day and 26 lbs. butter in 7 days.

No stock for sale at present.

GEO. RICE, Tillsonburg, Ont.

Spring Brook Holsteins and Tamworths

Herd headed by the first-prize bull, Nannet Pietertje Paul, whose dam and sire's dam and g-dam have official butter records averaging over 35 lbs. in 7 days. Females bred and young bulls sired by him for sale. Tamworths of all ages and both sexes. Come and see, or write at once for prices.
A. G. Hallman, Breslau, Ont.

RECORD OF MERIT HOLSTEINS

Herd 110 strong. Over 40 head now in the Record of Merit. Two of the richest bred bulls in Canada at head of the herd. For sale: 18 bulls, from 2 months to 1 year of age, all out of Record of Merit cows and sired by the stock bulls.
P. D. EDM. Oxford Centre P.O. Woodstock Station.

A FEW HOLSTEIN BULLS

fit for service, for sale at reasonable prices. Choice females, all ages. If you are willing to pay good prices for good stuff, write me.

G. W. OLEMONS, St. George, Ont.

Imperial Holsteins—An Advanced Registry herd for sale. One-year-old bull, a Toronto champion, four bulls from 6 to 8 months of age. A. B. on both sides. Imp. in dam from the U. S.

W. H. SIMMONS, New Durham P.O. & Sta

"GLENARCHY" HOLSTEINS
43 head of big, deep-flanked, heavy-producing Holsteins, many of them milking from 50 to 60 lbs. a day on grass. Young stock of both sexes for sale. A straight, smooth lot.

G. MACINTYRE, Renfrew P.O. and Sta

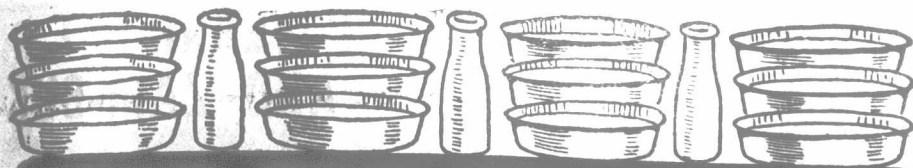
For Sale—Choice registered Holstein bull calves at \$15 each, sired by Prince Gretqui De Kol, whose dam made over 18 lbs. of butter in seven days at three years old; also one yearling and one two-year-old bull at a bargain.

W. A. BRYANT, Cairnform, Ont.

SPRINGBURN STOCK FARM, North Williamsburg, Ont., Ayrshires, both sexes and all ages; Berkshires, both sexes and all ages; Oxford Down sheep, a few choice ones left; Buff Orpington fowls, eggs \$1.00 per setting, \$4 per hundred. H. J. Whitteker & Sons, Props.

QUEEN CITY HOLSTEINS

If you would like to purchase a young Holstein bull whose sire's dam has an official record of 500 pounds of milk and 36 pounds of butter in seven days, write to R. F. HICKS, Newton Brook P.O., York Co.



THE OLD PAN WAY

50% MORE CREAM

THE TUBULAR WAY

SHARPLES TUBULAR SEPARATOR

DON'T PAY

The old pan way of raising cream don't pay—it's too mussy and fussy—too much work for the women. And it don't pay in dollars and cents because you actually lose 50 per cent of the cream you ought to get. You can increase your cream product about 50 per cent over pan setting; 33 per cent over cans set in cold water; 25 per cent over patent creamers or dilution cans by using the

Besides you can skim the milk immediately after milking—save the handling and the expense of storage. A good milk-house costs more than a Tubular and isn't half so profitable—even if you already have the milk-house it will pay in labor saved, in crocks and pans saved, and the increase in cream will be all clear profit. Of course, when you buy a separator, you want the one that will get you the most profit—you'll want the Tubular—the reasons why are all given in a book which you will want and which we want to send to you free if you will only write for it, ask for book H. 193

Mr. Mac Tuttle, Danville, Ill., says "The first week we used the Tubular we made a gain of 12 lbs. of butter from five cows."

THE SHARPLES SEPARATOR CO.,
 Toronto, Can. West Chester, Pa. Chicago, Ill.

BRAMPTON JERSEYS

Canada's Premier Herd

Strengthened regularly by importations from United States, England and the Island of Jersey.

We have animals of all ages and both sexes for sale, and the largest herd in Canada to choose from.

Write for prices and particulars.

Long-distance 'phone at farm.

B. H. BULL & SON, Brampton, Ont.

Ayrshires and Yorkshires

We now offer our grand imp. bull, Lessnessock Royal Star. Always winner of first prize at Toronto, except once, when he was placed second. Now four years old past. Other young bulls fit for service from heavy milking stock on both sides, with large teats. Females of almost any age. Young sows in farrow. One aged boar cheap. Pigs from 2 to 4 months old. Prices right. Long-distance 'phone, Campbellford Central.

ALEX. HUME & CO., MENIE, ONT.

HOLSTEINS FOR SALE

Four imported and one home bred bulls from 8 to 18 months old; also our entire crop of spring bull calves from weeb old up.

Sired by the grandly bred imp. bull, Sir Howitt B. Pieterie, whose dam record is over 28 lbs. milk in one day, and from great-producing cows of the most fashionable strains. Can spare a few cows and heifers, from one year up; 75 head to select from. Cheese 12c. Don't delay if you want one from this herd.

H. E. GEORGE, Crampton, Ont.

LYNDALE HERD

Offer a number of young bulls fit for service, out of Record of Merit cows, and sired by Beryl Wayne Paul Concordia, four of whose nearest dams have official records averaging 28 lbs. 11 ozs. each. Eight heifers coming two, and due to calve in spring. Younger stock, either sex.

BROWN BROS, Lys, Ont

Holsteins and Yorkshires

R. HONEY, Bricklay, Ont., offers a very choice lot of young bulls, also boars and sows fit to milk.

MAPLE GROVE HOLSTEIN HERD

is made up of Record of Merit cows and heifers with large records, and headed by Lord Wayne Meethilde Calamity. Young bulls fit for service at reasonable prices.

Walburn Rivers, Folden's, Ont.

Greenwood Holsteins and Yorkshires

For sale: A few richly-bred bulls from one to eighteen months old. Also a few choice females of all ages. Yorkshires of either sex.

D. Jones, Jr., Caledonia P. O. and Sta.

Grove Hill Holsteins

Herd consists of fifty-four head, containing blood of De Kol, Pieterie, Korndyke, Keyes, Inka, and other families of good testing qualities. Young stock of both sexes for sale at present in limited quantities. Write for prices.

F. R. Mallory, Frankford P. O. and Sta.
Trenton station, G. T. R.

Evergreen Farm Holsteins

is headed by Prince Pauline DeKol, which we are offering for sale; sire of 10 daughters in Record of Merit; also a choice lot of young bulls fit for service, from Record of Merit cows with large records.

F. C. PETTIT & SON, Burgessville Ont.

HIGH GROVE JERSEYS AND YORKSHIRES.

For sale cheap, several choice young bulls and a few heifers, some of them prizewinners at Toronto this fall; bred from the best. Twenty young sows just ready to breed. Prices, extended pedigrees, and all information for the asking. **ROBT. TUFTS & SON, Tweed P.O. and Sta.**

QUESTIONS AND ANSWERS. Miscellaneous.

WITHERS DISPLACED.

I have got a cow that has her withers out every year, three months before calving, and when they get cold they will not go in, unless bathed with hot water. She is going dry, and does not calve until the end of May. **SUBSCRIBER.**

Ans.—It is not advisable to continue breeding such an animal. Place in a narrow stall, and elevate hind end, degree of 1 inch to 10. Pursue same treatment as you have been doing. **R.**

USE OF POULTRY DROPPINGS.

What is the best use to make of poultry droppings? **J. A. W.**

Ans.—Poultry droppings form a manure particularly rich in nitrogen in a readily available form. According to Storer, the composition of the fresh excreta of the common domestic birds is as follows:

Geese.	77.1	19.4	0.6	1.0	0.8	0.2
Ducks.	56.6	26.2	1.0	1.4	1.7	0.4
Pigeons.	52.0	31.0	1.8	1.7	1.1	0.5
Fowls.	56.0	25.5	1.6	1.7	0.8	0.8
Water	.....	.....	.....	.....	.....	.....
Organic matter	.....	.....	.....	.....	.....	.....
Nitrogen (N)	.....	.....	.....	.....	.....	.....
Phosphorus pentoxide (P2O5)	.....	.....	.....	.....	.....	.....
Potash (K2O)	.....	.....	.....	.....	.....	.....
Lime (CaO)	.....	.....	.....	.....	.....	.....
Magnesia (MgO)	.....	.....	.....	.....	.....	.....

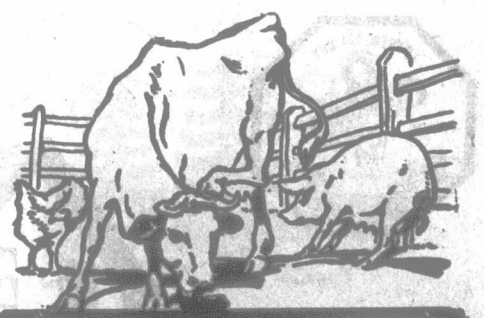
The same authority also estimates that the quantity produced by each bird per year is:

Pigeon	.....	6
Hen	.....	12
Duck	.....	18
Goose or turkey	.....	25

At the present time nitrate of soda is worth about \$3.50 per cwt., which is equivalent to 22.5 cents per pound for the nitrogen contained in it. The nitrogen of poultry manure is not quite so quickly available, but ought to be worth about 20 cents per pound for ordinary purposes, as compared with that of nitrate of soda at 22.5 cents per pound.

If, then, we value the nitrogen at 20 cents per pound, and the phosphoric acid and potash at the usual commercial value of 5 cents each per pound, and figure from the above data, it will be found that fresh hen manure is worth 45 cents per cwt., and that each hen will produce between 5 and 6 cents worth of manure per year. The nitrogen is in a readily available form, largely in the form of uric acid, which readily changes into ammonia. To prevent loss of this valuable constituent, the manure should be mixed with something, such as damp, fine loam, to prevent the volatilization of the ammonia. Some recommend mixing it with lime or wood ashes to neutralize the acid in the manure, and then mixing it with damp loamy soil to prevent the escape of ammonia. In this way, the nitrogen is brought into the best form of combination before the manure is applied to the soil. It is essentially a nitrogenous manure, and may be used freely on garden crops. Some recommend it particularly for strawberries.

R. HARCOURT,
Ontario Agricultural College.



Free Them From Lice

Instant Louse Killer is sold on a positive written guarantee to destroy lice on poultry, stock of all kinds and ticks on sheep, formulated by Dr. Hess, (M. D., D. V. S.)

For destroying lice on calves and colts, nothing equals Instant Louse Killer. For sheep ticks it is most effective, doing away with the muss and annoyance of a "dip."

Instant Louse Killer

is the original powder louse killer put up in round cans with perforated top. Be sure of the word "Instant" on the can—there are over 25 imitations.

1 lb. 35 cts. 3 lbs. 85 cts.

If your dealer cannot supply you, send your order to us.

Manufactured by
DR. HESS & CLARK,
Ashland, Ohio, U. S. A.

AYRSHIRES & POULTRY

Hotchouse Pilot (imp.) Heads the Herd.

For Sale: One splendid yearling bull, Norfolk Chief, by Sensation of Glenora, grand sire Douglas Dale of Dam of Aber (imp.). A few two-year-old heifers in calf can be spared, bred from producing dams. Prices reasonable, quality considered. Also 10 pair of Tolouse geese, at \$5 per pair. W. Wyandottes, B.F. Rocks, \$1.50 each. Pekin and Rouen ducks \$1 each. Write

W. THORN, Trout Run Stock Farm,
Norfolk Co. Lynedoch Ont.

Hillview Herd of Prizewinning AYRSHIRE CATTLE.

All animals bred and carefully selected for size, constitution, long teats and deep-milking qualities. Select animals of both sexes for sale at reasonable prices. For further information and prices write

A. KENNEDY & SON,
Hillview Stock Farm, Vernon, Ont.
Winchester Station, C. P. R.

SHANNON BANK STOCK FARM

FOR AYRSHIRES AND YORKSHIRES

Young stock of both sexes for sale from imported stock.

W. H. TRAN, Cedar Grove, Ont.

AYRSHIRES FROM A PRIZE-WINNING HERD

Have some nice bull and heifer calves for sale at reasonable prices. For particulars, etc., write to

W. M. STEWART & SON,
Campbellford Sta. Menie P.O., Ont.

STOCKWOOD AYRSHIRES FOR SALE

All ages, from imp. and Canadian bred stock. Prices and terms to suit purchaser.

D. M. WATT, St. Louis Sta., Que

Ayrshires 3 prizewinning bulls fit for service at reasonable prices, also younger ones for quick buyers.

H. DYMERT, Hickory Hill Stock Farm,
Dundas Sta. and Tel. Grappon, Ont.

Sheep Breeders' Associations.

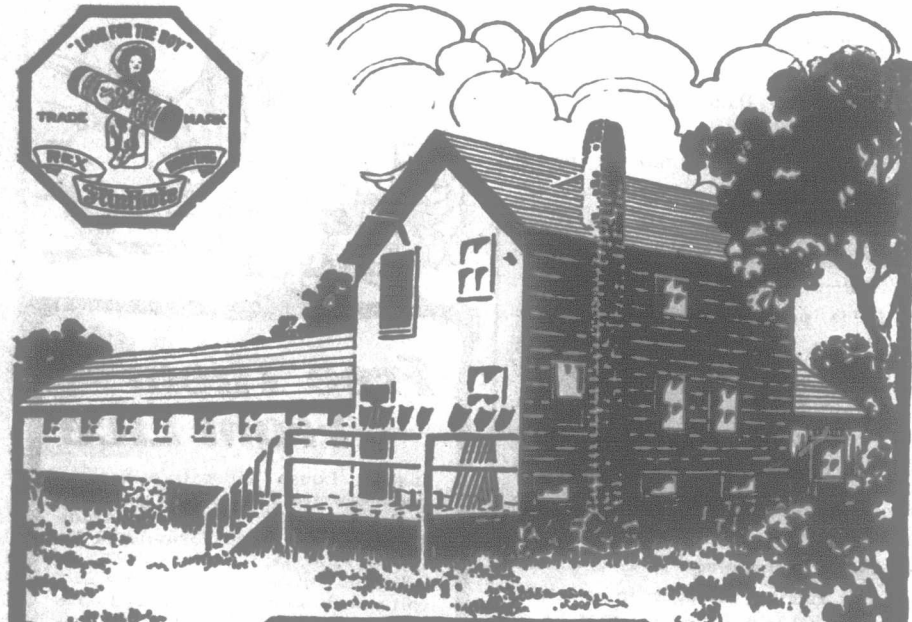
American Shropshire Registry Association, the largest live-stock organization in the world. Hon. John Dryden, President Toronto, Can. Address correspondence to **MORTIMER LEVY-BRING, Secretary, Lafayette, Indiana.**

SHROPSHIRE

Can sell about 20 Ram Lambs. Mostly by an Imp. Butcher-bred ram.

GEO. HINDMARSH, Ailes Craig, Ont.

I am offering for sale my entire flock of pure-bred **OXFORD DOWN SHEEP.** Consisting of 10 ewes, all in lamb to a pure-bred; also 7 shearings; all in splendid condition. Prices right. **G. GRISVE, Maple Lodge, Ont.**



A Roof of
Rex Flintkote keeps a building and its contents safe. Falling sparks will not ignite Rex Flintkote, rain and snow will not penetrate it, winds will not blow it off—because

REX FLINTKOTE ROOFING

is made of long fibre wool felt treated by our special process. It contains no tar or paper. Heat will not soften it, nor cold crack it. It is laid as easily as a carpet.

SEND FOR FREE SAMPLES

We will send upon request samples to test, and our valuable roofing booklet, "Look for the boy" on every roll. See trade mark in upper corner.

J. A. & W. Bird & Co., 20 India St., Boston, Mass.
Canadian Office:
29 Common Street, Montreal

MY SHROPSHIRE WONS THE FLOCK PRIZE AT TORONTO

And I have imported and home-bred **RAMS** and **EWES** for sale that are of the same stamp. All kinds of good **COTSWOLDS** and **SHORTHORNS** as well. Prices always reasonable. **Robert Miller, Stouffville, Ontario.**

Ship Your **HIDES SHEEPSKINS FURS**
To **E. T. CARTER & CO., TORONTO.**

SOUTH DOWNS
AND
Scotch Collies.
Robt. McEwen, Byron, Ont.
Long-distance Phone.

Canadian Agents for the Original **McDougal's Sheep Dip & Cattle Dressing**
Imported direct. Price: Imperial pints, 36c; Imperial half gallon, \$1.25; Imperial gallon, \$2.25. Sold by druggists, or charges prepaid on one gallon tin. **THE WORTHINGTON DRUG CO., Toronto, Ontario.**

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.**

Fairview Berkshires
Bred from imported and Canadian-bred sires and dams, and bred on prize winning lines. My brood sows are large, choice animals. Young stock of both sexes. Some sows bred to imp. boars **HENRY MASON, SCARBORO P. O.** Street cars pass the door.
When Writing Mention this Paper.

LARGE ENGLISH YORKSHIRES

Pigs of the most improved type of both sexes of all ages, for sale at all times. We have more imported animals in our herd than all other breeders in Canada combined. We won more first prizes at the large shows this year than all other breeders combined. We won every first but one and all silver medals and Bacon prizes at Toronto and London, and at St. Louis we furnished all the first-prize hogs in the breeding classes except two; also supplied both champion and grand champions. Prices reasonable.

O. G. FLATT & SON, Millgrove, Ont.

Meadowbrook Yorkshires

Young stock of both sexes. A number of sows old enough to breed, all sired by Imp. Dalmeny Topeman. Everything guaranteed as represented.

J. H. SNELL, HAGERSVILLE P. O. & STATION

Morrison Yorks. and Tams.

on hand, for sale. Are both sexes of both breeds. Bred from prizewinners and extra choice. Prices right.
Charles Currie, Morrison P. O., Shaw Sta. C. P. R.

YORKSHIRES

Improved Large Yorkshires. This choice stock from imported and home-bred sires for sale.
GEO. W. BROWN, HAYSVILLE, ONT.

GOSSIP.

Pendleton & Co., Lamont, Alberta, are offering farm lands in the Edmonton district of Sunny Alberta. You will find their advertisement on another page.

Volume 67 of the American Shorthorn Herdbook has been received at this office, thanks to the secretary and editor, Mr. John W. Groves, Chicago, Ill. It contains the abbreviated pedigrees of bulls, numbered from 257,709 to 263,114, and of a larger number of females, showing a steady increase of the breed and its spread over a wide territory in the United States and Canada.

Our poultry readers will be interested in the advertisement of John Pringle, London, Ont., who is offering some excellent Barred Rock cockerels and pullets at tempting prices. Mr. Pringle's flock numbers many choice birds, including first and other prizewinners in the unprecedentedly keen competition at the Ontario Winter Fair, as well as several of the best birds at Toronto. Among the trophies to their credit is the grand challenge cup for best pair of females at the latter show. Write for prices without delay.

A. Edward Meyer, Guelph, Ont., breeder of high-class Scotch Shorthorns, writes: "My cattle are wintering well, apparently enjoying the new stables built for them last summer. My herd was never so strong in richness of breeding and up-to-date individuality. My second crop of calves from Scottish Hero (imp.) =55042= (90065) is coming. His offspring mark him as a sire of high merit. Visitors are impressed with the individual excellence and evenness of his get. I have recently sold to Andrew Freeman, of St. Jacobs, Ont., the grand young bull, Village Hero, sired by Scottish Hero (imp.), and out of Village Lassie, of the Cruickshank Village family. To Mr. John McAnirich, of Crief, Chief Ramsden, of the popular Miss Ramsden family, got by the Cruickshank Blyth-some bull, Chief Ruler (imp.), dam Miss Howie 9th (imp.). These two bulls should do good service for their purchasers, as they are splendid individuals, backed up by good ancestry. I still have for sale a nine-months-old bull calf and two seven-months-old bull calves, all from imported sire and dams. They are young, but they are of the right sort, and will be priced so that it will be worth while to enquire about them."

Messrs. Geo. Amos & Son, Moffat, Ont., breeders of Shorthorn cattle, write: "Our herd has come through the winter so far in very good condition; have a nice bunch of calves coming up, sired by Old Lancaster (imp.), that are very promising. Have made the following recent sales: To A. G. Smillie, Hensall, Ont., the grand young bull, Scottish Signet, by the grand champion, Old Lancaster, dam Imp. Scottish Queen, by Scottish Prince. To Mr. Wm. Scafe, Grand Valley, the grand young bull, Old Nonpareil, by Old Lancaster (imp.), dam Nonpareil Violet, by British Statesman (imp.). One bull to each of the following gentlemen: Kenneth McKenzie, Corwin; Wm. Fraser, Campbellville; Geo. Graham, Rockwood. To Lee Bros., Galt, Scottish Lassie, by Gordon Prince. This is one of our best breeding cows, and is dam of Flora 90th, third-prize junior yearling heifer at Toronto last fall. To Arch Black, Corwin, the young cow, Rosette, by Diamond Statesman. We have recently purchased, to head our herd, the imported bull, Ben Lomond =45160=, bred by Mr. Simmers, Whiteside Scotland, got by the Duthie-bred Count St. Clair (74300), who was a son of Bapton Conqueror and Missie 137th, by Golden Ray. Ben Lomond's dam was Beauty 13th, by Lord Marshal (56070), who was a son of the great bull, Field Marshal. This bull was used by Mr. Wm. Anderson, of Saphock, Old Meldrum, with marked success, prior to his importation to Canada. He is of that low-down, thick-fleshed type we so much desire. Ben Lomond is assisted by Bud's Emblem, second prize senior bull calf at Toronto last fall; a bull of Campbell Rosebud breeding, and sired by Old Lancaster. Some think he is equal to his sire. He may be seen in the showing this coming season."

THE GOVERNMENT AND ZAM-BUK

SURVEY OUT FROM FORT WILLIAM TAKES A SUPPLY OF THIS USEFUL BALM.

Zam-Buk, the favorite household balm and salve, is now adopted as "the Doctor" by leading parties engaged in surveying various parts of the Dominion lands.

Mr. Henry Hall, writing from Fort William, says: "Having proved how beneficial Zam-Buk is in cases of cuts, skin injuries and diseases, and being engaged to go on a survey, I thought it would be a most useful thing to take along. I obtained a supply in Fort William, and very well it was I did so, for nearly every day it was called into requisition by one or other of the party for cuts, bruises, burns, or some injury. Zam-Buk quickly takes the soreness out of cuts, burns, bruises and injuries; and on our survey it earned golden opinions from all who had occasion to try it."

Mr. Lascelles Scott, one of the leading Government analysts, says: "I have no hesitation in certifying the entire purity of Zam-Buk, which in my opinion is excellently adapted for skin injuries and diseases." Zam-Buk cures cuts, scalds, burns, bruises, eczema, scalp sores, ring-worm, ulcers, abscesses, chapped places, spring pimples, blood poison, chronic abscesses, etc. As an embrocation, it relieves rheumatism, neuralgia and sciatica. All druggists and stores sell at 50c. a box, or from Zam-Buk Co., Toronto, for price. 6 boxes sent for \$2.50. Send 1c. stamp, and we will mail you free sample box.



Pat. 1908-04.

We manufacture **Steel Cheese Vats, Cream Vats, Gurd Sinks, Water Troughs, Hog Troughs, Steel Tanks, Tanks to Water Stock, Feed Cookers, Evaporators for Making Maple Syrup, Grain Boxes, Thrashers' Steel Tanks, Smoke Stacks, Steel Whey Tanks.**

Ask your implement agent for our free catalogue.

The Steel Trough & Machine Co., Limited, TWEED, ONTARIO.

PINE GROVE BERKSHIRES!

Bred on aristocratic lines and from high-class show stuff, sired by the Toronto winner, Willow Lodge Leader. For sale are young animals of both sexes—4 and 6 months of age; of choice bacon type and showing form. **W. W. BROWN-RIDGE, Ashgrove P. O., Milton Sta.**

ORCHARD HOME TAMWORTHS

He'd headed by Newcastle Warrior. This hog won first prize and silver medal at Toronto 1905, and defeated his sire, Colwell's Choice (1343), who has won these honors three years in succession. Our brood sows are large and of the same high quality. If you want choice stock, we can satisfy you at a reasonable price. Young boars fit for service; also young pigs now on hand. All stock shipped in comfortable crates. Express prepaid and satisfaction guaranteed.
CRANDALL BROS., Cherry Valley, Ont.

Newcastle Herd of Tamworths and Shorthorns. We have for quick sale a choice lot of boars and sows from 2 to 6 months old, the produce of sows sired by Colwell's Choice and Newcastle Warrior, both our own breeding, and winners of sweepstakes and silver medals at Toronto, 1901-02-03-04. Several very choice sows due to farrow in March and April. Pedigree furnished with every pig. Several choice heifer calves and heifers in calf to our present stock bull. All of high show quality. Prices right. Daily mail at our door.
COLWELL BROS., Newcastle, Ont.

MOUNT PLEASANT TAMWORTHS and HOLSTEINS.

For sale: An extra choice lot of pigs of either sex, from one to six months old, and two sows bred to farrow in March. They are nearly all sired by Colwell's Choice No. 1343; won sweepstakes and silver medal at Toronto in 1901-2-3. Also four bulls and one heifer from one to ten months old. Phone in residence. **BERTRAM HOSKIN, The Gully P. O.**

Tamworths and Dorset Horn Sheep.

A choice lot of pigs of different ages and both sexes. Some fine shearing rams and ewe lambs. **JAMES DICKSON, Orono, Ontario** "Glenairn Farm."

I Give it Free



To Men Until Cured Not One Penny in Advance or on Deposit.

I wish you could know for yourself the wonderful effect of the galvanic current on weak and nervous men. I wish you could realize the health and happiness that will be yours when this wonderful force infuses every nerve and vein of your body as accomplished through my treatment. I have been curing thousands every year for forty years, and have proved that my

method will cure any curable case. So positive am I of my power that I am prepared to take all the risk, and will give to any man suffering from Nervous Debility, Varicocele, Drains, Lack of Vigor, etc., or from Rheumatism, Lamé Back, Kidney, Liver or Stomach Troubles, the use of my world-famed Dr. Sanden Electric Belt, with Electric Suspensory, absolutely FREE UNTIL CURED. If I fail you don't pay me anything whatever. I leave you to be the judge, and ask not one penny in advance or on deposit. I cannot do more than this to prove the value of my treatment, so if you will call or write I will at once arrange to give you a Belt suited to the requirements of your case, and you can pay me when cured. Many cases as low as \$5.00, or for cash full wholesale discount. You will also get the benefit of the inestimable advice my forty years' experience enables me to give my patients. This long continuous success has brought forth many imitators. Beware of them. You can try the original, the standard of the world, free until cured, then pay for it.

Call to-day and take a Belt along, or send for one by mail. I have two of the best books ever written on Electricity and its medical uses, and containing several hundred wonderful testimonials, which I also send free, sealed, by mail. Address,

DR. B. W. SANDEN,
140 Yonge Street, TORONTO, ONT

Office Hours: 9 to 6; Saturdays until 9 p.m.

Dineen Building, Entrance 6 Temperance Street.

Woodstock Herd of Large English Berkshires

I have for sale pigs of all ages, both sexes, from prizewinning stock. I am booking orders for spring delivery from my Imp. and home-bred sows. Come and see or write for prices. My herd was in the front rank of prizewinners at the leading exhibitions this fall.

O. P. R. and G. T. R. Stations. DOUGLAS THOMSON, Box 1, Woodstock, Ont

Rosebank Berkshires. - Present offering:

Sows ready to breed. Choice young stock ready to wean, sired by Maple Lodge Doctor and Sallie's Bamoo (imp.), a Toronto winner.

Lefroy, G.T.R. JOHN BOYES, JR., Churchill, Ont Long-distance Phone

HILLCREST BERKSHIRES

Stand unrivalled for individual merit in the herd. Our business for 1906 surpasses former years. The enquiry for choice things increases from year to year. 8 me choice sows for sale due to farrow in the spring. Also a few boars on hand. Vine Sta. G.T.R. near Barrie. JOHN LAHMER Vine P.O.

BERKSHIRES

50 IMPORTED AND CANADIAN - BRED 50

Motto: "Good as Represented."

Mail orders receive careful attention.

H. M. VANDERLIP, CAINSVILLE, ONT.

OAKDALE BERKSHIRES

Largest Berkshire herd in Ontario. Stock boars and several brood sows imported. For sale: Sows bred and ready to breed, boars ready for service, and younger ones, all ages, richly bred on prizewinning lines and true to type. Everything guaranteed as represented.

L. E. MORGAN, Milligan P.O., Co. of York.

Long distance phone.

Large White Yorkshires.

A number of excellent sows, direct from imported stock, in pig to Worsley Duke, Imp.; also imported sows of different ages. Young boars and sows can be supplied not akin. Orders taken for young pigs. Write for what you want.

H. J. DAVIS, Woodstock, Ont.
Importer and Breeder of Yorkshires and Shorthorns.

SUNNYMOUNT BERKSHIRES.

Sunnymount Berkshires are unsurpassed for ideal bacon type and superior breeding. For immediate sale: A few choice boars from 5 mos. up to 15 mos. old.

JOHN McLEOD Milton P.O. and Sta., C.P.R. & G.T.R.

Duroc Jerseys—Imported and home-bred sows and boars ready for service. Pigs fit to wean; also Buff Orpingtons and Buff Leghorn cockerels.

MAC CAMPBELL, Harwich, Ont.

GOSSIP.

Readers will notice the advertisement of Wm. Colquhoun, of Mitchell, announcing his arrival with another importation of Clydesdale stallions, ranging in age from two to six years, also first-class Hackney.

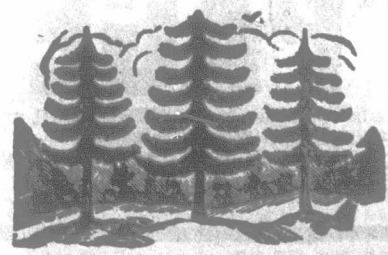
W. D. PUGH'S CLYDESDALES AND SHORTHORNS.

Mr. W. D. Pugh, Claremont, Ont., is no stranger to "The Farmer's Advocate" readers. For years, he has been breeding Clydesdale horses, Shorthorn cattle and Cotswold sheep. His offering, just now, in Clydesdales is The Marquis 5183, a bay, rising three, by Imp. Macqueen, dam by Imp. Here You Are. He is a big, smooth bay. Another is a bay yearling stallion, by Imp. Primrose, dam by Imp. Macqueen, grandam by Imp. Here You Are. Another yearling stallion is a bay, by the same sire, dam by Imp. Lord Lieutenant, grandam by Imp. Brown James. Here is a grand good pair of colts, full of style, quality and wonderful action. Another offering is a bay filly, rising two, by Imp. Macqueen, dam by Imp. Here You Are (imp.), grandam by Imp. Macfadyen. This is a show filly from the ground up. Mr. Pugh is also offering, very cheap, his stock bull, Gilbert Logan =36424=, by Imp. Blue Ribbon, dam Mayflower Maid, by Imp. Indian Chief. He is a roan, seven years old, weighs 2,500 lbs., is as nimble as a yearling, safe and sure, and a sire of low-down, thick stuff. Write Mr. Pugh, to Claremont P. O.

OAKDALE BERKSHIRES.

Berkshires were never more popular, nor their demand for breeding purposes so great as just now. One of, if not the highest class, as well as the most extensive herds in Ontario, is the Oakdale herd, the property of Mr. L. E. Morgan, Milliken, Ont., whose shipping stations are Unionville and Agincourt, on the G. T. R., and Agincourt on the C. P. R., all within twenty-five miles of Toronto. Three stock boars and twenty brood sows represent the breeding end of this now noted herd, part of which are imported from the leading herds of England. The stock boars are: Imp. Lucky Hightide 16886, by Hightide F. B., dam Lucky Maid F. B. This boar is bred from the same sire and dam as were the pen of four that have won first prize at the Royal in the classes under six months, for the last four years. Imp. Oakdale Compton 16867, by Supreme Boy, dam Compton Baroness, by the greatest of English Berkshire sires and champion of all England, Baron Kitchener. This boar is a straight-bred Compton, probably the choicest Berkshire strain. Third in service is Dr. Premier, by Imp. Polgate Doctor, dam a daughter of Premier Queen, silver-medal winner at Toronto. The sows principally belong to the Dawn, Belle of Baham, Countess of Wandsworth, Princess and Black Girl strains, and several of them trace almost directly to the champion, Baron Kitchener, as well as other noted prizewinners. Among them are such richly-bred ones as Imp. Oakdale Delilah 14161, by Cecil Augustus, dam by Baron Kitchener. She is a sister to the Toronto first-prize winner, Imp. King of the Castle. Imp. Oakdale Dawn, by Polgate Dragoon, dam Imp. Polgate Dawn, a Toronto champion, is by Baron Kitchener. Belle of Baham (imp.), by Springtide, is a son of the great hog, Hightide, dam Belle of Baham 8th, by Danefield Duke. This sow is a Toronto and Ottawa winner, and was one of a pen of three that won first at the Royal in 1904. Wandsworth Princess (imp.) is also a Toronto and Ottawa winner, by Baham Prince, dam by Motcombe Prince. This sow is richly bred on prizewinning lines. Countess of Wandsworth 20th (imp.), by Springtide, dam by Light Finger. Black Girl 10th is by the \$2,500 boar, Masterpiece. Space will not permit individual mention to show that this herd is as richly bred as any in existence, and strictly up-to-date in type. Pairs and trios can be supplied not akin. On hand for sale are both sexes, all ages, sows bred and ready to breed, boars fit for service, etc. Last fall, Mr. Morgan got out a choice importation of Hampshire sheep, and has another on the way, and when they arrive he will have forty head, all imported. Last fall's importation are now dropping lambs to his Toronto second-prize imported ram. The house is connected by long-distance phone (Bell line).

DR. WOOD'S



NORWAY PINE SYRUP

Stops the irritating cough, loosens the phlegm, soothes the inflamed tissues of the lungs and bronchial tubes, and produces a quick and permanent cure in all cases of Coughs, Colds, Bronchitis, Asthma, Hoarseness, Sore Throat and the first stages of Consumption.

Mrs. Norma Swanston, Cargill, Ont., writes: "I take great pleasure in recommending Dr. Wood's Norway Pine Syrup. I had a very bad cold, could not sleep at night for the coughing and bad pains in my chest and lungs. I only used half a bottle of Dr. Wood's Norway Pine Syrup and was perfectly well again."

Price 25 cents a bottle.



MONKLAND Yorkshires

Imported & Canadian-bred

We keep 35 brood sows, and have constantly on hand between 100 and 200 to choose from. Can supply pairs and trios not akin. Quality and type unsurpassed. Prices right.

JAS. WILSON & SONS, FERGUS, ONT.

G. T. R. and C. P. R. Long-distance Phone.

GLENBURN HERD OF YORKSHIRES

Winner of gold medal three years in succession. Offers for sale: 18 young boars, 4 months old; a large number of sows, same age; also 30 suckling pigs, both sexes. Also a grand good Shorthorn bull (roan), 10 months old.

David Barr, Jr., Box 3, Renfrew, Ont.

Glenhodson Yorkshires.

Sows bred or ready to breed. Young pigs from three to six months old. Pairs not akin. Satisfaction guaranteed.

GLENHODSON COMPANY, Myrtle Station, Ont. Long-distance phone at farm. Lorne Foster, Mgr.

Maple Grove Yorkshires

are among the leading Canadian herds for size, quality and firmness to type, and are prizewinners all around. For sale are both sexes all ages. Bred from imp. and home-bred stock. There are none better.

H. S. McDIARMID, Fingal P. O., Shedden Station. Breeder and Importer.

Fairview Berkshires

Are second to none. My herd has won high honors wherever shown. Am now offering sows bred and ready to breed, and younger ones of both sexes, the set of Masterpiece and Just the Thing. An exceptionally choice lot.

JOHN S. COWAN, Donagall P. O., Milverton Sta.

MAPLE LEAF BERKSHIRES!

High-class Berkshires of show-ring quality, bred from imp stock, for sale. 9 7-months boars by Imp. Polgate Doctor; 3 sows by same sire, bred; 10 sows, 3 1/2 months old, by King of the Castle, and young boars, Joshua Lawrence, Oxford Centre P. O., Woodstock Station.

Willowdale Berkshires

Young boars and sows, 3 and 6 months of age, out of imp sows, and sired by Imp. Polgate Doctor, Royal Masterpiece, a son of the \$2,500 boar, Masterpiece, and some of them imp. in dam. Satisfaction guaranteed.

J. J. WILSON, Milton P.O. and Sta.

ELMFIELD YORKSHIRES

Have a few young sows from 4 to 7 months, bred and ready to breed; also some young pigs weaned and ready to wean, from imp dam and sire. G.E. Hume, Av. Ont.

"PAGE FENCES WEAR BEST"

Made of High Carbon Wire,—we'll prove it to you. COILED—not crimped. This makes it still stronger in service. It stays taut. Painted WHITE over heavy

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A Message to Men WHO ARE WEAK AND AILING

The failure of medicine, of quacks, and even of other so-called electric belts is no argument against Dr. McLaughlin's Electric Belt. No other treatment, no other belt, is in the same class with it. Everything else may fail, but Dr. McLaughlin's Belt will cure. It HAS cured thousands who tried other remedies without success.

Here's an Offer
That no Weak
Man can Afford
to Miss.

Everybody
Admires and
Honors a
Strong Man.

ARE
YOU
ONE?



If You are
Tired of Use-
less Drugging,
Come Now.

Do You Want
to be
"A Man
Among
Men"?

WRITE
TO-DAY.

This is a message to men. It is to men who want to feel like men, to look like men and act like men. This is to men who lack courage, whose nerves are shaken, whose brains are muddled, ideas confused, sleep restless, confidence gone, spirits low and easily depressed, who are backward, hesitating, unable to venture because they are afraid of failure, who want somebody to decide for them, who are weak, puny and restless. It is to men who have part or all of those symptoms and want new life, new force, new vigor.

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is no longer an experiment. It is hailed by thousands with loud praise because it has cured them. "It cured me. I am well and strong as ever. What more could one ask?" writes a man with a heart full of gratitude.

Do not be in error. This grand appliance is like no other. It is new. It has all the good points that are known in electricity. It gives a powerful current, but does not burn or blister, because my special cushion electrodes make the current a warm, gentle glow, which exhilarates and relieves at once.

Dear Sir,—I am fully satisfied with the result of your Belt. It is fully as good as you claim. It has made a new man of me. I have gained both weight and strength. Every word turned out to be true. I could not believe at first myself that your Belt was as good as it is. My friends tried to make me believe that your Belt was no good, but I was strong-headed and got your Belt. After wearing it for seven weeks I knew that the Belt was good, and in two months' time I was completely cured. Now all my friends believe in the Belt, but none stronger than I do. I have recommended your Belt far and wide."—ALEX. McDONALD, Dunmore, N.S.

Dear Sir,—I have great pleasure in writing to you to say that, after a fair trial of your Belt, it has accomplished wonders in so short a time. The indigestion is gone and I can eat a good, hearty meal now (what I have not done for a long time), and the pain in my back is about gone. In fact, I feel like a new man, and will say that I am well satisfied with my bargain."—JOHN BEATTIE, Mina, Ont.

Dear Sir,—You will excuse me for not writing before, but I was in the lumber woods, and did not return until this month. Yes, sir, my back is all right. It is better and stronger now than it has been for thirty years. It is a permanent cure. My head don't bother me; nerves are strong; I am better all over. You can use my name to certify that your Belt is all you claim for it."—GEORGE STANLEY, Perth, Victoria Co.

"My case has certainly been a very serious one, and one of long standing. I had latterly and so long been unable to do any work at all. Your Belt has worked wonders in my case, as I am working steady now. It is well known here that it is your Belt that has put me on my feet again, and no doubt will be the cause of other sales for you."—WILLIAM J. BYERS, Nipissing, Ont.

"Your Belt has certainly done me a great deal of good in every way, and I shall always recommend your Belt to any one I know that is in need of it."—ROBERT DICK, Kimberley, Que.

"I write to let you know that my health is very good. My back is about cured. The benefit I received from the Belt is well worth the price I paid for it. The advice alone is worth the money twice over. My friends tell me that I am looking fine. I tell them I don't know whether I am looking fine or not, but I can tell them I am feeling more than fine. I shall speak well of what you have done for me with your Belt and advice. Wishing you every success, I remain, yours very truly, W. H. BELDING, Chance Harbor, N.B."

I knew no better way to prove my confidence in the wonderful curative power of my Belt than to cure you before I ask my pay. Can anything be fairer than that?

My confidence in my method enables me to offer the Belt on trial, and one who can offer me reasonable security can use my Belt at my risk

and

PAY WHEN CURED

Every weak man wants to feel young again! To realize the joyful sparkle of nerve life as it infuses the body with its glowing vitality; to feel the magnetic enthusiasm of youthful energy; to be happy, light-hearted and full of joyous impulses; to be free from spells of despondency, from brain wandering, from the dull, stupid feeling; to have confidence, self-esteem and the admiration of men and women! Such is the wish of the broken-down man, and it may be gratified.

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