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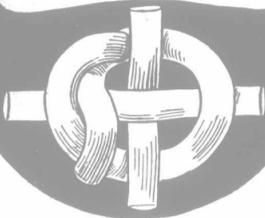
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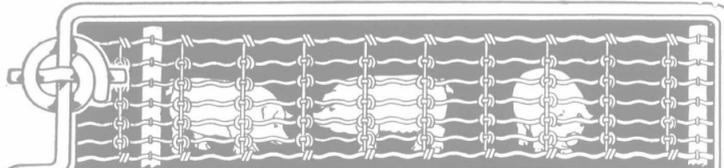
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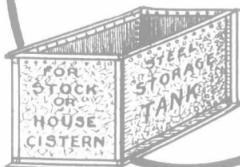
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# The Farmer's Advocate

## and Home Magazine

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Established 1882

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No. 813.

### EDITORIAL.

#### THE TURN OF THE LIVE-STOCK MARKETS.

Notwithstanding that familiar proverb, "The darkest hour is just before the dawn," a great many people are always mistaking it for midnight. This has been recently exemplified by the trend of the live-stock markets, particularly in the case of hogs. Last fall, when feed prices looked forbidding, there was a rush to cash in everything available in the way of domestic quadrupeds, despite the prevailing low prices for animals. While in some instances necessity compelled such a course, the movement was swollen, and meat markets correspondingly glutted by those who were actuated, not by necessity, but by something akin to a panic-fear. Wise words of warning were uttered at this stage by the agricultural press, and by expert agriculturists, such as Prof. G. E. Day, who, by reason of their position and experience, had the advantage of a wide and reflective outlook. Influenced to some extent by such adjurations, as well as by their own judicial estimate of the situation, a considerable proportion of farmers resisted to some extent the temptation to plunge with the crowd, and, by economical feeding and good management, undertook to carry a reasonable quantity of stock through the winter in anticipation of attractive spring values. The winter situation, however, subjected their judgment to a severe test. Hard times in the cities undoubtedly restricted consumption both at home and abroad. Close times on many farms maintained the pressure and consequent temptation to realize on both stock and feed. Animals were sent to the shambles at the earliest possible opportunity, often before they were decently fit to kill, and an abnormally slack demand was still further discouraged by over-heavy receipts of inferior stuff. Heifers and young sows, instead of being retained on the farms to insure future supplies, have been sacrificed on the block, thus contributing to the temporary depression of values. Litters of pigs have been either killed or left to eke their way along with scant supplies of grain, while their dams have been slaughtered. On top of all, Canadian hog-producers have had the cold satisfaction of witnessing the importation of American pork by Canadian packing companies to keep their plants going and furnish raw material presumably for this great Canadian bacon trade, which we had been educated to believe could only be supplied with the class of hog raised north of the international boundary. In fact, it would seem as though everything has conspired by a process of action and reaction, reinforced by certain adventitious circumstances, to keep down prices for animals and their products, thereby testing the patience of producers to the breaking point.

At last the tide seems to have turned, and those who held on have promise of liberal recompense for their foresight and perseverance. Scarcely had the echoes of certain recent recriminations died away, till the boom of advancing hog prices was heard, and the first few ripples were followed by waves of substantial volume. The panic developments have run their course. The approach of spring, with prospects for a plenitude of feed, the subsidence of abnormal supply, a probable resumption of normal demand, and the gradually apparent effects of the widespread slaughter of breeding stock, will all tend to bull the market, and unless some disastrous culmination of untoward influences occur, such as a backward spring and a continuance of close times in the cities, there is every reason to expect profitable and advancing prices for beef and pork. Indeed, it is

doubtful whether any combination of factors that is likely to occur can longer restrain values. Those who have litters of pigs or young cattle coming on will do well to give them every chance to make rapid gains, while those still fortunate enough to have sows will make no mistake in breeding them to farrow at the earliest possible date. It is the long-suffering stockman's turn to smile.

#### INSTRUCTION OR DISPLAY?

For one discriminating, stable mind, capable of holding steadfast to an original purpose, there are usually several prone to yield to the distracting influences of a popular clamor and the seductive prospect proverbially held out by distant fields. Happily, public opinion, while it may occasionally pitch and lurch a little, has generally sufficient ballast to "bring it to," and, with a few wise and steady men at the helm, usually proceeds on its way after a comparatively brief spasm of furore and loss of time. In the recent sporadic agitation for the removal of the Ontario Winter Fair from Guelph to Toronto Junction, the more active movers seem to have lost sight entirely of the true purpose of establishing this institution. Hon. John Dryden, ex-minister of Agriculture for Ontario, strikes the nail on the head when he says that the show was designed to be and is educational in its aim and scope, whereas the ideal of those agitating for its removal is rather spectacular. It was not intended as a mere plum for a number of exhibitors, but as a means of instruction to farmers and breeders, with sufficient inducement in the way of prizes to draw out a reasonable competition of stock. It is in no way contrary to the spirit of this intention to urge that in some cases, at least, the prizes might be increased and extended, but it must be borne in mind that the chief purpose is educational benefit.

The Chicago International is an impressive institution, but, while very grand and worthy in its way, it does not begin to compare with our own Canadian Winter Fairs in downright practical helpfulness to the individual visitor. We cannot compete with Chicago in scale. Why try? We can and do excel it in utility, and that is the true path to follow. One annual winter International Exposition is at present enough for this continent, but we cannot well have too many such exhibitions as those at Guelph, Ont., Amherst, N.S., and Brandon, Man. The path of winter-fair development has been wisely mapped out in Canada, and the unique and valuable institutions we have evolved are a matter of admiring praise to every foreign visitor. The educational ideal appeals to the sober sense of our people, and we have no intention of allowing ourselves to be swerved from it by a great hip-hip-hurrah and hullabaloo for a second-rate imitation of a less valuable American ideal. It is particularly gratifying to note that party politics are not being introduced to complicate the issue. The present Minister of Agriculture, Hon. Nelson Monteith, is, so far as we are aware, in full accord with the policy of his predecessor in this matter, and will not be persuaded to depart from it by a fatuous desire to do something different.

Of course, if Guelph expects too much aid from the Provincial treasury towards providing the necessary increase of facilities, a change of location might become necessary, but that is the only reason which could justify the removal of the Winter Fair from Guelph, where it is almost sure to remain educative, to Toronto Junction, where it would almost certainly degenerate chiefly into a spectacular and competitive display.

#### HOW EARTH ROADS ARE SPOILED.

Almost any country district at this season furnishes striking examples of how roads are spoiled. Gravity is the destructive force. Gravity is what we commonly call weight. It is what causes the team and wagon to bear down on the road, and when the surface is soft to cut into it. Gravity causes water to run down hill, and, in doing so, to erode or wash out little channels in the road, carrying away silt. Gravity gives the mud its tendency to subside from the high to the low places, thus gradually flattening out under the influence of traffic. Gravity, in short, tends constantly to destroy the crown. The rapidity of its action depends upon the attendant conditions of weather and traffic; also upon the drainage of the road and the height of its crown. When the road is hard, dry and smooth, its particles cohere strongly together, and the settling or subsidence is slight, the principal loss then being by dust blowing off the road. Water, under the influence of traffic, converts the hard clay into mud, which has little cohesive force, and yields readily to the levelling influences which gravity imposes on it. A muddy road soon flattens like a pancake; a hard, smooth, dry one retains its shape like a bun.

At certain seasons, particularly in spring when the frost is coming out, mud is bound to form on the surface of an earth road, and, if allowed to become too deeply cut up with hoof-prints, ruts and pitch-holes, it will impede drainage, holding water to soak into the soil, keeping the road soft, and making the mud gradually deeper, till, on some particularly waxy clays, it will tire a team to haul an empty wagon five miles at a walk. Now, what happens? Hoof-prints are punched fetlock deep; ruts are plowed out till wheels sink almost to the hubs; the very bowels of the roadbed are opened up, and a condition created that half a summer's traffic will not wholly redeem. A roadbed thus mired up is not so solid and durable as one that has been preserved intact, while the dried surface is horrible to travel on.

Moreover, as pointed out above, every passing vehicle tends imperceptibly but surely to press and crowd the mud outward, each rig and each horse doing a little at a time. This effect will be most pronounced when the road is sloppy, and when spattering of mud assists the constant subsidence. Go out and contemplate a much-travelled road in spring. With stakes and straight-edge, measure the height of the crown, then later measure it again. A few observations will explain why so many roads have seemed to call for repeated grading. The work of the machine is undone each year by the elements. One baneful result is the formation of a little ridge at the edge where the grass grows. Splattered mud and settled dust increase this ridge or shoulder and interfere with drainage. Lack of free drainage to the ditch means more mud, and subsequently a worse condition. Thus it goes from bad to worse—except in those cases where the existing condition is so bad that a worse one is impossible.

Where does this earth, removed from the crown, finally go? Some of it merely to the ditches; some of it to low spots in the road, about the ends of culverts and bridges; some of it to the rivers and lakes. Water carries it away. Then, what happens? The grader is brought on, a plow run in the ditches, and a furrow of good sticky blue or yellow subsoil clay (the worst of all road materials except pure sand) is drawn up on the road and deposited in the form of turfs, clods and dust, which traffic avoids

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PUBLISHED WEEKLY BY  
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by driving on the sides. What marvelous wisdom! As this clay makes the most abominable kind of mud, the following year's destruction and erosion will be still worse, and more rapid. This has gone on in many townships, until on some hillsides the roads have been worn out like railroad cuttings. The results, in a few generations, may be anticipated by the descriptions we read of ancient Chinese roads. It should be the purpose of earth-road maintenance to prevent such waste of good surface material.

It can be done very simply. Use the split-log drag early in spring and after every rain. Thus, the settling mud will be drawn back into the center before it has had a chance to reach the ditches. D. Ward King, of Missouri, by repeated dragging, crowned his road so high that he had to reverse the drag for a time. Some of our split-log-drag competitors graded comparatively flat pieces of road in one season quite nicely with the drag. The main object should be, however, to drag often and promptly enough to keep the crown shaped up, and prevent the need of grading. An ordinary earth road, properly dragged, will never require the road machine. Of course, one great benefit of dragging is that it keeps the road in the best possible condition during the season, instead of allowing it to lie in a rough, rutted condition till June, awaiting the annual grading. A dragged road will never get so muddy as an undragged one; it will dry sooner, be far smoother, and freer from dust. The benefits of dragging will be both temporary and lasting. It will keep the road oval, hard and smooth. Wonders may be accomplished with the split-log drag.

In a thin seeding of clover, the seedling plants which survive are often too few to be worth leaving. Liberal seeding increases the yield, and improves the quality of hay, reduces the number and area of open spaces for weeds to occupy, and goes far to guard against failure.

## OUR MARITIME LETTER. THE PORK SITUATION.

There are some incomprehensible things in the commercial operations of the country. Indeed, to advert casually to the mystification which surrounds the rise and fall of agricultural markets, in the minds of farmers, is to believe that there are many such things. The great principle of supply and demand by no means solves all our difficulties as to prices. Full of prospect for the best that is in any one line of production to-day, to-morrow we can easily see the bottom completely out of the market, so far as it is concerned, and hope displaced by desperation. There appears to be no normal connection, for example, between the recent prices of pork offering for sale, the cost of production, the supply, or the demand. Pork has been just dull, awfully dull, and that is all about it.

Still, there is a serious side to the matter. The raising of pigs, not an overpopular occupation at any time, and one involving in our Maritime circumstances lots of hard work, is more than likely to get a setback which will take years to overcome. It was thus a few years ago, when the prices fell below the lowest possible paying figures; and just after a campaign in favor of selling on the hoof to factories, too, had resulted in booming the business considerably. It will be so now, unless the unexpected happens, when, on account of exceptional prices for several years, and the jump in grains, it seemed more certain than ever that there would be little difficulty in disposing of our hogs at almost any prices. Farmers are disgusted, and where disgust enters in, it takes a very strong counter-influence to shut out discouragement.

Here, in the Island, it has taken more to fatten a pig this season for market than usual. We have had plenty of grain, but our pork is not usually grain-fed. It is fed mainly on potatoes, like the Irish pork, and, like it, is superior to all the other grades on the market. Purely corn-fed stuff could never stand up against it. But we use some grain in finishing—millfeed, cracked oats or barley, mixed with the potatoes, which we always boil. Potatoes were a short crop with us this year, generally; the season was so wet and backward, and they were unable to store up the usual amount of starch. Grains in plenty we had, but rather soft in quality, from a like weather reason. Both products range unusually high in price, however. The short grain crop of the Continent, and the local demand for potatoes, are accountable for this. Whatever else wobbled then, pork-raisers were satisfied that there would be no decline, whatever raise, in that commodity. Imagine their surprise when, shortly after the fall market opened up, there was a most discouraging slump, and things continued to go from bad to worse. This is a mystery which an appeal to hard times or the decline of lumbering cannot satisfactorily explain.

When the crisis came in pork a few years ago, and the word with the farmer was, "Let us get out of the business," we attempted to stem the tide as best we could here, and offered the same advice pretty freely which we feel we must offer now. This is a country of mixed farming. It would be fatal to drop in disgust every article which the farm produces, because the prices are not what appear to us requisite to earn a living wage, not to speak of profit. We must make on one and lose on another often; sometimes make on all, sometimes even lose on all; but the average gives us the assurance of making our way. We must raise hogs for well-understood reasons. We have now reached an excellent type of hog in breeding; we have a market for our particular quality of hog; and, under general conditions, our roots are better fed to this sort of animal, and with better results than to any other. Then, there is much roughage about a mixed farm which is most economically fed to the pig. We therefore have to keep up the raising, in moderate numbers, at least, of pigs.

At Chicago, the other day, whilst passing through the stock-yards, we were more struck by the smallness of the porkers going through the slaughter-houses than anything else. Here they want a pig of at least 150 pounds. There we saw thousands slaughtered, not one of which would exceed 100 pounds; many would not reach 90 pounds. The difference between those small hogs and our larger ones was certainly in the condition. There is a demand for hams and bacon of small pigs, but those pigs must be in condition for killing. The fresh pork eaten to-day in the cities of the Continent is the produce of small hogs, but it has to be fatted just so to be purchased by the dealers. We have noticed that, whenever small pork is marketed at all in these Provinces, it is so thin and poor as to run the risk of being returned. There can be no doubt but that all that is really profitable in the raising of pork is put on the pigs when they are young; so, it should be a lesson to us all, even here in these small communities, where conditions

are against cheap production, to raise pigs which can be slaughtered at the earliest possible date consistent with economic feeding. The heavy mess pork never pays the producer. We have been doing too much of this sort of business here for many years. It is just possible that we will have to raise a class of porker which will weigh up to 150 pounds to satisfy our markets, but, by attending to his coming in the early spring, and letting him run to grass or green-grain growth, with a little concentrated feed of one sort or another, this weight limit may be reached before the cold weather comes, and the pork thus marketed at a profit.

In any case, we hope that our people will not go out of hog production, but, remembering the lessons of the past, manfully and hopefully await the readjustment of the markets, and keep up the supply in a moderate way, at least.

A. E. BURKE.

## ECONOMICAL FARM MANAGEMENT.

Ever and anon we hear it claimed that farming does not pay, meaning that it does not yield standard city wages to those engaged in it, and current rates of interest on all the capital invested. Without pausing to expand the point that money-making is, after all, a poor ambition in life, or to dwell on the fact that farmers enjoy, without cash outlay, many privileges for which the city man pays a large share of his wages—if, indeed, he is able to obtain them at all—we pass on to admit that the above statement, so far as it goes, is probably true on the average, though it certainly is not true in all instances, and would be applicable in a great many fewer cases if we would only improve our methods as we might, make the most out of our farms, and live reasonably well up to the measure of our opportunities.

One splendid opportunity for true economy lies in seeding down rough, broken lands to permanent pasture, using the combination of grass and clover seeds recommended by Prof. Zavitz, and so often published in these columns. Another is in seeding down the less steep clay hillsides to alfalfa for soiling crop and hay, thereby converting them into the most profitable portions of the farm, growing a feed calculated to take the place largely of bran in the ration. Alfalfa is a wonderful plant, and, when once established, it thrives best and endures longest on hard clay hillsides, where other crops commonly are grown with much expense, indifferent yields, and little or no profit. Here the alfalfa finds surface and usually subsoil drainage (where the subsoil drainage is not good, as shown by water seeping to the surface, alfalfa should not be sown). Besides, it generally finds large quantities of the mineral elements of fertility, such as potash, phosphorus and lime. We have often observed alfalfa persisting on the brows of these clay hills many years after it had disappeared from the loamy knoll-tops, where the drainage appeared almost equally good. On mellow land, alfalfa is almost certain to be crowded out in course of time by grass, but on clay hillsides it holds its own indefinitely, withstanding successfully winter injury and the encroachment of grass.

Do not work rough land unless you are so unfortunate as to have none else on the farm. Set the more level and easily-cultivated portions aside for rotation, and hereon grow clover, corn, roots and grain. On the less-steep hillsides grow alfalfa, which has to be harvested, but seldom manured or reseeded. On the roughest land that is not in bush, lay down permanent pasture, and let the stock exercise itself by doing the harvesting. Such a policy as outlined will not only greatly economize labor, but increase annual profits and rapidly build up a farm.

## MOTOR-CAR TAXATION IN BRITAIN.

Mr. H. H. Asquith, since become Premier of Great Britain, in replying to a recent deputation representing Provincial authorities on the subject of an Imperial grant towards the upkeep of roads, said he thought the facts and figures were such as to suggest that the time had come when the whole question should be considered, and he was quite prepared to give it very careful consideration. A very serious question was, whether the remedy, partial or complete, was to be found in the additional taxation of motor-cars, and if so, how the distribution of the sum raised in the different areas of the country should be determined.

## HORSES.

## RAISING DRAFT COLTS.

R. C. McGowan, Huron Co., Ont., in Horsemen's Experience Competition.

To have the best success in raising draft colts, it is necessary to have a good mare of some one of the draft breeds. The breeder may choose whichever breed his fancy leads to. They all need the same treatment, so far as rearing is concerned. If not already the possessor of a fairly good mare, we must buy one.

I do not recommend buying a very long-priced mare where capital is small, especially an imported one, as we have seen many disappointments with those. We tried this ourselves once, and had to wait till our two-year-old filly was eight years old for the first foal. She was a Clydesdale. We then got one every other year, till we had four colts, and then fifth next year, and that was all. That was the best luck of quite a number we had the opportunity to know of.

There are some people who raise colts for years who are so fortunate as never to know what trouble with colts is; some mares seem to be extra lucky. Other breeders lose all, and many mares, too. We have been raising draft colts for twenty-six years, sometimes lucky, and again with nearly all kinds of trouble, and I think if this competition is going to be a benefit to the horse breeders of the country, it must deal with the troubles frequently met with. Assuming the mare is in foal, steady work, moderate feeding and gentle handling are essential to success. If not worked, the mares must get exercise some other way. It is well to have them sharpshod if there are ice and slippery places around. Never draw them in soft footing; this has been the cause of most of our losses.

When the time for parturition is near, and we are looking for the foal to arrive soon, the mare is put into a box stall and turned loose, and, if possible, we try to be with her when she foals. To do this, I make a comfortable place near-by, and stay there all night. You will meet some who condemn this way, and go out occasionally to see how she is; that is no good, as I have left a mare all right, apparently, and returned in 15 minutes to find the foal delivered. When expecting a colt, have convenient to hand a good strong string, a knife, a little carbolic acid or other disinfectant, a couple ounces of cascara (bitter), a small veterinary syringe, some sweet oil or raw linseed. If around when the colt comes, first see that there is nothing to hinder breathing; then, if the navel cord has not been broken, tie it with the string about one inch from the body, and again about two inches further away, and cut between the cords and apply a weak solution of carbolic acid or whatever disinfectant is at hand; this is to prevent so-called navel-ill. But I believe cleanliness is even as good a preventive.

Clean the stall out thoroughly now, and at least twice a day, and bed it fresh as long as the colt stays in it. I use cut straw when it is at hand, as it does not hinder the colt moving about. If the colt can stand up unaided, let it hunt a while for its first meal; if it gets it in an hour or so, no hurt; if it is tiring to the colt and the attendant to worry about this too soon. But the first milk is very necessary to the welfare of the colt, and well it is if it has not leaked away before this time. When this has been the case, or when the mares have not been on the grass, there is often trouble before the milk, as we say, comes through the colt, which should be in about 18 hours, seldom less, sometimes a little more, and all yet be well.

When the colt is about two hours old, it should get two spoonfuls of cascara, given in a little of dam's milk, unless, when the mare has been on grass a while, not leaking, then it may be all right to wait until the first symptoms of sickness appear, which will be rolling, and drawing the legs up to the body, and suffering pain; and if not relieved, bloating is another sign. Give two teaspoonfuls of cascara every two hours, and apply flannels wrung out of hot water across the bowels. Use a little of the oil, injected with the syringe, and some have removed some of the hard lumps by inserting the finger and drawing them out; inserting a strip of hard soap for this purpose is worthless, if not injurious. Never give turpentine, if not injurious. We once gave a colt 50c. worth of castor oil, without any results, and followed it with a tablespoonful of spirits of turpentine. When relief came, we next had a bad case of diarrhea, which we got checked (after a good many remedies failed) by the use of laudanum, fifteen drops every two hours. If the

colt leaves any milk, it should be drawn by hand, never allowing it to get old milk.

Be very careful not to overfeed the mare the first few days, especially wet grass. She ought to be let out as soon as the colt can follow, just to let the colt get a sun bath, which is life to it. Don't leave it out in rain till it is a few weeks old. Sometimes water will be noticed leaking from the navel. This is usually in male foals, and is a very dangerous symptom, and often starts when the colt is a few days old. At this time there is not enough of the navel cord left to tie it securely. It may be tied by the use of a needle and silk thread (white preferred); draw the navel cord gently, and when the skin is brought away from the body about an inch and a half or so, so as to allow the needle to be passed through, close by one side of the navel cord about an inch above where the cord enters skin; then pass it back by the other side, and tie it securely. Leave this tie in for three days, when it ought to be all right, if the operation was properly done, and to leave the stitches longer will make a sore.

Begin to handle the colt right along, every time you come near it. Catch it and hold it firm; don't let it break away; better not to try to hold it at all. Once it learns that you mean no harm, it may come up to you. If it ever gives an opportunity to scratch just behind the mane, don't fail to try it, and see how quickly it will be friends, and start to nip at your sleeve.

If a mare is a poor nurse, or she is needed for work too much to give the colt a chance, better to wean it young and hand-feed it. I think it is a poor practice to allow the colt to follow to the field when the mare is at work. Shut it in the stall, and leave it some feed that it likes. Bring the mare to it once each forenoon and afternoon, taking care that she is not overheated when she comes.

the weaning time comes, the colt that has been properly handled and tamed has a great advantage, as it comes to you, instead of running in terror to the far corner of the stall; and if it has been given a chance to eat out of a box of its own in a corner of the stall, it will know where to look for its feed now.

Take care of its feet by keeping them rasped off level with the frog; don't cut the hoof away round the frog with a knife; only use the rasp, and go round them about once a month in winter, when they run in box stalls. In summer they are likely to wear off on the ground, so as not to require much trimming.

## CARE OF THE MARE AND FOAL.

Editor "The Farmer's Advocate":

I have read with a good deal of interest the various articles on the care and management of brood mares and foals, and it makes me feel like giving my experience. We always try to give a brood mare plenty of work. After foaling, I always allow a mare three or four days' rest, and then, if I have work to do, she must take a share of it. Care is taken not to draw her heavy for the first week; after that she does any and everything that is to do until the day that she foals again. I have even had to hurry her home from the field, and pull off the harness. Some claim a mare should not be worked for a couple of weeks before foaling. My experience has been work her till the last hour, and no bad results. Some may think I have not had much experience. In the last twenty years, we have had from one to three colts a season, and seldom had any bad luck, all but one or two being strong and hearty. I raised twelve colts in the last four years, and not one of them was weak, and nothing was

done to the cord, only tie it, and that only in four cases. In those four years, the three mares did all the work on the farm (100 acres). They are draft mares, and bred to imported Clydesdale stallion, as draft horses are the most profitable for the average farmer to raise.

We never had but two cases of abortion, and each case was an idle mare. I know of a number of abortions this winter, and they are idle or over-fat mares. Where a mare is loaded with fat, and idle, the foal is apt to be weak. If nothing better can be done, turn the mares out in the yard every day for an hour or two.

A word about colts: Turn them out every day after weaning, no matter how cold; they will keep warm. I turn my horses out every day, unless very stormy or wet, and have not had a horse with a cough or cold for five or six years. Care should be taken with a sucking colt not to let it get wet until two or three weeks old. It is usual to wean at four to five months old. By that time the colts eat well, and if a week or ten days is used to wean in, by gradually lengthening the time between nursings, the colt never frets.

Perth Co., Ont.

WILL M. TURNBULL.

That prevalent disease of young colts known as joint-ill, is, in the opinion of veterinarians, due to a germ which exists in the earth or dust or dirt on stable floors, and gains entrance to the circulation by means of a navel opening. The parturition stalls should be thoroughly cleaned, floor and walls sprinkled with lime, and well bedded. When the foal is born, the navel string and opening should be at once thoroughly dressed four or five times daily with an antiseptic solution, such as a five-per-cent. solution of carbolic acid, or 15 grains corrosive sublimate to a pint of water, or one part formalin in ten parts water, till the opening has closed and healed.



First Baron (imp.) (6413) (13447).

Clydesdale stallion; bay; foaled 1905; sire Hiawatha. Imported and owned by T. H. Hassard, Millbrook, Ont.

The weaning may be done any time after the colt is two months old, by feeding it liberally on bran, boiled oats and green feed, and keep it in stable, letting it out often for a while when the dam is not in sight.

To learn it to drink milk, will perhaps test your patience a little. I find the best way is to take the colt away from the mare at noon, give it nothing to drink till the next morning, then milk the dam and try it with that. When using cow's milk, prepare the milk; mix it with one-third water, add a little brown sugar (never use white sugar—it is apt to constipate), give about a quart at a time, and give it about every two hours through the day, if the colt is very young. After three or four weeks it need not be fed so often. Reduce gradually to three times per day, but don't lessen the quantity of milk given; if the milk is plenty, it is well to let it have it all the time. After a time, skim milk may be fed in place of whole milk. We often had colts do better right through the weaning than they did while on the dam. One, I remember, weaned at three months, weighed 600 pounds at six months. Another, a Clydesdale filly, weighed 1,330 at sixteen months, was weaned at two months old. When

## COMPARATIVE STRUCTURE OF THE HORSE.

The concluding volume of a fine work on "The Horse," by Prof. Wortley Axe, contains much interesting information. Not the least notable section is a chapter on the horse's position in the animal world, from which the following interesting extract, dealing with the horse's skeleton as contrasted with that of man, has been extracted by the editor of the Farmers' Gazette:

The horse is generally described as a remarkable animal, at once exhibiting perfection of mechanism, complete balance of form, as well as beauty of outline. Professor Sir W. Flower lays great stress on the specialization of the horse; that is, the modification of its structure from the average type of quadruped to meet some special requirements. The horse is a favorite subject for the evolutionist, as illustrating probably more satisfactorily than any other mammal the truth of the doctrine of evolution. In particular, various rudimentary and apparently useless parts are met with in the horse which correspond to fully-developed structures found in other mammals. Such rudimentary structures in animals may either be in process of growth, or they may have the character of vestigial remains; that is, they may be structures that have degenerated from a former more perfect state of development, and are now only vestiges of what they once were. In the horse, most of the rudimentary structures and parts appear to be in a vestigial condition, and the discoveries in the geological history of the horse all point to that conclusion.

The accompanying illustration will show that in many respects it is possible to compare the bony framework of the horse with that of man, in whose structure the highest type of anatomical mechanism is exhibited.

For the general reader, the most interesting feature in the illustration will be the arrangement of the joints of the limbs of the horse, in comparison with those of man, and a very little study of the engraving will correct some popular errors, such, for instance, as refer to the position of the knee of the horse. The real knee of the animal is, in the phraseology of the horseman, the stifle-joint, and the joint which is usually called the knee of the horse is, in reality, the wrist. The letters in the illustration indicate the true shoulder, elbow, wrist, hip, knee and ankle in both man and horse.

Commencing with the fore parts of the skeleton, we will first notice the joint which is called the wrist or carpus, the knee of the horse, as it is wrongly named. In this, two rows of small bones are arranged, as can be seen in the figure, between the arm-bone above and the shank-bones below, the latter consisting of one large bone and two small splint-bones attached to it.

In man, the corresponding arrangement conduces to a very important end—a series of movements in the hand and arm which are mechanically impossible in the horse, notwithstanding the apparent similarity of structure.

The hand of man constantly performs the movements of flexion and extension, as they are called (these being hinge-like motions with extensive side movement), and, in addition, almost perfect rotation, at least to the extent of two-thirds of the circle. On the other hand, the horse's wrist or knee is only capable of flexion and extension.

Nearly the same degree and exactly the same variety of movement are possible in the elbow-joint of man, while in the horse, owing to the rudimentary form of the second bone of the arm (the ulna), no lateral or rotatory motion can take place. The movement is purely hinge-like.

Another marked peculiarity is observed in the connection of the shoulder-blade (scapula) with the trunk. In man, the junction is effected by a bone known as the collar-bone (or clavicle, which extends from the shoulder-bone, near the shoulder-joint, to the first rib on each side. The horse has no vestige of a collar-bone; the shoulder-blade (scapula) is joined to the trunk only by means of the muscles which are attached to it, so that the fore part of the horse's body is suspended by the aid of muscular bands between the two fore legs.

An examination of the hinder limbs will show that the general plan of construction is nearly the

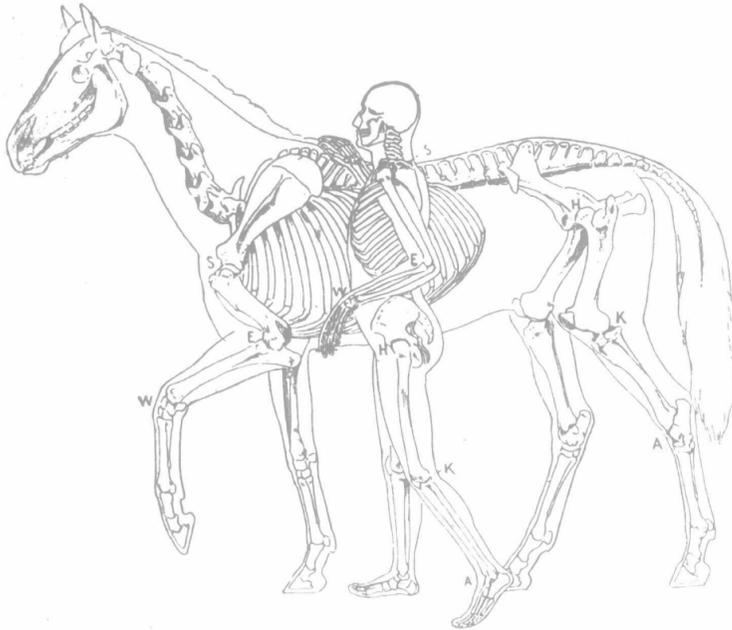
same in both man and horse, as far as the joints are concerned. The hip-joint, the stifle (the true knee), with the floating bone or knee-cap (patella), and the hock (ankle of man), are almost identical in mechanical arrangement.

With regard to the hock-joint, it may be observed that the two rows of small bones are placed as in the ankle of man, but the movement of the joint is purely hinge-like, and experience proves that the two rows of small bones may be cemented together, and to the cannon-bones and splint-bones below them, by bony deposits in old horses, without causing any defect in the action, to a sufficient extent, at least, to be noticed. In fact, the provision for perfectly complete flexion in the hock-joint is secured by the mode of junction of the bones called tibia and astragalus. The so-called cushion-bones do not appear to contribute much, if anything, to the movement of the joint, in the flexion and extension of which the small bones are largely concerned. Below the knee, in front, and the hock behind, begins the hand and foot, respectively. The one large digit in each extremity, composed of what are called the metacarpal and metatarsal bones; the rudimentary second and fourth digits (the splint-bones) attached to them, and reaching two-thirds of their length, and the three following phalanges, constitute the true hand and foot. The horse, in fact, stands on those parts which in man form respectively the tip of the middle finger and the point of the middle toe, both of which are capped with an investing hoof, instead of a nail.

## LIVE STOCK.

## BREED FOR EARLY FALL PIGS.

Indications are that the price of bacon-type hogs will be higher next winter than this; and,



Comparative View of Skeletons of Man and Horse.

S, shoulder-joint; E, elbow-joint; W, wrist-joint (so-called knee in the horse).  
H, hip-joint; K, knee (stifle-joint in the horse). A, ankle (hock-joint in the horse).

if the grain crops are also better, as there is good reason to hope they may be, feed will be more plentiful and cheaper. If this prediction appeals to farmers as consistent with the probabilities, it would appear to be the part of wisdom and judicious foresight to breed for early fall litters, as experience has taught that pigs born in September, and having the advantage of outdoor exercise for the first two or three months of their lives, have their bones and muscles grown strong, and their constitutions made vigorous, enabling them to more safely endure the enforced confinement of the winter months, when they are being fed to the finished condition required for the market.

There have been many complaints during the past winter of fall pigs becoming crippled and stunted, even in warm quarters and with liberal feeding, but they have been almost invariably pigs that were farrowed in November and December, and hence had not had the advantage of abundant exercise in their earlier life. In order to have litters come early in September, the sows should be bred in April or early in May; and, as most of the older brood sows will be nursing litters at this time, and cannot be bred for early fall litters, would it not be well to have young sows bred now to supply the pigs needed for winter feeding, when, in view of the probable scarcity of stock, prices will probably be such as to make it profitable? Those who have not young sows

of breeding age at this time can now secure them at very moderate prices, as many breeders have an unusually full stock of such, owing to the slack demand during the last few months, and are prepared to part with them at reasonable figures. It is certainly an uncommonly favorable opportunity to secure pure-bred seed stock at prices the average farmer can afford to pay, and pure-bred stock of the proper type cost no more to feed than do ordinary or inferior animals.

## THE WINTER FAIR.

Editor "The Farmer's Advocate":

I have been watching the expressions of opinion now being published in the different agricultural journals relative to moving the Ontario Winter Fair from its present location. The present seems an opportune time for a word from myself, as one of the principal actors in locating it at Guelph.

I have no quarrel with the proprietors of the Union Stock-yards at Toronto Junction, who, acting within their rights, are seeking to establish a rival institution at that point. But because they and many others do not seem to be informed as to the object sought by the permanent location of the Winter Fair at Guelph, I deem it wise to offer a few words of explanation.

First, let me say, it is evident there are before the minds of the people now considering this question two ideals, entirely differing from each other. I am bold enough to say that you could not successfully hold the present Winter Fair at Toronto Junction, no matter what appliances might be there. The people interested would not go until they were certain what it was to be. It would not, in my judgment, be accomplished for a considerable period. The exhibition at the Junction which would attract would be of another kind altogether, and after the type now established at the great International at Chicago. This exhibition is entirely spectacular. It is a great show of the finest cattle and horses which can be brought together in that country. There has never been any attempt, nor was such a thing thought of, in the early effort to organize the Winter Fair at Guelph. The ideal to be reached was entirely and absolutely different. I call it an "educational show," and, in order to reach the greatest usefulness, it is not really essential that there should be the presence of stock in large numbers at all, but it is necessary that there should be present animals of a superior quality. In fact, it fails in highest usefulness unless the very choicest specimens are present for inspection. Mark, I do not say for display. The show is not in any sense to be spectacular. We have plenty of these everywhere. What, then, is its object? What was present in the designer's mind? It was to present these good specimens in contrast with others inferior, in a lecture-room prepared for the purpose, and teach the younger men WHY one was of more value, and hence to be desired, than the other; and, secondly, to teach them how they could, with success, produce similar specimens—how to breed, how to feed, how to house them, etc. The spectacular display entirely shuts out and makes impossible such work as this. There are thousands of our people, many of them in towns and cities, who love the spectacular, and will patronize, with high-sounding trumpet, a fancy horse show—to all of which I have not the slightest objection. But I point out that the young men, who arrive in the midst of all this splendor, from the farms where they must be produced, look in vain for any help as to their production. Horsemen, especially, are always crying out, "Why don't the farmers produce" this or that class, for which they declare there is a constant demand? I answer, because they have never been told what they are; and, secondly, if they were told, they would probably be in ignorance how to produce them. To supply this and similar needs, the Winter Fair, in its present form, was organized. It has accomplished much good in past years, the most notable being the entire revolution of the swine industry of Ontario from the lard-producing variety to the opposite character of the bacon type. I have declared elsewhere, and I here repeat the statement, that we have succeeded in developing a better type than is found elsewhere. This has been accomplished by watching the killing process, and noticing the type of animal which gave best results on the block. Nothing like this can be attained at a great show of the spectacular type. I notice, further, there appears to be a desire to attach to the Winter Fair a great display of horses. I hope this will never be accomplished, for the reason that it would entirely overshadow and destroy the educational influence of the present Winter Fair. Education in the production of horses might, with much profit, be added, but the moment a merely spectacular display is presented, the original ideal will soon be lost. JOHN DRYDEN.

## THE SHEEP INDUSTRY IN NOVA SCOTIA.

By M. Cumming, Secretary for Agriculture.

Nova Scotian conditions are admirably adapted to the successful development of all branches of animal industry. Dairy cattle, beef cattle, horses, swine and sheep all flourish, and have joined to add to the profits of the Maritime farmer. He, in turn, has learned that he cannot afford to farm without the aid of one or more of these classes of stock, whose products or themselves, sold off the farm, remove so little fertility, as compared with the fertility which is removed when hay and oats and roots, in their unmanufactured condition, are put on the markets. Each of these classes of stock possesses individual advantages over the other, and in the management and marketing of each special difficulties are met with, which, in part, offset their peculiar fitness. Dairy cattle give sure profits, but require extra labor; beef cattle economize labor, but frequently give small profits; horses are profitable stock, but require a special skill in management, and, moreover, entail extra risk; swine pay well if you have enough by-products to feed them on, and do not have to buy too much expensive millfeeds; and sheep do well if you only protect them from their foes and give them a fair chance.

There are few countries where sheep farming cannot be profitably carried on, but Nova Scotia possesses exceptional advantages which make it possible for the skilled manager to surpass results which can be obtained in many parts of the world: (a) The country abounds in hilly, well-watered pastures, which, when properly treated, afford the best of feed for successful sheep-raising. (b) The climate is cool and moist, and, as a result, sheep are generally healthy and free from contagious disease. (c) The quality of the wool is considerably superior to that produced in the inland parts of America, and, as a result, local manufacturers are prepared to pay the highest market prices for this product. Nova Scotia wool products are being more and more appreciated in various parts of America. The superiority of these products, so our manufacturers state, is in no small measure due to the superior quality of the wool produced in this Maritime Province. As a result, sheep-raisers are safe in counting on a continuance of high prices for wool. (d) The possibilities of marketing mutton are excellent. During the greater part of the year, the local demand is so keen that it exceeds the supply, and lambs and mutton have to be shipped from other parts of Canada to supply the market. In addition, an export market for lambs has been established with the Eastern United States, the inhabitants of which have learned to appreciate the quality of this Nova Scotia product. (e) Lands are generally inexpensive. In France, on lands worth \$250 per acre, there are farms devoted almost exclusively to mutton and wool raising. The same is true of parts of England. The advantage of cheaper lands of Nova Scotia, as a means of reducing the cost of production, is apparent to anyone. (f) Perhaps the most conclusive statement of all in favor of sheep-raising in the Province is that those farmers who are engaged in intelligently carrying on this industry report large profits.

That the advantages easily surpass the disadvantages is clear to anyone; but, despite these considerations, there has, during the thirty years, beginning 1871, been a large decrease in the number of sheep kept in Nova Scotia. In 1871 there were in this Province 398,000 sheep, and in 1901 there were 285,000, a decrease of 113,000 in the past thirty years; i. e., a little over 28 per cent. This fact, in regard to the decrease in the number of sheep kept in Nova Scotia, has received considerable attention from various writers, who have, in many cases, attributed it to such local causes as the prevalence of dogs, etc. While, unquestionably, the dog nuisance, in part, accounts for the decrease, yet a consideration of the following facts shows that the cause lies deeper than that. In Germany there has been a decrease in the corresponding thirty years of 60 per cent., in France 30 per cent., and in Great Britain 15 per cent., and in the United States 25 per cent., in the number of sheep kept, and similar decreases in sheep-raising the world over.

The causes for this widespread decrease are easily explained. Thirty years ago, large areas in Australia, New Zealand, the Argentine Republic, and the Western United States, were devoted to sheep-ranching. The sheep kept on these ranches were, for the most part, Merinos and their grades, a class of sheep especially adapted to the production of wool, but not well suited for the production of mutton. Under these conditions, enormous quantities of wool were produced, and prices naturally dropped. This caused large numbers to give up the business. Concurrently with this, droughts in many of the sheep sections of the world caused great losses. As a result, there was an enormous decrease in the number of sheep kept, amounting altogether to, it is estimated, 90,000,000 in the world. Following this, there has come a decrease in the supply of wool, and prices have gone up, but this time on a much more permanent basis than heretofore, for

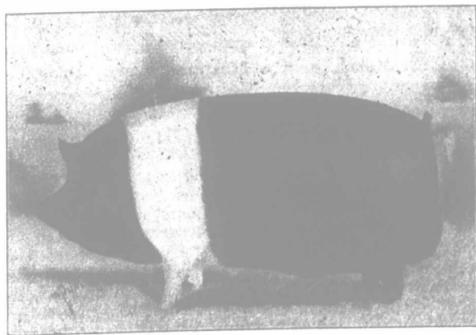
the reason that in large areas, especially of the general farming sections, mutton sheep have begun to supplant the old Merino strains. Consequently, the farmer in Canada, as well as the rancher in Australia, or the Argentine Republic, has now two markets at his command, namely, a market for wool, and the market for mutton. With this new lease of life, it has come about that large areas, especially in the Western United States, which were formerly available for sheep-ranching, are now settled and devoted to general farming. Hence, this great source of supply can no more be counted upon, and, as a result, it is the opinion of experts that sheep-raising will for the next years be pursued to a larger extent than heretofore in such general farming sections as the Eastern United States, the Maritime Provinces, and other parts of the Dominion of Canada.



Count Fascinator.

Shorthorn bull; roan; calved 25th January, 1907; sire Fascinator (88569). Bred by A. T. Gordon, Combscausway, Insh., Scotland.

During the past four or five years, with both the mutton and wool market at his command, the shepherd has received good prices, and the world has gradually been coming back to its rightful number of sheep. No statistics later than 1901 are available in regard to the number of sheep in Nova Scotia, but, from correspondence received in reply to inquiries, we feel safe in saying that there has been a considerable increase in the past few years. Every well-wisher of the Province cannot but hope that this increase will become much more marked in ensuing years. The industry is capable of great development, and it will be a long time before the possibilities of the Province for sheep-raising will be realized. In 1901 there were kept in Nova Scotia one sheep to every 35 acres. In Great Britain, the average is almost a sheep to the acre; and, while we have large areas of non-agricultural lands, which in part, offset the poor showing in regard to the number of sheep kept here, yet the figures signify a large scope for development. Since the above was written, a bulletin, just published by the



A Hampshire Boar.

(See "Gossip," page 757.)

Census and Statistics Department, at Ottawa, places the increase in sheep in Nova Scotia, since 1901, at 106,391, so that there are now only 6,609 sheep less than in 1871.

Farmers advance a number of reasons why they have not and will not embark more heavily in the sheep-raising enterprise. We will give a little consideration to each of these reasons in their turn:

1. We do not care for sheep. The farmer who has not a natural fondness for a particular class of stock will seldom succeed with that stock. By some it is considered that sheep require less care than any other animals on the farm, and while, in a measure, this is true, yet the fact remains that no animal will respond quicker to proper management than sheep. We have known two

farmers to start with equally good flocks of sheep on equally good farms, and, while the one may have realized anywhere from ten to forty per cent. profit, the other has suffered almost an equal loss. There are, then, farmers who, unless they teach themselves to care more for sheep, had perhaps better dispense with them. As a business proposition, however, there are few farms, outside of the fruit sections, where a small stock of sheep cannot be turned to profitable account.

2. Sheep-raising does not pay. A few years ago, when prices for wool were low, sheep were not very profitable stock, but, even in these years, good shepherds report a reasonable profit. With present prices prevailing, no more profitable stock is kept on the average farm. The future, moreover, seems assured, and it is significant that level-headed farmers are everywhere increasing their flocks of sheep. No one, seriously, under present conditions, adduces this as a reasonable objection to sheep farming.

3. The difficulty of fencing. This, I believe, is one of the greatest reasons why many farmers have disposed of the sheep which used to be kept on their lands. At the time when barbed-wire fences first came in, many farmers used two strands of this wire for fencing. This was perfectly effective against all other kinds of stock but sheep. Fortunately, this criminal kind of fence is being given up, and woven-wire fences and more humane pole fences are being used. The man who is too careless to keep up his fences, not only has difficulty with sheep, but seldom succeeds with any kind of farming. In any case, sheep merit a little extra labor spent on the fences, for they ask for only cheap buildings for winter shelter, and for far less labor in caring for them than other classes of stock. Moreover, so far as their breaking through fences is concerned, a little training makes a great difference. Sheep that are constantly frightened are far more apt to break through fences than those that are properly cared for, and that have no fear of their owners. Once a flock of sheep has become so thoroughly domesticated that they will make little effort to break through fences, one should always be careful not to put in with them sheep from a breechy flock.

4. They are hard on pastures. No doubt pastures which are already stocked to their limit with other classes of stock, and that are called upon to support, in addition, a flock of sheep, must appear to suffer from these omnivorous eaters. But where a fair allowance is made, and where the sheep are not turned out too early, it is the opinion of many of our stockmen that a reasonable flock of sheep are no harder on pastures than any other class of stock. And then they surpass all other farm animals in that they eat quantities of weeds that no other stock would touch, and hence assist in keeping farms free from these pests. We were discussing this phase of the sheep question a few weeks ago with one of the most extensive farmers in Scotland, who said that he always found it necessary to put a few sheep in the same pasture with his dairy cattle, beef cattle or horses, in order to keep down pernicious weeds. In these days, when labor-saving devices are so keenly sought after, it would seem reasonable to suppose that almost every farmer would appreciate a small flock of sheep, if for no other reason than that they will save hoeing, cultivating and other manual labor necessary to eradicate these troublesome pests.

5. The dog nuisance. That there have been large numbers of sheep destroyed in this Province by dogs, everyone knows. That many farmers have been driven out of the business owing to the ravages of dogs, and that many others have been prevented from entering into it from fear of the same source of loss, no one can deny. Undoubtedly, the evil has, in some quarters, been exaggerated, but nevertheless it is a real one. The question arises, can anything be done to remove, or, at least, reduce to a minimum, this serious obstacle to sheep-raising.

The Province already has a very good regulative law, but by many it is considered that it does not go far enough, and ought to be amended.

We have already stated that sheep can be cared for with less labor and at less expense than any other class of animals on the farm. There is, however, a minimum of care and feed which is necessary before any real success can be achieved. We have frequently read popular articles in reference to sheep, which would lead one to believe that these profitable animals can live upon the dry hills in summer time, and upon the cheapest of fodder in the winter time; need receive no special care, and will pay a handsome profit in response to this kind of treatment. Nothing could be further from the truth, for, while sheep can be kept comparatively cheaply, yet no animals respond better to care. The pastures on which sheep will succeed need not be clothed with a rank growth of grass, but should provide a thick, succulent mixture of grasses, and, if possible, considerable white clover. The dry wire-grass so often found on run-out fields will not even maintain a sheep in weight. There are farmers who have such pastures whose sheep are fleshier in

the spring than when they come into the stables in the fall. It is doubtful if any more frequent cause for failure with sheep exists than the fact that they are compelled to derive their sustenance from poor, run-out fields. It may not always be convenient, but it will pay to give sheep a run of almost as good pastures as any other stock on the farm.

In regard to winter care, no animals are less exacting than sheep. As long as their quarters are dry and free from draughts, they are all the better for not being very warm. Hence, very cheap buildings have frequently proved more satisfactory than the most elaborate. Sheep cannot withstand dampness, nor draughts, nor too much warmth. They should not be kept in large flocks, preferably not more than twenty-five in a group. They should, moreover, be encouraged to go outdoors and take lots of exercise. As to feed, plenty of good clover hay and turnips will prove the most satisfactory and economical. Generally, a little grain can be fed to advantage, especially toward lambing time. The quantity to be fed, however, will depend largely upon the condition in which the sheep are brought in in the fall. Some years, after a good season of grass, and with plenty of clover and turnips on hand, no grain need be fed. Other years, considerable oats, bran and oil cake, the ideal meal feed for sheep, should be used. The careful shepherd should handle his sheep frequently, and be guided largely by this in feeding.

There has, during the past few years, owing to the increased prices of wool, mutton and lamb, been a marked revival in interest in sheep-raising in Nova Scotia. This is extremely satisfactory, not only to the individual sheep-owner, but to citizens of the Province at large, who hail with delight any movement which tends to the improvement of affairs on the farm. It may be that prices will not remain at the same high level as at present, and they need not to make sheep-raising profitable. However, those who are best informed state that there is very little chance for a marked depression in the sheep market for many years to come. In any case, it is the man who stays with a particular class of stock during both profitable and unprofitable seasons, who, in the end, succeeds, and it is to be hoped that increasing numbers of Nova Scotia farmers will, through thick and thin, stay with the sheep "of the golden hoof." They cannot be dispensed with, and their presence in increasing numbers will help to turn to profitable account much produce of the farm that would otherwise go to waste.

#### THE LARGE, BROAD-BACKED, HEAVY-QUARTERED COW.

Editor "The Farmer's Advocate":

I have been much interested with the articles printed in your valuable paper on the dual-purpose-cow question, and I think if the farmers had stayed with the good-milking Shorthorn cows which some of our fathers had years ago, they would have been further ahead financially to-day. One writer has classed the dual-purpose cow as the rich man's cow, but I think, if she is properly handled, she is the cow that will make the poor man rich; for, if she is the right kind of a Shorthorn cow, she will give milk enough to pay her board, with a good profit, and the steers or heifers raised from her will be worth far more for butcher's cattle than the young stock of the strictly dairy breeds. And I think, if they are properly raised when calves, there will be as large a percentage of them good milkers as in any of the so-called dairy breeds. But the class of Shorthorns that are fitted for the show-ring are not a profitable type of cow for the average farmer to aim at. What I believe he wants is the large, broad-backed, heavy-quartered cows, that will give from six to nine thousand pounds of milk in ten months, and then the other two months of the year will gain up in flesh, and be something worth looking at; for, if a man has a type of cows that pleases the eye, he is likely to take better care of them, and that means more money in his pocket at the end of the year.

My opinion is that every farmer that keeps a stock bull should keep a pure-bred registered bull of whatever breed he takes a fancy to, and, by so doing, he can grade up his herd without any great expense, as the bull is worth nearly as much for beef when he is through with him as the first cost.

WM. A. WALLACE.  
Carleton Co., Ont.

#### GRUB IN THE HEAD.

Editor "The Farmer's Advocate":

Re grub in the head of sheep, the cure that we have adopted for years, with good results, is to put a little spirits of turpentine in the hollows of the sheep's head, just above the eyes, close to the brain, and the trick is done.

J. A. CALDWELL.  
Simcoe Co., Ont.

## THE FARM.

### PRODUCER GAS.

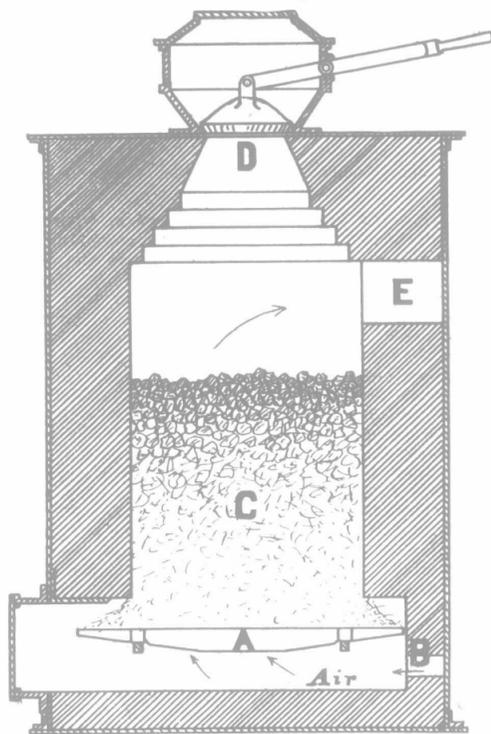
As the question of farm power is an important one, I would like to get posted on "Producer gas power." Would you give an elementary description of it, and your opinion of its suitability for farm use?

J. R. F.

The name "producer gas" is somewhat mystifying when one hears it for the first time. It gives no idea of the source, constituents, properties or uses of the gas in question. Nether can it refer to the person or firm who produces or manufactures it as distinguishing him from the consumer, because each consumer may make his own "producer gas." Perhaps it distinguishes the process of manufacture from the processes by which other gases are manufactured.

The accompanying drawing will illustrate the manufacture of producer gas. "A" represents fire-bars or grate; "B" an air inlet; "C" a column of fuel; "D" a hopper, with close-fitting valve, through which fuel may be introduced; "E" a gas outlet.

It is a well-known fact that when fuel is supplied with too little air for complete combustion, the gases given off are capable of burning and producing power when supplied with the necessary air. This is the principle upon which producer gas is manufactured: A fire is lighted on the grate (A), and the fuel (C) is built up to the



Gas-producer for the Manufacture of Producer Gas.

proper height. A supply of air is allowed to pass from B through A, and the combustible gas formed passes away through the outlet (E), whence it can be led by pipes to the point of consumption. The gas consists of carbon monoxide, hydrogen, gaseous hydrocarbons (chiefly methane or marsh gas), carbon dioxide, and nitrogen. This is called "producer gas." If steam be mixed with the air in proper proportions, some practical difficulties in operating the plant are overcome, and, besides, a gas of greater heating power is obtained, so that in practice steam is almost invariably introduced with the air. Thus, we see that, technically, "producer gas" is understood to mean the gas that is obtained by the partial combustion of fuel in a gas producer. No external heat is used, the heat necessary for the production of the gas being derived from the partial combustion of the fuel from which the gas is being made.

Illuminating gas is manufactured in quite a different way. Bituminous coal is placed in airtight ovens, with an outlet for gas. Fires are built under the ovens, the coal inside being "roasted," not partially burned, for no air can enter. Now this apparatus is a "gas producer," just as truly as that described for making producer gas. The distinguishing feature about producer gas is that it is manufactured by the partial combustion of the fuel from which it is being formed. Hence we see that the name is not really descriptive of the process of manufacture. But so long as we understand what it has

come to mean, we need not trouble ourselves whether the name is happily chosen or not.

The engines used with producer gas would be of the gas-using type, and therefore similar in design and principle to gasoline engines. Hence they would have all the advantages and disadvantages of the latter, and at least two disadvantages besides, viz.: (1) Their usefulness would be more limited, for they could be used only where the gas pipe has been laid. With gasoline, however, the engine may be used wherever it can be taken. (2) The producer gas is less suited to intermittent use than gasoline. The cost of the gas actually used would be less than the cost of the gasoline, but not enough to counterbalance the disadvantages referred to.

Aside from the service rendered, however, the first cost is perhaps the chief item with most farmers. The Ontario Hydro-electric Power Commission has recently issued a report on the cost of power production through the agency of producer-gas plants, and other prime movers under the conditions existing in Ontario. The smallest producer-gas plant estimated on is one of 10-brake-horse-power (B. H. P.) capacity, the capital cost of which is as follows: Plant, engines, producers, etc., \$1,300; installation and accessories, \$234; engine foundation, \$33; building, coal storage, land, etc., \$300; total, \$1,867, which puts this plant beyond consideration for general farm purposes. A 5 B. H. P. outfit, if there is such manufactured, would cost not less than \$1,200 to \$1,500, installed, putting it beyond the range of possibility, too. Hence, considering service and capital cost, under present conditions, producer gas does not appear to be suitable for farm use. Gasoline fulfils the requirements better, and the only initial cost is the price of the engine.

W. H. DAY.

O. A. C., Guelph.

#### "LONG" FALLOWING ABANDONED IN ENGLAND.

Editor "The Farmer's Advocate":

Your correspondent from Simcoe County, in your issue of the 2nd inst., asks for discussion on summer-fallowing, and, as I have many times heard people in this district talk of the need of summer-fallowing, will give my opinion on the matter. To start with, I do not believe in the summer-fallow. In my early days, in the Old Country, "long" fallows, as they were called there, were customary, a portion of the rotation allotted to roots being fallowed. The "long" fallow has been discontinued there for many years, for various reasons. My opinion is that the hot sun on the bare land the whole summer is injurious. I like the land covered after June. I think, with good cultivation of the land, with a judicious rotation of crops, weed seeds can be destroyed and the weeds kept under. I live in the backwoods district, and have not seen much of outside farming, but my opinion has always been there is not sufficient cultivation given to the land in this country. Lands for grain, broken down, and lying a few days before sowing, will allow a great quantity of weed seeds to vegetate. A large quantity of these weed seeds will be destroyed by the drill and harrowing in after the drill. A light harrow just before the grain is up, where grass seeds are not sown, will benefit the crop and kill the weeds vegetated. The hoe crop, of course, gets cultivation the greater part of the summer. After the grain is off the land, as soon as possible break the stubbles and cultivate the land. This will be a means of keeping down weeds. Give the land a good plowing before the winter sets in.

MUSKOKA FARMER.

#### MIXED GRAINS AND TURNIPS.

White Russian spring wheat has given the best satisfaction in this county. In oats, Sensation, Twentieth Century, and Banner, are the general favorites. Duckbill barley has done well. Considerable quantities of mixed grain are now raised, especially by dairymen in this section, and, as a rule, more feed can be raised from an acre this way than of any one grain alone. The most popular mixture is oats, barley and peas, using two bushels Banner oats, one bushel Six-rowed barley, and one-quarter bushel Golden Vine Peas. A good many varieties of potatoes are raised; the most popular are Burpee's Extra Early, Beauty of Hebron, and Early Rose, for early use; Carman No. 1, Delaware, and Silver Dollar, for later. We prefer the Scotch turnip seed (grown in Scotland), the variety known as "The Best of All Swedes"; Kangaroo, Elephant and Purple-top Swede also do well. Turnips are more largely grown every year. Corn is not grown, except for green fodder to supplement the pastures; Longfellow gives the best results.

We are having a cold April. At present writing (April 10th), the ground is covered with snow; but so much the better, if it only warms up in a week or so.

C. H. BLACK.  
Cumberland Co., N. S.

**THE FARMER'S BATH-ROOM.**

Editor "The Farmer's Advocate":

Having noticed in a letter in a recent issue a reference to the rarity of the luxury of a bathroom or a bath-tub in farmhouses, I am led to give my experience in installing this convenience in a house built two years ago. We put in the attic an oblong wooden tank, 6 feet long, 3 feet wide, and 3 feet high, made of two-inch matched lumber, lined with zinc; and about the center of the roof we put 16 feet of galvanized-iron trough, with a flat side, about a foot wide, to fit under the shingles, and with a pipe leading to the tank; while, from near the bottom of the tank, is a cast-iron or lead pipe, leading to the bath-tub in the bathroom below, from which, by means of a tap, the water is drawn into the tub, while the used water runs to a sewer pipe, and to a cess-pool in the back yard, a short distance from the house. Hot water is provided by means of an iron heating tank, connected with the kitchen stove, a water pipe being installed in the fireplace of the stove for that purpose, and a tap supplies hot soft water at the kitchen sink. This tank is, of course, supplied by a small iron pipe from the attic tank, and the weight of the water from above forces the hot water to the bath-tub, where it also is drawn from a tap. While we have a force pump at the kitchen sink to draw water from the cement cistern in the back yard, and connected by a pipe with the tank in the attic, which in a time of drouth we can fill from the cistern, we have so far always had enough water in the tank, caught by the trough in roof, to supply our needs for bathing and hand-washing. And when the tank gets filled, as, of course, it often does, an overflow pipe carries the surplus into the eavestrough, whence it runs into the cistern. An overflow pipe from the cistern carries the surplus to a hole in the ground, filled with stones and gravel, where it soaks away. A manhole in the top of the cistern is covered by a cement cap, which is covered with earth, and grass grows over it, as upon all the yard. The only difficulty with this arrangement is that, in case of the water supply in the attic tank failing, there would be danger of an explosion at the stove, but this can be guarded against by a little watchfulness, and carrying a few pails of water to the attic tank, if one has not a force pump.

The cost of such a provision of rain water for the house need not be very much, though I am not prepared to state the cost in our own case, as this arrangement was included in the whole contract, for which tenders were received. But it will readily appear that, even if one did not see his way to go in for the complete outfit in a house that has been built, he could at least instal the trough in the roof, the tank in the attic, and the bath-tub. And, if a room were not available for the tub, it might be possible, by a slight rearrangement of partitions, to provide a small room for the purpose. With a large enough tank in the attic, I see no reason why the convenience of a lavatory or closet might not also readily be provided in the bathroom, as is common in city houses.

A water service in the house from a well, by means of a windmill to a tank in the barn or house, or elevated outside, is quite practicable, at a moderate expense, and is a great saving of labor; but soft water is such a luxury for bathing that the wonder is that so many well-to-do farmers, who could well afford to provide this comfort for the family, are content to be without it. Hoping that these hints may be helpful, and that others may contribute suggestions along the same or similar lines.

S. C. J.

Middlesex Co., Ont.

**PREFERS LATE-SOWN MANGELS TO TURNIPS.**

Editor "The Farmer's Advocate":

In your issue of March 26th, under the heading, "Seeds to Sow, and How to Sow Them," I see more than one advise sowing mangels early, as soon as the land is dry. I may say that, in my experience of thirty years growing mangels, I find that, when sown late, I have invariably a good crop. For over twenty years I sowed early, and was often disappointed in the stand, and, when they did come, the weeds had the start of them, which entailed a tremendous amount of work. Since I have delayed sowing until the last of May, I have most of the weeds destroyed before sowing. The land should be worked from before sowing; treated as for a turnip crop, with frequent cultivation until after the 24th of May, or even the first of June. Sow either in drills or on the flat. The rows can be traced in a few days, when the cultivator may be run close to the drills. Cultivate frequently throughout the season. In the fall, the crop will be at least one-fourth more than of turnips. They may be harvested the same as turnips, but earlier, cutting the tops off with hoes. They are more easily stored, there being less danger from heating. Stock prefer them to turnips; hogs, cattle and mature sheep eat them readily, without pulping. If dairymen tried this manner of growing mangels, they would discard turnips entirely, and get rid

of the turnipy flavors that we hear so much about. I would much prefer handling a crop of mangels to a crop of turnips, and the amount of feeding value of the crop of mangels would exceed that of turnips. I prefer the Yellow Intermediate sugar beet or mangel. The Large Red is not so relished by stock, and is harder to harvest.

York Co., Ont.

W. S. FRASER.

**JOINTER PLOWING AND AUTUMN DRILLING OF ROOT LAND.**

Editor "The Farmer's Advocate":

The object in sending the photograph of plowing, reproduced in connection with this article, is to try to improve this line of our work, which is a very important one. It is generally admitted we are going back in plowing. When driving through the country, we do not see plowing equal to that of our forefathers, but the opposite—a slipshod, "hog-rooting" style, as my father used to call it when we made a poor job.

We have now a two-furrow riding plow introduced, with which some farmers say they can make better work, but I fail to see it. As yet, the plow is not built on wheels, and I do not think ever will be, to make as good work as a walking plow, well held.



Jointer Plowing.

On farm of H. K. Hamilton. (Photo by Oscar Stroh.)

I do not advocate fancy or even standard plowing, but good, practical work. The work shown in this picture was done with a jointer plow, skimmer and colter, six and a half by nine. The skimmer is run deep enough to turn down all the grass with a good heavy press to make it firm and solid, and it will be the same in spring as when it was done.

Now, there are different ways of improving this work. For instance, addresses at Institutes and other public meetings, and writings in your valuable paper; but I think the best way is by having plowing matches, either by single fields or whole farms. This gets the boys interested in the work. It was at the first match I attended that I received my first lesson in plowing, from John McNabb, Waterloo Co., who, in his day, was a hard nut to crack at a plowing match. I think, if plowing matches were continued to-day, young farmers would get many good lessons, and the plowing of our country would be greatly improved.

Now, I would like to hear what others have to say on this important question. We know the plow is the first implement used in tilling the soil, so why not make the first step right?



Land Ready for Beet Crop, 1908.

Work done by H. K. Hamilton. (Photo by Oscar Stroh.)

I shall give a brief description of how these drills, which are shown in the other picture, have been worked. I adopted the following system of preparing land for roots some years ago, and have always found it to give the best results:

The land is prepared in the fall. First, it is plowed deeply, and as early as possible after harvest. Manure is applied and worked in by disk harrow, then it is cultivated so as to work the manure and earth together by harrowing and rolling it. The last thing in the fall, just before it freezes, it is ridged. The drills shown in the picture were frozen, making a rough surface, which is in its favor. Sometimes it is necessary to go

over these drills before sowing. They should be cultivated between the drills as deep as possible afterwards.

Now, my reasons for saying that this is the best method are: First, we get them sown earlier, and thus no catch is missed; second, we have the frost mold, which is the best seed-bed we can possibly get; third, there are practically no weeds, compared with spring cultivation; fourth, the drouth will not affect them the same. They remain solid, and not baked, which is essential in growing any roots.

We have grown sugar beets for the factory, and also feed beets and mangels in this way; and when this method has been tested with spring cultivation, the yield has always been ahead, and I have seen it nearly doubled.

H. K. HAMILTON.

**CHEAP VENTILATION AND GOOD ROOT-HOUSE**

Editor "The Farmer's Advocate":

While there are several systems of ventilation that will no doubt give good satisfaction if properly placed in stables, yet the majority of farmers halt—perhaps with good reason—when the proposed scheme is going to cost \$100 or more. When building, last summer, the writer put in a system of ventilation that caused practically no expense, and has given fairly good satisfaction. My wall is built of cement hollow blocks, 9 x 10 x 32 inches. I chiselled off the projection on the outside corner of one block, and the inside corner of another, placing one in the third course from the bottom, and the other in the second course from the top, directly above, which gave a flue about 3 1/4 inches square in the center of the block for circulation of air. While I never used thermometers to test the temperature at different parts of the stable, and although my stable has not been more than half full since Feb. 1st, the stable never gets stuffy, nor coated with frost on the inside, except on the doors; but, on the other hand, feels fresh as the air outside, without any signs of frost. If cement-block manufacturers would order a number of 4-inch tile, cut in 2 1/2-in. lengths, which, I presume, could be easily done when being made, they could be built in the center of the blocks, through the outside of some and the inside of others, which could be matched when building, and would look better than a hole 2 1/2 x 9 inches, although some will claim that if the fresh air does not come in at the very top of the wall, and the foul air be taken off right at the floor, there will be a blanket of warm air at the ceiling above the fresh-air ducts; also a blanket of foul air on the floor below the air escapes. My opinion is, if you have intake and outlet air-holes in sufficient numbers to give a free circulation, it will air the whole stable, from floor to ceiling. One thing is certain, if we trust to doors and windows for ventilation, it can scarcely ever be gotten without drafts. And one other thing is certain, stable ventilation is necessary. So, after trying this simple system of my own for one severe winter, and finding it satisfactory, I would recommend it to anyone wishing to ventilate his stables at small cost. Whenever the wind is blowing hard from a certain point, it may be necessary to stuff up some of the holes along that side of the stable with straw, which is an easy matter.

While I am writing, allow me to say a few words about the root-cellar I built. It is 14 ft. 6 in. by 25 ft., inside measurement, built under a double driveway, and is built of cement throughout, excepting four street-car rails that are placed right under where the wagon wheels will go. The walls are built of the same hollow blocks as mentioned above, with a window in each end (doubled glass). Besides using the windows for filling, I have a slanted chute off the barn floor, under the barn door-sill, direct into the root cellar. The driveway or roof of the root-cellar is built of cement, 5 inches thick, reinforced with steel. Over this I put about 6 inches of earth. This cellar I lowered about one foot below the cow-stable floor, which gives an average height of over eight feet. The roots have kept perfectly, without danger of rotting any timbers which are liable to let horses break through and cause trouble some day.

Middlesex Co., Ont.

R. H. HARDING.

**POLE IN MOW TO DISTRIBUTE HAY.**

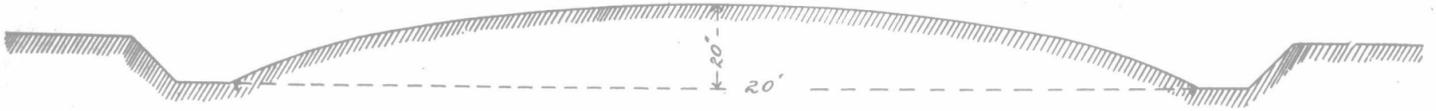
Editor "The Farmer's Advocate":

Now is the time to plan for saving labor during the coming season. We may say that, at haying, the past two years, we have used a pole to spread the horse-fork bundles, and consider it worth almost an extra man in clover. The pole is laid on the upper tie-beams, directly under the track, and is safer to be tied on with a piece of rope. By moving the pole a short distance to either side, the hay can all be put to the opposite side, when desirable. The hay also keeps better, as there is no hard bunch in the center which is usually mouldy, and which is so hard to avoid when the bundles all drop in the center of the mow.

A. JAMIESON.

Victoria Co., Ont.

## Improving Earth Roads.



Cross-section of an Earth Road.

The rounded center and sloping sides permit free drainage of the road surface. The open drains may have greater or less depth and capacity, according to the amount of storm water to be carried. Tile drains, if required, may be laid under the open drains to get the greatest depth with minimum excavation; on a two-per-cent. grade, lay the tile under the shoulders, where the filling will not be washed out; on hills put one tile drain down the center of the road. If stiff clay, fill over the tile with gravel, coarse, sharp sand, or other porous material.

W. A. McLean, C.E., Engineer of Highways, Department of Public Works, Toronto, who judged the split-log drag competition in 1907.

The split-log drag should at this season be in active use wherever there is a clay road. The implement is so exceedingly simple to make, and is so easily used, that neither the initial cost nor the time required to operate it form a sufficient excuse for leaving earth roads during the summer in a rough, rutted and flat condition. Earth roads, other than light sand, make the best of summer roads for moderate traffic, especially if cared for with the drag. Many of the roads which last year were entered in the drag competition, were kept like trotting tracks for the season, and became the main roads of the district, attracting much travel which had formerly followed other lines.

Clay roads in the early spring and in the fall cannot be other than mud roads, yet if well maintained during the summer season, they produce in a remarkable measure the benefits of good roads. Experience in Wentworth County, and in other counties where stone roads have been constructed, shows that the property along these improved roads is increased in value as much as fifty per cent. The same cannot be claimed for the results of the split-log drag, but considering the percentage of returns upon the outlay, the use of the split-log drag is an investment which no farmer can afford to despise, if he cannot at once secure a good macadam or gravel road. No farm looks its best when viewed from a road axle-deep in mud. No farm shows to good advantage from a road that is rutted, shapeless, and hard to travel. To give to home life reasonable social privileges, to increase property values and readiness of sale, to make the most of the farm as an income producer, good roads are a necessity.

By means of the split-log drag, earth roads will dry up more quickly in the spring. They can be kept smooth throughout the summer, with less dust and less mud. They dry more quickly after a rain, and maintain a firm condition longer in the fall. When nicely crowned and in neat alignment, they have a trim appearance, in keeping with a good farming community.

If the road past your farm has never been properly graded, or if it has become flat and shapeless, arrange, if possible, to have the township grading machine sent early in the season to grade the road, crowning and rounding it up well in the center, and forming the water tables. When this is done, it is the province of the split-log drag to keep the road in shape. The grading machine is an implement of construction; the split-log drag is an implement of maintenance. If the services of a grading machine cannot be secured, the split-log drag will do the work, but with an expenditure of more energy and time than would otherwise be required.

If the split-log drag must be used for all the work, the road should be lined out with the plow, and two or three furrows turned wherever any quantity of earth must be drawn in, to crown the road and form the open drain. When the furrows have been turned over, cut the loosened earth with a disk harrow, and draw it in by degrees, a small quantity at a time. By dragging often enough to keep the central part of the road smooth, and drawing in as much loose material as can readily be handled, an astonishing improvement will in a short time result.

The drag should be used as early in the spring as possible. The effect is to squeeze the water out of the surface of the road; that is, the lumps and ridges are cut off and are forced into the holes and hollows—a process which forces the water off the road and leaves it smooth, so that it dries quickly and is in shape to shed any further rain falling on it.

The object of using the drag is not to draw an immense amount of earth to the center at each operation. That work should be done by the grading machine. The split-log drag is at its best when used only to smooth the road and to draw a sufficient quantity to the center at each time, to make up for any settlement or spreading of the road which has occurred. To get the best results, the drag should be used as often as possible; that is, as often as the soil is in a fit condition. Do not wait until a road is rough and rutted, but use the drag, if possible, after every rain, even if the road is comparatively smooth. In this way

the road never gets out of repair, and one round of the drag will suffice, where two or three would otherwise be necessary. By using the drag often, and when the soil is in the best condition for its use, it is comparative play to operate it on the road; but if the road is left until rutted and cut up, to restore it to shape becomes laborious, and the results are not so satisfactory, nor so permanent.

Last year's competition indicated that the best time to use the drag is after a rain, when the surface is partially dry and the soil mellow. If used too soon, there is a stage when the soil is sticky and will roll up in lumps with very unsatisfactory results. It



A split-log drag, operated by W. B. Rittenhouse, of Beamsville. When in use, boards may be laid over the cross-bars, the driver standing on them.

has frequently been urged that the drag be used when the soil is extremely wet and slushy. Mr. John Young, of Abingdon, the winner of the first prize in Western Ontario, was the only one who thoroughly demonstrated the value of using the drag when the roads were in this wet condition. But he used the drag while the rain was still falling, and he had not let his road get rough. He used the drag immediately after, or during the rain. The result, after using the drag in the rain, was a tough, rubber-like surface, showing



A clay road kept in excellent condition during the summer of 1907, by John Young, Esq., Reeve of Caistor Township. A clay road can be kept at its best during the summer by using a split-log drag, but in the spring and fall, mud is inevitable. The roadside has also been neatly levelled.

the true effect of "puddling." To use the drag in this way is not a method which is likely to be received with general favor; so that as the second best method, the drag should be used just after the sticky stage is passed, when the surface is beginning to dry, and the soil below is moist.

The best form of drag is a matter which received much careful attention from those using it last year. One competitor, Mr. W. H. Speers, of Halton Co., has used for some years a triangular form of drag. This is very effective in cleaning out the open drains, and in drawing a considerable quantity of earth to the center of the road. It is, however, heavy and cumbersome, and requires two drivers and two teams of horses. A four-bladed plank drag was used by Mr. Matthew Wil-

hamson, also of Halton Co., who believes that it rides over and drops earth into the hollows more effectively than does the split-log drag. A similar type of drag was used by Mr. H. W. Park, of Wentworth Co. Drags of this description are good when the construction of a road is principally in view. Yet the great point, and one which requires emphasis, is that the essential value of the split-log drag lies in the fact that it is a light implement, easily handled by one driver and one team of horses, and can be used at the right time after every rain to maintain an earth road in its best possible condition. If construction is aimed at, some of the heavier forms of drag may be more effective than the split-log, but none of these can compare in this respect with the grading machine for general use. The common split-log drag is as yet unsurpassed, in the writer's opinion, by any other form of drag for maintenance only, under ordinary circumstances.

One form of drag has been made with the face sloping from the top backward, in such a way that the drag will tend to slide over a road when in a sticky state. The same result is reached, or practically the same idea is carried out, if a split-log is used, by reversing the drag and drawing the round faces forward, in this way permitting the drag to slip more easily over the surface of the road. Handles may be put on the drag, and in one case a lever was used, attached to the front of the central crossbar, and resting on the rear blade, and so arranged that it could be swung and used to press downward on the rear blade.

One of the most important improvements on the old form of drag is to so set the front and rear slabs with respect to one another that when the drag is in use, the ends will be nearly parallel with the sides of the road. With the common square form of drag, the rear slab projects, will catch on sod or the sides of the ditch, and thus interferes with the work of the front blade. When made in this improved form, diagonal braces are desirable at the ends.

A steel plate is advisable along the front edges of both front and rear blades, to preserve the drag from wear, and to make a more effective scraping or cutting surface. Some question has arisen as to whether the plate should be used on the rear blade, and whether it should extend the full length of the blades or not. Some suggest that the blade should be used only at the outer end, where the most cutting is required; that the steel should be below the wood at the outer end, and flush with it near the inner side at the crown of the road. As the steel is necessary principally to preserve the drag from wear (and the lower edges wear rapidly under constant use), the writer would recommend that both blades have steel shoes their entire length.

In order that the split-log drag may be readily operated after every rain by a single driver and one team of horses, it must be light. To this end, it should be of pine, cedar, basswood, or other light wood, and not be too long. Six or 7 ft. is ample. If this length is not sufficient to drag the road in two rounds, then narrow the road; it is evident that the road is at fault, not the drag.

A great number of earth roads throughout the Province are made too wide. A width of 18 or 20 feet from edge to edge of the ditch is in most cases ample. Twenty-four feet will accommodate a heavy amount of traffic; and only in rare instances, close to large cities, need this width be exceeded. Wide roads cost more to construct than narrow roads, and vastly more to maintain. Narrow roads, well crowned, should be the rule. A smooth, dry, well-shaped narrow road is much preferable to a wide, but rough and shapeless road; and that, as a rule, is the choice that must be made.

While using the drag, do not forget that there are other points to consider beyond the simple smoothing and crowning of the road. Drainage is of the first importance. To crown and keep a road smooth is a part of the drainage, but not all of it. The open drains at the side must have free outlets at the low points along the road as frequently as possible. When using the drag, consider the direction of the flow of water on the roads, and see what can be done to improve the open drainage.

The drainage is extremely effective, nearly as much

so on earth roads as on stone and gravel roads. A road that is underdrained will dry up more quickly in the spring than one that is not, and the mud will not get so deep. In addition to drainage, it goes without saying that logs, stumps and boulders should be removed. There are venerable stones standing a foot or more above the surface of many a rough road, which son, father and grandfather have driven over since the first settlement. They have destroyed buggies, wagons and harness for many a year. Why not get them out?

Straighten the road, and make the grade of uniform width. A crooked road, following the angles of a snake fence, is an abomination. Many of the crooks are merely a memory of the place where a stump formerly stood. If turns are necessary, make them at hill-tops; that is, make the road straight from hill-top to hill-top, and in this way the turns are less noticeable.

Let the improvement of the road itself extend to the roadside. A neat, trim, level roadside, with a row of trees bordering the road, is an improvement of the greatest value. To neglect the roadside is to neglect the farm, for the road is practically part of every farm. It is objected that shade trees on the roadside may impair the road. This is true to a certain extent only, and is a matter of planting the trees a sufficient distance from the road. Do not plant trees close to the road. It is better to put them on private property, inside the fence. Use common Canadian trees. There are none that surpass the maple and elm; or, if desired, use fruit trees. Nut trees, such as hickory, chestnut and walnut, are also effective. Southern Ontario has been stripped of forest trees to an extent that is most regrettable, and to plant trees along the roadside is but a slight return for past destruction.

Can a drag be used on a gravel or stone road? Yes, but here the process must be reversed. Never place soft material over a hard bed of gravel or stone. Use the drag (with the plow and harrow, if necessary) to cut off the shoulders, and to throw the sod and soft material outward. High, square shoulders do all roads much injury, as they prevent proper surface drainage. Cut them off so that the water can get away from the hard-road surface. Turn it across the open ditch if necessary. The split-log drag can be used effectively for this work early in the spring, but after the ground hardens it is of less value. When the soft sides have been cut away, it is then in order, if the road requires it, to restore the crown by putting on a coat of new stone or gravel. But, as has been previously stated, do not attempt to crown the gravel or stone road by placing soft material upon the hard metal.

The full benefit of the split-log drag will not be realized until taken up by township councils, and a systematic plan adopted for dragging all the earth roads of the municipality. But councils, as a rule, move only as fast as the voice of the ratepayers demands. For the present it rests largely with individual farmers to take the matter up, make drags for themselves, use them for a season to convince themselves and their neighbors of the benefits of dragging. Out of this will grow the public opinion that will lead to the wider and more comprehensive system. Such a system can be established whether statute labor is in use or is abolished—and numerous townships of the Province have done away with statute labor. Already one township (Clinton, where Mr. W. B. Rittenhouse used a drag last year) has ordered fourteen drags for township use.

The grading, crowning, draining and straightening of earth roads, such as has been outlined in this article, is all work that is preliminary to the making of a durable stone or gravel road. A large part of the waste that has characterized roadmaking in Ontario has arisen from neglect of this preliminary work. It has been like building houses without laying foundations. If the improvement of earth roads is carried out in a judicious manner, holding them to a permanent crown and grade with the split-log drag, straightening, levelling, draining, etc., as the circumstances require, the way will be opened up for a much more rapid extension of stone and gravel roads, at the least possible cost. Much is to be expected from the humble split-log drag.

#### A CONTRAST IN ROADS.

The following experience was related recently by a correspondent of our esteemed Iowa contemporary, Wallace's Farmer. The writer had occasion to make a long drive about the end of February. Here is the condition of the roads as he found them:

"The roads were sloppy and muddy. It was not deep in the morning, but full of splash. After three or four miles, horse, driver and rig were plentifully besprinkled with yellow clay spots, intermingled with other darker splotches containing more of Iowa's fertile loam. Soon our white collars assumed a polka-dot complexion, and little dots of mud, like monstrous freckles or warts, perched upon our cheeks, chin and nose. Occasionally huge snowdrifts, fence-high, would reach across the road and silently admonish, Halt! Fortunately, ways were opened up through the fields, and we were able so proceed.

"As the day grew older and the sun warmer, the mud became deeper and less splashy. When within a quarter of a mile of our final destination, we suddenly drove out of deep mud onto a dry road. We looked for the cause, but could not discover it. The conditions ahead and behind

seemed identical, and yet behind was mud reaching to the fetlocks of the horse; ahead stretched the road dry and smooth. A cross-fence stretching away north and south on either side of the road, indicated that the dry road began at the outside limits of the farm we were approaching. At the house we made inquiry about the road, and were informed it was a bit of 'Wallace's Farmer Good Roads.' Last summer, and into late fall, the quarter mile of road had been worked along the lines suggested in Wallace's Farmer (with the split-log drag), and there it lay, with miles of mud on either side, a dry, smooth testimonial to the efficiency of the drag and your good-roads recommendations." M.



Triangular Form of Drag Used by W. H. Speers.

#### THINK SUMMER-FALLOWING A NECESSITY.

Editor "The Farmer's Advocate":

We are pleased to see that a discussion has arisen in the columns of "The Farmer's Advocate" on the summer-fallow question. We agree with Mr. F. Foyston that it is necessary to summer-fallow, in order to efficiently combat with the noxious weeds that are rapidly spreading in this Province.

We also saw an article, written by some unknown person, who thought he could keep down weeds by a three or four-year rotation, using corn as a crop with which to clean the land. We have tried this method, and find that, in spite of all we can do, natural grass, quack grass, thistles, and quite often daisies, will appear in the first crop of hay, when seeded down thus. He also speaks of going through the corn with the hoe the last of July. Now, as this is a very busy time of the year for the average farmer, we would like to know who has time to go through fifteen acres of corn, whereas the summer-fallow can be easily tended to between times.

We also find that, in order to grow a big crop of first-class timothy hay, it is necessary to sum-



Drag Used by Matthew Williamson.

mer-fallow and apply a coat of manure. Some people complain that one year's crop is lost. This is not so, for what is lost is more than made up in the succeeding years, besides getting rid of many weeds that otherwise could hardly be gotten rid of. The hay, also, will bring a higher price, if offered for sale.

For summer-fallowing, the ground should be plowed the fall before, then it can lie till the rush is over in the spring, then plowed with a two or three sod plow. Keep all weeds down by frequent cultivation. It should be plowed again, as before, in about a month's time from when it was first plowed, then kept well worked till the first of August, when the grass seed should be sown. A light coat of manure, spread evenly on the field as a top-dressing, will add greatly to

the crop; also protect the grass in winter. Clover seed can be sown the following spring, whichever kind is best adapted to the soil. We have never failed to have a catch when handled as stated above, whereas seeding down with corn is only chance-work.

We are talking from a twenty-years' experience on a good farm, and would like to impress on the minds of the rising generation of farmers the need of good farming. We would like to hear the opinion of other interested and experienced farmers on this important subject. We consider summer-fallowing a necessity, and not an evil, either.

MORTON GIFFIN.

Leeds Co., Ont.

[Note.—The "unknown person" was one of our editors, and he was writing not of what he thought he could do, but of what he has actually done, as well as of what many others, among them some of the best farmers in the country, have done. It is not difficult to keep a cornfield quite free of weeds, if it is properly cultivated, which most cornfields, unfortunately, are not. The true remedy lies not in summer-fallowing, but in more early, more frequent, and more thorough cultivation of the land under corn and roots. This attended to, there will be very little left to do with the hoe, and summer-fallowing will be unnecessary, except in rare cases, as when a field is badly infested with bindweed, perennial sow thistle, or possibly couch grass. We agree with our correspondent as to the uncertainty of obtaining a catch of clover with corn. We had not recommended or even mentioned this. The allusion was to seeding with spring grain after corn.—Editor.]

#### SAINFOIN.

Editor "The Farmer's Advocate":

Sainfoin has attracted much attention as a fodder plant, and also as a honey-producer. In its cultivation and manner of growth it resembles alfalfa (but it is slightly finer, and grows thicker in the bottom), having a more decided stooling habit, which makes it better for pasture. It is especially liked by sheep and cattle. The soil best suited to the growth of this plant seems to be a deep, rather dry loam, containing a fair proportion of lime, with good natural drainage. It will do well upon almost any soil that is well drained, provided it gets a good start. Heavy clay and light, sandy soils both produce excellent crops of sainfoin, but on the latter it naturally requires generous manuring. It should never be sown on land likely to be covered with water at any season of the year. The amount of seed sown—of hulled seed—is 40 to 50 pounds per acre; if the hulls are on, it will require 80 to 100 pounds per acre. Great care should be taken to secure new and plump seed. A good seed-bed is of great importance. If the field has been in meadow, pasture or grain, do not plow, but simply cultivate and harrow. First cultivate as shallow as possible, then pass the heavy iron harrows at a good sharp walk across the first cultivating. This operation will break up the sod or stubble very fine, and leave it on the surface to dry out. The second cultivation should be in opposite direction to the first, and likewise the harrowing. It usually requires about four cultivations and four harrowings to make a perfect job. All this work must be done on fine, sunny days, and as soon after harvest as is possible. Every particle of growth must be kept out of sight, and all vegetation brought to the surface to be dried out by the sun. This dead but valuable material may, during the autumn, be plowed under, to decay and add fertility to the soil. By the next spring, this land should be in perfect condition for sowing. The best time to sow is as soon as the ground is in good condition in spring; the seed will then germinate quickly. As sainfoin is a quick-growing and deep-rooting plant, the roots keep going down into the moist earth, so that dry weather will not have much effect upon it. If sown with a nurse crop, oats, wheat or barley may be used, but the latter is preferable, as it can be harvested earliest. Not more than half the ordinary amount of grain should be sown per acre with sainfoin, and better results are usually obtained by sowing it alone. The seeding may follow a hoed crop, but, whatever the preparation of the land, it must be clean; and, as the seeds are small, it is essential to have it in a good state of tilth. This plant, like alfalfa, will stand many years. As is well known, legumes of all kinds are the most valuable plants which can be grown, and plowed down as fertilizers, and the benefit of plowing under sainfoin would more than pay for the resowing every third or fourth year.

Sainfoin sown May 14th came in bloom on August 12th of same year, was cut for hay on August 25th, and gave a yield per acre of 1 ton 1,700 pounds of cured hay. The second growth of the first year should be allowed to stand over for the winter as a protection to the roots. In the second year, the plants came into bloom on June 1st, and lasted up till the 24th of that month, when the plot was cut for hay. These

dates might have been extended, had the plants been grown merely for honey, but, as they were at that time in the best of condition for hay, they were cut for that purpose. The yield of the first cutting was 2 tons 200 pounds of cured hay per acre. The second bloom was on July 27th, and lasted until August 17th. This is a very important point for beekeepers to note, as the bees worked as well on the second bloom as on the first, and from morning till night. The yield of the second cutting of cured hay was 2 tons 1,400 pounds per acre. A third crop will provide pasture, or it is better to allow it to remain on the ground for winter, or, in favorable seasons, it might be again cut, although this is not advisable. From what I have seen of sainfoin, I believe that farmers and beekeepers would find it profitable to grow it.

Sainfoin compared with alfalfa:

Starts to grow earlier in spring, and keeps green later in autumn.

Grows thicker in the bottom, making much better pasture.

The stems and branches are finer and softer; grows more bushy, not quite so high.

When a good stand is secured, it will equal in yield per acre, and is relished by all stock both green and dry.

It is the best honey-producing plant that I know of. The cost of securing a good catch is its greatest drawback. Requiring so much seed per acre makes it expensive. J. FIXTER.

Macdonald College.

## THE DAIRY.

### DAIRY EXPERIMENTAL WORK IN 1907.

The three chief lines of experimental work done in the Dairy Department of the Ontario Agricultural College, Guelph, as reported in the 23rd annual report of the institution, relate to "Methods of Determining Moisture in Dairy Products," "Experiments in Buttermaking," and "Experiments in Cheesemaking."

The steam-oven plan is the one which has given best all-round satisfaction with all kinds of dairy products, though the "Beaker" method gives good results in the hands of a careful person, for determining moisture in butter. The weakness of this latter test is the difficulty of knowing when to cease heating. The "Gray" and the "Improved Gray" methods were also tested, but were not altogether satisfactory. The tendency was for the results to be too low with both these. The expense for glassware and chemicals is also an objection, from the practical creameryman's viewpoint.

A short comparative test for moisture in curd is described. In this test, the amount of moisture in the curd at dipping is assumed to vary approximately with the variation in the weight of a given volume of curd. The standard taken is 17.5 c. c., which weighs, when the proper degree of moisture is in the curd, about 17.5 grains. Each decrease of .1 (one-tenth) of a grain in weight represents a decrease of about .6 (six-tenths) of one per cent. moisture in the curd.

### EXPERIMENTS IN BUTTERMILKING.

Two main lines of experiments were conducted during the year. The first related to various methods of treating cream and butter, the latter of which was exported to London, Eng. The conclusions reached from the experiments are summarized as follows:

1. The results obtained from pasteurizing sour cream were not altogether satisfactory. The extra loss of fat in the buttermilk was not offset by an increased price obtained for the butter in London, although there were a few marked exceptions to these general results. Further experiments are needed to settle the point definitely.

2. The sweet-cream lots, pasteurized, and afterwards ripened, were scored highest in flavor by the Montreal experts, and sold for the highest prices in London. These experiments point strongly in favor of having the cream delivered sweet at creameries for the best results.

3. The saltless butter sold, on an average, at about two shillings per hundredweight more in London than did similar butter salted at the rate of one-half ounce of salt per pound of butter, and indicate the probable increased value of saltless butter over salt butter for export.

4. Preservative in the form of common borax, gave results practically equal to those obtained with the more expensive commercial preservatives. One-quarter of one per cent. is the amount recommended.

5. Two lots, out of 44 lots analyzed, contained over 16 per cent. moisture: The majority of the lots ranged from 14 to 15 per cent. moisture.

6. The financial returns were about three cents per pound of butter less for the butter exported than was received for similar butter on the local market. However, there is every prospect of much higher prices being received for Canadian butter exported during 1908.

The second series of butter experiments related to the much-discussed moisture question.

The conclusions reached from these experiments are:

1. The moisture in the butter and the overrun do not bear a constant relation to each other. This is somewhat difficult to explain, unless the "absorption theory," recently put forward by a bright young Canadian dairyman, be accepted. According to this theory, milk fats vary considerably in their power to absorb moisture when in the liquid condition. If this theory be correct, then we shall never have a constant relation between moisture in butter and overrun. The theory is of sufficient importance to warrant further investigation, and seems to bear on many practical problems in connection with creamery practice, more particularly in connection with testing cream.

2. Overchurning in the buttermilk, massing the butter in the wash water or in brine, and washing with the rollers in motion, especially when the butter is soft from using a wash water rather warm, tend to produce a butter with a high moisture content; but, in order to be effective, these abnormal methods have to be carried to a point where the tendency is to produce a greasy, gritty, mottled butter.

### CHEESEMAKING EXPERIMENTS.

Pasteurization of Milk for Cheesemaking.—The report points out the difficulties in pasteurizing large quantities of milk, as handled in factories, and the writer says he does not think the plan is practicable under factory conditions, but the increased yield of cheese, equal to 14½ pounds per 1,000 pounds milk, as a result of pasteurization, is worth considering. This increased yield was caused, in part, at least, by increased albuminous material in the cheese, due to heating the milk. The quality of the cheese was not altogether satisfactory, but would suit local trade, because of its soft texture.

Recovering More of the Milk Solids.—The fact is pointed out that, in the ordinary process of cheesemaking, only about one-half of the milk solids are utilized, and one-half of the most valuable food material, prepared in any laboratory, or by nature, is practically wasted. The rapid development of the milk condenseries is a sign of the times, showing that something must be done to stop this great waste of human food.

The object of the experiments conducted was to see if a coagulating agent could not be obtained which would precipitate all or the greater part of these solids. It is pointed out that the results were not altogether satisfactory, except that the loss of solids in the whey was reduced about one per cent., but there was no increased yield of cheese, due to the fact that the cheese contained less moisture. The quality of the cheese made with the RA 2 coagulating agent was equal to that made by the use of rennet. So far as could be observed, the curds of cheese from using RA 2 were quite normal in character.

### METHODS OF CUTTING CURD.

The use of a fine curd knife, made of fine wire, and having the wires one-quarter inch apart, is recommended, more particularly for what are known as fast-working curds. An increased yield of cheese, equal to about one pound of cheese per 1,000 pounds milk, was obtained by using the fine-wire, perpendicular curd knife, as compared with the regular-blade knife. The use of a fine wire (30-gauge) knife is strongly recommended in preference to the steel-blade form of curd knife.

### MOISTURE IN CURDS AND CHEESE.

The principle of retaining as much moisture as possible in curds and cheese, consistent with making fine quality of goods, is recommended to the consideration of cheesemakers, because the water in curd and cheese contains dissolved in it some casein, all of the albumen and sugar, and the larger part of the ash or mineral constituents of milk. In this respect, the moisture or water of cheese differs materially from the water in butter, which latter is extraneous, and contains little or no food material in solution.

An increased yield of cheese, equal to from one-half to one pound of cheese, was obtained as the result of stirring curds very little or not at all at the time of dipping. A caution is given to makers, however, not to hastily change methods which have given good results in the past, but to try the new plan in a small way at first. Pope's advice is worth noting in this connection:

"Be not the first by whom the new is tried,  
Nor yet the last to lay the old aside."

On the average, about 20 per cent. of the total moisture lost from curds occurs between dipping and milling, and about 10 or 12 per cent. is lost after adding the salt. From 3 to 4 per cent. is lost between milling and salting, and 1 to 3 per cent. during ripening or curing.

### ACIDITY OF CURDS AT SALTING.

The object of these experiments was to ascertain the loss from holding curds four and five hours after dipping, compared with salting, on the average, about three hours after dipping. The results showed an increased yield of about 1½ pounds cheese per 1,000 pounds milk, as a result of salting at the earlier stage. There was little

or no difference in the quality of the cheese from the various methods of salting.

The weak point about the foregoing experiments is the lack of chemical and bacteriological data. Most of the work would be more complete if this data were added. The authorities at the College may very well consider whether or not the time has not come when there should be at least one man devoting all his time to dairy problems in chemistry and bacteriology. It is no reflection on the excellent work done now in these two departments of the College to say that they would be materially strengthened, and the Dairy Department of the College would be very much helped if such a man were available for dairy work. These problems come up, not only in connection with the dairy work at the College, but also in connection with the work of the instructors during the summer. Such a man would be of inestimable value to the man in the factory and to the instructor on the road. It cannot be altogether a question of finance, because we note, from the financial statement, that the net expenditure in the Dairy Department during the year was but the paltry sum of \$158.32. Surely a larger sum than this may be profitably spent on investigational dairy work. Our neighbors in the United States are spending large sums of money on purely investigational problems in connection with dairying. How much money is being spent to-day in Canada upon scientific dairy investigation? Practically nothing. How shall we hope to maintain the lead in dairying if we allow this branch of the work to be neglected? It is verily true, "Unless science makes progress, practice marks time," in dairying. H. H. D.

### INSTRUCTORS IN TOUCH WITH PATRONS.

During the months of December, January, February and March, 132 special and annual meetings of cheese-factory and creamery patrons were attended by the Chief Dairy Instructor for Western Ontario or one of the staff of Instructors, with a total attendance of 5,341, or an average of 42 patrons at each meeting. The subjects taken up and discussed by the speakers and patrons were: "Paying for Milk by the Babcock Test," "Co-operation Between Patron and Maker," "Producing and Caring for Milk and Cream," "Storing Ice for Cooling Milk and Cream," "Green Crops and Silage as a Substitute for Dry Pastures," "The Advantages of Keeping Records of Individual Cows," "Advantages of Building Cooling Rooms for Cheese," "General Outline of the Work of Dairy Instruction and Inspection, as Carried on in Ontario, What it Had Accomplished and Was Expected to Accomplish in the Future"; "The Advantages of Sending Home Sweet, Clean Whey From Clean Whey Tanks, and the Pasteurizing of the Whey as a Means of Helping to Control Acidity and Bad Flavors."

A great deal of interest was shown by the patrons at these meetings, and the subjects taken up by the speakers were freely discussed, and suggestions offered for the improvement of the industry were readily adopted. A general feeling of satisfaction with the high prices of dairy products during the past year prevailed, and confidence in the future was strong. The outlook for the coming season appears bright. The writer noted quite a number of patrons who had been giving particular attention to fat cattle in past years, expressing their intention of going more extensively into milk production. A number of factories voted to try the heating of the whey this year, while quite a large percentage freely gave the makers a raise in price for manufacturing, believing that they deserved it on account of the rise in cost of supplies and general expenses. A few more factories adopted the system of paying for milk by test, though a few others voted it out, leaving the number about the same as last year.

Attending these annual meetings will, it is believed, give good results, for at no other time can the instructors meet so many patrons of a factory in one place, and talk over subjects of interest to them and methods of improvement, which, when carried out by the patrons, will certainly have a wide influence in keeping up the price of dairy products, for there is no doubt that fine quality has a great deal to do with the high prices, as well as the law of supply and demand. The efforts of the Department of Agriculture of Ontario and the Dairymen's Association of Western Ontario, in sending out these speakers to annual meetings, are certainly appreciated by the factory men and milk producers in general, and it is to be hoped that a prosperous and productive season will be our record for 1908.

FRANK HERNS,  
Chief Dairy Instructor, Western Ontario.

Appearance does not tell much as to milking capacity, and hence the necessity for milking trials and butter tests, and their inclusion in records of pedigree. But appearance does tell a good deal as to the commercial merits of either a beef animal or an animal designed for draft or speed.—[Scottish Farmer.]

### INSTEAD OF THE HIRED GIRL.

Editor "The Farmer's Advocate":

My gasoline engine is a two-horse, two-cycle, upright engine, quite satisfactory to run No. 5 Daisy churn, as we use a 24-inch diameter pulley on churn, driven direct from a four-inch diameter pulley on engine. Our No. 5 Daisy barrel-churn will churn 60 pounds butter quite handily from separator cream, and the churn works best with the large pulley, having more grip for the belt, and runs the proper speed, and strong. We use it in a well-lighted room, having cement floor 14 by 16 feet, with a 10-foot ceiling, with a line shaft high enough to clear one's head, and a short intermediate shaft to reduce the speed. Having smaller pulleys on these shafts, we slip the belt from off churn, and place on the 12-inch pulley on shaft over engine. This shaft has another pulley, of four-inch diameter, from which a belt runs up on the 12-inch pulley on line shaft; another 12-inch pulley on line shaft runs the belt down to washing machine, which has a 10-inch pulley. This same belt does for grindstone (10-inch pulley), by having one of them a little each way from being direct under line shaft. I find this works handy enough for us, as one at a time is all we have had occasion to use yet. By putting extra pulleys on line shaft, it could be used to all of these purposes at once, if necessary.

I like my engine well. It is very simple, takes up very little room—no more than a cream separator—and uses very little gasoline, and is as safe as a coal-oil lantern.

Domestic help being so hard to obtain, I bought this engine, and it has proved a wonderful help. W. J. PEGG.  
York Co., Ont.

### THE DAIRY INSTRUCTORS OF WESTERN ONTARIO.

The Dairy Instructors and Sanitary Inspectors of Western Ontario spent the first week of April at the Guelph Agricultural College. The time was well taken up with dairy lectures, lectures on veterinary science, lectures and practical work in the chemical and bacteriological laboratory. One-half day was very profitably spent scoring cheese and butter, when they were fortunate in having the assistance of Mr. W. W. Gray, of the firm of Thos. Ballantyne & Sons, cheese exporters, Stratford, who gave some valuable information regarding quality of cheese and butter demanded by the export trade, laying particular stress on the fact that a clean-flavored, close-boring, smooth-textured, yet firm-bodied cheese was the ideal cheese for export; the color, also, should be clear and uniform, but not too high in colored cheese.

Time was set apart for general discussion of the coming year's work of instruction, and several evening meetings were held, when the work was all carefully gone over by the instructors, so that entire uniformity of method would be advocated by each, since uniformity is recognized as one of the principles of success. A lively but friendly discussion was brought out during one of the lectures regarding moisture in cheese, and, after a full discussion, it was the unanimous opinion of the instructors that the system of cheesemaking advocated and taught by them during the past five years, and practiced by the very best cheesemakers, was giving excellent results in improving the quality of the cheese in Western Ontario, and that it would be unwise to make any radical changes in the methods of making.

A short course for makers desiring instruction in milk and cream testing was carried on at the same time as the Instructors' course, and was attended by quite a large class of experienced cheese and butter makers. The instructors and makers who took the week's course appreciated very much the efforts of the Professors of the College to make their stay both profitable and enjoyable.

There will be no change in the Instruction staff this year, which consists of the following men: Frank HERNs, London, Chief Instructor; Alex. McKay, St. Mary's, Stratford Group; Jas. R. Burgess, Listowel, Listowel Group; E. N. Hart, Ingersoll, Ingersoll and Woodstock Group; Geo. Travis, Tillsonburg, Simcoe Group; R. H. Green, Cayuga, Brantford Group; W. Hamilton, Woodstock, London Group; Fred Dean, Western and Southern Creameries; Mack Robertson, St. Mary's, Northern and Eastern Creameries.

FRANK HERNs,  
Chief Instructor, Western Ontario.

In the London, Eng., market the ruling average price of cheese during the seven months of production of the season of 1907 was 61s., as against 50s. 6d. for 1906.

While imports of Canadian cheese into Great Britain showed a slight falling off last year, and imports from New Zealand are increasing, Canada is still far in the lead, supplying within 34,911 tons of Britain's needs.

## GARDEN & ORCHARD.

### THE STRAWBERRY AND ITS CULTURE.—II.

#### GROWING PLANTS FOR PROPAGATING.

It is just as necessary to have good, strong, vigorous plants to set, as to have the best grain to sow, or trees to plant. They should be grown with special care for that purpose. Only a limited number of plants should be allowed to form, and these should be kept separate from one another, so that each plant can fully develop; then you have plants capable of doing credit to themselves, which strawberries will do every time they are given a fair chance. Is there any wonder that strawberries, as some say, "soon run out," when they, year after year, take up plants that may be in the way—plants that were late in rooting, weak, and from which no sane man should expect great results? Get started right by setting only the best plants, and then keep right by growing your own plants as much as possible. I believe by growing plants as I have advised, we can improve the strawberry from year to year, instead of "running it out."

#### SETTING THE PLANTS.

See that the ground is thoroughly worked, and in the best possible condition, then mark it out, both ways, the same as for corn. I would prefer setting the plants three feet by three feet to three feet by four feet, as many do, believing that by having the matted rows narrow they do better. We trim up the plants; that is, take off all runners and dead leaves, and also cut off some of the long, fibrous roots, as it is difficult to get them properly planted otherwise. Care should be exercised that the roots of the plants are not exposed to the sun or wind; they should be kept covered and moist. A plan adopted by some during warm weather is to "puddle them," which covers the roots, and thus prevents the fibrous roots from drying out so readily.

Some about here have tried the plant-setting machine, but I believe the old hand machine is as good as any yet. We use the spade, which is inserted not perpendicularly, but on an angle, and the plant is carefully inserted in the opening at the same time, giving it a few sudden jerks so as to spread the roots, and then the soil is firmly tread about the plant by the foot so as to close the opening. The advantage of the angle opening is that you can much more successfully and thoroughly close it. Many plants are lost simply from the fact that they are not firmly planted. See that the crown of the plants are fully as high as the surface of the soil; if lower, the earth gets into the crowns, to the serious injury of the plants. Remove the blossoms, so as to give the plant every advantage to do its best.

Another way of setting plants I have practiced for several years with good success is as follows:

Having grown the plants as above advised, each plant standing alone, I take these up carefully with a tiling scoop by inserting it about the plant, giving the scoop a few side movements, when the plant, with the earth adhering, can be removed, similar to a potted plant. These plants, with the earth, are conveyed on a dray to the new plantation, where they are set. The advantages of this system are:

1. Every plant will grow.
2. One may plant them about one month later, and yet have an abundance of plants. During this time, one can be giving the ground frequent cultivation, thus de-

stroying many weed seeds, and have less cultivating and hoeing to do.

3. Fewer plants will be required, as one can set them five feet apart in the row and they will run together, as they start growth immediately. Some may claim this system encourages too much plant growth at an expense of fruiting. I am not prepared from the limited experience I have had, to know whether such is the case, if continued for years.

#### CULTIVATION.

As soon as the plants are set, especially if the soil is dry, begin the cultivation at once. Don't delay one day. The best implement I have found for this purpose is a weeder; unless the plants are very firmly set, it may be necessary to remove a few teeth that come directly over the rows, else some plants may be pulled out. The advantage of the use of this tool is that you create a dry earth mulch, which conserves the moisture in the soil, which is all-important at this stage. It is also doing its work as a weed destroyer. In a week or ten days, the cultivator may be started, and then followed up again with the weeder, and continued at frequent intervals throughout the season. Don't wait till the weeds appear. You can economize much time by taking them in the "nick of time." Use the hoe occasionally, and I have found a garden rake to be of good service about the plants. As soon as the plants commence making growth, I give them a spraying of Bordeaux mixture with a hand sprayer, which can be done as fast as a man can walk, and takes very little material. The following spring, as soon as growth starts, give them a thorough spraying of Bordeaux, and you will not have any trouble with the blight.

#### MULCHING.

In this locality, very little attention is paid to mulching, as the plants generally come through the winter all right. In more northerly latitudes, I would advise covering them as soon as the ground is frozen; this covering to be removed in the spring, and raked between the rows. I have found a dressing of farm-yard manure, applied over the rows, to be valuable; but the serious objection is that you also seed the ground down, and render the plantation beyond redemption for more than one crop. Where berries are grown only for home use, by covering a part and delaying the removing in spring for some time, the season can be lengthened a week or two.

#### PICKING.

Picking season is a busy time with the strawberry man. The hot weather ripens the fruits very fast, and they should be picked just as soon as ripe. Sometimes it is necessary to pick them every day; usually every alternate day will do. They should not be picked while wet with dew or rain. When intended for shipment, they should be graded while being picked in three classes: No. 1, or the larger; and No. 2, smaller, but sound; and No. 3, such as are too ripe or otherwise faulty, for local consumption. The pickers will need extra pay to do this work. But if we pay them, say, two cents per box, will not the berries thus graded be worth that much more in the market, and give better satisfaction?

Indians from the reservations, until the past few years, had been relied upon to do most of the picking. The Pollocks and others have been tried, with varying success. The local help in the country, towns and villages—boys, girls, men and women—now turn out and have their annual outing at picking strawberries.



Dairy Instruction Staff, Western Ontario.

Back row (left to right): E. N. Hart, Fred Dean, Mack Robertson, Geo. Travis.  
Front row: Alex. McKay, Jas. Burgess, Frank HERNs, Robt. Green, W. Hamilton.

and earning from \$50 to \$100 in from four to six weeks.

#### MARKETING.

Until recently, nearly all the berries grown about here were put upon the commission market, which frequently resulted in low prices for the producer. Now they are either sent out on orders, or sold outright at the shipping point, which is proving much more satisfactory. Then, too, as soon as they get down to canning factories prices, they are utilized at home and kept off the market, so that city people must expect to pay what they are worth in the future.

Lincoln Co., Ont.

W. B. RITTENHOUSE.

#### POTATO SCAB.

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

Maine Agricultural Experiment Station, Orono, Maine. Bulletin No. 141, by W. J. Morse: This bulletin is a good treatise on the disease known as potato scab, which, under some conditions, disfigures potatoes very much in Canada. Not only is the potato affected with this disease, but, "In addition to the potato, beets, mangels, turnips and rutabagas are quite susceptible to the disease. It has also been found on cabbage and carrot roots, and possibly may develop in a slight degree on radishes, salsify and parsnips."

The potato scab is a disease which spreads by means of spores which are either in the ground or on the tuber when it is planted. It does not develop spontaneously, as is sometimes supposed, but must be carried to the soil in some way from somewhere. When the conditions of the soil are made more alkaline, as by the application of fresh manure, lime and ashes, the conditions are made more favorable for the development of scab. Some fertilizers, on the other hand, have the effect of making soil conditions less favorable to the development of scab. These are superphosphate, ammonia sulphate, kainit, sulphate and muriate of potash. Speaking generally, alkaline soils give favorable conditions, and acid soil conditions unfavorable to the potato-scab disease. The disease will remain active in the soil for a long time, which makes it very difficult to eradicate entirely. There has been a large amount of scab found on potatoes where none had been grown for from five to seven years, and where clean seed was used. A long rotation is, hence, advisable. Where the disease is bad, it is recommended to plow under a green crop just before the potato crop, which will help to make the land somewhat sour, and give least favorable conditions for the scab. Very good results have been obtained by the successive plowing under of green crops for a number of years on land which had been badly infested with scab. By the seventh year, when potatoes had been grown every year on the same land, a crop of 285 bushels per acre was raised by a man in Ohio, nearly free from scab. Scabby seed should not be planted without being treated to destroy the spores. Great care should be taken not to use baskets or bags which have had scabby potatoes. Even implements with dirt on them from an infested field should be well cleaned to make sure they do not reinfest clean land. The tubers are disinfected before planting with either formalin or corrosive sublimate.

"Soak uncut tubers for two hours in solution of one-half pint formalin to fifteen gallons of water, or one and one-half hours in two ounces of corrosive sublimate dissolved in 15 gallons of water. Spread out to dry on grass or clean floor. For large quantities of seed, formaldehyde gas, generated by the use of potassium permanganate, is the most practical disinfecting agent. Place seed tubers in bushel crates or shallow, slat-work bins in a tight room. For each 1,000 cubic feet of space spread 23 ounces of potassium permanganate evenly over the bottom of a large pan or pail in center of room. Pour over this 3 pints of formalin, leave room at once, and allow to remain tightly closed for 24 to 48 hours."

When formalin or corrosive sublimate is used, the same solution may be used over and over again, adding fresh solution when necessary to cover the potatoes.

Press Bulletin, New Series, No. 9, of the University of Idaho Experiment Station, Moscow, Idaho, by L. F. Henderson, also treats briefly of potato scab, and gives results of experiments tried in treating seed potatoes, which were, briefly, as follows:

1. Rolling seed potatoes in sulphur, as has been shown at other stations, will prevent scab little, if at all.
2. Treated potatoes, planted in soil scabby from last year's crop, will produce a scabby crop.
3. Well-treated potatoes, taken from treated sacks and planted in new ground, will produce comparatively scab-free tubers, whether the seed were clean or scabby before treating. As the new ground approached the scabby soil of the previous year, more and more scab could be observed, but in no case much.
4. Formalin gave in this experiment just as good results as corrosive sublimate. That being

the case, I would advise all to use it, as it is much safer than the other fungicide.

In another experiment, where very scabby but well-treated potatoes were planted in clean soil, there was a crop with 99 per cent. of clean potatoes.

#### AMATEUR EXPERIENCE IN ONION CULTURE.

Having had, in 1906, a favorable experience with a strip on onions, I was last year encouraged to put in a rather larger area, though many growers would think it small indeed. Measured exactly, there was nine-sixteenths of an acre sown to onions. The land is loam, inclining to sand rather than to clay, and it had been in cultivated crops for several years, receiving each year a light dressing of manure, so that it was in good heart and fairly clean. Not having been plowed in the fall, it was plowed in the spring, and 12 or 15 loads of manure per acre turned under. The ground was worked and the seed sown about the end of April, the seed-bed being made fairly fine with harrows and clod-crusher. The seed was sown with a hand seeder in rows 19 inches apart, about 3 pounds of seed per acre being used. The rows would have been made closer had not the intention been to cultivate with a horse, but, after all, that was done but once. Last spring being cold, it was a month before the seed came up, but it came up well when it did come, the seed being good. As soon as the plants were well up, the ground was wheel-hoed, and all weeds within a half inch of the onion rows on each side destroyed. Then a man and some boys were impressed into the service one Saturday, and the rows were weeded. We used fingers principally, but also little implements made of table knives, with an inch of the end bent at right-angles. In about two weeks, when the onions were the size of pipe-stems, the wheel-hoe was used once more, and the plants thinned to an average of 1½ in. apart. Experiment the year previous pointed to that as being the proper distance to secure the largest yield. Where, as sometimes happened, there was a gap of six inches or more, two plants on each side of it were left close together, and they apparently grew as large as if they had been evenly distributed over the space. Thinning onions is slow work, and no great fun, either, but it was thought that it would save labor at harvesting, and assist in the selling process, the bulbs being a better and even size. It did both, and, we think, paid. A man and some boys were again employed. The heavy end of the work was now past. The next working was done with a horse and spike-toothed cultivator, but it was not used again, as there was danger of injuring the plants, and the remaining two cultivations were done with the wheeled hoe. Some stray weeds in the rows were pulled by hand. The season last year was a late one all through, but the crop ripened fairly well, and was harvested in the latter half of September, though it was the middle of October before all were cured and taken in. The yield was 270 bushels, at the rate of 480 bush. per acre, and was sold, wholesale, before being harvested, at 80 to 90 cents per bushel. The returns from this little plot amounted to \$215. The seed and hired help came to \$15.

Middlesex Co., Ont.

T. BATY.

#### APIARY.

##### A COMMON MISTAKE.

A mistake common with beginners in beekeeping is the idea that the honey season commences as soon as bees begin flying in spring. Consequently, the prospective beekeeper is in a big hurry to carry home the bees he has bought from a neighbor, or from somebody at a distance. He seems to think that every day he has not the bees at home after the first of April, or so, he is missing part of the revenue to be derived from that season. This is a mistake, and the beginner cannot do better than leave the bees in the possession of one who understands them, and will not go playing with them until they are able to stand it. While bees throughout most of Ontario fly pretty regularly after the middle of April, and usually get some honey and pollen, there is never anything to be gained by the mere having possession of the bees before May is pretty well advanced and fruit bloom is at its height. There is a great fascination in watching the bees work in the fine April days, and the beginner might learn familiarity by sitting beside his bees at that time, but the temptation to look inside would almost certainly become too strong to be resisted, and his bungling operations might prove disastrous, especially on a day which he would consider warm, but which an experienced beekeeper would tell him was altogether too cold to open a bee-hive. The middle of May is time enough for the amateur beekeeper to make the acquaintance of his new live stock. By that time the weather is fairly settled, the bees have passed the critical period of their spring brood-rearing, and are on the high road to prosperity. There is usually a

good supply of honey from dandelions, fruit bloom, etc.—enough, at least, to supply the needs of the hive, and the new owner of the bees will have time to become fairly intimate with them before the rush of honey from clover is due. He can buy his supplies, of course, earlier in the season, and have them all ready for the busy time before it comes, or before the bees are brought home. It is advisable for the beginner, if he has never seen the inside of a bee-hive, or does not know exactly how it should be, to have one hive all put together at the factory, and then he can use it as a guide in setting up the other ones. There is a bewildering array of pieces in a hive when they are all separate, and the novice might find it puzzling to tell just what to do with each one, and in the end, perhaps, would not have everything exactly right.

E. G. H.

#### POULTRY.

##### A YEAR'S EGG RECORD.

On page 295 of "The Farmer's Advocate" of February 20th, Mrs. Geo. Drewery, of Grey Co., Ont., told of the ten-months' egg record of their flock of 50 hens, and promised to send the results of the remaining two months. From April, 1907, to January, 1908, this flock laid 470 dozen and 10 eggs, making an average of 113 eggs per hen. Just to hand is a letter from Mrs. Drewery supplying these further particulars:

"The two last months of the egg record, 102 dozen and 4 eggs. Total number for the year, 573 dozen and 2 eggs, making the average of 137 eggs (with 28 over) for each hen. They laid 43 dozen and 6 eggs in February, and 58 dozen and 7 eggs in March."

Our correspondent is anxious to compare notes with anyone who has done better.

##### \$60 FROM 65 HENS IN THREE MONTHS.

Having read many articles on poultry in your valuable paper, I wish to give our experience concerning production of winter eggs. We have a pen of 65 pure-bred Buff Orpingtons, and, having kept strict account of each day's laying from January 1st, 1908, to April 1st, they laid 2,595 eggs. In January, 463; February, 881, and March, 1,251. The above number of eggs were worth \$60 at the market price, we having sold \$55 worth, and kept the rest for our own use. The highest price sold for was 40 cents per dozen, and the lowest price 20 cents.

These hens have a free run in yard, and for feed they get, in morning, wheat scattered among straw; for noon, a warm feed of bran, shorts and oat provender, mixed with hot water and milk when we had it, with some table scraps, and in the evening we fed whole oats, and every day gave them a little clover hay to pick the leaves and blossoms from. They were given water twice a day, and always had grit and shell before them.

We find the Buff Orpington the best winter-egg producer that we have tried, and think them a good fowl for the farmer, both for laying and table fowl. They are very quiet, and are great foragers.

MRS. A. W. ROSS.

Renfrew Co., Ont.

#### THE FARM BULLETIN.

##### AMENDMENTS TO THE ONTARIO SCHOOL ACT.

The amendments to the Provincial School Law of Ontario, which have just been passed by the Legislature, are important. They embody the Government's policy in relation to public-school education, and apparently Dr. Pyne, Minister of Education, has given heed to the demand that special attention be paid to the wants of an agricultural population.

##### TEACHER TRAINING.

The new legislation provides for a change in the training of teachers. Model schools will be retained only in those portions of the Province where financial conditions require a supply of teachers with the new third-class certificates. In future the cost of maintaining such Model Schools will be borne by the Department, which will also supervise the training and conduct the examinations. Except in the case of the districts and school sections in the counties which are permanently weak, the new third-class certificates will not be valid. The course of study in the Normal Schools has been revised. It now includes both professional and academic instruction. The teachers in training will be required to review and extend their knowledge of such subjects as reading, spelling, grammar, geography, writing, mathematics, etc., which are the basis of a good public-school education. Thus prepared, teachers will be better qualified to remedy the defects now complained of in the primary schools. The course of instruction in the new Model Schools will also be efficiently maintained, and the certificates obtainable there will be the former district certificates, improved in character and issued by the Minister, who will, henceforth, control the professional training of all the teachers in the Province, and will alone issue certificates. The fee of \$5 for entrance to the Model

Schools, and the Normal-school fee of \$10, have been abolished. In future, the teachers in these schools will receive free tuition.

#### TEACHERS' COURSES AT AGRICULTURAL COLLEGE.

Special courses to fit Normal-trained teachers for rural schools are being provided. Special three-months' courses in elementary agriculture and horticulture, and in workshop training, and probably in household science, are to be given at the Ontario Agricultural College, Guelph. Teachers with a Model-school course, and, at least, one year's teaching experience, who pass the final examinations of the Normal School by the beginning of April, will be given an opportunity of taking the special three-months' course at Guelph. Their travelling expenses to and from the College will be paid, and while there, their tuition and board will be free. It is thus hoped to provide rural schools with teachers who will interest boys and girls in country life, and impart to them instruction useful to all who intend to live on the farm. The Government is of the opinion that the first step to take in the work of reform is to provide competent teachers prepared amid proper surroundings. Without such teachers, courses of study and regulations can be of no avail.

#### HIGH-SCHOOL AGRICULTURAL CLASSES.

The Government is impressed by the success thus

far of the six agricultural departments in the Collegiate Institutes, and will provide two more this year. In these departments, as already announced, pupils taking the ordinary high-school course receive two years' instruction in field husbandry, animal husbandry, dairy husbandry, poultry-keeping, horticulture, forestry, agricultural botany, agricultural physics, agricultural chemistry and entomology. Short, practical courses, held in different parts of the country, for those who can leave the farm only for a few weeks, have also been provided; and, while, as was anticipated, the High-school classes have not been large, the country classes have been both large and successful. As agents of the O. A. C., the services of the teachers of the agricultural departments have also met with an enthusiastic reception from the farming community.

#### CONTINUATION CLASSES AND TOWNSHIP HIGH SCHOOLS.

The latest amendments to the law also provide for the reorganization of Continuation Class work. This policy carries out the promise made to place better school facilities within the reach of the rural population. In future the continuation classes will be divided into Continuation Schools (which will do work inclusive of and in advance of fifth-class instruction) and Fifth Classes. Both will be generously aided by grants. To show the earnest desire of the Government to provide

adequate instruction for the rural districts, it may be pointed out that the Continuation grants have increased from \$21,000 in 1905 to \$45,000 voted for 1908. The Continuation Schools will, it is expected, multiply rapidly, so that a kind of rural or township high school will be provided, with, in time, at least one in every township in the Province. The Fifth Classes, also, are expected to increase in number rapidly, and if found necessary the present regulations will be modified to stimulate and fittingly reward local effort.

#### EXPENDITURES.

It is announced that during the past four years the educational grants voted by the Legislature, not including the cost of administering the system, but money actually bestowed upon instruction and kindred objects, have increased by \$25,000, almost a \$1,000,000. It will take some time before the effect of this expenditure will be fully apparent. Great improvement has already been made, and there can be no doubt of the final result. In the meantime, it is gratifying to find that the efforts of the Department of Education to make the school system efficient, as a whole, are generally commended by the press and the public, and that a more hopeful spirit pervades both the teaching profession and the Province at large.

## Ontario Provincial Legislature, 1908.

### Notes on the Recent Session from an Agricultural Standpoint.

#### AGRICULTURAL SOCIETIES.

Some years ago a convention of representatives of the old District Societies met in Toronto, and asked the Government to increase their grant. This was acceded to, and an additional \$100 provided for each of the District Societies, the grants to township societies being unaffected. The coming in of the revised Act put all societies on equal footing in qualifying for the grant, the common basis being the amount spent in the previous year for purely agricultural purposes. There have been rumors of another "attack." This came to a head at the recent meeting of the Provincial Fairs Association. They marched to the Parliament Buildings, two hundred strong, and boldly asked for another \$30,000, which, added to the \$70,000 annually provided, would round off the \$100,000. The idea apparently had gone abroad that the Government had plenty and to spare, and that, while grants were being increased along other lines, the ancient and honorable agricultural societies should receive their fair proportion. The Government "took the matter into serious consideration," and voted not the \$30,000, but the following, to be expended through the societies:

Pure-seed fairs .....	\$1,000
Spring stock shows .....	3,000
Field-crop competitions .....	3,000

An amendment was made to the Act, whereby the old limit of \$70,000 was removed, and the expenditure of these additional lines permitted. Evidently, the Minister of Agriculture thinks that the success of these three lines of work warrants expansion, and so the door is opened for future increases as circumstances permit and the expenditure is justified.

#### HORTICULTURAL SOCIETIES.

At the recent annual meeting of the representatives of horticultural societies, the new Act was fully discussed, and changes suggested. The Minister has embodied these in an amendment Act. Hereafter, the annual meetings will be held in the first week in November, just before the Provincial Horticultural Exhibition, and, at this meeting, delegates will be appointed to the Provincial meeting. A large attendance will likely result. Further, the officers will have the entire winter to plan for the campaign of the coming year's work. New societies will still be organized in January. All reports will be in the hands of the Superintendent by Feb. 1st. The grants can immediately be appointed, and the societies notified as to what is coming to each upon their filing affidavits of membership for the current year. These grants will be payable on or before July 1st, which date is the limit for completing the membership lists. Hereafter, all societies, city and town, will have their grants based on the work and membership of the previous year. The limit of expenditure along any one line is changed from "one-third" to "one-half," and grants or donations for any specific purpose are excluded from the calculation. A grant of \$500 was made to enable the Department to send speakers to special meetings of societies.

#### WINTER FAIR, GUELPH.

Twenty thousand dollars was voted for enlarging the Winter Fair building at Guelph, and an increase in the appropriation for holding the Show necessitated by the addition of horses to the exhibits. There is a vote of \$1,000 for horse exhibits, and, also, a special \$3,000 for horse shows. It is presumed that the summer horse shows and the Winter Horse Show at Guelph will be provided for out of this \$4,000.

#### EASTERN WINTER FAIR, OTTAWA.

Apparently the appropriation has not hitherto been sufficient, for there is a grant of \$1,200 to square old accounts, and the usual vote of \$4,100 has been increased to \$5,500, besides which there is \$500 for poultry coops.

#### INSTITUTES.

Hitherto, the grants for Farmers' Institutes, Women's Institutes, Fruit Institutes, etc., have been voted separately. This year they are all grouped together, and the vote stands at \$21,500, an increase of \$1,500. The explanation given was that Women's Institutes are increasing rapidly, and there is a great demand for special Institutes of all kinds—Fruit Institutes, Poultry Institutes, Live-stock and Judging Institutes, etc.

#### DAIRY WORK.

The passing away of the old dairy school at Strathroy is indicated in a small vote to pay for the advertising and sale of the same. Report is that the building has been sold by tender, and the equipment transferred to the dairy school at Guelph. The estimates under the Guelph dairy department indicate a change in method. Hitherto, milk has been purchased from the producers, and the College has received the revenue from the sale of butter and cheese. Arrangements have been made, beginning April 1st, whereby the College makes for the producers at a fixed price per lb. of cheese and butter, and the patrons get the money received from the sale of the manufactured goods. A most important change has been made in one of the dairy Acts. The old Act to prevent fraud in the manufacture of cheese and butter now comes to us as The Milk, Cheese and Butter Act. The name is simplified, but the provisions have been extended. Formerly, the inspectors could inspect, for sanitary conditions, the premises of producers sending milk to the factories, but had not power to take and test samples of the cows' milk. Now they are given this power. Further, in villages, towns and cities, all milk sold must be genuine. Skim milk cannot be sold unless so advertised. Inspectors can be appointed by the Minister under this Act to test samples of milk at the place of production, in transit, at the milk depots, and when being delivered to customers. Watering, skimming and the using of preservatives are prohibited, unless it is clearly advertised that such is being done. The inspectors for the cheese factories and creameries are paid by the Department. The inspectors for prosecuting are paid by the two dairy associations. Any inspectors appointed for prosecuting in the case of city or town milk supply will be paid by the city or town; but all will be appointed by Order-in-Council on the recommendation of the Minister. A strong effort was made on the representation of the Toronto Board of Health to have a milk standard established, but this was rejected, as it was not thought to be the most effective method. After this was disposed of, the Minister enlarged his proposed legislation as indicated above to meet the demand for a pure and genuine article in the city and town supply. One of the last Acts of the session was the putting through of the Act, in its consolidated form, so that the dairymen of the Province now have it in this more convenient form.

#### BREAD.

As farmers are more and more using bakers' bread, a reference to this, following milk, will be in order. For some years, bakers have been allowed to make bread in any size, provided it was labelled as to weight. Again and again, proposal has been made to do away with the label, and return to the old standards. The proposals have been various and conflicting. The question was attacked this year again with vigor. All the bills were gathered together—bread by the dozen was piled up before the committee. The law now is as follows: Ordinary bread made for sale, or offered for sale outside of the municipality in which it is made, must be in loaves of either one and one-half pounds, or three pounds; fancy bread, for the same purpose, must weigh 16 ozs. or 20 ozs., and must be labelled. Fancy bread is defined as bread having a certain per cent. of sugar and shortening, or of milk solids in addition to the flour.

#### FRUIT, VEGETABLES, ETC.

This branch of the Department is now fully organized, for provision is made for a head to be known as Director of the Fruit Industry. Mr. P. W. Hodgetts, Secretary of the Ontario Fruit-growers' Association, has been appointed to the position. Hitherto, he has also been Accountant to the Department. The grants of \$6,000 for encouraging spraying are continued this year, and the grant to the Vegetable-growers' Association has been increased to \$800. The most important items deal with the new experimental fruit farm at Jordan Harbor. Fifteen thousand five hundred dollars has been appropriated for maintenance and for experimental work, and \$24,300 for buildings—administration building, greenhouses, storage plant, and residences.

#### DEMONSTRATION FARM.

Work has been begun on the new demonstration farm, on the Toronto and Northern Ontario Railway, 460 miles north of Toronto. One hundred acres have been cleared during the past winter. Ten thousand dollars is provided to complete this great building and begin practical work.

#### DISTRICT REPRESENTATIVES.

Last year, six graduates of the Agricultural College were located in six counties, provision made for agricultural classes in the high schools and offices opened for assisting and instructing farmers. The Department of Education provides for the salaries, and the Department of Agriculture for the office, travelling and other expenses. It is proposed to add to the members this year, as well as provide assistants during the summer to at least four of those already appointed. Nine thousand six hundred dollars is voted for salaries, and \$7,700 for office and other expenses.

#### VETERINARY COLLEGE.

There have been rumors and suggestions that the Ontario Veterinary College was to pass into the hands of the Government. A vote of \$20,000 in the supplementary estimates indicate that this is about to be realized. The announcement was made that the College is to be taken over, a new principal and staff appointed, and the College is to be run as a branch of the Department, on lines similar to the Agricultural College. It is understood that the course is to be extended to three years, the standard of admission raised, and an effort made to put it on a par with the Agricultural College. In fact, one would not be surprised to see it ultimately federated with the latter, and more closely associated with the University.

#### FORESTRY.

A vote of \$5,000, entitled "grant for special forestry work," is, by itself, not likely to attract much attention, but, with the Minister's explanation, it may be the promise of a work that will ultimately lead to big things. It is proposed that the Department shall buy up cheap waste lands in the older-settled counties, start nurseries, plant, preserve, and thus inaugurate Government and municipal forest reserves. It may not mean much this year, but it is a beginning, and it is the first step which counts. The farm forester of the College has, for a year past, been quietly investigating, and, we understand, he knows just where a beginning can be made.

#### ONTARIO AGRICULTURAL COLLEGE.

Two additional teachers are provided for, a Lecturer in Economics and a Demonstrator in Fungus Diseases and Insects. Provision is also made for extending the work in demonstrating the principles of farm drainage. In the way of public works, besides completing work already under construction, the following new work is provided for: Vegetable and fruit house (\$3,000), incubator house (\$8,000), farmer's house (\$3,000), new cattle stables (\$4,000). It is also

understood that the Department of Education will shortly announce a summer course at the College for Normal teachers in training, a part of the new scheme of equipping teachers for agriculture and nature study in rural public schools.

ASSOCIATIONS.

An amendment to the Associations Act provides for the recognition of The Gardeners and Florists' Association. It is proposed that this shall take up the only bit of work now left to the old Toronto District Agricultural Society, namely, holding flower shows and looking after the work of the florists in connection with the Horticultural Exhibition. The latter will be organized under the Act along lines similar to those of the two winter fairs.

WEEDS.

The Noxious Weeds Act, as it appeared in the Revised Statutes of 1897, placed the cutting of the weeds on the highways in charge of the municipal overseers, the work to be performed as a part of the ordinary state labor, and to be paid for by the municipal treasurer as directed by the council. In 1904 this provision was cut out, and the duty placed on the landowners, who were required to cut down weeds on the half-road allowance opposite their respective farms or lots. This amendment of 1904 has now been repealed, and the former section replaced, so that the responsibility is again placed in the hands of overseers of highways to have the work done by statute labor.

AUTOMOBILES.

There was a revival of the battle over this much-discussed question. The principal changes in the amending Act are as follows: (a) All paid drivers must be licensed by the Provincial Secretary; (b) no person under 17 years of age is allowed to drive a motor vehicle on any public street or highway; (c) when meeting horses which appear to be frightened, or when signalled to stop, the driver of the motor shall stop, and, also, SHUT OFF THE MOTOR, and if necessary, assist the driver of the horse to pass; (d) when meeting a funeral, the motor must be stopped, and, where practicable, the motor shall be turned into an intersecting street, road or lane, until the funeral procession has passed.

APPROPRIATIONS.

	1907.	1908.
Agricultural societies, etc.	\$102,092	\$109,412
Live-stock Branch	28,682	30,375
Institutes Branch	27,816	30,272
Dairy Branch	57,650	55,800
Fruit Branch	40,522	39,200
Bureau of Industries	5,500	5,500
Miscellaneous	30,500	73,650
Agricultural College:		
Salaries and expenses	109,375	119,835
Macdonald Institute	33,250	34,190
Forestry	4,000	9,500
Animal Department	20,610	20,250
Field Department	8,990	10,800
Exp'l Dairy	14,495	7,518
Dairy School	9,560	10,850
Poultry Department	3,835	4,990
Horticulture Department	9,626	3,874
Mechanical Department	950	1,000
Farm drainage		1,000
Total	\$507,453	\$574,016
Capital Account	77,225	82,310

The following were the expenditures in connection with agriculture during 1907: General agriculture, \$480,318; public buildings (capital account), \$66,836; total, \$547,254. These correspond to the amounts referred to above. In addition there was expended the following: \$75,000 (the last special grant under the Beet-sugar Bounty Act), and \$26,647, the cost of the head offices of the Department (Civil Government). The revenue of the Department for 1907 was \$78,598, as against \$71,814 in 1906.

LET FARMERS DO THEIR OWN THINKING.

Editor "The Farmer's Advocate":

Thanks to our "Advocate" mentor for the McKenny letter and endorsement thereof. Let farmers no longer be tongue-tied, but do a little of their own thinking; not to be like Thoreau's rustic, "the man that works as I do, and keeps the thoughts he has already got, does well." We feel our position not unlike Issacher of old—"a strong ass crouching between two burdens"—as we have our own circumstanced conditions, and the relativity in which our rulers have placed us. Let our position of the free and independent yeomanry not all evaporate on election times. Let the plain, palpable, provable facts of our position be shown and typed as our average farm balance-sheets, to show what can be met, if Governmental works pay rates beyond the farm's possibilities. We old pioneer hands look like old army mules, fit only to be dumped on some village roadside, if "we may not have been "Oslerized" at the oar; but as we are allowed to be the cause of all the unearned increment now so bluffed, sure we have priority and claim on the new pensions.

Bruce Co., Ont.

DAIRY INSTRUCTION STAFF, EASTERN ONTARIO

Editor "The Farmer's Advocate":

I enclose you a list of the names of the men who have been appointed as instructors and sanitary inspectors for cheese factories for 1908: D. J. Cameron, Campbellcroft; R. W. Ward, Peterboro'; J. B. Lowery, Frankford; R. T. Gray, Campbellford; T. H. Whattam, Picton; Hugh Howie, Belleville; G. H. Bensley, Warkworth; W. H. Brintnell, Kingston; S. S. Cheetham, Gananoque; A. H. Wilson, Athens; J. H. Echlin, Balderson; Peter Nolan, Philippsville; W. J. Ragsdale, Smith's Falls; W. G. Gardiner, Easton's Corners; C. B. Larry, Kemptville; W. G. Graham, Vankleek Hill; Thos. J. Ellis, Chesterville; C. W. Norval, North Williamsburg; J. Villeneuve, Casselman; Jos. Charbonneau, Plantagenet; Allan MacDonnell, Alexandria; W. W. Dool, Ottawa; R. E. Elliott, Carp; Jobiel Buro, Mille Roches.

Inspectors of Creameries: Jas. Stonehouse, Port Perry.

The instructors have just attended a special course at the Eastern Dairy School, Kingston. The course was of a week's duration, and the subjects dealt with in the course were those having a direct bearing on the work of instruction and inspection. While lectures were given by the staff of the School, a good deal of time was devoted to discussion. In this, special attention was given to the consideration of the causes of the defects found in our cheese, and the best methods of overcoming the same.

While general progress is being noted from year to year, we believe that it was more marked in 1907 than in any previous year, and it would appear that 1908 would be not lacking in this respect, as a special effort has been put forth during the fall and winter by a series of district dairy meetings, and the supplying of speakers to annual factory meetings. The instructors are unanimous in their opinion that splendid results will be obtained from this work. The patrons are becoming more interested in seeing that suitable conditions exist for the proper manufacture of their dairy products, and are devoting more attention to the care and production of the milk, and nothing is more gratifying to us than this, as we realize that with their co-operation in this respect, success is assured.

G. G. PUBLLOW,

Chief Dairy Instructor for Eastern Ontario.

OXFORD COUNTY - ROADS EXPENDITURE.

Editor "The Farmer's Advocate":

In your issue of Feb. 27th I noticed a letter from S. A. Freeman, Oxford County, denouncing the County-road system. Mr. Freeman states "that an expenditure of \$90,000 has been made, and only ten miles of road improved, and the Government has not paid one cent," and he hopes it never will. At time of writing, I have the Government's 12th Annual Report on Highway Improvement of 1907, and find that the County of Oxford expended in 1904 and 1905, \$53,043.71, instead of \$90,000, as Mr. Freeman states, and the Government paid one-third, or \$17,678.27. It would seem as if Mr. Freeman has not seen this Report, but these are the Government figures, and should bear inspection. It would be better if these reports were more freely circulated, then one would see what is being done in one's own county. The subject of adopting a county-road system is now being agitated in Huron County. I sincerely hope it may soon be carried into effect. The Act applies to both roads and bridges, and only needs to be understood to be fully appreciated.

HURON SUBSCRIBER.

[Note.—The facts submitted to us by the County Clerk of Oxford County are as follows: Up to 1904, Oxford County had toll roads. In that year they were purchased by the County for some \$53,000, and the Provincial Government paid over \$17,000 in aid thereof, the roads going back into the hands of the township municipalities. In 1907, the County proceeded to take advantage of the Good Roads Act, and spent, for machinery and road improvement, somewhere about \$90,000. The account was presented to the Government in February, with a request for one-third of this amount, but the grant has not been received as yet. The work has been approved of by the proper officers, and the Lieutenant-Governor-in-Council has directed the payment to the County of over \$26,000, but through some technical error in the preparation of the by-law, the auditor refused to pass the amount, notwithstanding the fact that the Law Clerk of the Legislature prepared the by-law, but Mr. Campbell, the Deputy Minister of Public Works, informs the County that the matter will easily be remedied. Preparations are made for continuing the work during the present year, but in a more economical way.—Editor.]

A PROGRESSIVE LOCAL TELEPHONE SYSTEM.

Among the most progressive independent rural telephone lines in Ontario is that of the Harrietsville Association, which, at the end of 1907, had 205 telephones installed; 64 miles of circuit; paid-up stock, 661 shares at \$10 each; paying a dividend of six per cent. per annum. Dr. Wm. Doan is President and Manager; Jas. Smith, Vice-President, and C. B. Adams, Secretary-Treasurer.

A few years ago, the manufacture of cement in Japan was making slow progress, the amount scarcely exceeding 600,000 barrels. Of late, the demand is growing by leaps and bounds. At present, the total output throughout the country reaches about 1,300,000 barrels per month.

ANOTHER TEXT FOR MISS WATT.

Editor "The Farmer's Advocate":

In your issue of April 2nd I notice another article by Eunice Watt, attacking my remarks re military training and tuberculosis. Her scriptural quotations without doubt describe a state of affairs to be most devoutly hoped for. I agree most emphatically with Eunice Watt as to the desirability of the consummation of peace; we differ only as to the method by which this end can be best attained.

Your Nova Scotian correspondent concedes that physical culture is a desirable addition to the training received in our schools, but objects to the bearing of arms "as the first step towards conscription." Now, it is the opinion of almost all the thinkers of the day that such instruction is one of the best remedies for the same, and it stands to reason that such a deduction is correct. The necessity for conscription will be completely done away with when we have the boys of our nation trained so that they are capable of the defence of their country; for I would remind Miss Watt that the object of all military training in Canada is "defence, not defiance."

Eunice Watt also states that there are two distinct sides to a soldier's training—the military and gymnastic side—and that the latter is given to counteract the stiffness of the former. Here, again, she is in error. If she will turn to infantry training, she will find that the extension motions (which I advocated as a means of building up the minds and bodies of children) are used to set up the recruit, to develop his chest and general physique, to prepare for (not counteract) the training of a soldier.

Miss Watt is not alone in her aversion to the bearing of arms. We have, in Ontario, a transient colony of Doukhobors, who are imbued with the same prejudice. Even Miss Watt, however, would be unlikely to regard as exemplary citizens these adherents of this principle, beside whom even the degraded and wholly unregenerate Tommy Atkins would appear in quite a favorable light.

Propos of Tommy Atkins, Eunice Watt seems to go rather far afield when quoting instances of depravity in the English regular army as a sweeping condemnation of our Canadian volunteer militia. I will not attempt a refutation of the aspersions cast on the character of Tommy Atkins (in my humble opinion that gentleman is quite capable of maintaining his character in the face of almost any odds), but, in passing, will refer you to a couple of lines of Kipling's which seem to fit the present instance:

"Yes, making mock of uniforms, that guard you while you sleep.  
Is cheaper than those uniforms—and they're starvation cheap."

Never having had the privilege of attending a camp in Nova Scotia, and realizing the great difference which evidently exists between the people of Nova Scotia and Ontario, I hardly feel competent to enter into a controversy with Eunice Watt as to the conduct of her brother Nova Scotians assembled in military camp, whom she holds up as a set of vandals. Now, in Ontario, the men who compose our militia are of a decidedly different class. Occasionally we have some turbulent spirits, who are rather hard to control, but they are soon shown that unseemly conduct will not be tolerated by either their comrades or the military authorities.

I must confess, however, that I am not overwhelmed with astonishment at the statement that in an assembly of forty-one hundred men she saw some drunkenness and fighting. It would, I imagine, be a matter for greater astonishment if she had not seen something of the sort in a gathering of such a number; no matter what their calling.

As to it being injurious for boys to come into contact with the bad and idle, I would ask Eunice Watt what profession they might pursue in which they would not come into contact with those who will lead them into temptation. In every walk in life it is the same; parsons fall, medical men are not above suspicion, bank managers embezzle the funds of their employers, and in many cases the very sins of which the Tommy Atkins she goes so far afield to seek is accused, are the cause of the downfall.

Again, Miss Watt makes a rather sweeping assertion when stating that a soldier is a parasite. Why should he be singled out for criticism any more than any other Government employee? He is paid, and not too generously, by the Government. He does his appointed work, and does it well. Unlike the member of the civil service, he can hardly be accused of following his calling for "what there is in it." His opportunities for "graft" are decidedly limited. In spite of Eunice Watt's aversion to quotations, I cannot refrain from quoting a verse from Kipling, which I imagine would describe my horticultural friend's state of mind, were our country ever invaded by a foreign power:

"It's Tommy this, and Tommy that,  
And 'Tommy fall behind.'  
But it's 'Please to walk in front, sir,'  
When there's trouble in the wind."

Thanking you, Mr. Editor, for the space occupied in your valuable journal.

A MILITARY-TRAINED FARMER.  
Peterboro Co., Ont.

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.  
 2nd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.  
 3rd.—In Veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.  
 4th.—When a reply by mail is required, to urgent veterinary or legal enquiries, \$1 must be enclosed.

Veterinary.

INFLUENZA.

Two of my horses have had a cough for ten days. They sneeze and cough, but there is little nasal discharge.

C. W. B.

Ans.—They have influenza. This usually yields readily to treatment, but is liable to almost any complication. Keep comfortable and dry. So long as they eat fairly well, gentle work in fine weather will do no harm, but they should not be heated nor allowed to get wet or cold. Make a liniment of equal parts raw linseed oil, oil of turpentine and liquor ammonia, and rub their throats, twice daily, with it for three days. Take 10 ounces chlorate of potassium and 2 ounces quinine. Mix, and make into 48 powders. Give a powder to each horse three times daily.

V.

PARALYSIS.

My sheep are fed on clover hay and pea straw, with a little grain, and a few roots, and have plenty of exercise. One ewe frequently fell on her knees, and the others would push her over when feeding. She lost control of her limbs entirely. We treated her with linseed oil and turpentine, and applied pine tar to nostrils, but she died.

A. J.

Ans.—The ewe died from paralysis. It is not possible to say what caused the trouble, any animal of any class is liable. It frequently arises from stomach trouble, but probably is more often due to a growth upon the spinal cord. Treatment is often unsuccessful, and consists in purging with 6 to 8 ozs. raw linseed oil, and following up with 20 grains nux vomica three times daily.

V.

INAPPETENCE.

Ram took diarrhoea. We treated with castor oil, laudanum and tincture of arnica. The diarrhoea ceased, but he has little appetite. We drench him with new milk, eggs and brandy. He has a slight discharge from his nostrils, and he coughs a little after being drenched. He is still strong. He has been fed clover hay, cut corn, a few pulped roots, and a little meal consisting of corn and frozen wheat. He may have had an overfeed of frozen wheat.

W. E. S.

Ans.—Take 2 ounces each of sulphate of iron, gentian, ginger and auz vomica. Mix, and make into 36 powders. Give a powder three times daily mixed with the milk, eggs and brandy. Be very careful in drenching him, as there is danger of some of the fluid passing down the windpipe. This is probably what causes him to cough. Give him anything he will eat, except the frozen wheat.

V.

Miscellaneous.

BUYING UNSOUND HORSE.

A has an auction sale. B buys a span of horses. Unknown to B, one of these horses is ailing seriously with his water. A admits he was wrong two weeks before the sale, but refuses to take the horses back. If this horse dies on B's hands (he having done everything to cure the horse), can A collect the price of same from B?

P. F.

Ans.—We think so, for it does not appear from your statement of facts that there was any misrepresentation on A's part, or any concealment by him of the animal's unsoundness. Indeed, it does not appear that to A's knowledge the horse was unsound at the time of sale. And, moreover, the statement does not show that there was any return or formal tendering back to A by B of the horse in question upon the latter's discovery of the fact of the unsoundness.

LINE FENCING.

A and B are two farmers living alongside of each other. The school ground between them is on A. B's share of line fence is at the back, A's share being front. Where would be the lawful place to measure from? Would it be from the road, or from back part of school fence?

FARMER.

Ans.—From the rear end of the school fence.

POULTRY MANAGERS AT EXPERIMENTAL FARM.

Who is in charge of the poultry department at the Government farm? New Brunswick.

W. J. U.

Ans.—There are many Government farms in Canada. A correspondent should be specific. The poultry manager at the Central Experimental Farm, Ottawa, is A. G. Gilbert. At the Agricultural College, Truro, N. S., the poultryman is J. P. Landry. At the Maritime (Dominion Government) Experimental Farm, at Nappan, N. S., the poultry as well as other departments are under the supervision of the Superintendent, R. Robertson.

REPAIRING APPROACH.

I am repairing approach to barn, the dimensions of which are sixteen feet wide by twenty feet long. Could you suggest a suitable covering for it, which would not be too expensive?

1. Would you think a building over it would look all right, on account of its length out from barn?

2. Would a covering of cement be more suitable and less expensive?

3. If I put cement, would you advise putting it on boards laid on wooden stringers?

4. What slope would you give it per foot?

5. Would cement be too slippery for horses to go up on?

READER.

Ans.—1. We think the length out from the barn would be too great for best appearance, and the expense is unnecessary anyway.

2. Cement would be cheaper, and as good.

3. The one thing essential is that it be laid on something solid. Much use can be made of wire in strengthening cement.

4. One inch would be about right.

5. Cement-concrete smoothed is very slippery, but it can be scored with cross grooves to make it safe; or it could be covered with earth.

T.

HIGHEST GOOD LAND NEAR TORONTO.

Which is the highest, good, agricultural section within 80 miles of Toronto, and what is the altitude of the place, also the kind of farming that is general in that section, also the price per acre of good, improved farm land, with house and other buildings all in good order?

W. A.

Ans.—The high ground, of course, is immediately north of Toronto. The Union Station is 254 feet above the level of the sea, and just a few feet above the level of the lake. Richmond Hill, 18 miles north of Toronto, is 817 feet above the sea, and 26 miles north we have the highest ground, immediately north of Toronto, 1,000 feet at King Station. All the intervening section is good farming land. The value varies according to the distance from Toronto and from the larger towns in the neighborhood. Ordinary farm lands, having no particular advantages with reference to situation, sell from \$45 to \$70 per acre. Land near Toronto, partly on account of its great fertility, but more, perhaps, on account of its situation, will sell for double that. Farms with good buildings, but nothing extra, would go from \$50 to \$80 per acre. Where the buildings are a special feature, from \$30 to \$50 per acre would be added. As a matter of fact, the price varies very distinctly with the improvements and with the situation so that only a personal examination could determine whether there was value for the price asked.

Mixed farming is the ordinary occupation. Near Toronto, dairy farming is a very important feature, supplying city milk. This is also becoming a feature in the neighborhood of the stations 40 or 50 miles north of Toronto. In a few sections, pure-bred stock breeding is followed, both in York County and in Ontario County. The only way of determining accurately would be to secure lists of places for sale from real-estate agents and pass upon them individually.

Speaking generally, improved farms have as high a value within a radius of 80 miles of Toronto as in any other part of Canada. I except, of course, the high land lying to the north-west of Toronto, in the Counties of Wellington and Dufferin, which would come within the 80-mile belt. There is much rough land there, especially in the Township of Caledon and generally around Orangeville.

A. McNeill,

Chief, Fruit Division.

SECRETARY OF THE DOMINION GRANGE.

Kindly give me, through your columns, the address of the Secretary of the Grange in Ontario.

W. M.

Ans.—The Secretary of the Dominion Grange is W. F. W. Fisher, Burlington, Ont.

CALCULATIONS OF COST OF FEEDING—HOG PASTURE.

1. How much is it worth to keep four horses for two winters and one summer, fed about half clover hay and half straw, and about four quarts of oats and bran, equal parts, per day?

2. How much is it worth to keep one cow two winters and one summer? She milked some this winter, but not much, being her first calf. Cattle were fed straw and cut cornstalks, without husking. No chop.

3. How much is it worth to keep a calf, born in the fall of 1906, to the present time?

4. I have small piece of clover I intended for hog pasture, but the clover seems to be killed. Is there anything I could sow for pasture this summer?

AN INTERESTED READER.

Ans.—1. If we assume that the horse was kept for exactly one and one-half years, then if it was fed during all that time an average of four quarts daily of a mixture of equal parts by bulk of oats and bran, it would consume approximately thirty-four and one-quarter bushels of oats, and about five hundred and fifty pounds of bran. The amount of hay and straw consumed by a horse will depend, of course, upon the size of the animal, and it will also depend upon the care exercised in feeding. A moderate-sized horse should get along very nicely upon about fifteen pounds of hay per day. At this rate, in one and one-half years, the horse would consume a little over four tons of the mixture of hay and straw. From these figures your correspondent can estimate the cost fairly accurately from the market value of the products he fed. It is impossible for an outsider to say just exactly what rate should be charged for these foods.

2. As to the cost of keeping a cow during one and one-half years, I think it would be fairly safe to estimate that she would consume about thirty pounds daily of the straw and cornstalks. Possibly she would use really more than this, but it would hardly be safe to make the estimate higher. As for the summer, I presume she was on pasture, and pasture is variously estimated all the way from \$1 to \$2 per month per cow. Your correspondent, no doubt, will be able to ascertain what is the common charge for pasture in his locality, and from the figures I have given he will be able to arrive at an approximate idea of the cost of keeping the cow.

3. In regard to the calf, it is impossible to say, from the statement furnished by your correspondent what it would cost to feed this calf. It will all depend upon how the calf was fed. The cost of keeping the calf a year may be kept down below \$20 in some cases, and if the calf is liberally fed, and given whole milk for a considerable period at the start, the cost may run as high as \$40. Your correspondent will have to make his own calculation in this case.

4. One of the best things to sow for a hog pasture is rape. The main objection to it is that it is somewhat late in the season before it can be used. If the rape is sown very early, it is liable to be eaten off by the flea beetle, and our experience is that it is not safe to sow rape before the end of May at the earliest, and it would probably be five or six weeks before the rape would afford pasture worth speaking of. At the same time, I think that, under the circumstances, rape should be about as satisfactory a pasture crop as your correspondent could use.

G. E. DAY.

STRYCHNINE FOR CROWS.

I am thinking of saturating for a short time, and then drying my seed corn in a solution of strychnine to prevent crows from pulling. What do you think of the plan? Would it injure its germinating qualities, or would the action of the soil remove its poisonous effects? Coal tar is not entirely satisfactory, as it has a tendency to gum-up the planter, and crows will pull a considerable amount and leave it lying upon the ground untouched.

CORN-GROWER.

Ans.—Strychnine would probably be found quite an effective protection, and we would not anticipate adverse effects on the germination, but it is somewhat dangerous to use, especially where children or poultry are about. Moreover, it is not advisable to kill crows, unless overly numerous. A reasonable number of crows do far more good than harm. The aim should be, therefore, merely to keep them from pulling up the corn. Coal tar, applied as recently directed through these columns, is pretty effective, not very troublesome, and thoroughly safe. In planting, it is well to step on every hill after the planter is withdrawn. This helps to cover any exposed kernels, and by pressing the soil about the seed tends to hasten germination as well. After the field is planted, it should be lightly harrowed to restore a surface mulch and especially to prevent the soil baking over the hill, as tramped soil of a clayey nature is liable to do more or less.

TIME TO SOW CLOVER—SPAVIN.

1. Taking one year with another, when is the proper time to sow clover seed?

2. Explain in what condition a horse's joint is in when spavined.

3. How would coal oil act on it?

4. Will coal oil blister if rubbed in?

5. Is there any benefit derived from feeding horses tobacco in small quantities?

6. Which is the most beneficial feeding for horses, a cut mess or whole grain, and why?

H. W.

Ans.—1. On fall wheat, it is generally sown in April, when the ground is freezing and thawing alternately, the seed being covered by the contraction and expansion of the soil. If sown on fall wheat, after freezing is over, harrowing is advised, as it not only covers the seed, but, also, as a rule, improves the growth of the wheat. With spring grain, it is sown at the same time as the grain, either by means of a grass-seed attachment to the drill, or by hand and covered by a stroke of the harrows. The earlier in spring the seed is sown, the better, provided the land is in fit condition to be worked into a fine tilth.

2. There are two kinds of spavin, namely, bone spavin and bog spavin. Bone or jack spavin is a disease of the bone of the hock, an inflammation of the articular (joint) surface, as a result of which marked lameness is usually shown, following which a bony enlargement is thrown out at the lower part of the internal side of the hock joint. The result of this is often stiffening of the joint. Bog spavin appears as a soft, puffy swelling on the inner sides of the hock, just above the site of bone spavin.

3 and 4.—Coal oil will blister if applied where there is hair; but a stronger blister is needed for the cure of bone spavin, and generally needs to be repeated. The biniodide-of-mercury blister is generally used. The preparation and use of this is frequently described in these columns. For bog spavin, bathe with lukewarm salt water until soreness and lameness disappears, then blister as in the other case.

5. We know nothing from experience of this, and have not heard of its use being practiced or recommended.

6. If a horse's teeth are in good condition, whole grain and hay is as good as any method of feeding, unless he has the habit of gulping his oats without chewing, in which cases mixing the oats with cut hay or bran to secure better mastication is advisable. Indeed, it is good practice to feed at least one meal a day, the night meal preferred, mixed with a cut mess, or with sifted wheat chaff, or bran.

## THE TRADERS BANK OF CANADA

Incorporated 1885.

### Joint Deposit Accounts

A special convenience in force in our Savings Department, is the "Joint Deposit Account."

This means that an account may be opened in the names of two persons (husband and wife or any two members of a family) so that either may withdraw money on their individual checks.

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\$1.00 opens a Savings Account. Interest added quarterly.

One of the 75 branches of this bank is convenient to you. Your account is invited.

## MARKETS.

### TORONTO. LIVE STOCK.

The total receipts of live stock at the City and Junction markets last week were 203 carloads, composed of 2,995 cattle, 3,515 hogs, 665 sheep, 738 calves and 183 horses. The number of finished cattle was not as large as it was on the previous week. Trade was good, with prices firm for the best grades; but the half-finished cattle were a trifle easier.

At the Junction market on Monday, 20th, receipts were light, 548 cattle; trade broke. Prices were higher. Export steers sold at \$5 to \$6; export bulls, \$4 to \$5; picked butchers', \$5.60 to \$5.90; good loads, \$5.25 to \$5.50; medium, \$5 to \$5.25; common, \$4.65 to \$4.85; cows, \$3.25 to \$3.50; short-keep feeders, \$4.15 to \$5; milch cows, \$30 to \$50; calves, \$4 to \$6; sheep, \$5 to \$5.50 per cwt.; yearling lambs, \$8 to \$8.50 per cwt.; spring lambs, \$4 to \$8 each; hogs, \$6.40 for selects, and \$6.15, f. o. b. cars, country points.

Exporters.—Export steers last week sold at \$5 to \$6 per cwt., the bulk of the best selling at \$5.40 to \$5.70; export bulls sold at \$4 to \$5 per cwt.

Butchers'.—Prime picked lots sold at \$5.40 to \$5.70, loads of good, \$5 to \$5.25; medium, \$4.75 to \$5; common, \$4 to \$4.50; cows, \$3.50 to \$4.40; canners, \$2 to \$3 per cwt.

Milkers and Springers.—Receipts of milkers and forward springers were limited, with a quiet market. Prices ranged from \$30 to \$55, the bulk of the best cows averaging about \$45.

Veal Calves.—The number of so-called veal calves offered was large, but the quality was not good, as there were many dairy-bred, such as Holsteins and Jerseys. Prices were generally easier, at \$3 to \$6 per cwt., the bulk selling from \$5 to \$5.50, although a few choice new-milk-fed calves sold at \$7 per cwt.

Sheep and Lambs.—Export ewes sold at \$5 to \$5.50 per cwt.; yearling lambs of choice quality, \$8 to \$8.50 per cwt.; common, inferior lambs sold at \$5 to \$6.50 per cwt.; spring lambs sold from \$3 to \$9 each.

Hogs.—Packers, last week, quoted prices 10c. per cwt. lower. Selects, \$6.40 per cwt., fed and watered, and \$6.15 to \$6.25 to drovers, f. o. b. cars at country points.

Horses.—During the past week 180 horses were offered at the regular sales at the Union Stock-yards, on Monday and Wednesday. Out of this number, about two-thirds of them were sold by auction, while not a few were disposed of at private sale. The private sales are steadily increasing, and business in this way is being transacted daily. The prices reported by the Manager, J. Herbert Smith, were as follows: Drafters ranged from \$160 to \$210; expressers and general-purposes, \$150 to \$200; drivers, \$120 to \$160; serviceably sound at \$25 to \$95 each.

### BREADSTUFFS.

Wheat.—White winter, No. 2, buyers, at 89c.; No. 2 red, sellers, 89c.; No. 2, mixed, buyers at 87c.; No. 2 Goose, 82c.; Manitoba, No. 1 Northern, \$1.16; No. 2, feed, 64c., on track, Georgian Bay ports.

Rye.—No. 2, 86c. to 87c., market strong.

Barley.—Dull, at 55c. to 60c.

Peas.—No. 2, 88c., at outside points.

Oats.—No. 2 white, buyers, 45½c.; sellers, 46½c.; No. 2, mixed, 43c.

Corn.—No. 3 yellow American, 73½c.; No. 3, mixed, 72½c.

Buckwheat.—No. 2, 64½c. to 65c.

Bran.—Car lots, on track at Toronto, \$25, sacks included.

Shorts.—Car lots, on track at Toronto, \$26, sacks included.

Oil-cake Meal.—\$1.70 to \$1.75 per cwt.

Flour.—Ontario, 90 per cent. patents, \$3.50 bid for export; Manitoba patent, special brands, \$6; second patents, \$5.40; strong bakers', \$5.30.

### COUNTRY PRODUCE.

Butter.—Market firm. Creamery, pound rolls, 32c. to 33c., and Locust Hill brand is selling readily at 34c.; separator dairy, farmers' make, 30c. to 31c.; store lots, 26c. to 27c.

Cheese.—Market firm. Large, 14c.; twins, 14½c.

Eggs.—Receipts equal to demand, at 17c. to 18c.

Honey.—Market quiet; 11c. to 13c. for strained; and combs, \$2.75 to \$3 per dozen for prime clover.

Potatoes.—Prices firmer, on account of bad roads preventing delivery, which has caused light receipts. Ontarios, 85c. to 90c.; New Brunswick Delawares, 95c., for car lots, on track at Toronto.

Beans.—Market steady. Primes, \$1.70 to \$1.75; hand-picked, \$1.80 to \$1.85.

Poultry.—Deliveries light. Prices firmer. Turkeys, 20c. to 25c. per lb.; spring chickens, or hot-house broilers, 40c. per lb., last-fall chickens, 25c. to 27c.; year-old chickens, 18c. to 20c.; old fowl, 14c. to 15c.

Hay.—Car lots of baled hay on track at Toronto, \$15; market dull.

Straw.—Market dull. Car lots of baled straw, on track at Toronto, \$8 per ton.

### TORONTO FRUIT MARKET.

Deliveries of apples by farmers last week were large, greater than the demand, with prices lower. Russets, Ben Davis and common-class apples, \$1 to \$2 per bbl.; No. 2 Spies, \$2.50; selected, No. 1 Spies, \$3.50; cabbage plentiful, at \$20 per ton, or \$1.50 per bbl.; onions, \$1.25 to \$1.40 per bag.

### TORONTO SEED MARKET.

The Wm. Rennie Company quote the following as their selling prices for seeds: Red clover, No. 1, per bushel, \$14.40; No. 2 red, per bushel, \$14.10; alsike clover, No. 1, per bushel, \$12.30; No. 2 alsike, \$11.10; alfalfa, per bushel, \$13.80; timothy, No. 1, per cwt., \$7.75; timothy, No. 2, per cwt., \$7.25.

### HIDES AND SKINS.

The E. T. Carter & Co., 85 Front St., East, Toronto, were paying the following prices: Inspected hides, No. 1 cows and steers, 5½c.; inspected hides, No. 2 cows and steers, 4½c.; country hides, 4c.; calf skins, city, 10c.; country calf skins, 9c.; horse hides, No. 1, \$2.50; horse hair, per lb., 23c.; tallow, per lb., 4½c. to 5½c.; sheep skins, 70c. to 80c.

### BRITISH CATTLE MARKET.

Liverpool.—States steers, 12½c. to 13½c.; Canadians, 12½c. to 12½c.; bulls, 10½c. to 11c.; cows, 11½c. to 11½c.

### MONTREAL.

Live Stock.—Shipments of cattle from Portland, Me., and St. John, N. B., for the week ending April 11th, amounted to 1,500 head. Local exporters showed a disposition to operate last week, owing to the fact that the quality of the Easter stock offering was very choice. Purchases were being made at \$5.60 to \$5.90 per 100 lbs. The Canadian, distillery-fed cattle, amounting to over 5,000 head this year, have been purchased by the United States exporters, on the basis of about \$6.40 per 100 lbs. for the choicest. At date of writing, there have been practically no engagements made on the ships sailing from this port for shipment at the opening of navigation. Last week, being Easter week, there was a good attendance of butchers at the local market, a number of buyers from Ottawa and Quebec being also on hand. The weather was favorable, and the condition of the stock was very good, the supply being, however, a little on the light side. Prices advanced almost 1c. a lb. for top grades. The highest prices realized for fancy animals were 8c. a lb., for a two-year-old steer, weighing 1,725 lbs. Other sales of choice animals were made at 6c. to 7½c., according to quality, the bulk of the trade being at the lower figure. Good to fine cattle brought from 5½c. to 5½c. a lb., and medium, 4½c. to 5c., common stock selling down to around 3c. a lb. The supply of sheep and lambs was small; demand good, and prices firm. Choice yearling lambs sold as high as 7c. to 7½c., good ranging from 6½c. to 7½c. Choice sheep brought 5½c. per lb. There was a fair supply of spring lambs, and demand was good at \$5 to \$8 each. Some choice, milk-fed calves brought 6c. to 7c. per lb., good stock being 5c. to 5½c., and fair, 4c. to 5c. Hogs showed a weaker tone last week, owing to the increase in supplies brought out by the recent high quotations. Prices declined ½c. to ¾c. a lb., selected lots selling at 7c. to 7½c., weighed off cars.

Horses.—Dealers last week experienced a light demand from the country for farm horses of a cheap grade, and there was also some demand from transportation companies for a good quality of horses. Prices, however, continued steady, as follows: Heavy-draft, 1,500 to 1,700 lbs., \$250 to \$300 each; light-draft, 1,400 to 1,500 lbs., \$225 to \$275 each; good blocks, 1,300 to 1,400 lbs., \$200 to \$225; express, \$150 to \$225; common plugs, \$50 to \$75, and choice saddle and carriage horses, \$300 to \$350 each.

Dressed Hogs and Provisions.—The demand for dressed hogs was fairly active last week, owing to the approach of Easter. Prices, however, declined about ½c., in sympathy with the market for live stock, and sales of choice abattoir-dressed, fresh-killed stock were made at 9½c. to 10c. per lb. The market for provisions showed increased strength all the way round. Demand for hams and bacon was good, and prices advanced ½c. a lb. Lard, also, advanced 1c. a lb., and barrelled pork is slightly higher. Hams weighing 25 lbs. and upwards were selling at 12½c. per lb.; those weighing 18 to 25 lbs. being 13c. per lb.; 12 to 18 lbs., 13½c.; 8 to 12 lbs., 14c. Bacon was 12c. to 15c. per lb. for smoked, and 11c. for green flanks and long clear, heavy, while light is 11½c., and boneless, 12c. per lb. Pure lard sold at 12½c. to 13½c., and compound, 8½c. to 9½c.

Eggs.—Receipts of eggs have showed considerable increase of late, and prices declined, notwithstanding the greater demand. The stock is now all choice. Quotations for choicest, on Monday, 20th, were 17c. to 18c.

Maple Products.—Everything considered, the run of sap has been of considerable volume this season, and the offerings of syrup and sugar have been quite as large as usual, with quality fine. Dealers have been selling choice syrup in wood at 6c. per lb., wholesale, and in tins of about 10 lbs., at 65c. to 70c. each. Sugar has been sold at 9c., and is a little on the easy side.

Butter.—Approaching Easter, the demand for butter was unusually active, and, as the supply did not keep pace, prices were forced up a few cents per lb. Sales were made as high as 34½c., wholesale, for choicest stock; but a more prevalent price was 33c. to 34c., and on Monday, 20th, was quoted at 30c. to 31c.

Cheese.—Holders quote 12½c. to 13c. for the best white, and 13c. to 13½c. for colored.

Grain.—Quotations for oats from ½c. to 1c. a bushel lower than two weeks ago. Quotations from Eastern Canada: No. 2 white, 49c.; No. 3, 46½c.; No. 4, 45½c.; rejected, 43½c., in store; Manitoba rejected, 45½c. to 46c. per bushel, here or North Bay.

Flour.—Demand dull, and prices about steady. Manitoba patents, \$6.10 per bbl., in bags, seconds being \$5.50; Ontario patents, \$5.10; straight rollers, \$4.50 to \$4.75.

Feed.—Millers unable to offer large quantities, and the less they are called upon to supply, the better pleased they are. They continue to quote as follows: Manitoba bran, \$23 to \$24.50 per ton, in bags; shorts, \$25. Ontario bran is \$24.50 to \$25, and shorts, \$25.50 to \$26; gluten meal, \$1.50 per 100 lbs.

Seeds.—The supply of clover seed of all kinds is exceedingly light, and, as demand is active, the tone of the market is firm. Red clover, \$23.50 to \$25 per 100 lbs.; alsike, \$18 to \$21; alfalfa, \$21 to \$22, and timothy, \$6.25 to \$7.50 per 100 lbs., Montreal.

Hides.—Dealers paying 11c. per lb. for No. 2 calf skins, and 13c. for No. 1, beef hides being 5c., 6c., and 7c. per lb., for Nos. 3, 2 and 1, respectively, and selling to tanners at ½c. increase. Sheep skins, 75c. to 80c. each, and horse hides, \$1.25 each for No. 2, and \$1.75 for No. 1. Tallow, 1c. to 5c. per lb. for rough, and 5c. to 5½c. for rendered.

### BUFFALO.

Cattle.—Prime steers, \$6.60 to \$7.

Veals.—\$5 to \$7.75.

Hogs.—Heavy, \$6.15 to \$6.20; mixed and Yorkers, \$6.20 to \$6.30; pigs, \$4.50 to \$5.75, roughs, \$5.20 to \$5.35; dairies, \$6 to \$6.25.

Sheep and Lambs.—Lambs, \$5 to \$8.10.

### CHICAGO.

Cattle.—Beeves, \$4.50 to \$7.20; cows and heifers, \$2.25 to \$6.20; calves, \$4.50 to \$7.20; Texans, \$4.50 to \$5.40; Westerns, \$4.50 to \$5.50; stockers and feeders, \$3.25 to \$7.25.

Hogs.—Light, \$5.25 to \$5.90; mixed, \$5.40 to \$5.90; heavy, \$5.30 to \$5.80; rough, \$5.30 to \$5.35; pigs, \$4.20 to \$5.15.

Sheep and Lambs.—Native, \$5 to \$6.70; Western, \$5 to \$6.65; yearlings, \$6.35 to \$7.15; lambs, \$6 to \$7.65; Western, \$6 to \$7.70.

### HOLSTEIN TESTS.

The following seven-day official tests have been accepted since Feb. 12, 1908, by the Canadian Holstein-Friesian Association:

Hasketon Belle 4th (2239), at 10 years 2 months 7 days of age; 14.68 lbs. butter-fat, equivalent to 17.13 lbs. butter; milk, 426.8 lbs. Owned by John H. Caldwell, Fallowfield, Ont.

Francy 3rd (6220), at 3 years 3 months 2 days of age; 14.69 lbs. butter-fat, equivalent to 17.14 lbs. butter; milk, 442 lbs. Owned by John H. Caldwell.

Burke Hengerveld (—), at three years 8 months 13 days of age; 11.55 lbs. butter-fat, equivalent to 13.46 lbs. butter; milk, 353.68 lbs. Owned by Orlando Lillie, Westport, Ont.

Queen Artis De Kol (5270), at 3 years 7 months 1 day of age; 10.48 lbs. butter-fat, equivalent to 12.23 lbs. butter; milk, 344.4 lbs. Owned by David Rife, Hespeler, Ont.

Netherland Beauty De Kol (6067), at 3 years 2 months 10 days of age; 10.20 lbs. butter-fat, equivalent to 11.90 lbs. butter; milk, 296 lbs. Owned by W. J. Bailey, Naber, Ont.

Princess Acme De Kol 2nd (6068), at 2 years 8 months 22 days of age; 8.93 lbs. butter-fat, equivalent to 10.42 lbs. butter; milk, 266 lbs. Owned by W. J. Bailey.

Genieve Lucile Pietertje De Kol (—), at 2 years 11 months 8 days of age; 8.83 lbs. butter-fat, equivalent to 10.30 lbs. butter; milk, 271.9 lbs. Owned by George Rice, Tillsonburg, Ont.

Madame Melba 2nd (6212), at 2 years 11 months 9 days of age; 8.58 lbs. butter-fat, equivalent to 10.01 lbs. butter; milk, 281.85 lbs. Owned by David Rife.

Rose H. Pietertje (6618), at 1 year 10 months 25 days of age; 8.31 lbs. butter-fat, equivalent to 9.70 lbs. butter; milk, 267.2 lbs. Owned by Edward M. Bull, Bloomfield, Ont.—G. W. Clemons, Secretary.



**Life, Literature  
and Education.**

[Contributions on all subjects of popular interest are always welcome in this Department.]

**BIOGRAPHICAL SKETCHES.**

**Thoreau.**

The wholly conventional life is, no doubt, the easiest life. If you do the ordinary things which other folk do, farm, keep store, or go into any of the trades or professions, stepping neither greatly to the right nor to the left from the path which all other farmers, or storekeepers, or tradesmen, or professional men, have kept, you may jog on placidly, respected to the end of your days. Let your mind be ever so little of the unconventional type, however, be you ever so little inclined to step away from the multitude, live your own life, carry out your own ideas, regardless of what the masses have done, and you dare your fate. You become the cynosure of all eyes. You snap the thread of sympathy. People watch you curiously, smile, shrug their shoulders at you, look upon you as a new species of genus homo—a freak—and are only willing to take you back into the swim of things when you have won success.

In very truth, it takes a strong man to be unconventional, and the band of those who have dared to be so has been small. And yet who can say that, in the face of all, the life of the daring few has been unhappy? There is a satisfaction in living one's own life; to some temperaments there is a galling slavery in bowing to the common yoke of things as they are. There may be, too, a stimulus in living ahead of one's day, a consciousness of being able to show some example, to teach some lesson whose truth may come home when the teacher has long passed away—for the highest type of man may not live for himself alone. Yet, recognition is sweet to all, and the pity of it would seem to be that so often it comes so late.

Among men of the unconventional class, for whom fame has waited long, was David Henry Thoreau, Emerson's "queer hired man," the one-time "idler," dreamer of idle dreams, the Indian-like wanderer of the swamps, who "would never amount to anything." His works are to-day in almost every well-chosen library, and whose fame, after nearly seventy years, continually increases.

Thoreau was born at Concord, Mass., on the 12th of July, 1817, the youngest son of a pencil-maker of that village, whose father, in turn, a Jersey Islander, of Norman-French extraction, had come to New England in 1773.

Here the lad grew up, showing early in life the traits of reticence and introspection, and the passion for rambling about out of doors, which were always so characteristic of him. Even when a small lad of ten years of age, he spent every spare moment, it is said, quite alone among the woods or meadows, or floating in a punt down the sluggish

waters of the Musketauit, or those of the more swiftly-flowing Assabet.

This ruling passion for wild nature, which dominated him all his life to an extent which made him ever prefer the bleakest swamp to the most elaborate garden, has been attributed to a possible strain of Scandinavian blood in his ancestry—"The gray wolf," as Burroughs has described it, "that stalks through his ancestral folklore." He himself has, seemingly, been pleased with the suggestion. "Perhaps I am descended," he said, "from the Northman named 'Thor-er, the Dog-footed.'" . . . However that may be, Nature was to him, perhaps more than to any other man save David Jeffries, an intimate, and so close to Her was he that, as Emerson has remarked, he seemed to have additional senses: "He saw as with a microscope, heard as with an ear-trumpet, and his memory was a photographic register of all he saw and heard."

Neither at the public school nor at Harvard University does Thoreau appear to have distinguished himself by unusual proficiency in ordinary studies. Perhaps even then the rebellion against conventionality, cut-and-dried "courses," excessive system, was stirring in him to an extent that prevented that enthusiasm in his general work which he might otherwise have attained. . . . Nor was he at any time a favorite with either teachers or students. He was too reserved, apparently too cold. At the public school he was nicknamed "the judge"; at the university he was left pretty much to himself. His loosely-fitting clothes, Indian manners, and stern reserve, did not recommend him to the gay bands of young men who liked to play pranks and indulge in champagne suppers; nor would he have cared for their company. Moreover, he was compelled to be economical, for it was a sore strain on the finances of the family at Concord to send this son to College. . . . In one person, however, he seems to have excited interest—Emerson, the Concord philosopher, to whose influence was due the fact that he received some assistance from the beneficiary funds of the College.

But although Thoreau made no brilliant record on the examinations at Harvard, he was by no means idle. He occupied himself strenuously at what, perhaps, seemed to him to count for more, his walks, his observations, his burrowings in the realms of old English literature; and when he left College he was able to say that he had learned "to express himself," an acquirement whose value he was to prove ere many months had passed.

Upon his graduation, at the age of twenty, he engaged for two or more years in teaching, but found the work thoroughly uncongenial. "As I did not teach for the good of my fellow men," he says, "but simply for a livelihood, this was a failure." It is interesting to note, however, as an instance of his independence, that his final severance from the school was due to the persistence with which he refused to carry out the instructions of the School Board in regard to flogging, an operation with which he refused to have anything to do.

Thenceforth, to the end of his days, he gave himself up to his own "business," and became the naturalist-poet-philosopher, whose life and thought were one day to challenge the attention of the thinking world.

**HIS NEW "WORK."**

The first thing to be considered was, however, how to make a living, and the way to this he found in surveying and pencil-making, dabbling in the one or the other just long enough to insure the necessities of life, and permit him to be again about his "work."

Little wonder, surely, that the people who knew him but casually were wont to scoff at such "work," and at its master, deeming him a queer fellow. Strange work this, this tramping about fields and woods, for the most part alone, for four hours each day; this writing in notebooks placed on logs and top rails, of the tame occurrences of a Massachusetts swamp; this expanding of such notes into a voluminous journal by the light of the evening dip. And, truly, a strange man this, who often avoided his fellow men; who never stopped to gossip in the village inn; who cared nothing at all for his personal appearance, nor for any "comfort" or luxury, save books, that money could buy; and who was so brutally honest that he would tell you the truth at all costs, even of your friendship. A strange, cold man this, not made of ordinary flesh and blood—and yet—the children all loved him. He was their captain on many a huckleberry trip, their very own Thoreau, who could tell such marvellous stories about all the out-of-door things, who could glorify the world. . . . And yet, too, even early in his career he wrote, "I would fain communicate the wealth of my life to men."

It must not be thought, however, that Thoreau kept himself aloof from all his kind save the children. In his home he was an affectionate son and brother; and he loved to talk at times with some of the honest farmers, fishers and oystermen of the vicinity—with anyone, indeed, who was sincere. "He relished strong, acrid characters," Ellery Channing has said. And before long he was to come into closer touch with the most individual coterie of thinkers that the United States has ever known.

**THE NEW ELEMENT.**

This new element, which had of late drifted into Concord and its vicinity, was, in short, about to pave the way for Thoreau's public "expression of himself." In 1835 Emerson had come to live near the village, and close upon him, drawn as by a magnet, came permanently, or as frequent visitors, Ripley, Theodore Parker, Olcott, Hawthorne, Lowell, Margaret Fuller, and many others, among them Ellery Channing, the brilliant but indolent, who became Thoreau's best friend.

Presently the "Dial," a quarterly review, was started as the mouth-piece of the circle, and in it Thoreau found his first place in print, notwithstanding the fact that several of his essays, which now hold a place in his books, were rejected by Margaret Fuller, with a sharp criticism of what she considered their faults.

In the meantime, however, Emerson, who was also interested in the Dial, was so impressed with the young philosopher that, in 1841, he invited him to become an inmate of his house, where he was to have his board for what labor he chose to do, and have sufficient time for his own occupations.

During the two years which followed, this arrangement seems to have been perfectly satisfactory. To the end of his life Thoreau retained the warmest regard for the Emerson family, while Emerson was by no means niggardly in his praise of his "wonderful hired man." "Thoreau is a scholar and a poet," he wrote, "and as full of promise as a young apple tree"; and, again, "He is thus far a great benefactor and physician to me." In a letter to Carlyle, he said, "One reader and friend of yours dwells now in my house, Henry Thoreau, a poet whom you may one day be proud of."

But Thoreau's poetry was to be prose-poetry—poetry of thought. He was never felicitous in his attempts at measured verse.

**CHARACTERISTICS AS A YOUTH.**

This constant intercourse with Emerson doubtlessly had some influence over Thoreau. Indeed, he is said to have grown like him even in voice and mannerisms; yet he never lost an iota of his own peculiar personality. "He was not an imitator of any mortal," wrote Moncure Conway.

Of his personal appearance at this time, in the zenith of his youth, we are given several versions. He was short and straight, and of tremendous vitality, although naturally of weak constitution. Of his face, Hawthorne wrote, "He is as ugly as sin, long-nosed, queer-mouthed, and with uncouth and somewhat rustic though courteous manners, corresponding very well with such an exterior. But his ugliness is of an honest and agreeable fashion, and becomes him much better than beauty." . . . Others, on the contrary, have spoken of his face as scholarlike and thoughtful, even delicately refined, though strong in outline.

Of his strange power over wild animals and birds, which seldom hesitated to come close to him, many have spoken. "Nature, in return for his love," wrote Hawthorne, "seems to adopt him as her especial child, and shows him secrets which few others are allowed to witness. He is familiar with beast, fish, fowl, and reptile, and has strange stories to tell of adventures and friendly passages with these lower brethren of mortality. . . . Strange to say, he seldom walks over a plowed field without picking up an arrow-point, spear-head or other relic of the red man, as if their spirits willed him to be the inheritor of their simple wealth." . . . Incidentally, it may be mentioned that Thoreau is thought to have been the suggestion of the mystic Donatello in Hawthorne's novel, "Transformation."

At this period, also, the ideas of the Transcendentalists ran rife in Massachusetts, and in so far as they advocated simplicity in living, and the doctrine that everyone should labor a part of each day with his

hands, Thoreau was thoroughly in sympathy with them. From such ventures as the famous "Brook Farm," however, he, with Emerson, stood strictly aloof. "As for these communists," he wrote in his journal, "I think I had rather keep bachelor's hall in hell than go to board in heaven." He felt, in fact, that too much mixing with men was not good for him, at least; that it tended to flch from him his individuality and confuse his thought.

#### WALDEN.

In 1845 he undertook that experiment which has ever since been a source of surmise and wonder—his somewhat solitary residence in the hut which he erected in the woods by Walden Pond.

A strange "raising" it was—that raising of his little hut on land owned by Emerson, and with Alcott and George William Curtis helping him to put the frame in place. On the 4th of July he began housekeeping, with but scanty furniture, his books, a table, a looking-glass three inches in diameter, kitchen utensils, and three chairs, "Two for friendship, and three for society." If he had any furniture to dust, he said, he preferred it should be that of his mind.

Here he lived for two years, putting in a few vegetables and beans near his house, and learning how little labor it takes for man's subsistence, to leave a maximum of time for thinking and study. Here, above all, he had time to write his articles and his journal, and to get his "Week on the Concord and Merrimac Rivers" into order for publication.

He was far from being a hermit at Walden, although the squirrels on the roof, the woodchuck under the house, and the loon on the pond were his most constant companions; for his friends often came to visit him, Emerson and Alcott, and Channing, and many another of that brilliant circle. The farmers of the neighborhood he was always glad to see, and it was whispered that more than one slave escaping to the North had found harborage under his roof. There were also the curious, and the would-be philanthropists, who came without invitation, but the visits of these he brought more than once to a speedy termination.

In 1847 he had some correspondence with Agassiz, and sent him some collections of specimens, chiefly such as he could obtain without taking life. Indeed, he seldom even ate flesh of any kind, holding it wrong to "murder these fellow creatures which hold their life by the same tenure that we hold ours." In the same year, also, he quitted the hut, having completed the "private business" which had called him there, and returned to the village.

After all, perhaps, it was no great marvel that a philosopher who loved the woods should repair to them to think out his problems at leisure, nor that he should leave them when this had been accomplished, in the consciousness of other lives to live. Nevertheless, endless have been the motives ascribed to his experiment at Walden Pond. In regard to it, he himself has said: "I went to the woods because I wished to live deliberately, to front only the essential facts of life, and see if I could not learn what it had to teach, and not, when I came to die, discover that I had not lived." . . . Other men, as a rule, require the bustle of the throng for development; for Thoreau, the essential was, at some times, solitude. When the time had passed, he expressed himself as satisfied in having found out (1) that, to maintain one's self on this earth is not a hardship, but a pastime, if we will live simply and wisely; (2) that if one advances confidently in the direction of his dreams, and endeavors to live the life which he has imagined, he will meet with a success greater than he has expected; "in proportion as he simplifies his life, the laws of the universe will appear less complex, and solitude will not be

solitude, nor poverty poverty, nor weakness weakness."

He had, in fact, during this time of comparative retirement, ripened his thought, matured his ideas. "It is," he said, "as if I always met in these places some grand, serene, immortal, infinitely encouraging though invisible companion, and walked with him. There, at least, my nerves are steadied, my senses and mind do their office."

He came forth from Walden an exponent of his doctrine of Simplicity, plain-living, high thinking, individuality; but the chief expression of it, "Walden," though written for the most part in the hut, was not published until 1854.

#### SUBSEQUENT EVENTS.

On his return to the village, he spent one year with the Emersons, and for the rest of his life made his father's house his home, alternating, as before, manual labor with mental, walking, thinking, observing, writing, surveying, pencil-making, doing odd jobs of any kind and for any man—truly a wonderful hired man, who, as Channing said, laid out "every molecule of fidelity upon his employer's interests." He expected, however, the same uprightness in others, and so came to be known to not a few as "that terrible Thoreau."

Upon several occasions he went on camping excursions, chiefly near home, for he had found that he was

#### THE END.

Thoreau had been born with a predisposition towards consumption, which was finally brought on probably by a cold induced by his utter disregard of wet feet, and overexertion. In 1859 he came prominently before the public in a daring lecture in behalf of John Brown, who was then being hounded to his death. In the following year he went to Minnesota in the vain hope of regaining his broken health, which was aggravated every day by his heartbroken worrying over the reverses of the North during the first years of the Civil War.

From this time he sank rapidly, although he continued contributing to the Atlantic almost to the last. "With an unflinching trust in God's mercies," says Channing, "and never deserted by his good genius, he most bravely and unsparingly passed down the inclined plane of a terrible malady, working steadily at the completing of his papers to the last hours, or so long as he could hold the pencil in his trembling fingers."

During those long last months in his father's house, many visitors—for the whole community was at last stirred into love for him—came to see him. He talked but little, yet was ever true to himself, characteristic until the last. Upon one occasion, when asked whether he had made his peace with God, he quietly replied that he had "never quarrelled with him." Perhaps his inquisitors did not realize than his former words, which

alike; and advocated strenuous work, both mental and manual, for every man. "If I devote myself," he said, in words strikingly like others uttered by Tolstol, "to other pursuits and contemplations, I must first see, at least, that I do not pursue them sitting upon another man's shoulders. I must get off him first, that he may pursue his contemplations too." . . . He demanded that every mind should have time in which to make the best of itself, and that no opinion was to be taken on trust, but that everything should be examined. In short, he did not wish to persuade men to live as he did, but to stimulate independent thought by the force of his example.

Thoreau may not afford the easiest reading, especially to those out of sympathy with nature or deficient in a sense of humor. He is fond of paradox, and often exaggerates it, as he says, it is necessary "to reach heaven so." But his own will find him, while to all those who dislike as well as those who like him, he must prove a mental tonic, must stir to thought, be it only to disagree. . . . In the last and most unprejudiced analysis, he must have many a lesson for us all. He has helped many to live more simply, more happily, and more worthily, and his teachings, perpetuated for all time with the mystic charm of his writings, must go on while English literature, to which he has been accorded a place all of his own, shall last.

#### ANOTHER SCHOOL GARDEN.

In answer to a query re the report that a new school-garden had been started adjoining the grounds of the Horticultural Experiment Station at Jordan Harbor, the teacher of the Rittenhouse school writes us as follows:

"I may say, in reply to your letter regarding the Vineland school-garden, that it is situated in the Village of Vineland, and is about two miles from the Experimental Farm. A few weeks ago a meeting of the ratepayers was called to discuss school-gardening. The section were almost unanimous, but land is so high that paying the sum of \$500 for less than an acre was considered too much.

However, after a vote of ratepayers by ballot, it carried by a goodly majority. Much enthusiasm was manifested, some farmers promising to fust, others to level the plot.

"As to being the first garden in the county undertaken by the ratepayers themselves, I believe this is correct. We must say for the Vineland School and people they deserve great credit for the efficiency of their school, and their progressiveness."

"HARVEY GAYMAN."

"Go make thy garden as fair as thou canst,  
Thou workest never alone;  
Perchance he, whose plot is next to thine  
Will see it, and mend his own."

has been said, and truly the heaven of the garden at the Rittenhouse School has been working well in the little Niagara Peninsula. May the good example spread quickly from this and like localities, until every rural school in Canada has its garden.

#### ABOUT SOME SCATTERED SUN-BEAMS.

I write from memory, but I believe I am fairly correct in stating that the seed-thought of one of the many beneficent works undertaken by the Canada National Council of Women, namely that of the Aberdeen Association, was planted in Winnipeg by the Founder and President of the N. C. W. in 1891, as the result of sympathetic observations made during a trip taken by Lord and Lady Aberdeen throughout the big Northwest.

They had noted the many limitations surrounding the isolated lives of many of the settlers in their scattered homes on the wide stretches of



A Picturesque Little House.

There are ideas here which bright minds with a love for the uncommon may seize upon. (By permission of House Beautiful.)

able to "travel much in Concord." His longer trips were made into Maine and Canada, where he visited Quebec and Montreal. In the latter city he was much impressed with Notre Dame Cathedral, which seemed to him "a great cave in the midst of a city, where the still atmosphere and the sombre light disposed to serious and profitable thought."

During the preceding year, his "Week on the Concord and Merrimac Rivers" had been issued at his own expense. One thousand volumes were printed, of which, in four years, over seven hundred were returned to him unsold. He was, however, in no wise daunted by the blow, notwithstanding that he had to go surveying again to pay off the debt. He could, indeed, write humorously of the situation—that he had now "a library of nearly nine hundred volumes, of which over seven hundred were written by myself." Perhaps he knew that one day the "Week" would come to its own.

This book and "Walden" are the only two which were published during his lifetime. The rest, "Cape Cod," "In the Maine Woods," "Excursions," "A Yankee in Canada," "Early Spring in Massachusetts," "Summer," and "Winter," are all posthumous volumes, which have been made up of collections from his articles in the Atlantic Monthly and other publications, and from his private journal.

had, perhaps, seemed to them blasphemous, had been launched, not against religion, but against cant, pretence, insincerity.

He died on the 6th of May, 1862, with the words "Indian" and "Moose" on his lips—living over again the old life in his dearly-loved woods. Two years later Hawthorne was laid beside him in the little Concord graveyard, which, with the cairn of stones which marks the site of Thoreau's hut at Walden, has become a Mecca of pilgrimages.

Thoreau's chief message to mankind was the doctrine of individuality, the necessity for self-development. "I know of no more encouraging fact, he was wont to say, than the unquestionable ability of man to elevate his life by a conscious endeavor." He did not advise all men to live as he did at Walden; he insisted that they should live their own lives. Yet he was firmly convinced that high thinking is the chief thing in life, and that by far too many people fritter away valuable time in the attainment of luxuries that count for nothing at all in the great scheme of the universe. Simplicity, rather than a complexity which may only enervate, was his ideal. To follow the leading of the ideal was to him a religion, and failure in this seemed to him sin.

He detested gossip, and conventionalities that tend to make all men

The Quiet Hour.

WALKING WITH GOD.

Enoch walked with God.—Genesis v.: 22.

"I fear not Thy withdrawal; more I fear, Seeing, to know Thee not—hoodwinked with dreams Of signs and wonders—while, unnoticed, Thou Walking Thy garden still, commun'st with men, Missed in the commonplace of Miracle!"

"The commonplace of Miracle!" what a true statement that is. We live in such a world of miracles that we grow used to them and forget that God is working almost visibly through them. Yesterday was the feast of the Annunciation, for I am writing this on the 26th of March, and we were reminded of that unique Birth which has linked God and man in closest bonds of union. Plenty of people now are declaring that they cannot believe in the great miracle of that Virgin-Birth. Do they doubt it because it is so marvellous? Then how can they believe in the great miracle of birth which is giving new men and women to the world continually? We are forced to accept the commonplace miracles of every day, and they are at least as wonderful as the extraordinary miracles described in the Bible. It is not really more marvellous to feed five thousand people with a few loaves and fishes than it is to produce uncounted millions of grains of wheat from one—yet that is quite possible in the course of a few years. It is not really more wonderful to turn water into wine at a feast, than it is to change it into wine slowly by passing it through grapes in the ordinary commonplace of miracle. It is a miracle of miracles to keep the earth and other heavenly bodies swinging continually through space in perfect time and harmony. And the great sun, with its life-giving rays, burning on in undiminished splendor for many thousands of years, is another of the commonplace miracles which we have grown used to. Each of the millions of blades of grass—not to speak of the flowers—which comes out of the hard earth in answer to God's call, is a miracle. The food which we eat, changing mysteriously into skin and bone, flesh and hair and nails—dead material changing into living, thinking men and women—is another commonplace miracle. Every day God lets us see that He has not forgotten us; every day He works miracles for us so that we may remember that He is in us and with us, and may walk consciously with Him as Enoch did. Enoch was lifted out of the sight of men here on the earth thousands of years ago, but down through the ages still rings that wonderful com-

the prairie and amongst the solitudes of the Rockies. They had seen these accepted as inevitable, and bravely borne as part of the programme of pioneers; they had admired the fine spirit in which difficulties had been met and conquered, but, knowing that many of these settlers had come from cultured surroundings and busy centers, they realized the mental starvation which they must endure by their being cut off from even occasional access to the current literature of the day, or, indeed, from books or newspapers of any kind. "Yes," they had been told, "perhaps that is the hardest little crook in our lot. It emphasizes our aloofness from the busy, bustling world we have left behind us. Such few books as we were able to bring with us, we have read over and over again, until we almost know them by heart. It would be a boon, indeed, if an occasional magazine or newspaper could be spared us from the superfluity of those who live in cities, and who perhaps could hardly realize the book-hunger which consumes us."

To hear of a need always has meant to Lady Aberdeen the suggestion of a remedy, and this remedy was found through the prompt response to her appeal on behalf of the book-hungry settlers of the Northwest, by some sixty ladies who gave in their names as willing to assist her in the matter. And thus was laid the foundation of a society which has brought sunshine into many homes, into far-away cottage-hospitals and lumber camps, and which, as the "Aberdeen Association," has branches throughout Canada, with a growing membership of enthusiastic workers.

When Lady Aberdeen returned to Canada as the wife of the Governor-General of the Dominion, she laid the matter before the heads of the Post-office authorities, with the happy result that parcels of literature under accredited endorsement were to be carried free of charge, an inestimable boon which has never been wholly withdrawn, although there have been necessary restrictions of later years as to weight, size, etc. To the several branches are allotted certain families with whom they are in communication, and from whom come, from time to time, most interesting letters, many of them containing pen-pictures of the lives of the settlers who are gradually peopling the vast areas of our wide Dominion. I have permission from one of our Ontario branches to offer our readers a few quotations from these letters, in proof of the welcome given to the scattered sunbeams of which I write:

"Your parcels come like a visit from a dear friend. We feel most grateful for the magazines."  
"When the parcels come, it is like a grab-bag, everyone is so anxious to get something."  
"My husband has been sick for a long time; not able to do any work. I do not know what I would have done without the magazines to read to him."  
"The children look most anxiously for the parcels when the time comes to expect them."  
"Before my husband died he became quite blind. During the months he could not see, it was a great comfort to have the magazines to read to him."  
"We are too far from any school for the children to go, so they can only get what I can teach them. Books are very welcome."  
"We are going back to the Old Country, so you may send our parcels to someone else. I hope they will appreciate them as much as we did. I do not know what we would have done without them. We had nothing else to read, and no neighbors near. My husband often walked to the post office, eight miles away, on purpose to get them, when the roads were too deep with mud to take a team."  
"I cannot express my gratitude for the reading you send. My little boy sends thanks and kind wishes, too."  
"I want to thank you especially

for the nice reading in the envelope series."  
"It is very kind of you to send me such nice letters. You do not know how much good they do me. That is one way to help others. This country is all bush, and it will take time and hard work to make nice homes here."  
"The February parcel of reading was received last night, and it is always welcome. I pass it on to others, and I generally ask them to return it to me, as I can't stand to have good reading matter destroyed. Wishing the Association all kinds of good luck, I am, yours gratefully."  
"The reading was received and much appreciated. We could scarcely get it read, others were after it. There are only four English-speaking women in eight miles."  
"We have heard of the Aberdeen Association. Could you send us something to read? We will be glad to get anything, for we have nothing to read. Will you have it returned, if necessary."  
As it is the privilege of the writer to lend a hand in filling the big envelopes to which one writer alludes, she cannot refrain from telling that every now and again her envelopes contain helpful clippings from the columns of our "Home Magazine," especially those of our dear Hope, as a more especial bit of sunshine in her distant shack, far away from the sound of the bell which is so familiar a summons to us and our families on every Sabbath morning in Eastern Canada. H. A. B.

Current Events.

Two thousand persons have been drowned in floods at Hankow, China.  
The Supreme Court of Tennessee has ordered the Standard Oil Co. to cease doing business in the State.  
A bill providing that women may vote in all communal elections has been passed in Denmark.  
Japan and Russia are said to be engaged under a tacit agreement to work upon the Chinese Government for the virtual partition between them of Manchuria.  
Practically the whole of Korea has arisen in a revolt against the Japanese. Several collisions, in which the Koreans have been badly worsted, have taken place.  
The former Governors-General of

Canada have started a fund, to be raised in England, and presented to Canada at the Quebec Tercentenary, to aid in transforming the Plains of Abraham into a national park.  
A movement is afoot to work out a plan by which Normal-school students in Ontario will spend the last three months of their course in Guelph on industrial training before obtaining their certificates.

THE NEW BRITISH CABINET.

As announced on April 12th, Mr. Asquith's Cabinet has been reconstructed from the old, with but few changes in the members, although several in the distribution of portfolios. The principal changes are the advancement of Mr. David Lloyd-George, to be Chancellor of the Exchequer, and of Winston Churchill and Walter Runciman to Cabinet rank. As reconstructed, the personnel of the Cabinet is as follows:  
Herbert H. Asquith, Prime Minister and First Lord of the Treasury.  
David Lloyd-George, Chancellor of the Exchequer.  
Lord Loreburn, Lord High Chancellor.  
Lord Tweedmouth, President of the Council.  
R. B. Haldane, Secretary for War.  
John Morley, Secretary of State for India (with a Peerage).  
Earl of Crewe, Secretary for the Colonies.  
Marquis of Ripon, Lord Privy Seal.  
Herbert Gladstone, Home Secretary.  
Sir Edward Grey, Secretary for Foreign Affairs.  
Reginald McKenna, First Lord of the Admiralty.  
John Burns, President of the Local Government Board.  
Sir Henry Fowler, Chancellor of the Duchy of Lancaster (with a Peerage).  
Walter Runciman, President of the Board of Education.  
Winston Spencer Churchill, President of the Board of Trade.  
Hon. L. Harcourt, First Commissioner of Works.  
John Sinclair, Secretary for Scotland.  
Sidney Buxton, Postmaster-General.  
Colonel G. E. S. Seely has been appointed Under Secretary for the Colonies; Lord Lucas, Parliamentary Secretary War Office; F. D. Acland, Financial Secretary War Office, and Thomas R. Buchanan, Parliamentary Secretary, India Office.  
Earl Carrington, Secretary of the Board of Agriculture.  
Augustine Birrell, Chief Secretary for Ireland.



A Country Home. The possibilities of a natural grove as the surroundings of a home. (From Country Life in America.)

mentary on his life: "Enoch walked with God; and he was not; for God took him." Which of us could wish for a grander tribute to his memory?

There is a story told of a poor shoemaker called Martin, who received in a dream a promise that the Lord Jesus would visit him on the morrow. He lived in a cellar, and could only see the feet of those who passed by. Three or four times during the day he saw shabby boots shuffling wearily past the window, and each time he hurried out to invite the tired wayfarers in for rest and food. All day he watched for the expected Guest, and went to bed sad and disappointed because He had not come. Then in a dream the shabby men, women and children he had cheered and helped came one by one, looked earnestly at him, and said: "Martin, dost thou not know Me." Then he saw that each one had the face of his loved Master, and he knew that the King had really visited him in his poor little home many times that day. This is not a parable, it is a glorious fact. Christ, God in man, will surely visit each of us to-day and to-morrow and every day. We, like Enoch, may walk with Him every hour. If it thrills us with solemn gladness, as Miss Havergal says, to know that we shall really see Him face to face when we have passed through the gate of death, surely the thought of His Presence, now and here, has power to thrill us with solemn gladness too. He is close beside you now, stop a moment to drink in that inspiring thought. Close beside you, ready to give all the help and cheer you need, loving you always, though you may be weak and cowardly and may trust Him very little. Will you not slip your hand in His, with the trustful confidence of a happy child, and say: "Dear Lord, I joyously accept Thy ordering of my life, give me what Thou wilt."

One whose eyes are open to the invisible, who sees with true spiritual sight the angels and the angels' Lord beside him, can go on his way with high courage and perfect peace, sure that all is well. The promise is fulfilled to him: "Thou shalt not be afraid for any terror by night," for he can see God at least as well in the dark as in the daylight. No difficulties or dangers can alarm him, for he knows that all things are working together for his real good. He is not afraid of anything, for he knows that the servants of God have the sure promise that no weapon formed against them shall prosper. The plots against Joseph seemed to prosper for a short time, but they only resulted in making his character strong and beautiful, and—as soon as he could bear worldly honor—they led straight to it. It was the same with Daniel, the plots of his enemies led swiftly to fame and promotion.

Faith is often spoken of as "the eye of the soul," for it is by faith that we see things invisible—it is "the evidence of things not seen." Without that sense of spiritual sight we should become materialists, and miss the beauty of the spiritual world within us and without us. Faith and superstition are not really alike, although some people may confuse the two. Faith opens the door into a world of joy and beauty—a world that is really there—while superstition tries to mislead us by showing shadowy pictures which have no reality. The one is like showing a traveller in a desert a spring of living water; the other is like a mirage, a mockery, wavering and unreal. Superstition weakens the courage, while faith strengthens it. One who thinks that misfortunes will follow the breaking of a mirror, the spelling of salt, the walking beneath a ladder, or the many other occurrences which are supposed to bring bad luck, is dishonoring God; for he evidently thinks God has no power to control His own world. There is a good deal of heathenism still lingering in Christian countries; many people still cherish superstitions, many still treasure charms. But if we walk consciously with God we know that "the earth is the Lord's" as well as the heavens, and we feel safe in His hands. No blind goddess of fortune can control our fate. It is not only foolish, it is really very wrong to trust in charms instead of in the living God who rules in heaven and earth. And one who walks with God can never be afraid of the revelations of Science. God made the universe, and, therefore, the more we can find out about it, the more we shall know of

Him. One who refuses to examine scientific discoveries, for fear they might contradict revealed truths, shows very little faith in the truths. He is evidently afraid to test them. Truth should never be afraid of standing in the light of any age to be tested and examined. Only, in talking about science, it is well to be cautious and not over-credulous. Theories are often put before the world as facts only to be flatly contradicted by scientists of future years. When clever people are foolish enough to say that they don't believe in a soul, because no one has ever discovered one when examining a human body, we know they are talking nonsense. They would be the first to deny the statement if someone else said: "I have seen a human soul." You might just as well say: "I have seen love." We know that love is invisible, but surely no one is so forlorn and desolate as to deny its existence on that account. We know that if anyone said he had seen a soul he would not be telling the truth—though both love and a human soul can manifest their presence in very tangible form. So we are told that no man hath seen God at any time, and if a man should say, "I looked into heaven through a strong telescope and saw God," no sane person would believe him. Last Sunday a clergyman asked the children in Sunday-school: "Where is heaven?" The answer given by one child was the best possible one: "Heaven is where God is." If God is in heaven, and heaven is always where God is, we have every opportunity of living in heaven every day of our lives. God keeps out of sight, but He makes His presence felt to the pure-hearted souls that are earnestly reaching out after Him. He does not leave them long in doubt. Go where you will, and you will find Him, if you look in the right way. And there are countless men and women in the world who know that He is with them. I don't mean the people who hope the wonderful story of God's love is true, but those who know it by their own personal experience. They may have an occasional cloud of doubt to trouble them, but, as Bishop Blougram says, such doubts are only "dreams" and "faith is my waking life." There is all the difference in the world between "a life of doubt diversified by faith," and one "of faith diversified by doubt."

"I absolutely and peremptorily believe!—I say faith is my waking life.  
One sleeps, indeed, and dreams at intervals,  
We know, but waking's the main point with us,  
And my provision's for life's waking part."

Perhaps you may say that you never have these clouds, these "dreams" of doubt. Is your faith, then, so perfect? Do you never worry about possible difficulties in your path, do you never chafe and fret against God's ordering of your life, do you never get anxious if you hear no word from absent loved ones? All these things prove that our faith is not yet perfect; we still often long to order our own lives, at least in little things. We still often tell God that we know better than He does what is good for us.

"With me, faith means perpetual unbelief,  
Kept quiet like the snake 'neath Michael's foot,  
Who stands calm just because he feels it writhe."

You own your instincts—why what else do I,  
Who want, am made for, and must have a God  
Ere I can be aught, do aught?—no mere name  
Want, but the true thing with what proves its truth,  
To wit, a relation from that thing to me,  
Touching from head to foot—which touch I feel,  
And with it take the rest, this life of ours!"

Very few walk with God always. They often forget His presence, often doubt His providence, are often weak in temptation because they rely on their own strength; and yet they reach out with a real heart-hunger for that Infinite Love

which is always more ready to hear than we to speak. Perhaps the last waking thought at night is the sweet peace of resting on that Heart of Love, without a care for the future—like the late Bishop of Washington, who lately fell asleep murmuring the great "Holy, Holy, Holy." Perhaps our first waking thought may be the joy of serving the Master of the World. But what of the hours when we are immersed in the work or pleasure of the day, do we always walk with God, joyously and bravely? Do we not often forget His very existence, and act or speak or think as though we had no Father, no wise and loving Elder Brother to lean on and to obey?

Let us pray more and more earnestly that our eyes may be opened ever wider to see Him who is invisible. Let us walk in heaven now, with God and His good angels close beside us.

"Seldom do we think upon them, seldom we believe them nigh,  
Like the child who deems in sunshine that the stars have left the sky;  
So, by this world's pleasures dazzled, scarce we feel their presence true;  
In foolishness and fickleness, are we not children too?  
God's angels still are near us, with their words of hope and cheer,  
When the foe of our salvation and his armed hosts draw near;  
But a Greater One is with us, and we shrink not from the strife,  
While the Lord of angels leads us on the battlefield of life."

HOPE.

## With the Flowers.

### NOTES.

Poppies and mignonette do not bear transplanting well. Leave them where they were sown, and thin out to leave room for the plants to develop properly.

Asters, when finally set out in the garden, should be cultivated frequently, and given plenty of moisture. Until the flowers begin to show their color, spray from time to time with an insecticide, e. g., hellebore, 1 oz. to 3 gals. of water. If aster bugs appear, pick them off by hand every day.

Bulbs which may be planted in May are: Tigridia, canna, caladium or elephant's ears, oxalis, tuberose, and Madeira vine. All of these (but especially canna and caladium) require a very deep, mellow, rich soil, and plenty of water. The oxalis, which seldom grows more than a foot in height, should be used for borders, where the bulbs should be planted three inches apart.

Rapidly-growing vines, which may be used for temporary purposes, are: (1) Common morning-glory, the dark-purple varieties of which are very beautiful. Give a deep, rich soil, plenty of water, and thick cords or small rods or poles to twine about. (2) For lower-growing screens, say, 6 feet high—sweet peas and tall nasturtiums. These, likewise, require a rich soil and plenty of moisture. They run well on a trellis or poultry netting. (3) Scarlet runner. Give a sunny situation, and sow when the ground is rather dry, as the seed will rot if too wet before germination. (4) Alleghany vine and canary vine. Both of these are exceedingly delicate, lace-like vines with attractive flowers. Give rich soil, plenty of moisture, and supports on which to climb. The Alleghany vine prefers a partially-shaded situation. (5) Japanese hops. A very rapidly-growing vine which soon makes a fine shade. Sow in the house, and transplant, when danger of frost is past, into a sunny location, giving plenty of water.

Add to your hoe, rake and spade a planting trowel, an iron dibbler for setting out cabbage, etc., a weeder, a weeding hoe with a shallow blade which may be used for cultivating, a small three-cornered hoe, and see how gardening may be simplified.

Plant the seeds of perennials in May in order to have good strong plants, which will stand the winter and be ready to give a good bloom next year.

Among perennials that are fragrant are white rock cress, lily of the valley, rose-scented peonies, lemon lily, grass pink, bee-balm or Oswego tea, white day lily.

## The Young People's Department.

[All letters intended for the Young People's Department must be addressed to "Cousin Dorothy," 52 Victor Ave., Toronto.]

### CAPTURING A PYTHON.

About five years ago, says Captain riawser, in *The American Boy*, I headed an expedition into the interior of Sumatra, our object being to gather great apes and snakes for one of the large zoological gardens of Europe.

We had done pretty well, as far as the mammals were concerned, and several fine specimens of the man apes were already on their way to Europe; but we had failed absolutely to catch or even hear of a really big python.

Finally, we broke camp and moved to a valley between two high, wooded hills, where I had seen great snakes on a previous visit.

The day after we pitched camp in the new spot, I took my heavy express rifle and started into the jungle to look for the beautiful antlered Sumatra deer.

It was extremely thick, and the high trees made the forest almost as dark as if it were evening, although the sun was high. I stepped softly, and to do this, I often had to look down pretty closely so as to avoid creepers and other tangled vegetation that obstructed the ground and made nasty traps for unwary feet.

I had just cleared a particularly bad tangle, and was in the very act of raising my eyes again to peer ahead, when I became aware of something hanging almost in front of me. Before I had more than perceived the thing it moved backward and then forward like a flash, and the next instant it drove straight at my chest and struck me such a terrific blow that it would unflinchingly have crushed my sternum if I had not been protected by my heavy cartridge belt, which hung across my breast from one shoulder.

As it was, the blow knocked me at least five feet, as if I had been a tennis ball. I knew what had happened to me, however, even before I fell. I had blundered into a python, hanging head downward full length from a tree, and the creature had done what these great snakes do almost always under such circumstances—it had rammed its long, hard head at me with the force of a hammer.

All the wind was knocked out of me, and I was half stunned. But I retained consciousness enough to reach out for my gun as soon as I got over the first shock. And the next move was to roll away to avoid a second attack.

In this, however, I was too late; before my hand had closed on my gun, I felt the cold body of the serpent, and then a suffocating weight as coil after coil of the monster fell slowly upon me.

In another moment one of the thick coils was thrown around me and began to constrict until I could hardly breathe. Tighter and tighter the terrible thing wreathed itself. Then, when I thought that the next tightening would surely crush all my bones into splinters, the snake ceased and began to pull itself up into the tree, to which it still clung with its tail.

My weight did not seem to bother it in the least. Up I went, as if I were being raised in an elevator, till I was dangling just above the lower limbs of the tree.

I knew then what was in store for me. The serpent intended to throw another coil around both me and the big branch, and with the purchase thus obtained to crush me at its leisure.

I had my big revolver in my holster, but it was pressed close to my side as my arms were. I found, however, that I could move one finger enough to get it into the trigger guard. Unfortunately, the muzzle was pointed so that there was no chance to hit the monster that had me; but I hoped that the shots might bring help, though it looked desperately unlikely that help could reach me in time.

However, I fired all the five shots as quickly as I could, and the explosions had the good effect of startling the serpent so that it uncoiled itself partially at the first shock, and I slipped out and

dropped to the ground, so badly squeezed that I could not move, but lay in a heap where I tumbled.

Within five minutes, while the great snake was still quivering and alternately expanding and contracting its huge body in evident fright, my men came hurrying to the scene.

When they caught sight of me they set up a great shout, and the big snake tried to crawl up into the tree and get away. But I saw its retreat in time, and ordered the men to get into the tree after it, while others hurried back to the camp for ropes and machetes.

The ropes were passed to the men in the tree, and they went boldly at the python. It struck at them, and when they dodged it opened its vast jaws with a frightening gape and hissed like a steam engine. But soon it was beset by more than thirty natives, each of whom had hold of some part of its body, despite all its wriggling and twisting. They broke its hold on the branches by cutting them off with their machetes, and all at once the big snake began to come down a prisoner.

In the meantime other men had cut down a young tree and trimmed all its branches off. As soon as the big snake was on the ground, the sapling was held alongside of it, and ropes were quickly wound around both from one end to the other. Thus stretched out the big snake was carried in triumph to camp, and in the same manner it finally went to the coast.

It reached Europe in good condition, and is alive still. It is one of the really big snakes in captivity, for it measures fourteen feet.—Selected.

THE MAKING OF AN ARTIST.

Another of our young people, T. Ware, of St. George, Ont., has sent me some of his work for criticism; and his little painting seemed to me so pretty that I was not surprised that he had been able to sell some of his sketches. But, as I know very little of the works of an artist myself, I have asked the opinion of a lady who is herself an artist of some standing in Toronto, and this is what she said: "One cannot tell what ability may be behind a copy. Work offered for criticism must be entirely original; that is, done independently of any mechanical aid, photographic or other. I suppose the first principle of art is individual interpretation of beauty, to which, obviously, mechanical process is totally destructive. Needless to say, 'genius' cannot be detected in anything but original work. To anyone uncertain about taking up art as a profession, I should say, remember the saying, 'artists are born, not made,' does not mean that they are born ready-made, but that some people have instinctively an appreciation and facility which cannot be instilled into others, but which, in any case, needs long years of sincere hard work and study to develop."

There is no doubt that the profession of art demands a tremendous amount of study and perseverance, with very little return as far as money goes, for many years. But a born artist is happy in his work, and is generally apt to let other things take care of themselves. No doubt the wish to become rich does not go with the passion for art. Still, you need a certain amount of means, for an artist must both take lessons, and have an opportunity to study in some great center of art life, such as New York or Paris.

But apart from all that, my own opinion of the sketch (comparing the mere putting on of the paint with the methods of finished artists) is that it is rather too smooth, and also makes more of details than the eye naturally would at such a distance. At the same time, the coloring is very delicate, and shows good taste. I should think the talent shown well worth cultivating. I would like to give this little bit of advice: Read as much of the best literature as possible, and don't get narrow-minded. A narrow-minded man never makes the best artist or musician, no matter how hard he works at his profession. He may put his whole soul into it, but his painting or his composition will lack something that a cultured person puts into his unconsciously. These remarks may not be of much use, but they are made with a sincere wish to help, as far as one can at this distance.

Another Member for the D. A. P. S.

Dear Cousin Dorothy,—I have for several years been an interested reader of your corner, and the debates have afforded me much pleasure. I hope we shall have many more in the future. If we do, and this doesn't take up with Madam W.-P. B., I may offer my views on some of the topics.

I am nearly sixteen years old. I live on a farm in Albert County. It is very beautiful around here. There is the Shepody River flowing between the two parishes of Hopewell and Harvey. It is not frozen now, but it has been for some time. Directly in front of me, as I write, are the grand Shepody Mountains, which are only about 1,000 feet in height, but are very beautiful, especially in the autumn months.

I am writing now to join your "Farmer's Advocate" Dumb Animals Protection Society, as I think I can make the necessary conditions. I am a lover of dumb animals, so I do not find it at all against my wishes to promise to protect them at every necessity. But, now, I suppose I must tell my story. I have a young niece who, when just a little tot, would often toddle away from the house into danger. She was watched by her dog, who, by gently taking hold of her dress and pulling her out of danger, proved an invaluable help to her mother. Wishing the Society success, I will sign myself—

AN ALDER LEAF.

About Skis.

As several kinds of making skis have already been described, I am keeping a letter on the subject, written by Harold Duncan, for publication next fall. C. D.

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Address: "Fashion Department," "The Farmer's Advocate," London, Ont.

The Ingle Nook.

THE GIRL OF LITTLE MEANS WHO GOES FROM THE COUNTRY TO THE CITY TO LIVE.

Article I.

FROM THE COMMERCIAL STAND-POINT.

It is scarcely necessary to remind the readers of "The Farmer's Advocate" that we have never encouraged the daughters of the farm to leave it for the sake of taking situations in the town. After all, there is no shelter like that of the home—provided it be the right sort of home—for the girl. Nowhere else in the world will she receive the same affection and sympathy, the same patience with her shortcomings, the same interest in her welfare.

Nevertheless one cannot shut one's eyes to the fact that there are many situations in which the girl simply must leave the farm and set out in the great world all alone. Financial pressure may force her to it, or the death of her nearest relatives; a rare opportunity for work, that can only be done in the city; or, very rarely it is to be hoped, a hatred of country life which renders it unendurable. We cannot expect that all people shall love the country, any more than we can expect all to love carpentry, or bookkeeping, or dressmaking. All do not look through similar glasses, nor can any amount of preaching, as a rule, change the scope of vision.

To-day, then, I have felt that I want to talk to the girl who is, from any reason whatever, about to enter upon life in the town, and I trust she will forgive me if I address her directly.

In the first place, we will suppose, my young friend, that you have obtained your situation. It is to be hoped you have not done this rashly; that you have considered all the ins and outs, what you can make, and what you must spend, two very important matters once you are afloat in your own little canoe. It is to be hoped, also, that you have thoroughly equipped yourself for the work to which you intend devoting yourself. For instance, if you are about to go into a business office, you will find it an estimable advantage to have taken a thorough course at some reliable business college—a "thorough" course, may we repeat, not a mere period of "jollification" with a bare scrape "through" at the last. Knowledge is power in this as in other things, and unless you have very exceptional ability, and a very unusual degree of perseverance, you will find it dangerous to embark on a business life without it. Knowledge will put your feet under you, give you confidence in yourself and in your work; it will even make itself known in your department so that, at the first interview, others will have confidence in you; and it will enable you to command higher wages—in no case very lucrative for a beginner—than could ever be expected by the unskilled.

As noted before, whatever be the course which you have decided upon, this question of wages must needs be a most important one. Whether dressmaking, clerking, working in an office—whatever you do—there is the same necessity of "living," of having at least nourishing food, and being able to dress respectably. You must allow, nowadays, in most cities—the towns may afford cheaper living—for \$4 a week for room and board. Boarding-houses at lower rates are almost invariably "no good,"—poorly heated, poorly lighted, with food either insufficient or badly cooked and insufficiently nourishing. . . . Then the

companionship in such places must be considered. It may be all right, but there is the possibility that it may be all wrong. No girl of a delicate, sensitive nature wants to go among coarse, utterly uncultured people. Without, at least, a modicum of refinement in those with whom she must associate, life must be to her a veritable death in life. She must remember that with the best possible environment she is likely to be often homesick; and how much more so in an atmosphere in which every element is uncongenial.

To avoid just such a contingency many a girl, unable to pay the rates in a really respectable boarding-house, has adopted the alternative of getting her own meals in her own room. This is scarcely a sociable way, and is not likely to be altogether desirable; nevertheless, it is preferable to living in a coarse or poor boarding-house. It gives the girl at least the option of choosing her own food, and if she is provided with a good gas lid or two, and has the judgment to provide wholesome food—milk, eggs, beefsteak, vegetables, fruit and bread and butter—she may live very comfortably indeed.

But the board rates do not sum up all the expense. There are many other things to be considered: first of all, perhaps, laundry. If your landlady happens to be one of the motherly sort, she may, possibly, permit you to do your own washing and ironing. If, however, she objects to the "muss," or the expense of the gas used for heating water and irons, you must be prepared to have your washing done by a laundress. For two shirtwaists a week, and the necessary underclothing, collars, handkerchiefs, etc., this will cost you, at the lowest calculation, from 50c. to 75c. a week—considerably more when there are any extras. You may, of course, cut the shirtwaist item down somewhat by wearing dark ones.

Add to this the amount necessary for odds and ends, postage, car fare, the occasional trip "home" without which you can scarcely exist, and that needed for boots, clothing, etc., and you may come to some idea as to how much salary you must have in order, simply, to live. . . . Believe me, it is very necessary to make this estimate. It is a great risk to take a situation at a low salary, and trust to get through somehow. You can't get through "somehow." You must have, at least, a living. . . . Perhaps you will not agree with me here, but, speaking for myself, I must emphatically say that, were I in reduced circumstances, so reduced that the procuring of my very bread might be a serious question, as it may be to some—not many, I trust—of you, I would rather, yes a hundred times rather, go to service in some private house than take a position as clerk or office girl at \$4 or \$5 a week. If you have a little money to fall back upon, and can afford to wait six months or a year for an increase in salary, you may, of course, take the latter risk. Otherwise, by going to work in a respectable private house you are sure, at least, of a warm dwelling, protection, and good food. You can, moreover, wear out your clothes while doing kitchen work as you never could while going out to work every day, and so you can lay up a little store of savings against the time when you may desire to enter upon work of another kind.

(To be continued.)

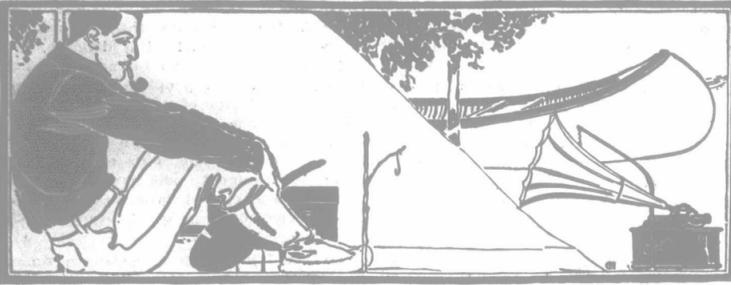
Making Hard Soap.

Dear Dame Durden.—As I am always very busy, I have never found time to drop you a line ere this, although I am an interested reader of the correspondence column. I am not going to write a letter this time, but, some time later on, you may hear from me. Am writing to-day to ask if any of your readers have a recipe for making hard soap? Also can you make hard soap out of pork grease? I have saved all the fat after rendering the lard, and it is so nice and clean, and we always put it through the meat grinder.

AN INTERESTED READER.

Halton Co., Ont.

"Interested Reader," can you ever, ever forgive me for not publishing your letter sooner? To tell the truth it was simply lost—lost among the piles of papers in one of the "pigeon-holes."



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**White, Ehrhardt & Co., Logan Ave., Toronto, Can.**

where it has been reposing peacefully ever since the 25th of February last, and I did not come upon it until to-day. It is a good thing that you could get soap to buy, else, were you depending upon the Ingle Nook, you would be in a dreadful way. Here are the recipes anyway, and I hope they will not be too late to be of use:

The first is for good, strong kitchen soap: Save every bit of grease rinds, etc., of any kind not fit for cooking. When five or six pounds of it have accumulated, get a pound of concentrated lye, and to it add one gallon rain water. Let come to the boiling point, put in the grease, and boil from fifteen to thirty minutes. It should eat up all the scraps, and look clear like honey. Take out a spoonful in a saucer, and cool it. If it gets hard and grainy, it is done. If it shows too much lye, pour in some melted grease. When done, and cooled, it should be hard enough to cut from the kettle.

To make a hard, white soap of finer quality, proceed as follows: To 15 lbs. lard or suet, made boiling hot, add, slowly, 6 gals. hot lye, or solution of potash, that will bare up an egg high enough to leave a piece as big as a quarter bare. Take out a little and cool it. If no grease rises, it is done. If any grease appears, add lye, and boil until none appears. Add 3 quarts fine salt, and boil up again. If this does not harden well on cooling, add more salt. Boil; run in moulds, and cut in cakes.

#### Vinegar from Maple Sap.

Kindly publish in your next issue a recipe how to make vinegar out of maple sap. **MRS. I. I. H.**

Carleton Co., Ont.

We regret that we can find no data on this just at present. Can anyone send directions?

## About the House.

### LAUNDERING.

Now that summer, with its additional washing of light garments, is almost here, the time may be opportune for investigating as to the easiest methods of laundering. A correspondent writes that, so far as the white clothes are concerned, she has solved the problem in the following way: On the evening before wash day she puts the clothes to soak in soapy water to which, if the clothes are much soiled, a little of any good washing powder may be added. No soap need be rubbed on the clothes, except on much-soiled spots, such as neck and wristbands. In the morning she wrings out the clothes and puts them in the boiler, which should be half full of water, in which one-fourth of a bar of any good laundry soap and two tablespoons of borax or ammonia, or any good washing powder have been dissolved. While the clothes are boiling, she does her housework, and afterwards very little labor is needed in finishing the clothes. The clothes should be rinsed through two waters.

It is said that print dresses, gingham and muslins will not fade if washed in this way: Make a gallon of flour starch, straining it as usual. Pour half of it into two pails of soft water, and wash the cottons in it. Put the rest of the starch in the rinsing water; dry in the shade, and iron on the wrong side.

### HOUSEHOLD HINTS.

Keep lemons in cold water, changing it every day. If, however, any of them should have become hard and dry through neglect of being put into the water, put them in a pan of hot water, and set where it will keep hot without boiling. In about two hours the fruit will be soft and juicy again.

If rolls, biscuits, or buns, have become stale, roll them up in wet paper, lay them in a pan, and heat in a hot oven until the paper scorches. They will be as good as if freshly baked.

A good lotion for the complexion is made as follows: Dissolve two tablespoons Epsom salts and one tablespoon borax in half a pint of lukewarm water, then stir in ten drops tincture of benzoin, and bottle. After thoroughly washing the face, apply with a soft cloth, rubbing in well.

To Protect a Polished Dining-table from Hot Dishes, especially when the table is to be used without a cloth, the asbestos stove-lids, which sell for a small sum, will prove to be excellent. Cut off the tin rim of the mat, and cover the asbestos with two thickness of linen.

To Clean a Discolored Bottle.—Partly fill it with strong soap-suds and put in some carpet tacks; then shake well.

If you have any Jerusalem artichokes growing about the place, don't forget to dig some up and cook them before growth begins. Cook in milk and water; strain and serve with milk sauce; or, slice thin in milk, and cook, adding butter, pepper and salt. Salsify and parsnips also keep well in the ground over winter, and may be used in spring before growth begins. Parsnips, however, are said to develop poison, if permitted to grow up year after year, hence they should all be dug out of the ground after the first year.

Put furs away in regular moth bags, or in any kind of heavy paper bags, tied so tightly that a moth cannot penetrate.

To make steak tender, smear it with olive oil, and let stand a couple of hours before cooking.

### DO YOU PULL DOWN THE BLINDS?

"In sunny weather do you pull down the blinds, madam, lest the sun fade your carpets? Answer me this, because in the answer do I get a valuable clue to your character."

I once heard it said that the pulling down of the blinds to save the fading of the carpets, or the letting the carpet "go to the wall" for the sake of sunlight, was no had test of temperament and disposition.

Pursuing this investigation, if you draw down the blinds, why and wherefore do you draw them down? Because you are too sick at heart or too ill and weary to bear the light? That is one reason, and because the sunlight will fade the carpet is another.

What I have written recalls the fact to me that the virtues of one generation may be the vices of another. Forty, fifty years ago to permit the sun to fade the carpet was considered an act of inexcusable extravagance.

The salubrious properties of sunlight were still undiscovered, and the preservation of carpets at all hazards was still considered the bounden duty of the housewife. Even so, upon some of our valuable merits future generations may set a low price, and upon the most cherished goals of our ambition those who come after us may look with contempt. Advantages and disadvantages, good fortune and ill fortune, change places curiously in the big wheel of fortune and the raree-show of life.

I was reading a sermon the other day, preached not fifty years ago, in which the relative fortunes of the rich and poor were set forth.

"Think of the rich consumptive," said the preacher, "sheltered from every breath of heaven; and then turn to the miserable condition of the poor consumptive, exposed to the outer air in all weathers."

Nowadays, of course, Dives, with a tendency to phthisis, would, in that particular, willingly change places with Lazarus; and perhaps the condition on which, in other respects, Dives to-day sets such store will be appraised by Dives' grandson as about as enviable as is to-day that of a consumptive sheltered from every breath of heaven.

There is a fashion in the apples of the eyes as there is in scenery, in old and new masters, in furniture, and in everything else. Who can say in which direction, or towards what goal, the coming generations will press forward? The very insanity of one age is the culture of another. The seeing of auras and hearing of voices, which our grandparents would unquestionably have accepted as signs of lunacy, we accept as tokens of culture and finely-tempered organisms.—From "More Pages."

### AIRING ONE'S CLOTHING.

We are most of us very particular about airing our beds, but some of us do not realize that it is considerably more important to air our clothing. A great many girls drop the garments they have worn through the day into a pile where it is impossible for the air to reach them. Instead, they should be hung

over a chair in such a way that a current of air will reach each one, and freshen it thoroughly. The nightgown, instead of being rolled up as soon as it is removed, and thrust under the pillow, should be hung where the sunshine and fresh air can reach it for at least an hour.

Instead of hanging the dress you have worn into a wardrobe or closet as soon as removed, it is a good plan to put it on a hanger and leave it out over night, till it is thoroughly aired. But even with this precaution, a closet will become "stuffy" in time, and the only remedy is to empty it and to give its contents a thorough sunbath on the clothesline out of doors.—Sel.

## POWER LOT

### A Story of "Down East."

BY SARAH McLEAN GREENE.

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#### CHAPTER IV.

Mary Stingaree.

Mary tried not to notice how Rob looked. As Captain Belcher said to me afterwards: "Jim," says he, "I was sorry for 'im. Now, don't you discount that one mite. I was sorry for 'im. I'd almost rather he'd been silly drunk; the 's some excuse for a man lookin' as he done when he's drunk. As it was, when I presented him to Mary, it looked an' appeared ter me as ef I was presentin' something 't lay hard on my stummick as a natteral fool-jackass—an' I wa'n't no ways rorsponsible for him, neither; but thar he was, hitched to my towline; an' me, as I looked at him, only jest wishin' 't I could have a glass o' plain sody ter git my stummick back whar it was afore I met him."

"Wasn't the pay you got for the job satisfactory, Belcher?" I asked.

"Sure, sure. But no ordinary reckon's wouldn't apply ter that job. Why, Jim, I took sass from him. Say, I atcherly took sass from the crittur without so much as heavin' a chip at him. An' Mary—she was took in the same way. She turned soft, too."

"What do you say?"

"I say, soon as she looked at Daisy, she 'threw up the rag,' like the wust knocked-out champen in the ring. She did so. Ma'y Sting'ree 's a woman that's natterally kind o' awesome to a man—leastways, her eyes gives me the creeps. They ain't unhullsome eyes, but they're too d—n big an' queer for comfort. When she turns 'em full on me, by Cripes, I allus feel as ef I was settin' in the choir facin' the hull congregation, with, mebbey, a 'lip showin' along the leg o' my britches. I allus face her up squar', but I'm glad when I git away. This is jest between you an' me, Jim. She's a fine young woman."

As a matter of fact, Rob, on entering the Stingaree house, made Mary a very low bow. His haggard eyes were without hope, or any question of hope; but he made his bow—and such a bow as only a fellow with a long line of ornate ancestors knows how to make.

"Yer trunks is too large ter heave thro' the door," Captain Belcher belovled at him at this juncture. "I'll have ter dump 'em in the shed."

"It's too bad," Mary said, and she blushed; that was all; she made no apology. But she knew civilized conditions of luxury as well as Rob. The squawking of a hen, rudely roused from her listless dreams of maternal empire by the sudden overturn of trunks in the shed, further animated the meeting between Mary and Rob. As Mary had tried not to notice Rob's appearance, so Rob assumed unconsciousness of the wild racket in close proximity. Though Captain Belcher's unloading fairly

shook the house, Rob spoke genteelly:

"The shed will do quite as well, Miss Stingaree. I hope you won't find me troublesome."

"I find you—very welcome," said Mary. "Your room is upstairs to the right. The little front room to the right."

"Thank you, I know I need a tub," murmured Rob, as though he wanted to get clean and then die.

Now, an all-over bath at Power Lot—unless, of course, you dipped in the River or the Basin, or swum on the Bay—but an all-over bath in the house at Power Lot meant a considerable stunt in the line of preparation. It meant fetching water by the pailful from the spring and using every kettle available to heat it up on the little stove in the kitchen; then, it meant lugging it upstairs, with more water from the spring to make enough of it.

"I heard the crittur say 'tub,'" related Captain Belcher afterward, "an' I knew he 'xpected, from sheer force o' habit, ter go into a room full o' v'ilet-smell soap an' towels, an' turn'on the fasset, an' then, arter he'd soaked a while, ter let the plug out—an' thar' you be. I'd seen them kind o' bathrooms, onct in a while, in my own day, cruisin' round. "But now," continued Captain Belcher, "when Daisy Lee says 'tub,' I took a peeper at Mary's face, an' she looked as though she'd run up agin' a cemetery. 'Wouldn't a sponge bath be wiser this evening?' says she, 'you are so tired.' 'No,' says that slob of a Daisy Lee ag'in, with his dyin' genteel voice, 'I'll have a tub.' 'I'll see ter that, Miss Sting'ree,' says I, comin' forwards, an' leavin' my oxen ter loll 'longside the shed. 'I'll see ter that.' An' thinks I ter myself: 'You want a tub, Mis' Daisy, an' I'll get ye a tub—an' be blamed to ye fr' a pest-erin' foot-loose pudd'head.'"

"Say," went on Captain Belcher, "I went ter work. I hove myself down inter the cellar an' sawed off the end of an old merlasses barrel, an' I rolled 'er upstairs to Daisy's boodwar; an' then I set to, totin' water, an' bilin' of 'er on the stove. 'T made me think fr' all the world o' hog-butcherin'. Don't know why it brung up that to me, 'cept 'twas natterally on account o' luggin' an' bilin' so much water. Wal', when that thar 'bath' was all fixed, I says to Daisy, 'Yer tub's all ready,' says I very pleasant an' hopeful; an' me an' the oxen lit out."

"I hope he got clean," concluded Captain Belcher ruminatively. "It 'ud 'a' been a friv'lous fool-junket wastin' water that way, ef it hadn't been so ridick'lous; but fr' that matter, the hull stunt o' haulin' him up thar was as comical as a mess o' tame b'ars. I lafed all the ways home, till these 'ere roundin' side-slats that make up the mainstays of a man's body-frame was so sore they squeaked. Say, I'm givin' that to ye straight—they squeaked audible."

Rob, having previously carried up a portion of his wardrobe from the boxes in the shed, took his bath by the light of a rather ineffectual lamp, his mind dwelling all the time on a foretaste of something which he had brought up concealed in a mass of garments, the very thought of which bloomed as a coming transport within his weary breast.

It was his last, his only, bottle. If he had known the exigencies of the situation he would have brought more. Never mind; he had that. It sustained him through the dingy and unaccustomed trials of his bath. He dressed himself scrupulously in clean linen and broadcloth, then he took a beaker of his one remaining source of comfort and joy, and thus equipped he descended the stairs to meet Mary Stingaree.

A short, bustling woman had come over from a neighboring house to help Mary get supper on this occasion. As soon as Rob had emerged from his room, this palpably officious female began grimly to bring down, pailful by pailful, the dark and forsaken waters of his bath.

"That Belcher," she exclaimed, with stiff scorn. "By Jo, I'd like to knock him over with his jokes. Ain't you sticky?" she inquired seriously of Rob.

Rob had suddenly become altogether smiling and blissful. "Yes, madam," he agreed, politely, "the water was a trifle sti—hic—sticky, I thought, but very sof', very nice sof' water, madam."

Mrs. Byjo—for so she was called by reason of her frequent use of that pure though forceful expletive—Mrs. Byjo looked very hard at Rob, sniffed and sighed with a mighty breath that almost alarmed him. She went over and whispered to Mary. Rob did not mind; his sole aim was to be condescending and agreeable, as well as he knew how under the circumstances.

"I sh'd think," he said, with great delicacy and friendliness, as the roar of the wind outside smote his now placid ear, "I sh'd think your beautiful little homesteads up here'd get blown off, sh'd think they'd get going and blow right off, over on to all 'kingdom-come' off there. Don't see how you make 'em stay, really. Anchored somehow, I suppose?" he concluded, smilingly.

"Yes, our houses are anchored all right," replied Mrs. Byjo definitely, "and they're not 'beautiful homesteads'; they're poor old shacks in one way and another, and we know it." She shut her lips with an ominous gravity that portended sorrow; but Rob went on:

"Doesn't the wind ever stop blowing 'round here?"

"It does," answered Mrs. Byjo, "when its work is done. Sometimes it has to tear 'round till it's blown a little common sense into some intellects that nothing but a tornado 'll have any effect on. In them cases it has to blow long and blow strong, and turn and overturn."

"Gee," said Rob amiably, letting a whistling breath of polite surprise through his white teeth.

"It blows," continued Mrs. Byjo, "until them that has been raised soft and fearful on the milk o' one cow, as the sayin' is, gets so that they can forage up a living on any kind o' crusts and porridge they can lay their hand to, and be glad of it; yes, and be the better for it, too."

"I sh'd think prob'ly you were the schoolteacher 'round here," intimated Rob, ingratiatingly; "I always like the school teacher in a rural play, I do—always fall in love with 'em. I sh'd think—"

"You set down here till you can think o' something more to the purpose," said Mrs. Byjo, shortly, plumping a chair down before him. "I'm a woman over forty. And you—ain't you proud that you're goin' on ten? But you're a thoughtful boy, that's plain to see, you're always thinkin'. Now, you set down there and 'think' what kind of a condition you're in to meet ladies, whilst we go on getting supper."

What Rob thought was that he had fallen among exceedingly ill-bred people in grotesquely sordid surroundings. He had tried to mitigate their state by overlooking their poverty and ignorance with genial good-will, and instead of appreciating it they took advantage of his good nature to make a butt of him. Very well—he mused darkly—he would show his breeding through all. A gentleman could not do otherwise. But his lip curled, and his beautiful eyes, hollowed by fatigue and dissipation, glowed sullenly.

He watched the women get supper. Mary's face was very sad. She was strikingly handsome, in a far-off foreign way. But she—who was, in fact, a trifle younger than Rob—looked very old to him. She and Mrs. Byjo appeared to him to be about of an age. He wished heartily that there might be some young and sparkling life about him at that moment, and he sighed.

Mrs. Byjo cast a hopeful glance at him, but Mary had had deep experience of cases of similar ailment in her own household, and she knew that

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Rob's mind was simply becoming very groggy. She made a cup of strong coffee and brought it to him with her own hand.

"Take this before your supper," she said; "you must be utterly fatigued."

Rob rose uncertainly, and, with one hand seeking support from the back of his chair, he bowed his thanks as he accepted the draught.

"Some young men who have had wealth," said Mary, in her low, deliberate voice that smacked so of indifference it tended to rouse him, "enjoy camping out and an occasional return to primitive conditions. Whether you are one of that kind or not, you will find that it is practically 'camping out' here, and the primitive necessity of inventing resources for existence."

Rob gulped down the coffee gratefully, though he remained courteously on his feet.

"New York City's good 'nough for me." He then smiled at her vaguely. "Tell you the truth, Miss Stin'gree, when I go to th' country, I like—good hotel—and some 'musement. You look 's though you'd seen bet—better days yourself," he added, more boldly, but his manner was, somehow, inoffensive. "Tell you the truth—only thing this place is fit for—is grave-stones—and I wish I had mine."

"Are you sure that you're not something of a coward?"

There was fire, as well as kindness, in the dark eyes at which he gazed for a moment steadily. He fancied there was a smile in them, too; he endeavored desperately to ascertain that important fact through his fixed stare. Then his contemplation drifted waveringly to a graying lock or two that shone, so early, in the black hair on her temples.

Mary blushed. She knew that her face and figure were superb. That premature tint of gray was a little thorn, even to her high mind.

"Robert," she said, accepting quietly the supposition of superior years, while a faint smile touched her lips, "I shall call you 'Robert'—being so much older than you—but I prefer that you should call me 'Miss Stingaree'—never forget that—my poor mother will never walk again until she has reached the 'place of graves.' She has been waiting to meet you; a new voice and presence are so much to one afflicted as she is. She cannot see you. Do you mind going in to speak just a word to her?"

"Why, certainly," said Rob, absorbing the last of the virile potato in his coffee cup. "Certainly, Miss Stin'gree. D'lighted."

Mary opened the door from the kitchen—which was sitting-room and dining-room also—into a bedroom adjoining.

"Here is Robert Hilton, mother."

"Come here, Robert Hilton, let me look at you," said the sightless old woman, from where she sat propped up in bed. She had an eager air of expectancy.

"Mother has been talking all day of your coming," said Mary.

"Let me take a good long look at you, Robert Hilton," exclaimed Mrs. Stingaree. She seemed to study his face with her large, unseeing eyes, brilliant in their natural coloring, while the touch of her pale hand reminded him disagreeably of the tingling of an electric battery. Rob hung his head and cast down his own eyes in extreme discomfort.

"He is noble, noble," finally declared the blind woman, to Mary's passive amusement, and Rob's unspeakable amazement. "Have you put on Aunt Taylor Fleming's teacup for him, Mary, and my Tower spoon?"

"You haven't half set the table, I'll warrant. Bring out the best things, girl. Have it fine, girl, fine. Will you ever come in to see me, I wonder?" she said pettishly, turning to Rob; "they all run away from me."

The clear announcement of the "noble" was still ringing in Rob's befuddled ears. His physical being revolted at the uncanny prospect of

another entrance there; but "noble," "noble," pealed charmingly through his soporific senses.

"Cert'nly, madam, I'll come in to see you with greatest pleasure, if you'll allow me. Pleasure 's all on my side, madam, I 'ssure you."

"Noble," once more muttered the old woman, her brief moment of energy fading into a vague relapse.

"Now, just a moment—do you mind?—will you come and see my brother?" said Mary.

"All these s'prises—I fancy you're tryin' to get me able to stan' on my feet 'fore we go to dinner," murmured Rob confidently, already childishly convinced that deceit or any affectation of it might as well be laid by, as a vain and useless garment, before Mary Stingaree's all-discerning eyes. "'S that so, Miss Stingaree? All these s'prises?" and he laughed feebly and approvingly.

Mary led the way to a little alcove, which still further revealed the possibilities of the "kitchen." There, on a lounge, half concealed behind a door, lay a form, hitherto unsuspected of Rob, considering his own state and the gruesomeness of these altogether novel surroundings.

"This is my brother Bate," Mary said. "He has been on a 'spre.'" She spoke in a matter-of-fact tone. Rob turned to her with a sharp look. Her face was inscrutable. "He is only twenty-seven—and a poor, unshaven, besotted wreck of a man," as you see, dead drunk."

"Where—where did he get it, do you suppose?" said Rob, with innocent cunning.

Mary smiled wanly. "I wonder," she said, "if you would help me to try to save Bate?"

Rob's views on this subject were altogether too hazy and confused to admit of framing any intelligible reply. He waited uneasily, his eye wandering toward that part of the kitchen where Mrs. Byjo was stalking about forcefully among the pans and kettles.

"Yes, we will go and have some supper," said Mary; but she still stood for a moment close at her brother's side. There was a singular witchery of compelling power about her, not attractive to Rob, but effective, nevertheless; where she looked, he felt constrained to look. So he let his eye wander cursorily again over the lamentable figure on the lounge. "He was such a handsome lad," the sister said. Rob felt that he must look at her, and following the voiceless behest, he did look up, and met those uncomfortably thrilling eyes again.

"I expect help of you," she said quietly, "and not an added care and sorrow. I have all that I can do and bear. You will see that. This is all unnecessary to say, however. You are a gentleman born, and a gentleman does not inflict added burden and trouble upon an already overburdened woman."

The concise, cool voice stung through Rob's senses. It also painted a picture before him in vivid, ineffaceable colors. Whatever he thought, whatever he did, the picture lasted. That was Mary's power.

"I am depending upon you," she added gently, moving away with him. Rob wiped the sweat from his brow.

"Oh, h—l," he sighed deeply. Mrs. Byjo offered no weak solace to his straits. She unrolled her sleeves and buttoned them at the wrist, but her manner was rather as though she rolled them up, and that to do battle.

"You will stay and take tea with us, Virginia?" Mary pleaded.

"No, Ma'y, I can't. My oxen ain't unyoked, and my cows are bawling away, over thar', with stuck udders. I'll come over when I've done my chores, and keep ye company if ye want me to. Don't blame ye for not liking to be left alone, considerin' how ye're fixed."

Her words contributed much that was frankly unflattering to Mary's newly-acquired guest, but Rob simply gazed at her in amazement. It appeared to him that Mary Stingaree was try-

ing to persuade her cook to sit down at the table with her.

"I hoped," continued Mrs. Byjo, "that Jim Turbine would come up and look our for ye this evening, but he's hawking it, off somewhere. I'll be glad to come over and set with ye after I've thrashed around a while at home."

Rob inferred that some frailty, or lack of cordiality on his part, had prevented Mary having the pleasure of her rude servant to dine with her.

"Take my chair, Cook," he cried, elaborately yielding his place. "I'll go get another chair. All sit together. D'lighted."

Mrs. Byjo wore short skirts; her hair was short; her boots declaimed aloud that life was a rough and toilsome journey. She took the ox-whip, which she always carried about with her, from a corner of the room, and snapped its lash tentatively. Then she turned to Rob.

"My ancestors were reigning on ducal thrones," she notified him in very correct English, "when yours, probably, were inventing some new kind of lager beer. Good-night. I'll be over presently, Ma'y."

"She is not my cook," said Mary, as the door closed, "she is my neighbor, who came over to help me out of charity."

Rob was very red. "Excuse me, Miss Stin'gree," said he, "but they're a dev'lish queer sort 'round here. And they don't like me. They been antag—tagonizin' me from the start. I like to be frien'ly. They won't be frien'ly with me."

"You just persevere," Mary encouraged him; for, whatever his ancestry, there was ingrained in him at least one classic tenet of good breeding, not to hurt the feelings of others, and his face was suffused with regret and mortification. Mary's spirits, as a practiced disciplinarian, rose. There was, evidently, "something to get hold of" in Rob's nature.

"There are some queer sorts that you'll find it is only elevating, after all, to make friends with," she went on brightly. "You won't find, the world over, a heart more worthy to win than Virginia Stafford's—sometimes called 'Mrs. Byjo.' And by the way, her line is traceable from the very grandest, and here she is, genuine, away off here in Power Lot with her rough hands and her ox-whip. And there's James Turbine—"

Well, I, who write this, am picking up the gladdest things that ever befell, along with the rest; and I heard of it, what Mary said about me there before Rob. I don't mind being the kind of fool that I've done it up in blood-tissue, and tied it with my heart-strings, and got it stowed away in the safe-deposit vault that I shan't lay down when I shuck off my old body, but take right along with me up yonder—some place they tell of—where the angels sing—So much for that.

Ah, but Rob had the chance—sitting there at the table alone with Mary; and he so broad and tall, above most men, and winsome, handsome, and clad in such high fashion; he had the chance to put in a promising lick of courting. He could not even see straight. It crossed his mind that he wished a certain light-footed lady, whom he had frequently met convivially in New York, were opposite him, in the place of the "old maid," as he mentally denominated Mary Stingaree. Treating him as an inferior, too, with her lofty manner, he soliloquized, maudlin-childish. He wished she might see the dining-room in his own house at home. He tried to recover pride; then stared stupidly at his soup.

(To be continued.)

W. W. Hodgson, who has, since its inception in 1901, taken so large a share in the development of the new Union Stock-yards, at Toronto Junction, has resigned, in order to take life easier. W. Grundy, late G. T. R. station agent at Toronto Junction, is appointed successor to Mr. Hodgson.

GOSSIP.

Messrs. J. Crouch & Son, the great horse importers of LaFayette, Indiana, recently shipped to Ontario two fine Percheron stallions, one a large, dapple-gray, five years old, weighing 2,125 pounds, purchased by Ratz & Cook, of Tavistock, Ont.; and the other, a splendid two-year-old, blue-roan, weighing 1,860 pounds, and a horse of remarkably fine action, purchased by Chas. McMechan, of Lucan, Ont.

DEMISE OF NOTED SHIRE BREEDER.

The death, last month, of Mr. James Forshaw, of Carlton-on-Trent, England, has removed from the ranks of Shire-horse breeders an outstanding personality, whose name has figured conspicuously in the prize lists for Shires at leading British shows for many years. It was from his stud that some of the best of the early importations of Shires to Canada were drawn, as the following quotations from a letter written by him to the Farmer and Stock-breeder, five years ago, will show:

"The first horse I owned I got in 1869. I had him till 1872. He was called Nonsuch, and I sold him to go to America. I showed him all over the country for three years, and he took first prize on every occasion. I then got the famous Ben Lomond that won a Clydesdale prize at Birmingham. I sold him to Richard Graham, of Canada, and at the same period I had the famous horse called Paragon Tom, a Shire horse, bred near Boston, in Lincoln. Through a misfortune he could never face the show-ring, but as a stock horse he will always live in the memory of Shire horsemen.

"As time went on I secured the famous Lincolnshire Hero and a most wonderful stock horse named Waggon Shaker. In the fall of the same year, I secured the famous What's Wanted, which, in my opinion, I have never seen the equal of, either belonging to myself or in any other one's possession. Down to this day and this generation the strains bred from him are always coming to the front. Some of our biggest stud owners have said if he now stood at 30 gs. a mare, he would have a full book. Then succeeded him, Bar None. During the first season I had him, Dick Graham wired from Canada, asking the lowest price. I wired back, and received a message to say he would accept him. This was in the month of June in '81. After Graham had accepted him at the price I put on the horse, he lamed himself, and I wired Graham to Canada, but he had started for this country. Consequently, I could not stop him from coming. When he got to my place, he stripped himself and bathed that horse sixteen hours a day for three days; he was so anxious to have him. He came to the conclusion, however, that he could not make him strong enough to meet the Atlantic. That was the best thing that ever happened to me.

"St. Ives followed him, and he had only a short career; but in his short career he won first at London. He took a chill there, and died. The bit of time he was allowed, he proved himself a most exceptional sire. In Lancashire you can see traces of his breeding today—superiority at the ground, feet and ankles. During that year I bought the famous Premier. I had him six or eight months, and then sold him to Mr. Duncombe. In the fall of that year I bought Harold, and had him for a period and then sold him to Mr. C. J. Douglas, of Aurora, Ont., Canada. When he got him to Liverpool, he shipped every horse on board but Harold. It was severe shipping at that time; Harold had cost a bit of money. Mr. Douglas went to Canada with the other horses, and left Harold with a farmer friend in England waiting orders when he had to be shipped. Mr. Douglas arrived in Canada, but the upshot of the matter was," continued Mr. Forshaw, "that his partner and he agreed to divide partnership. So, when they divided up, Harold came to Douglas' share. He wired that Harold must be sent to London when the time came, to be sold by auction. He went to London, and was sold to Lord Hindlip. The rest of Harold's career is well known to everyone as that of one of the greatest horses of the breed and one of the most successful sires of draft horses."

Mr. J. W. Boyle, Woodstock, Ont., advertises for sale pure-bred, up-to-date Yorkshire swine, bred from first-class, imported stock, and of approved type.

Mr. Thos. Southworth has withdrawn his name from the candidature for the position of City Park Commissioner in Toronto, as the city council were not unanimous in his favor.

That the prospect for higher prices for Shorthorn cattle is encouraging is evidenced by the fact that at five auction sales in the United States in one week in the present month, 222 Shorthorns sold for an average of nearly \$300. As Canada is the breeding ground from which United States breeders draw heavily for breeding and show stock, the above-mentioned result gives promise of an upward trend of prices for good cattle, and significant is the fact that the highest price obtained for a single animal at these sales was for a calf, the produce of a Canadian-bred cow.

SALE DATES CLAIMED.

April 23rd.—Rathbun Company, Deseronto, Ont., registered Holstein and high-grade dairy cattle, Shropshire sheep, Yorkshire and Berkshire swine. May 13th.—John A. Govenlock, Forest, Ont., Herefords and Shorthorns. May 20th.—A. D. McGugan, Rodney, Ont., Shorthorns. June 4th.—John Dryden & Son, Brooklin, Ont., Shorthorns. June 23rd.—Richard Gibson, Delaware, Ont., dispersion sale of Shorthorns.

GLENORA DISPERSION SALE.

Mr. A. D. McGugan, Glenora Stock Farm, Rodney, Ont., announces in our advertising columns this week that, on May 20th, the entire Glenora herd of 45 head of high-class Shorthorn cattle will be sold by auction at the farm, without reserve. The herd is made up of such notable families as Marr Roan Ladys, Missies, Urys, etc. The herd bull, and some good young bulls, as well as the breeding cows with calves at foot, and a fine lot of heifers in calf, are all in the sale, and the terms are six months' time, or 5 per cent. off for cash. See the advertisement, and apply for catalogue.

Kyle Bros., Ayr, Ont., write: "We have sold eight Shorthorn bulls this season, among them being the two young bulls we imported. Geo. D. Fletcher, Binkham, got the imported Cruickshank Butterfly bull, a good, low-down, thick calf; sired by Scottish Farmer; dam Beatrice 22nd, by Lancelot. D. W. Chambers, Freelton, got the other, a Marr Flora; sired by the Duthie-bred bull, Royal Velvet. These were a pair of good bulls of the very best breeding, and should turn out well with the men that got them. We recently sold to Wm. Hamilton, Bright, a very promising young bull, Jessie's Chancellor; sired by Raption Chancellor (imp.); dam Jessie 4th (imp.); this bull won second at Toronto in the junior bull calf class, and first at London last fall. The young bulls we are advertising are a first-class lot. They will be sold very reasonably, as we do not want to run them over the summer, and anybody wanting a good bull, cheap, should write for particulars, or, better, come and see them. We will part with a few females of choice quality, and safe in calf to Clipper Chief (imp.), the Canadian National junior champion of 1907."

TRADE TOPIC.

FREE SAMPLE OF ROOFING YOU DON'T HAVE TO PAINT.—The makers of Amatte roofing have advertised their goods very extensively, but the mineral surface proposition is unfamiliar to many people who do not see how it is possible to make a flexible, pliable roofing with a surface of real stone. Any man will recognize that a mineral surface will wear longer, for instance, than a painted surface, but one has to see how Amatte is made to really appreciate its advantages. The manufacturers, therefore, distribute samples very freely, and you can get one very easily by addressing a postal card to the manufacturers' nearest office. Address: The Paterson Mfg. Co., Montreal, Toronto, Winnipeg, St. John, Halifax.

POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at two 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 for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 30 cents.

BLACH Orpington prizewinners, \$1.50 per 13; White Rocks, \$1 per 13. W. J. Bebatock, Ridgeway, Ont.

BARGAIN DAY—100 choice-bred Barred Rocks one and two years at \$1 each, or \$75, cash with order, takes the lot. Choice strains, large birds, great winter layers; 75% now laying. Ten White Leghorns, one year, beauties, \$8 Quick sale. Going West. Elgin Poultry Yards, Rodney, Ont.

BARRED Rock eggs safely packed in Morgan baskets. One dollar per fifteen. C. H. Chalmers, Smith's Falls, Ont.

BUFF Orpington eggs from prizewinning stock. \$1 for 15. S. L. Anderson, Crossland, Ont.

BUFF Orpingtons—Splendid cockerels for sale. Also few pullets. Price right. Egg \$1 and \$2 per fifteen. Special prices for hundred lots. James McGregor, Caedonia.

BUFF Orpingtons, White Wyandottes, Rocks, Leghorns, Black Minorcas, Buff, Partridge Cochins, Hamburgs, Pekin, Aylesbury ducks. Settings \$1. B. L. White, Drumbo.

BUFF ORPINGTONS—Pure-bred—Eggs, \$1 per 15. 9 chicks guaranteed \$5 per 100. Extra heavy layers. Hugh A. Scott, Caedonia, Ont.

BUFF Orpingtons only. Choice quality. Eggs \$1 per 15. John Taylor, Jr., Galt.

BARRED ROCK eggs from elegant matings. Eight-page circular free. W. W. Dods, Alton, Ont.

CLOVER Crest Farm Buff Orpingtons; pure bred choice laying strain, \$1.00 per 15 eggs. Mrs. A. W. Ross, Douglas, Ont.

CLARK'S Buff Orpingtons 19 pens. Exhibition, egg strain and utility pens. National winners. Eggs from \$1.00 to \$5.00 per 15, 12 fertile eggs guaranteed. Incubator eggs a specialty, \$5.00 per 100. To raise birds for the fall shows get my eggs. Free mating list. J. W. Clark, Cainsville, Ont.

EGGS from choice R. I. Reds, one dollar; Welland, Ont. one dollar. Emerson Tufts, Welland, Ont.

EGGS from large heavy-laying White Wyandottes, 15 eggs for \$1. J. O. Stonemaa, Hensall, Ont.

EGGS from pure-bred Barred Rocks, White Wyandottes, one dollar per setting. John R. Morgan, Wales

EGGS for hatching. Choice White Wyandotte and Barred Rocks. \$1 per two settings. W. A. Bryant, Cairngorm, Ont.

EGGS for hatching from specially selected matings. Barred Rocks, Buff Orpingtons Rhode Island Reds, \$2 for 13; \$3 for 25. Any variety Cash with order. J. N. Cober, Box 203, Hespeler, Ont.

EGGS for hatching. Pekin ducks (imported), eggs twenty-five cents each. White Wyandottes (Fisher), R. I. Reds (Thompson), eggs fifteen cents each. Farwell Poultry Farm, Oshawa.

EGGS FOR HATCHING—From a pen of Barred Rocks, selected for their persistent laying of large, rich colored eggs. Having the run of the orchard and mated with three A1 cocks—large, strong-boned, healthy birds. Price, \$1 per 13, or \$3 per 40. W. C. Shearer, Bright, Ont.

FOR SALE—Eggs from choice pens of Barred Plymouth Rocks, \$1 per 15; 45 eggs, \$2.50 J. F. Trevorton, Pouchers' Mills, Ont.

INDIAN Runner ducks. Greatest layers on earth, and best pen in Canada. My pen contains every first and second prize ducks at Ontario and Toronto fairs. Eggs \$3 per 11. Good hatch guaranteed. If you want the best deal with me, and you will be pleased. H. F. Wismer, Box 23 St. Thomas, Ont.

INGLE NOK Poultry Farm offers eggs from selected pairs of heavy laying strains—Brown and White Leghorns, Buff Orpingtons, B Minorcas, and Barred Rocks, \$1 per 13. White Leghorns only \$5 per hundred. W. H. Smith 41 Spruce St., Toronto.

LOOK! Canada's champion exhibition and heavy-laying strain Single-Comb White Leghorns. Send for free mating list, which gives complete winnings at Canada's leading shows, and prices of eggs at \$1.00 per 15 upward. Address Jas. L. McCormack, Brantford, Ont.

MY Barred Rock—237-egg-hen—is still Canadian champion. Send for circular. J. B. Henry, Walsworth, Ont.

MOTTLED Ancona eggs, \$1.50 per 15; single-Comb White Leghorn eggs, \$1.00 per 15, \$4.50 per 100. Winter layers. Money makers both. Circulars free. E. C. Apps, Box 224, Brantford.

POULTRY and eggs for sale. Cedardale White Wyandottes, bred from prize stock for quality, vigor and profit; large, snow-white, handsome, true Wyandotte shape. Persistent all winter layers the greatest laying strain known. Selected eggs from best matings. One dollar for fifteen. Good hatch, safe and prompt delivery guaranteed. A. J. Milton Bean, Box 355B, Toronto Junction, Ont.

PLUM Creek Barred Rocks, S. G. Dorkings, and Pekin ducks. Eggs \$1.25 per setting. Garland Bros., Pinkerton, Ont.

RHODE Island Reds, rose-comb. Bred nine years from carefully selected heavy winter layers. Large brown eggs. Dollar-half per fifteen. Good hatch guaranteed. Jno. Luscombe, Merton, Ont.

SPRING reduction sale to make room: 35 Ideal 50-egg incubators at \$5; 15 Ideal 100-egg incubators, \$7; 15 Morgan 60-egg incubators, \$7.50; 18 Morgan 120 egg incubators, \$14; 10 Morgan 240-egg incubators, \$16; 12 Sectional 100-chick indoor brooders, \$3.75; 12 Sectional 200-chick indoor brooders, \$5.50; 10 Sectional 300-chick indoor brooders, \$7.50; 15 Morgan 50-chick indoor brooders, \$4; 20 Morgan 100-chick indoor brooders, \$7.50. Above machines are all new and guaranteed. The largest poultry supply house in Canada. Catalogue free. Rosecomb White Leghorn eggs, \$1.50 per setting. A. J. Morgan, London, Ont.

SINGLE-COMB Snow-white Leghorns, bred for size. Heavy layers and beauty. Two hundred-egg strain. Hatching eggs, from six hundred selected breeders, \$1 fifteen, \$5 hundred. Prompt, safe delivery and good hatch guaranteed. G. Norman Shields & M. Ina, 1559 Bloor St. West, Toronto, Ont.

SINGLE COMB Rhode Island Reds, bred for winter eggs. Dollar per fifteen. Five dollars per hundred. Wm Y. Lockie, Roseville, Ont.

SINGLE COMB White Leghorns are laying well for me. Unexcelled for beauty. Just try a few and see. \$1 per 15; \$2.50 per 50; \$4.50 per 100. Enos M. Beer, Bethany, Ont.

UTILITY-BRED Hatched Plymouth Rocks (exclusively). Eggs one dollar per fifteen. George B. Hammond, Pelee Ontario.

WHITE Wyandottes only—Two grand pens. Bred for size and winter egg production. None better. Eggs \$1.50 per 15. Mrs. James Smith, Fine Grove, Brookland, Ont.

WHITE Wyandotte, White Leghorn eggs. Grand stock. Fertilis layers. Dollar a setting. E. W. Burr, Pa. I.

WHITE and Buff Wyandottes Prize fowl, great winter layers; \$1.00 for 13 eggs. Order to-day for April and May setting. Harold Hunter, Barrie, Ont.

WHITE Rocks, Buff Orpingtons, prize-winning, heavy-laying strains. Eggs one dollar and a half per setting. Rife Bros., Hespeler, Ont.

WHITE Wyandottes. Bred to lay Eggs from record-bred hens, bred by the individual record system; 15 for \$3.00, 30 for \$5.00. George Elliott, Welland, Ont.

WYCKOFF'S 250-egg strain S. C. White Leghorns eggs Fifteen, \$1; thirty, \$1.75. Geo. Easton, Jr., Whitney, Ont.

WHITE Wyandottes exclusively Best general purpose fowl. Strongly fertilised eggs from heavy-laying Martin and Dupont strain one dollar per fifteen. Edith S. Green, Brantford.

Houdans and White Wyandottes—We won prizes at the leading Canadian shows in 1907 over any other exhibitor on Houdans. Houdan eggs, \$3 per 15; Wyandotte eggs \$1 per 15 or \$5 per 100. Write for circular. Charlton Bros., Box 4, Ilderton, Ont.

TRADE TOPIC.

SUNSHINE FURNACE.—An interesting series of advertisements will shortly appear in this paper on behalf of the "Sunshine" furnace, manufactured by McClary Mfg. Co., London, Canada. Newspaper advertising is a part of the McClary publicity programme, and works hand-in-hand with an extensive follow-up system. The series of advertisements were prepared by A. A. Briggs, Advertising Manager of the McClary Company, and placed by McConnell-Ferguson Advertising Agency, London.

GOSSIP.

THE HORSE SHOW.

In spite of the commercial and financial depression, the prices of the best class of horses have never been so high in Canada as at present. The show-ring horses are held at higher prices than animals of the same class in the United States. This fact has a special interest in relation to the fourteenth Canadian Horse Show, which is to be held in the St. Lawrence Arena, Toronto, on April 29th, 30th, May 1st and 2nd. The entries promise to be larger than at any previous show. All the leading exhibitors will be largely represented. Hon. Adam Beck, of London, has added no less than ten new hunters to the fine stable possessed by Mrs. Beck and himself. One of the new ones is said to be a better horse than Kakabeka, which won the premier honors at the International Horse Show, in London, last year. Mr. John J. Dixon, a leading amateur of Toronto, is buying prizewinners in New York so as to compete for the King Edward Hotel Challenge Cup. Among other exhibitors who will be prominent are: A. Yeagher, of Simcoe; Langdon Wilks, Galt; Dr. R. E. Webster, Ottawa; Gordon J. Henderson, Hamilton; Dr. McCoy, St. Catharines; Aemilius Jarvis, Dr. W. A. Young, H. C. Cox, George Pepper, Crow & Murray, Toronto. Reduced rates can be obtained on all railways. It is expected that His Excellency the Governor-General will be present.

## GOSSIP.

## MAPLE-LINE HOLSTEINS.

About five miles from Strathroy, Ont., is Maple Line Stock Farm, the property of Mr. W. A. Bryant, Cairngorm P. O., breeder of Holstein cattle, Yorkshire hogs, and White Wyandotte poultry. At the present time, Mr. Bryant has on hand about 27 head of Holsteins, none of which have ever been officially tested, but have given, in milk, from 35 lbs. a day, for two-year-olds, to 72 lbs. a day, for aged cows; and, if appearances count for anything, we think nearly or quite every animal in milk in the stable would go in the Record of Merit if given a chance, as they certainly look like being great milkers, and tests made of their milk showed 3.8 per cent. butter-fat. Among the lot are half a dozen heifers that are exceedingly choice animals, all in milk, of ideal dairy type, and carrying beautiful udders. The stock bull is Prince Gretqui De Kol, by De Kol Smith Dorrien, who has four sisters in the R. O. M. His dam, never tested, gave 60 lbs. of milk a day; and her dam, Daisy B. De Kol, has a butter record of 19 lbs. 2 ozs. in seven days; dam Josephine De Kol Colantha has a three-year-old record of 18.66 lbs., and she has two sisters with records of 17 and 18 lbs., respectively. For several years this herd has won practically everything hung up at a number of local shows, including Sarnia, where, last year, two of them won the special prize for best two dairy cows over all breeds. For sale, there is one yearling bull, out of a daughter of the stock bull, and by a Clemons-bred bull, and several bull calves, from three weeks to two and one-half months of age, all by the stock bull, and a choice lot they are. In Yorkshires are both sexes coming on. The Wyandottes are strictly high-class, and Mr. Bryant is selling eggs at two dozen for \$1.

## MAPLEBANK SHORTHORNS.

For a great many years the Maplebank herd of Shorthorn cattle has been recognized as one of Canada's leading herds, and the owners, Messrs. T. Douglas & Sons, Strathroy, Ont., are well known as among the foremost Canadian breeders. Always particularly careful in their selection of stock bulls, and paying particular attention to the development of the milking qualities of their cows, it is very doubtful if a better lot of milk-producing Shorthorns can be found in the country. They are also particularly averse to the family or strain fad; believing that the first, last, and all the time, requisite is the individual, one that has size, form and constitution, and the ability to raise their calf without the aid of nurse cows, or that can pay a profitable percentage over their cost of keep at the pail. Such is the kind that make up the herd of 85 head at present; up to a big weight, with faultless form, many of them would, if in show shape, weigh from 1,600 to 2,000 lbs., the get of such high-class bulls as the Cruickshank Victoria-bred bull, Valkyrie, a full brother to the champion Valiant, Imp. Diamond Jubilee; the Bellona-bred bull, Double Gold, a son of Imp. Golden Drop Victor, and the present low-down, thick, mellow-handling bull, Diamond =44695=, by Marvel =24871=, dam Lily Ramsden, by Speculator. This bull has proven a rare good sire, and, as a show bull, won first at Toronto as a junior yearling; he is sire of a number of one and two-year-old heifers, among which are some choice animals. In young bulls on hand are about a dozen, from ten to twenty-four months of age, a few only of which we have space to mention: A roan yearling, by Diamond; dam by Double Gold; is a real nice one, and one worth looking after. Another is a red yearling, by Hot Scotch; dam by Vanguard; this is an extra good one, low down and even. Another roan yearling, by Diamond, and out of a Double Gold daughter of Imp. Graceful 8th, is a herd-header for someone. Then we might mention two two-year-old red bulls, both sired by Diamond; the dam of one, by Double Gold; the other by Imp. Diamond Jubilee. These mentioned are representative of the lot, and nearly all are out of cows that have made good at the pail, and they together with the heifers can be bought very easy. In Clydesdales, the firm are offering four imported fillies, three of them rising three years, the other rising

## Dispersion Sale, Wed., May 20, At Glehoro Stock Farm, Rodney, Ont.

**45 SHORTHORNS** of the popular Scotch families—Marr Roan Ladys, Missies, Miss Ramsdens, and Urys. Money-making sorts. The get of noted sires. Heavy-milking and regular-breeding matrons with calves at foot and bred again to the great sire, Nonpareil Count. Eight choice heifers in calf—showyard material. Seven young bulls of unusual merit, and the herd bull—one of the best of the breed. No reserve, as the proprietor has leased the farm for a term of years.

Six months' credit, or 5% per annum off for cash.

Catalogues on application after May 1st.

A. D. McGugan, Rodney, Ontario.

## The Most Complete Line of Iron Stable Fittings in Canada.

ALSO A COMPLETE LINE OF STEWART HORSE-CLIPPING AND SHEEP-SHEARING MACHINES.



Knives Sharpened and Returned Promptly.

Before fitting up your stable write us for information and prices.

Our knowledge, gained by years of experience, is at your disposal.

The Tisdale Iron Stable Fittings Co., Limited,

19 Temperance Street, Toronto. Send for Stable Fitting Catalogue.

## OATS Good Clean Seed Waverly Banner SEED 70c. per bush. Sensation

## PEAS Golden Vine Canadian Beauty Prussian Blue Early Brittany Black Eye \$1.25 per bush.

CLOVER AND TIMOTHY	No. 1 Government Standard	"Sun" Brand Red Clover @ \$14 00 per bush.
		Gold Alfalfa @ 13 00 "
		Choice Alfalfa @ 12 00 "
		Diamond Timothy @ 3 50 "

GEO. KEITH, Seed Merchant, TORONTO



No. 10 Plano Box Buggy. Price \$57 00.

## Carriages and Harness at First Cost

Why not deal direct with the Maker, and save two Profits P

By our system you can purchase a buggy, phaeton or other high-grade carriage or harness at one-third less than from your local dealer. If not thoroughly satisfied you can return the goods and we will pay the freight both ways. Our complete illustrated catalogue, showing many styles of Vehicles and Harness, with description and price of each, mailed free. Write to-day.

International Carriage Co., BRIGHTON, ONTARIO.



## YORKSHIRES

Of the Choicest Type of Breeding!

Our herd stands second to none in Canada to-day. We invite inspection. Any stock shipped can be returned at our expense if not satisfactory on receipt. Prices not the lowest, but for value received we guarantee them as good as the best. Good stock on hand now. J. W. BOYLE, P. O. Box 563, Woodstock, Ont.

WHEN WRITING ADVERTISERS, PLEASE MENTION THIS PAPER.

four. All are in foal, and all are typical-quality Clydesdales. There are also for sale two fillies rising one year old, one of them with imported sire and dam, the other with an imported sire, and out of a registered Canadian-bred mare. Two of the imported fillies are in foal to the stallion in service, Royal Viscount (imp.), by Kitchener, by Montrave Mac, by Macgregor, dam Lady Alice, by Galliant Potteath, by Top Gallant, thus giving him a double cross of Darnley; he is one of the flashy, quality horses with superb action, a bay, seven years old, a sure getter, and is for sale. Anything on the farms is for sale, and no fancy prices asked.

## DAVIS' SHORTHORNS AND YORKSHIRES.

With a reputation as an importer and breeder of high-class Scotch Shorthorn cattle and Yorkshire hogs, equalled by very few men in the business in Canada, Mr. H. J. Davis, of Woodstock, Ont., enjoys a widespread and active demand for animals imported and bred on his noted stock farms. Mr. Davis is an importer of many years' experience, and no man knows better than he what constitutes the desirable points and qualities of Shorthorn cattle and Yorkshire hogs, and last, but by no means least, is the straightforward way he does business. Owing to so many sales during the winter and early spring, the herd at present is somewhat reduced, only about 45 head being on hand at the time of our visit a few days ago, the major part of which belong to such very fashionable tribes as the Broadhooks, Jilt, Cruickshank Butterfly, Marr Roan Lady, Bruce Rosewood, Duchess and Princess. Thirteen of the breeding cows are imported, the get of Scotland's most noted bulls. We were particularly struck with the splendid udders of some of these straight Scotch cows, and could not help thinking that if some of the critics who say that Scotch Shorthorn cows cannot raise their own calves, could see these splendid cows with their large, even, well-filled udders, and their broad-backed, thick calves, they would certainly change their mind. In young things there are several real choice heifers, the get of one of the stock bulls, Imp. Westward Ho, a Missie-bred son of the great bull, Merry Morning, and Imp. Queen's Counsellor, a Bruce Strawberry, and a pair of roan yearlings that look like show things, sired by the Marr Roan Lady bull, Imp. Deeside Chief. As an assistant to Westward Ho in service is the roan yearling, Imp. Nonpareil Chief, bred by Alex. Gordon, sired by first-prize bull at the Royal, Fascinator; dam Dalmeny Nonpareil; he is a straight-lined, even-fleshed, good-handling young bull, with great length, and will make a very large, good bull. In young bulls, the stock is limited, owing to the great demand for herd-headers, only one fit for service being left; he is Royal Archer, a red yearling, by Imp. Protector; dam Spicy Maud, a daughter of the Toronto grand champion, Imp. Spicy Marquis. This young bull shows good form, and should not be long here at the price asked. Then, there are two about six months old, both reds, one by Westward Ho (imp.); dam by Imp. Bapton Chancellor; the other by Imp. Queen's Counsellor, and out of Royal Bracelet. Here are a pair that will certainly develop into something extra.

In Yorkshires, as in Shorthorns, Mr. Davis is sold out pretty closely. All the brood sows are imported; of the Duchess, Dalmeny Lassie and Sorbie, Broomhouse Hawthorne, and Nottingham Corporation Farns strains. The stock hogs are imported, one of them bred by the Earl of Rosebery, the other by the Earl of Ellesmere. For immediate sale, there are four seven-months-old sows, and three boars fit for service; all grand good ones. At the time of our visit, two sows were being shipped to Niagara Falls. Of course, there are plenty of youngsters coming on.

The average price of Shorthorns sold at F. W. Harding's sale, at Waukesha, Wis., on April 8th, at which 47 head were disposed of, was \$418. The highest-priced animal sold was White Sultan, a bull calf, aged ten months; sired by Whitebull Sultan; dam Village Maid 2nd; bred by H. Smith, of Exeter, Ont., which brought \$2,750.

QUESTIONS AND ANSWERS.  
Miscellaneous.

A FREE-MARTIN.

I have a pure-bred Jersey cow which has given birth to twin calves, a bull and a heifer. Can you tell me will the heifer be of any value as a breeder of stock?  
J. W. R.

Ans.—The heifer twinned with a bull in probably ninety cases out of a hundred fails to come in heat, and is, therefore, barren, and is called a free-martin. In odd cases, a heifer so twinned comes in heat and proves a breeder. The bull twinned with a heifer is generally as sure a breeder as if born single or twinned with a bull.

ALFALFA ON FIELD WITH GRAVELY SUBSOIL.

1. Would alfalfa likely do well on land having about 18 inches of loose soil over a very hard, gravelly subsoil, or is this too shallow to expect good results? The land is sandy loam, with good natural drainage and rich enough to grow a good crop of hay or oats.

2. Which would be the better, land which grew a crop of buckwheat last summer, or lea plowed last fall?

3. Would you recommend sowing with a nurse crop or alone, and what quantity of seed per acre?  
C. P.  
P. E. I.

Ans.—1. Unless the gravelly subsoil amounts to actual hardpan, the alfalfa roots will doubtless make their way through it, providing the water table is well down.

2. With the buckwheat land. On inverted sod, grass is liable to work in and crowd out the alfalfa. Land intended for this crop should first be made as clean and free as possible from grass and weeds.

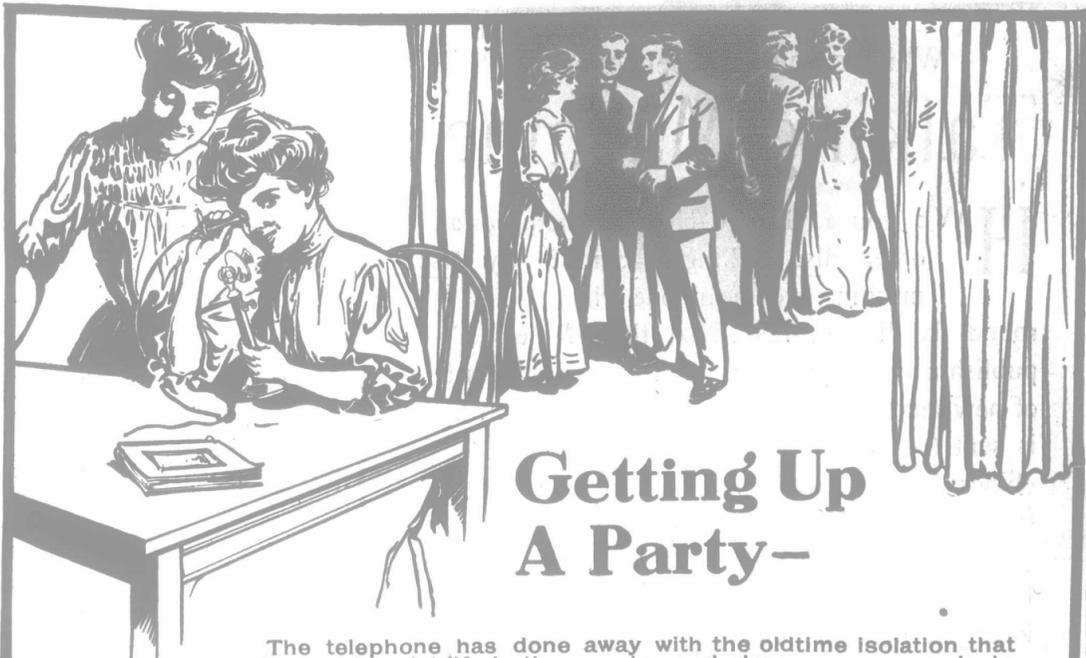
3. In some cases rather better results are obtained from sowing alone, but, generally speaking, it is advisable in the interests of economy to sow with a light nurse crop of barley or wheat. Twenty pounds of first-class alfalfa seed with a bushel or five pecks of barley per acre.

NEGLECTED PEAR TREES.

I should like to receive your opinion as follows: I have a number of late pear trees which have been neglected and very severely pruned. The trees have made all top wood and grown very tall. Would you advise top pruning and inducing growth on lower part of trees by lightly pruning any new wood from lower part of stem? I propose dressing trees with bone and potash this spring. Would you advise this? Or, would this cause trees to make too much wood-growth, as they appear to have this tendency? If a space around each tree were left uncultivated, would that check any tendency to make over-much wood?  
E. F. W.

Ans.—It is always more or less of a difficult problem to get into proper shape old trees which have been neglected or injured by improper pruning. If the trees have been trained too high, the only remedy is to cut back the tops more or less severely, and allow the new growth on the lower part of the tree to form branches which will in time produce bearing wood. The natural tendency of the pear is to grow more or less upright, and it requires careful annual pruning to overcome this tendency, and give the tree a more spreading habit of growth by cutting back to buds on the outside of the tree; that is, to buds pointing in the direction you wish the new growth to take, and at the same time thinning out the interior of the tree where it is too crowded.

Bone meal and potash are excellent fertilizers for fruit trees on most kinds of soils, as they tend to promote fruitfulness rather than excessive growth of wood. Leaving the trees in sod would, of course, tend to check growth of wood; but it is seldom that trees so treated give best results. As a rule, the best results are obtained by giving good cultivation during the early part of the season, applying whatever fertilizers the soil requires to insure production of good crop, and regular annual pruning to keep tree in proper shape and admit light to all parts of the tree, which helps to improve the quality of the fruit.  
G. A. C. H. L. HUTT.



Getting Up A Party—

The telephone has done away with the oldtime isolation that handicapped social life in the country and drove young people to the cities. In fact the telephone has completely turned the tables, and to-day the city dweller envies his country brother the good social times that are now to be had on the farm. Perhaps you think you do not need the best instrument for a light chat with friend or neighbor, but remember that same telephone will also be called upon in your more important business when the reply of "I can't hear half you say" might be a serious matter. THEREFORE BUY AND USE ONLY,

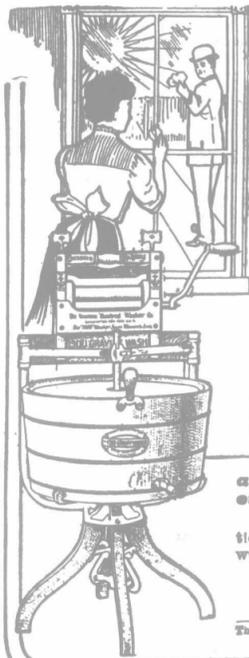
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It's the handiest and quickest washing machine made; you can wash a tubful of the heaviest and dirtiest clothes in six minutes, doing it better than it could be done by a strong woman in an hour or more. Remember—if you use the "1900 Gravity," there'll be no hard, sloppy, dirty work, no danger of colds and rheumatism, no wearing and tearing your fine linens and lingerie, and best of all wash day will also be ironing day.

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We are the only people on the continent that make nothing but washing machines and that are willing to send a washer on ONE MONTH'S TRIAL FREE to any responsible party—without any advance payment or deposit whatsoever.

We ship it free anywhere and pay all the freight ourselves. You wash with it for a month as if you owned it. Then, if it doesn't do all we claim for it, ship it back to us at our expense. Could any offer be fairer?

LOOK FOR THE LABEL ON THE TUB None genuine without it.

Write to-day for our handsome booklet with half tone illustrations showing the methods of washing in different countries of the world and our own machine in natural colors—sent free on request.

Address me personally F. A. G. Bach, Manager THE 1900 WASHER CO., 355 Yonge Street, TORONTO, Canada

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SEND \$1. receive 5 cloth remnants, suitable for boys' knee pants up to 11 years. Give age and we will cut out pants free. Add 50c. for postage. W. Southcott & Co., 8 Coote Block London, Canada.

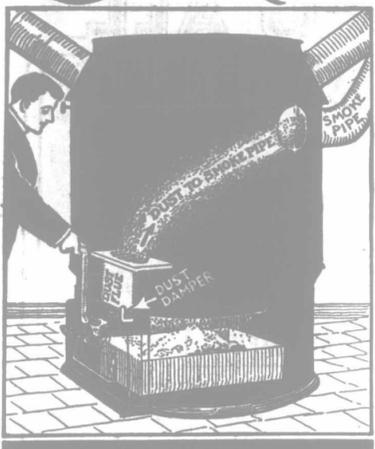
## What is the Number of Your Talking Machine?

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A Draft off furnace dome, with no other assistance, is powerless to overcome the dust nuisance in shaking time. Only surplus dust rises of itself above the fire. Great bulk descends into ash-pit, and unless legitimate outlet is therein provided, dust will escape through ash-door slits and into operator's face.

In "Sunshine" Furnace the legitimate dust outlet is provided. It's a great big dust-pipe running straight from

ash-pit to dome, thence to chimney. When big pipe damper is opened, all dust in ash-pit ascends to dome; then, when direct drafts are opened, all dust passes up chimney.

Always the clean and quick dust route in "Sunshine" Furnace—via grate, to pan, to dust-pipe, to dome, to chimney, to open air.

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When writing advertisers kindly mention "The Farmer's Advocate."

### QUESTIONS AND ANSWERS. Miscellaneous.

#### ALFALFA QUESTIONS—PEA-VINE HAY.

I am only a new subscriber to your paper, but I think it is a very valuable one to farmers, as it deals with all the improved methods of farming, and that is what farmers want, especially round here, where there is a total absence of anything bordering on scientific farming. But what I am writing to you for is to find out if I will have any chance of having a good stand of alfalfa on a piece of ground that I am preparing for it. It grew a good crop of clover and timothy in 1906, and was plowed early after haying, and well worked during the fall. Last season I sowed barley on it, and seeded it down again to Mammoth. There was a good catch, but the dry weather through the summer killed it, and so I plowed it up about September 25th, and harrowed it. This winter I gave it a good coat of good stable manure. It is well drained, and no water lies on it. There is one fault, and that is that the snow does not lie on it on account of the wind blowing it off.

1. Do you think if the grain was cut high that the stubble would hold enough snow to protect the alfalfa from being winter-killed? I am thinking of sowing about 15 pounds per acre, with 5 of Mammoth, so that in case the alfalfa would be killed, the Mammoth would be left. Would it be better to sow 20 pounds of alfalfa, and no Mammoth?

2. On account of the previous good catches of clover, would it be necessary to inoculate it with nitro-culture?

3. If it is sown behind the hoes of the seeder, will the harrow cover the seed enough?

4. What are the digestible constituents of clover (red) and pea straw (green)? Would you advise me to sow some peas to be cut green to take the place of clover hay, as I will have none, and there won't be any to be bought, or would it pay better to let the peas ripen and feed timothy hay? What time should peas for hay be cut, and what time would they require to be sown to be ready to cut at or after July 12th?

#### A NEW SUBSCRIBER.

Ans.—1. It would appear that this field was of a nature and in a condition to promise fairly good success with alfalfa, especially if, as the inquirer suggests, the grain stubble be long and a good autumn growth of alfalfa is always left. If the manure applied this winter is at all dirty, weeds will give trouble, unless special precautions are observed by working the land over a few times this spring at intervals of a few days so as to germinate and destroy the weed seeds. This will also incorporate the manure with the soil, and bring the land into a splendid state of tilth to be sown about the middle or last of May, which is the date we would advise in this case. The plan of sowing a few pounds of clover seed along with the alfalfa might be worth trying on part of the field, only we would recommend common red instead of Mammoth, as the latter matures so late that any alfalfa in the meadow would be long overripe before the Mammoth was ready to cut. On the whole we incline to favor seeding the alfalfa alone, for if it fails it is probable that the clover would fail also, and the chances of a first-class stand of alfalfa will ordinarily be better if the alfalfa has the ground to itself. On no account sow any grass seed.

2. The previous growth of clovers will have done nothing to inoculate the soil with the particular species of nitrogen-gathering bacteria that work on alfalfa. Melilot, or sweet clover, is the only other legume which inoculates the soil for alfalfa. Send to the Bacteriological Department, O. A. C., Guelph, for a bottle of nitro-culture for alfalfa.

3. Not deep enough for best results, besides, it is thought that if the seed is treated with nitro-culture, the vitality of the bacteria may be reduced or destroyed by exposure to light before the harrowing takes place. Sow before the hoes, this will have the added advantage of throwing the alfalfa seed mostly between the drills of grain.

4. We are not so well supplied with information concerning the precise chemical composition of field peas as some

### DISFIGURING FACE SORES

#### HOW TO CURE THEM.

Pimples, face sores, and the kindred eruptions common to late winter and early spring, are the worst disfigurements the fair sex have to bear. The indoor life of winter has caused impure matter which the skin should get rid of for the blood, to remain in the pores; the process of "exhalation" is interrupted; the general complexion suffers, and just where the bad matter collects, pimples, ulcers and sores quickly appear. To remove the impurities, the pores must be opened and the functions of the skin stimulated, by the vigorous applications of Zam-Buk morning and night, and washing frequently with Zam-Buk Medicinal Soap. Zam-Buk reaches the root of the disease by soaking through the skin and tissue and its powerful herbal juices expel disease, and make the skin do its work, which can't be done simply by the use of internal medicine. Miss Ellen Smith, of Somerville, Ave., Toronto, says: "My face was greatly disfigured by a skin eruption which annoyed me dreadfully for months. I was advised to try Zam-Buk, and I am glad I did, for it quickly removed the trouble, and my face is now clear of all eruptions."

Zam-Buk contains no animal fat whatever, but is a pure healing salve. It cures cuts, burns, chafings, cold sores, itch, eczema, running sores, ringworm, piles, bad legs, inflamed patches, and all diseased, injured and irritated conditions of the skin. Obtainable at all druggists and stores, 50c., or postpaid upon receipt of price from Zam-Buk Co., Toronto.

### CONSUMPTION Book Free!

If you know of any one suffering from Consumption, Catarrh, Bronchitis, Asthma, or any throat or lung trouble, or are yourself afflicted, this book will help you to a cure. Write at once to the Yonkerman Consumption Remedy Co., 122 Rose Street, Kalamazoo, Mich. Don't wait—do it now.

other fodders, but it would appear that peavine hay corresponds rather closely to red-clover hay. We do not require analyses, however, to demonstrate that peavine hay, or even pea straw, has a very considerable feeding value. A combination of peas and oats, if cut early, constitutes a forage crop of high nutritive quality, much appreciated by farm stock, especially sheep and cows. The mixture has the advantage of being easier to harvest than peas alone. It would, no doubt, be wise to sow some peas and oats quite early for curing as hay, and probably a field of peas alone to be harvested and threshed. For hay, to be cut July 15th, we should judge it would be necessary to sow the mixture, in Dufferin Co., quite early in spring. Cut when the pods are forming.

#### LUMP JAW.

I bought a heifer at an auction sale. There were four in the bunch, all drove out at once. I bought the first pair, and, after giving my note for them, I found one had lump jaw. Can I recover damages, or what is the law governing the sale of lump-jaw cattle?

#### SUBSCRIBER.

Ans.—There is no law against selling live animals affected with lump jaw, but it is unlawful to sell for food the flesh of an animal affected with the disease. We do not see that you are in a position to recover damages.

#### COBBLESTONES IN SILO WALL.

In your articles on cement siloes, which I am pleased to read, I notice that the writers do not mention the use of cobblestone in the concrete. I have some stone heaps which I want to move, and I thought that this would be an economical way of getting rid of them. Kindly advise. C. A. S.

Ans.—Many correspondents from time to time, as well as our editors, have recommended embedding stone in the wall when building siloes and other concrete structures. As much as one-third of the total bulk of the wall may be of stone, to the great saving of cement and gravel. None of the stone should be allowed to come flush with either inner or outer face of the wall, and it is better to use small stones, or, if large ones must be used, they should be broken to small sizes.

**SIMPLE HOME RECIPE.**

Get from any prescription pharmacist the following:

Fluid Extract Dandelion, one-half ounce; Compound Kargon, one ounce; Compound Syrup Sarsaparilla, three ounces.

Shake well in a bottle and take a tea-spoonful dose after each meal and at bedtime.

The above is considered by an eminent authority, who writes in a New York daily paper, as the finest prescription ever written to relieve Backache, Kidney Trouble, Weak Bladder and all forms of Urinary difficulties. This mixture acts promptly on the eliminative tissues of the Kidneys, enabling them to filter and strain the uric acid and other waste from the blood, which causes Rheumatism.

Some persons who suffer with the affections may not feel inclined to place much confidence in this simple mixture, yet those who have tried it say the results are simply surprising, the relief being effected without the slightest injury to the stomach or other organs.

Mix some, and give it a trial. It certainly comes highly recommended. It is the prescription of an eminent authority, whose entire reputation, it is said, was established by it.

A druggist here at home when asked stated that he could either supply the ingredients, or mix the prescription for our readers, also recommends it as harmless.

An Irishman one day went into a barber's shop to get shaved. After he was seated and the lather about half applied, the barber was called to an adjoining room, where he was detained for some time.

The barber had in the shop a pet monkey, which was continually imitating his master.

As soon as the latter left the room, the monkey seized the brush and proceeded to finish the son of Erin's face. After doing this he took a razor from its case and stropped it, and then turned to Pat to shave him.

"Shtop that," said the latter firmly. "Ye can tuck the towel in me neck and put the soap on me face, but, begorra, yer father's got to shave me."



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**GOSSIP.**

Mr. Arthur Johnston, Greenwood, advertises for sale four young Shorthorn bulls, which, he states, are as good in quality, type and breeding as he has ever offered his customers, which certainly is saying a good deal, as he has bred and sold very many high-class ones.

Mr. H. G. Boag, Barrie, Ont., offers for sale the imported Clydesdale stallion, The Nobleman (12770), a bay son of the champion Hiawatha, foaled in 1903; also the imported Hackney stallion, Ganymede II., imported by Hon. Robert Beith. These horses are good value for the prices asked.

Reports from correspondents and agents of the Bureau of Statistics of the United States Department of Agriculture indicate that the general condition in regard to healthfulness of farm animals on April 1st was higher than the average of the past ten years, and, with the exception of swine, slightly higher than on April 1st last year. Losses from disease of swine during the past year were slightly heavier than during the preceding year; but smaller than the average of the past ten years. Estimates for other classes of farm animals indicate smaller losses in the past year than either the preceding year or the average for the past ten years.

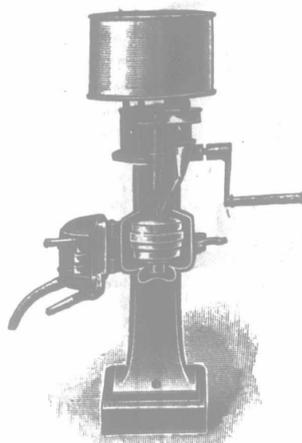
Mr. D. Milne, Ethel, Ont., writes: "Since last report I have sold Short-horn bulls to the following gentlemen: One to Wesley Boyd, Atwood, Ont.; one to Fredrick Curtis, Atwood, Ont. This is the third bull in succession Mr. Curtis has bought from the Maitland Bank Herd, and he is one of the most successful dairy men in one of the best dairy districts in Ontario, Elma Township, Perth County. To Geo. E. Clark, of Fulton, Wentworth Co., Ont., the grand young bull, Broadhooks Champion. These gentlemen have made no mistake in their selection of dairy Shorthorn bulls. I still have four for sale, equally good, and will make prices right for quick sale."

Mr. John Miller, Brougham, Ont., writes: "I have sold to Alex. McTavish, of Shakespeare, Ont., the young Shorthorn bull, Prairie Flower, sired by the Edwards-bred bull, Flower Champion, and out of the imported Marr cow, Lady Madge. This is the third bull Mr. McTavish has bought from us. He says the bulls he gets from us always do him lots of good. I have also sold to Lew. H. Lamar, of Storm Lake, Iowa, a Clydesdale filly, rising three years, and a stallion colt, one year old last September. They are both out of the imported mare, Miss Campbell, and I think the colt one of the best we have ever bred. We still have quite a number of young bulls to sell; one extra good one out of the Marr cow, Lady Madge 8rd. He is a dark roan, fourteen months old, and would make a good show bull in any company. We have a few extra heavy-fleshed bulls that should find ready sale at the price asked for them, either to raise good steers from or to head pure-bred herds."

**GOVENLOCK'S HEREFORD SALE.**

The dispersion sale of the noted prizewinning Forestview herd of 40 Hereford cattle, together with ten Shorthorns and fifteen grades, belonging to Mr. John A. Govenlock, Forest, Ont., to take place at the farm, on May 13th, as advertised, will afford an exceptionally favorable opportunity to secure Herefords of first-class character, in conformation, quality and breeding; also useful dual-purpose Shorthorns and good-feeding cattle stock. The Hereford herd has a continental record in prizewinning and championship and herd-prize honors. The grand stock bull, Imperial, has made a splendid record as the sire of first-prize and championship winners, and the great cow, Forest Lady, has a record of championship winnings, seldom, if ever, equalled in the Dominion, while in herd competitions this herd has made a mark which puts it in the first place in the front rank, for particulars of which see the advertisement on another page in this issue. With winter feeding over, and a good prospect for grass and grain crops, and prices for beef cattle climbing up, no better opportunity for founding or strengthening a profitable herd could be desired.

"Quality tells long after the price is forgotten."



**The Melotte — the least expensive Cream Separator on the market.**

Suppose you saved \$10 by buying a low-grade separator, and during the first two or three years it has cost you \$25 or \$30 for repairs, is that separator expensive or not?

And supposing, again, you did not try to save a couple of dollars on the price, and bought a Melotte, and that machine cost you nothing for repairs during, say, 10 years, is the Melotte expensive because it cost a few dollars more than the low-grade?

The Melotte will last for years without repairs. We have a great many testimonials from people who have used the Melotte twice a day for 9, 10, 12 and more years without having paid one cent for repairs.

Send for catalogue, testimonial booklet and information regarding free trial offer.

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**5 of the Best Stock Varieties:**

**CARROT**—Ewing's Select Strain Champion White Carrot; 1 lb., 55c., postpaid; 2 lb., 18c., postpaid.

**MANGEL-WURZEL**—Ewing's Select Strain Long Red Mammoth; 2 lb., 12c.; 1 lb., 30c., postpaid; 4 lbs., \$1.10, postpaid.

**MANGEL-WURZEL**—Ewing's Select Strain Giant Yellow Intermediate; 2 lb., 12c.; 1 lb., 30c., postpaid; 4 lbs., \$1.10, postpaid.

**INTERMEDIATE SUGAR BEET**—Ewing's Select Giant Rose; 2 lb., 12c.; 1 lb., 30c., postpaid; 4 lbs., \$1.10, postpaid.

**SWEDE TURNIP**—Ewing's Select Strain Mammoth Clyde Purple Top; 2 lb., 12c.; 1 lb., 30c., postpaid; 4 lbs., \$1.15, postpaid.

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**Geo. W. Beardmore,** Chairman.      **Stewart Houston,** Manager.      **W. J. Stark,** Secretary.



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Death to Ticks and Lice.

We offer you one gallon for one month's trial; if satisfactory you pay us \$1.50, if not it will cost you nothing.

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1 imported bull calf, 2 August bull calves from imported stock, 1 May bull calf. Females all ages; heavy milkers and from heavy milking stock, with good teats. Also Shropshire ram lambs, Buff Orpingtons, B. P. Rocks, B. Leg Hens, Mammoth Pekin ducks at \$1.25 each. Toulouse geese, \$6 per pair. Prices very reasonable, considering quality. For particulars write: William Thorn, Lynedoch, Ontario, Trout Run Stock Farm.

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cures inflammation of lungs, bowels and kidneys. The 20th-century wonder. Agents wanted in every county. Write for terms.  
DR. BELL, V. S., KINGSTON, ONT.

FOR SALE: Hackney Stallion, Wadsworth Equire (imp.)—217—(12189) [708], sired by Garton Duke of Connaught. Dark chestnut, white star, two feet white; 6 years; 15.2; weighs 1,255 pounds. Good foal-getter. Write to Mrs. E. M. Routledge, Georgeville, Que.

For Sale—Two good Suffolk Punch Stallions, sired by pure-bred Suffolk Punch stallion Ontario. One brown, five years old; one sorrel, three years old.

THOS. KNAGGS, Vandecar, Ont.

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PLEASE MENTION THIS PAPER

### GOSSIP.

Mr. Robert Miller, Stouffville, Ont., writes: "I have made two important sales of Shorthorns which have not been reported to your readers, and they were made to breeders not very far away. Messrs. J. & J. Haffey, Mono Mills, Ont., got the imported Roan Lady bull, Roan Admiral =70136=, a straight, smooth bull with the best of feeding qualities, good length, good head and horns, good hair and the very finest of breeding. His sire is the outstanding \$10,000 bull, Royal Crown (84598), a Cruickshank Clipper, bred by Mr. Duthie. The dam was Roan Lady 29th, by the Marr Flora bull, Morning's Pride (69154), and the grandam was Roan Lady 23rd, by the Marr Missie bull, Minstrel (63014); then follows the usual strong combination of sires used by Mr. Marr. The second bull sold was Cloudy Morn =70133=, a Duke of Richmond Queen Esther, bred for milk to suit 'The Farmer's Advocate,' with size and breeding to suit an Englishman or a Scotchman. The sire of this bull was the choice of five that won first for best group at the Birmingham Show and Sale in 1906, and which five made an average of \$1,675 in the sale. The second sire was Village Archer (71789), other good ones following all down the line. Both the cattle and the sheep I am advertising now would interest any person that can use them. There is show-yard material in every class, of a kind that will not soon be put down, and there are sires and breeding females that will be appreciated on sight. The prices will be attractive too."

### MORRISTON TAMWORTHS.

With live hogs selling at \$6.40 per cwt., and steadily rising, the prospects are exceedingly bright for a very remunerative season for those fortunate enough to have wintered over their brood sows, as, without doubt, the inevitable shortage of marketable hogs will soon be seriously felt, owing to so very many brood sows being disposed of last fall. The Morriston herd of Large English Tamworths, the property of Mr. C. Currie, of Morriston, Ont., was never better prepared to fill up the gap for choice brood sows and stock boars than at the present time. With 100 head on hand to select from, bred from prizewinning stock, the selection is a choice one, true to bacon type, strong of bone and smooth of body. The stock boars are: Coldstream Victor, a son of the great show hog, Flasher, weighing, in show condition, 900 lbs., and last fall at Toronto, owing to being lame, he was placed third, but pronounced to be the best hog in the entry. Newcastle Choice, an 800-lb. son of the great champion, Colwill's Choice, and out of Newcastle Queen, also a Toronto champion, won second at Toronto, and has been three years champion at Guelph over all breeds. In brood sows, there are over a dozen, from 600 to 700 lbs. in weight. Thrifty Pink, a 700-lb. sow, was first at Toronto in 1906, and for three years has been champion at Guelph over all breeds. Morriston Bessie, a 600-lb. daughter of hers, was third at Toronto, 1907. Morriston Lassie, another 600-lb. sow, was first at Toronto, 1907, and is suckling a beautiful litter, by Imp. Knowle King David. Morriston Lily weighs 600 lbs., and won second at Toronto, 1907, and is in pig to Imp. Knowle King David. Morriston Lady, another 600-lb. sow, is safe in pig to the same imported boar. Morriston Tena was winner of first at Guelph Winter Fair last December in the nine-months class. There are a few of the many high-class brood sows, nearly all of which are daughters of Newcastle Choice. For sale are a large number of young sows, a number of them in pig to a son of Mr. Hallman's imported sow, imported in dam, and younger ones not yet bred, an exceptionally choice lot, and infused with new blood, as their progeny will be, makes them desirable buying. In males, there are several ready for service. One of them, Morriston Champion, was last fall first at Guelph and Galt; he is now eighteen months of age, an ideal type, on big, strong bone. Mr. Currie has also a real nice little herd of Shorthorn cattle which he is offering very reasonably, also some Clydesdales (imported and Canadian-bred).

## Is your money earning all it should for you?

If your money is not earning more than three per cent. it is not earning what it should and still be safe.

We know of sound, safe securities which pay all the way from four to seven per cent. And to-day is the time to buy them—perhaps never before could they be had for so little money.

We would like to give you the particulars of some of these securities—what they will cost and how much they will earn for you.

We have been in this business for nearly 40 years.

Much of our business is done by correspondence. We are always glad to answer letters of enquiry.

## John Stark & Co.

Stock Brokers and Investment Agents

Members of the  
Toronto Stock Exchange

26 Toronto Street  
Toronto

## POTASH

Is an indispensable ingredient of a complete fertilizer and has absolutely no substitute.

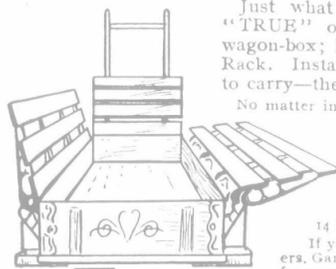
POTASH may be had from all leading fertilizer dealers in the highly-concentrated forms of

### MURIATE OF POTASH and SULPHATE OF POTASH

Copies of our publications, including "Tabulated Results of Fertilizer Experiments," "The Potato Crop in Canada," "Fertilizers for Hay and Grain Crops," etc., will be mailed free to any address in Canada.

The Dominion Agricultural Offices of the Potash Syndicate  
Rooms 1102-1105, Temple Building,  
TORONTO, CANADA.

## "TRUE" COMBINATION WAGON BOX AND RACK



Just what every farmer needs. With the "TRUE" on his wagon he has a first-class wagon-box; Hay, Stock, Corn, Wood or Poultry Rack. Instantly adjusted for any load you want to carry—the only tools you need are your hands.

No matter in what position you put the wings, it is impossible for them to get out of that position, but it would take you but an instant to change them.

We guarantee this article to be made of nothing but the best of material—Yellow Pine, Hardwood and Malleable Iron—and to carry two tons in any position. Made in 14 and 16-ft. lengths and 38, 40 and 42-inch widths. If you need anything in the line of Planters, Seeders, Garden Drills and Cultivators, Sprayers, etc., write for our catalogue. We have dealers in your town.

THE EUREKA PLANTER CO., Limited - Woodstock, Ont.

# Fistula and Poll Evil

Any person, however inexperienced, can readily cure either disease with **Fleming's Fistula and Poll Evil Cure**—even bad old cases that skilled doctors have abandoned. Easy and simple; no cutting; 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 Vest-Pocket Veterinary Adviser. Write us for a free copy. Ninety-six pages, covering more than a hundred veterinary subjects. Durable bound, indexed and illustrated. **FLEMING BROS., Chemists, 75 Church Street, Toronto, Ontario**

# Tuttle's Elixir

Greatest maker of sound horses in the world. Tested many years, never fails if cure be possible. \$100 reward if it does. For lameness, curb, splint, spavin, ringbone, swellings, etc.

# Tuttle's Family Elixir

Liniment for household use. Ask for Tuttle's American Worm and Condition Powders and Hoof Ointment. "Veterinary Experience," perfect horse-man's guide fore. Symptoms and treatment for all common ailments. Write for it. Postage 2c. **TUTTLE'S ELIXIR CO., 66 Beverly St., Boston, Mass.** Montreal: H. A. Tuttle, Mgr., 32 St. Gabriel St. Beware of all blisters: only temporary relief, if any.

# Lame Horses

certainly do need Kendall's Spavin Cure. Whether it's from a Bruise, Cut, Strain, Swelling or Spavin, KENDALL'S will cure the lameness—quickly—completely. **CUPAR, SASK., May 16th '06.** "I have used Kendall's Spavin Cure for 30 years and find it a sure cure."

**FRANK K. ADAMS.** Price \$1-6 for \$5. Accept no substitute. The great book—"Treatise on the Horse"—free from dealers or **Dr. R. J. Kendall Co., Essexburg Falls, Vermont, U.S.A.**

# DR. HESS Poultry PAN-A-GE-A

Think how exactly contrary to nature is the condition of a hen shut in a house or closed run. Is it a wonder she mopes about, lazy, sickly, unproductive? Give the food elements nature meant her to have—make digestive organs work as nature intended them to work and your hen is healthy, happy and productive. Dr. Hess Poultry Pan-a-ge-a takes care of the digestion.



It gives a natural condition to the hen when every surrounding is unnatural. It makes perfect digestion—tones and strengthens the system and wards off disease. Leading poultrymen endorse Poultry Pan-a-ge-a. It is the prescription of Dr. Hess (M.D., D.V.S.) and is a guaranteed egg producer, makes chickens grow fast and helps old fowls to fatten. Costs but a penny a day for 30 hens.

**SOLD ON A WRITTEN GUARANTEE.**  
1 1/2 lbs. 35c 5 lbs. 85c  
2 lbs. \$1.75 25 lb. pall, \$3.50  
Send 2c. for Dr. Hess 48-page Poultry Book, free.  
**DR. HESS & CLARK, Ashland, Ohio, U. S. A.**  
Instant Louie Kuer Kills Lice.

## GOSSIP.

Mr. Israel Groff, Elmira, Ont., writes: "I have just received a letter from Mr. W. C. Flurry, South Omaha, Neb., stating that the carload of Shorthorn bulls I shipped him a few days ago landed in good condition, and that he is well pleased with the selection I made for him. I selected these animals from most of the leading herds of Western Ontario, two from Senator Edwards (Rockland), four from H. Cargill & Son (Cargill), three from J. A. Watt (Salem), one from John Watt & Son (Salem), one from F. W. Ewing (Salem), one from Ephraim Weber (Elmira), one from T. S. Shantz (Waterloo), one from Aaron Shantz (Waterloo), one from Jonathan Snider (Bridgeport), one from my own herd, and two from Harry Smith (Exeter). These were all selected with great care, and were pronounced by good judges the best lot of young bulls that ever left these parts at one time and consigned to one individual. In looking over the herds from which these animals were selected, I found our Shorthorn herds, in general, are in fine condition, and a bright future is in store for this popular beef breed. I find the best demand for the best cattle."

## HAMPSHIRE SWINE.

Mr. Artemas O'Neil, Birr, Ont., writes: "Something new to Canada is the Hampshires, or Belted swine, which are progressing rapidly in favor, and promise to be the coming hog of the century, being claimed by their friends to be the most handsome and early-maturing breed of hogs in existence. They are a black hog with a white belt or a listed mark extending over the shoulders, including the fore legs, which attracts the attention of hog fanciers. They are hardy, responsive feeders, of stately carriage and free from broken-down or disjointed limbs, easily attaining the weight of 225 pounds at six months old. In the hog section at the World's Fair they received admiring attention, and have also proved themselves successful over all breeds at the International Live-stock Exposition, Chicago, three years in succession. They are said to be the most prolific of all breeds, it being not unusual for a gilt to produce from ten to twelve well-developed pigs; and are uniformly good mothers, and bear more litters than sows of other breeds. The first importation of this breed was made in 1904, and since that time they have made a wonderful mark." Persons desirous of improving or establishing a herd of swine should read the advertisement of Mr. O'Neil in this paper.

Messrs. W. G. Pettit & Sons, Freeman, Ont., in sending a change of advertisement, report the following recent sales of Shorthorns: "To Mr. J. F. Mitchell, Burlington, the choice young imported bull, Redstart; this is a very smooth, even bull of excellent quality, and we are pleased that he is going into a high-class herd. Messrs. C. J. Schoenfeld & Son, Fox Lake, Wis., selected a very nice cow of the Marr Roan Lady family, and sired by Imp. Prime Favorite. They also took a very promising bull calf, sired by the same bull and from a Scotch-bred cow. Mr. Andrew Kersell, St. George, Ont., purchased a young bull of the Miss Ramsden family, and sired by Prime Favorite, that should leave him some good calves. He won first at New York State Fair as a calf. Messrs. P. M. Brett & Sons, Regina, Sask., are taking from the herd a pair of very choice Marr Roan Lady heifers. This is an excellent family, both for breeding and milk, and Messrs. Brett are making no mistake in introducing this blood into their herd. Messrs. Geo. Wander & Son, of Elgin, Iowa, secured an imported yearling bull that promises to develop into a large, thick fellow, and should do a great deal towards improving their herd. We still have five imported bulls to offer. They are just past a year old, and represent some choice Scotch families. The home-bred bulls we are offering are a good lot, and parties in need of such should see what we have before purchasing elsewhere. Our prices are very reasonable. We have a catalogue of our Canadian-bred bulls which will be sent on application."

# THE DEERING

for  
**GRAIN CUTTING WITHOUT INTERRUPTIONS**



WHEN the grain is ripe you want the work of harvesting to go right along. You cannot afford to be annoyed by breakages and delays. Breakages and tinkering with the knoter or other parts to get them to work right means more than vexatious delays. It means expense and it may mean that you will not get your grain harvested in good condition.

The Deering binder comes nearer giving you insurance of uninterrupted work than any machine you can buy.

What can be more satisfactory to the grain grower at the beginning of harvest than to have a machine he knows he can depend upon?

The Deering binder is such a machine. It has stood the test in thousands of harvest fields. It is not only dependable and

right working but it harvests all the grain. It handles tall and short, light and heavy, down and tangled grain all to a nicety and with least possible loss. Machines are made in 5, 6, 7 and 8-foot cuts. In addition to grain harvesting machines the Deering line includes binder twine, mowers, tedders, sweep rakes, side delivery rakes, hay loaders, stackers, corn machines and knife grinders. 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 scufflers. Also gasoline engines, cream separators, hay presses, feed grinders, wagons, sleighs, and manure spreaders.

For all particulars call on the local Deering agent or write to any of the following branch houses for catalog:

**CANADIAN BRANCHES: Calgary, Alta., Hamilton, Ont., London, Ont., Montreal, P. Q., Ottawa, Ont., Regina, Sask., St. John, N. B., Winnipeg, Man.**  
**INTERNATIONAL HARVESTER COMPANY OF AMERICA, CHICAGO, U. S. A.** (Incorporated)



## Imported Shires!

From the famous breeding farms of

**JOHN CHAMBERS & SONS, Holdenby, Northampton, England.**

SHIRE.

Sixty head have been sold by me in Ontario alone during the past year. The quality of the stock may be judged from the fact that while we have nothing forced for exhibition purposes these horses won in the show-rings at The Ontario Horse Breeders' Association, Toronto; The Western Fair, London; The St. Thomas Horse Show, and other places. A fresh consignment of mares and fillies in foal, and stallions ready for service, among them several handsome two-year-olds, will be ready for inspection and sale at my barns, St. Thomas, Ont., about April 10th. We show the goods, and sell at reasonable prices. Our terms are reasonable. Correspondence solicited. **G. K. GEARY, St. Thomas, Ont., Agent for Canada and the United States.**

## GLYDESDALES AND FRENCH COACHERS, IMP.

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

**ROBT. NESS & SON, HOWICK, QUEBEC.**

**IMPORTED GLYDESDALES** Up to over a ton in weight, with the very richest of breeding and the best of quality. I think no better shipment of stallions ever left Scotland. I have also nine fillies, without doubt the best lot in Canada. All will be sold cheap and on terms to suit. Long-distance phone. **GEO. G. STEWART, HOWICK, QUE.**

## 2 IMPORTED GLYDESDALE FILLIES

Sired by Prince Alexander and Macgregor's champion, recorded in Clydesdale Stud-book of Canada. Terms and prices reasonable. **Robt. McEwan, Byron, Ont. London Ry. Station.**

## Imp. Clydesdales (Stallions and Fillies), Hackneys, Welsh Ponies.

I have now on hand Clydesdale stallions and fillies—Scotland prizewinners and champions; Hackney fillies and Hackney pony; also Welsh ponies. These are no better animals, nor no better bred ones, than I can show. Will be sold cheap and on favorable terms. **A. AITONSON, GUELPH, ONT., P. O. & STATION.**

## SIMCOE LODGE GLYDESDALES

Our stable of imported and Canadian-bred Clydesdale stallions and fillies was never so strong in show stuff as now, although we have had some very strong lots. Call and see what we have before buying elsewhere. **HODGKINSON & TISDALE, BEAVERTON, ONT., G. T. & C. N. R.** Long-distance phone.

## OAK PARK STOCK FARM HACKNEYS!

Four imported and home-bred stallions for sale. Ten imported and home-bred mares for sale. Among these are prizewinners at Toronto, Chicago and New York. Prices reasonable. Visitors always welcome to inspect stock. **J. S. BROWN, Manager, BEAVERTON, ONT.**

**Clydesdales** Imported and Canadian-bred. Imp. brood mares a specialty. Celebrated Clydesdale sire, Acme (imp.), at head of stud. Will stand in his own stable for mares at \$20 this season. Long-distance phone. **R. M. HOLTSBY, Station and P. O. Manchester, Ont., G. T. R. Myrtle, Ont., C. P. R.**

## DOES YOUR HEAD

Feel As Though It Was Being  
Hammered?  
As Though It Would Crack Open?  
As Though a Million Sparks Were  
Flying Out of Your Eyes?  
Horrible Sickness of Your Stomach?  
Then You Have Sick Headache!

## BURDOCK BLOOD BITTERS

will afford relief from headaches no matter whether sick, nervous, spasmodic, periodical or bilious. It cures by removing the cause.

Mr. Samuel J. Hibbard, Belleville, Ont., writes: "Last spring I was very poorly, my appetite failed me, I felt weak and nervous, had sick headaches, was tired all the time and not able to work. I saw Burdock Blood Bitters recommended for just such a case as mine and I got two bottles of it, and found it to be an excellent blood medicine. You may use my name as I think that others should know of the wonderful merits of Burdock Blood Bitters."

## Dr. Page's English Spavin Cure.

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

J. A. JOHNSTON & CO., Druggists,  
171 King St., E., Toronto, Ont.

## RIVER VALLEY CLYDESDALES AND SHORTHORNS.

For Sale—Two stallions, one imp., the other imp. in dam; 9 imp. mares 3 and 4 yrs. of age—a grand pair, with size and quality; 1 fully foal imp. in dam. Shorthorns all ages, of both sexes; straight milking strain. A. V. Carefoot, Thornbury Sta., Redwing P. O.

## MR. A. I. HICKMAN,

Court Lodge, Egerton, Kent, England, exports pedigree live stock of every description to all parts of the world. Exported during 1907 more Shetland ponies, more Romney Marsh sheep, and more champion Oxford Downs than any other breeder or exporter of horses, ponies, cattle, sheep and pigs. Correspondence invited. Highest references given.

## CLYDESDALES

One 1,750-lb. 8-year-old mare in foal. One 5-year-old mare and one 3-year-old mare.

## SHORTHORNS

Two right good yearling bulls left yet, and a lot of heifers cheap. Write, or come and see them.

## JAMES McARTHUR, Gobles, Ontario.

FOR SALE: CLYDESDALE STALLION rising 3 years this spring. Grandson of Imp. Bold Boy. His sire full brother to a world-champion show horse at Chicago. A light chestnut. White face. Well feathered. Good mane and tail. Stands 16 hands. Good block and splendid action. Plenty of good flat bone. Was bred to 15 mares last season; 9 or 10 have proved in foal. The property of the late Henry K. Schmidt. Must be sold. For further particulars apply to GEO. MOORE or J. H. ENGLE, Y. S. Waterloo, Ont.

Clydesdales, Shorthorns and Cotswolds—For particulars of above breeds, write me. My new Cotswold and Clydesdale importation will arrive early in the season.

J. C. ROSS, Jarvis, Ont., P. O. and Sta. Shannonbank Clydesdales, Ayrshires, Yorkshires One stallion rising three years, by imported Hopewell. Two young bulls ten months, and some heifers from six months to two years. Yorkshires of both sexes. W. H. TRAM, Cedar Grove P. O., Lecust Hill Sta., C. P. R.

YOUNG MEN WANTED—To learn the Veterinary Profession. Catalogue sent free. Address VETERINARY COLLEGE OF Department Y, Grand Rapids, Mich.

## QUESTIONS AND ANSWERS. Miscellaneous.

### TRESPASS—BREEDING MARES.

1. Can a man take down your fences and pass through your fields, and use it for a road in the winter, without permission, because his lane drifts full of snow?
2. Can I compel him to keep off of my property, and shovel out his lane?
3. Is there any distance from the road that a man with a stallion is allowed to breed mares in sight of the public road?

SUBSCRIBER.

- Ans.—1. Not legally.  
2. You could prosecute him for trespass, if, after warning, he should persist in so doing.  
3. There is no arbitrarily-fixed distance.

### WART ON COLT.

Please describe treatment for wart on top of colt's head, just back of the halter band. It has been on all winter. Have been rubbing with castor oil, and tied a silk cord around it. It came off a couple of weeks ago, and another is growing on again. It was about one and a half times as big as a hen's egg.

A. M.

Ans.—Get from your druggist a stick, or pencil, of caustic potash; slightly damp the top of the wart, and rub it gently with the pencil, being careful not to wet so that moisture runs down on the skin. Repeat the application once a day till the roots are burnt out. Touching the wart daily with butter of antimony, with a feather, is also recommended by some veterinarians instead of the potash. If the latter is used, it must be kept from the air, and the fingers protected by paper when handling the pencil.

### PLANTING MAPLE SEEDS.

1. When do the seeds of soft maple ripen, and how long can they be kept after ripening before planting to insure germination?
2. When do the hard maple seeds ripen? Are they best planted in the fall, or will it do to keep them till the next spring? I wish to send some of both to a friend in the West this summer.

W. M. G.

Ans.—1. The seeds of the soft maple ripen in the spring. The silver maple or white maple seed ripens, in Southern Ontario, about the last week in May to the first week in June. The red maple ripens usually a few days later than the silver maple. These two maples are commonly called soft maples, and their seed should be sown as soon as it falls to the ground. It can be sown in beds, similar to garden seed, and will germinate in a few days.  
2. Hard-maple seed ripens in autumn, about September. The seed may be planted at once, or it may be kept over till the following spring. It should be kept in a dry, cold place.

E. J. ZAVITZ.

### DITCHING—ROAD ALLOWANCES

A small watercourse, which runs a few weeks during spring and fall, crosses farms owned by A and B. There is a public road between said farms. B objects to water going across his farm, and asks the council to cut a ditch on the road to take water to a larger watercourse, 100 rods distant. C owns a farm through which the larger watercourse runs, and objects to having the extra water pass over his farm, claiming it would injure his property. A's farm is damaged considerably because watercourse is not opened up properly.

1. Can council divert water from small course to larger one if owner of property through which large course runs objects?
2. Who should take action first in this matter, and how, to have it settled properly? Explain fully.
3. Do municipalities control road allowance around small lakes?
4. Can council give anyone a title to a portion of such allowance?

Ans.—1. We think that they cannot properly do so.

2. A would seem to be the proper party to initiate any proceedings. The Ditches and Watercourses Act (Revised Statutes of Ontario, 1897, Chap. 285) provides for the opening of which he may avail himself.

3. Generally speaking, yes.
4. Yes.

## THE UNION STOCK-YARDS COMPANY, Ltd. HORSE EXCHANGE

KEELE ST., - - TORONTO JUNCTION

Auction Sales of  
Horses, Carriages and  
Harness every  
Monday and Wednesday.  
Private Sales every  
day.



Come and see this new  
Horse Exchange,  
It will interest you, also  
the Quarter-mile Track  
for showing  
and exercising

The Directors of the above Company have not spared anything in the building of this new Horse Exchange. The stables, which are built of cement and brick, will stall between 900 and 300 head of horses and are considered by judges, who have seen them, to be the most sanitary they have yet seen.

We have sold on an average of 100 horses per week since the opening of this great horse market, and now that the success of the horse business is assured, we are in a position to handle the success of the horse business of all kinds, Cattle, Sheep, and Hogs.

Breeders will find that advertising from a central place like Toronto will be advantageous in many ways, as this is unquestionably the most complete market of its kind in America for both buyer and seller.

We have our own railway chutes, which are the finest, and can load any number of cars at once on both G.T.R. and C.P.R. No charge for loading or unloading stock of any kind.

Correspondence solicited as to terms, etc.

HERBERT SMITH, Manager.  
(Late Grand's Repository).

## IMPORTED CLYDESDALES AND HACKNEYS



Stallions and mares,

both breeds, repre-

senting the best

blood of England

and Scotland, com-

binning size, quality

and faultless action.

Stallions are all

guaranteed sure foal-

getters, or replaced

by one of equal

value. All will be sold on the long-time payment

plan. Stallions insured against risks of all kinds. If in need of something choice

of the above breeds, write or wire for full particulars and catalogues.



DUGALD ROSS, Streetsville, Ontario.

## For Sale: 7 Imp. Clydesdale Stallions

Also One Percheron Stallion. I will sell the above at low-down prices, as they must be sold this spring. Please write me for prices.

O. SORBY, Guelph, Ont.



## Graham - Renfrew Co.'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 448.

GRAHAM-RENFREW CO., LTD., Bedford Park, Ont.



## CLYDESDALE STALLIONS

Our new importation has just landed. An exceedingly good lot. Some extra big fellows. They may be seen at our stables, Fraser House, London. Call and see them, or write

MESSRS. DALGETY BROS., GLENCOE, ONT.



## 25 Imported Clydesdale Stallions and Fillies 25

Two Clyde stallions, 1 Hackney stallion, over 90 Clyde mares and fillies, from 1 to 5 years of age. Many high class show animals among this lot. Many winners in Scotland among them. They have size, quality, style, action and breeding. Come and see them. GEO. A. BRODIE, Bethesda, Ont., P. O., Shelburne and Gormley Stations.



## IMPORTED CLYDESDALES! 9 stallions, 1 to 6 years of age; 10

fillies, 1 to 3 years of age, several of them in foal; 1 two-year-old Hackney stallion; 1 two-year-old Shire stallion; 8 Percheron stallions, 3 years old. All are selected animals, bred in the purple. Will be sold cheap and on terms to suit. T. D. ELLIOTT, BOLTON, ONT. Phone.

IMP. CLYDESDALE STALLIONS AND FILLIES.—Our new importation of stallions and fillies are the best we could select in Scotland, particularly well bred, with the size, smoothness and quality that Canadians admire. Show-ring stuff. Come and see them. Will sell on terms to suit. JOHN A. BOAG & SON, Queensville P. O., Ont., Newmarket Sta., G. T. R. Telegraph and telephone one-half mile from farm. Metropolitan Street Ry. from Toronto crosses the farm.



**YOU WANT**

a hatcher that does not require watching; a hatcher in which the heat is perfectly, automatically regulated.



**THE MODEL** contains the most perfect heat controller in the world—strong, yet active, sensitive, yet positive—perfect in action. The Patent Office has decided in my favor in the interference suit on this perfect-acting regulator

The Model Corrugated Leaf Compound Thermostat.



This Thermostat has three corrugations in each leaf, is exceedingly strong and frigid; is not easily damaged, and is so positive in action that the entire movement given off by the different co-efficient of expansion between the two metals of which it is made is transmitted to the controlling device without any loss of movement.

The Model Incubator gives a perfect heat control, which stimulates and holds the germ development uniformly constant and normal, as under a hen. This wonderful hatcher has almost a perfect balance in ventilation and humidity, and supplies all the vitalizing principles found under the incubating hen. The Model Incubators and Brooders are used on the biggest money-making commercial poultry plants in the world. The Model Double Indoor Brooder is just what you want for winter work. Broiler men pronounce it the most successful rearer yet produced. At the Model Farm, where we raised over 80,000 birds the past season, the Model Double Indoor Brooder did the best winter work. Buy your incubators and brooders of the man who knows how to hatch and raise poultry, who is doing it successfully on a commercial basis, and who can help you to be successful. Your success is my success. Write for my printed matter.

Indorsed and used by more Dominion Government Colleges and Stations than the whole of our competitors combined. We make this statement in no boasting spirit, but simply stating facts—a word to the wise is sufficient. The Ontario College, Guelph; The Dominion College, Ottawa; Agricultural College, Truro, N. S.; Macdonald Institute, Ste. Anne de Belleville, Que.; Government Experimental Stations, Bowmanville, Ont.; Bondville, Que.; Andover, N. B.; Chicoutimi, Que.; Union River Bridge, P. E. I.; Experimental Station, Edmonton, Alta.

**CHAS. A. GYPHERS,**

President Model Incubator Company, Limited,

C. J. DANIELS, Mgr.

River St., Toronto, Ont., Canada.

**TO STALLION OWNERS**

**\$1,000**

To be given by the

**Ontario Jockey Club, Toronto,**

in seven premiums to Thoroughbred Stallions standing for half-bred mares. Owners of Thoroughbred stallions should communicate with

**W. P. Fraser, Secretary Ontario Jockey Club, Toronto.**

Entries close May 1st, 1908.

**Largest Importation of Clydesdales, Hackneys and Percherons of the Year.**



My latest importation has just arrived home. I have now on hand for sale: 20 Clydesdale stallions from 1 to 5 years of age; 25 Clydesdale fillies from 1 to 4 years of age; 19 Hackney stallions from 3 to 8 years of age; 19 Hackney fillies, all young; and 4 Percheron stallions 3 and 4 years of age. A total of 73 head, with size, quality and action, and bred in the purple. Largest selection in Canada. Will be sold right, and on terms to suit.

**T. H. HASSARD, MILLBROOK, ONT.**

**CLYDESDALES**



At Columbus, Ont., the home of the winners, this year's importation just arrived. The pick of Scotland's best. For size, style, conformation, quality and royal breeding, they eclipse any former importation we ever made. Look them up in our barn on Exhibition Grounds. Over 50 head to select from.

**SMITH & RICHARDSON, COLUMBUS, ONTARIO.**

**Shires, Shorthorns and Lincolns.**

At present we are offering a very choice consignment of imported stallions, mares and fillies received from the great Shire stud of R. Moore & Sons, Beeston Fields, Nottingham, England. They are a grand lot, and will be sold at right prices.

In Shorthorns we have a number of choice young bulls, three of them show animals; also an excellent lot of females—all ages.

**John Gardhouse & Sons, Highfield, Ont.**  
Toronto, 14 miles. Weston, 3 1/2 miles.



Long-distance phone.

**QUESTIONS AND ANSWERS. Veterinary.**

**SWOLLEN PASTERNS.**

Clydesdale stallion has one hind pastern swollen and sore, and it keeps wet. He is lame. N. McC.

Ans.—Make a solution of corrosive sublimate, 20 grains to a pint of water. Dress it, twice daily, with this. The hair must be carefully parted in order to get the dressing to the skin. Do not wash. If it cracks, and becomes raw, dress with oxide of zinc ointment. Purge him with a ball made up of ten drams aloes and two drams ginger, and follow up with two ounces Fowler's solution of arsenic twice daily for ten days. V.

**COULD CALF HAVE BEEN SAVED?**

Cow swallowed some wire which penetrated the stomach and pierced the heart, causing death ten days before she was due to calve. Could calf have been saved? E. M. S.

Ans.—If a veterinarian had been present and performed abdominal section and removed the calf before the death of the cow, it is possible it might have lived; but the operation would not have been successful unless performed before, or, at all events, immediately after death. It is quite possible for a calf born ten days before full term to live. At the same time it is probable that, in this case, the circulation of the foetus was so weakened by the weakness of the heart of the dam that the immature foetus would have perished, even though the operation had been performed. V.

**Miscellaneous.**

**A TENANCY.**

A purchased a farm from B, and C had a little lot rented from B for pasture for five years, and the lease does not expire for two more years. C paid A the rent for last year, and A drew a receipt, wording it that they had settled all accounts and dealings to date. Can A hold the lot from C for the next two years? OLD SUBSCRIBER.

Ontario. Ans.—No.

**ALFALFA FOR SEED.**

I have an excellent catch of alfalfa, and soil is free of any weeds.

1. Can we raise our own seed?
2. If so, what cutting do we get it from?
3. What would a good crop yield per acre?

Oxford Co., Ont. C. C. R.

Ans.—1, 2 and 3. Alfalfa seed is a very uncertain crop in Ontario. Occasionally it will yield well, as high as 7 bushels per acre being reported; but more often it is a bushel or less, and sometimes a good crop of feed will be sacrificed, and scarcely any seed at all secured. The second cutting is the one usually left for seed.

**COW OUT OF CONDITION—CLIPPING MARE.**

Would you please inform me through your valuable paper (1) how to treat a cow which has been in milk about two weeks, and has a discharge of bloody matter? She appeared to clean thoroughly. Is very thin in flesh, having run in the barnyard all winter. Do you think it would have made any difference if she had been in good flesh and better fed?

2. Would it be wise to have mares, in foal, clipped before commencing the spring work? W. B.

Ans.—1. The discharge is probably natural, and does not indicate any disease. We judge what she needs is nourishment, and would advise giving her in moderate quantity ground oats and bran, good clover hay and roots. If she has not an appetite for food, a tonic should help her. Take equal parts of sulphate of iron, gentian, ginger, nuxvomica, nitrate of potash and bicarbonate of soda. Mix, and give a tablespoon twice a day for a week in a pint of cold water as a drench, slowly, from a quart bottle.

2. We think it would be safe if mare is kept blanketed when not working.

**HORSE OWNERS! USE**

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

THE LAWRENCE-WILLIAMS CO., Toronto, Canada

**THE LAFAYETTE STOCK FARM**

J. CROUCH & SON, PROPS., LaFayette, Ind.



Largest importers in America of Percheron, Belgian and German Coach stallions and mares. The three popular breeds. The States have about discarded all breeds of draft horses except the Percheron and Belgian. They are low down, blocky shaped, clean legs, cuppy foot and tough, and can go over rocky roads without shoes; are close made, long ribbed, and live on half the food that the leggy, shorty ribbed, big Roman nose kind do. They mature at three years old. Long time to responsible buyers. Guarantee the best. Prices from \$700 up to \$2,500.

**Stallions for Service**

Monerief Marquis (9053), winner of first prize at the Highland & Agricultural Society's Show, at Ioverness, in 1901, also winner of numerous other prizes and cups in Scotland.  
King's Seal (12523), winner of second prize at Castle Douglas, third prize at 4 yr, and third at Edinburgh.  
Hackney stallion, Warwick Model, winner of first prize at Toronto Spring Horse Show for best stallion suitable for getting carriage horses, also winner in 1906 and 1907 of the English Hackney Society's silver medals at London, Ont.  
These stallions will stand at their own stables, 4 miles south of Guelph, for the season of 1908. Service fee, to insure a foal for any of the above, \$15.00.

**O. SORBY, Guelph, Ont.**

**ABSORBINE**

Removes Bursal Enlargements, Thickened Tissues, Infiltrated Parts, and any Puff or Swelling. Cures Lameness, Always Pain without laying the horse up. Does not blister, stain or remove the hair. \$2.00 a bottle, delivered. Pamphlet L-O free.

ABSORBINE, JR., for manking, \$1.00 bottle. Cures Synovitis, Weeping Sineu, Strains, Gouty or Rheumatic Deposits, reduces Varicose Veins, Varicocele, Hydrocele, Always pain. Book free. Genuine mid. only by

W. F. YOUNG, P.D.F., 73 Monmouth St., Springfield, Mass  
Canadian Agents: LYMAN BROS & CO., Montreal.

**ARTIFICIAL MARE IMPREGNATORS**

For getting in foal from 1 to 6 mares from one service of a stallion or jack, \$8.50 to \$6.00. Safety Impregnating Unit, especially adapted for getting in foal so-called barren and irregular breeders. \$7.50. All goods prepaid and guaranteed. Write for Stallion Goods Catalog. CRITTENDEN & CO., Dept. 38, Cleveland, Ohio, U.S.A.

**Clydesdale Stallion (registered) [5438], High-**

land Pioneer, for sale; rising 4 years old, from imp. stock, with four registered dams; stands 17 hands; weight, 1,700 lbs.; color, rich dapple bay, white strip on face and three white feet. Apply to **JOHN D. MORRISON, Argyle P.O., Ont.**

**For Sale: Imported Shire Stallion,**

**Eton Harold (22247), foaled 1903.** Successful stock getter. For price and pedigree write: **JAMES BARONS, BELMONT, ONT.**

**THE SUNNYSIDE HEREFORDS**

To reduce herd will sell: 10 cows at ..... \$100 each  
10 heifers at ..... 50 each  
10 bulls from \$50 to 100 each  
Come and see them or address **M. H. O'NEIL, Southgate, Ontario.**

**Hyde Park Herefords**

Choice young heifers, and cows with calves at foot and bred again, for sale. **Thomas Skippon, Hyde Park, Ont.**

**ABERDEEN - ANGUS**

For sale, 50 head to pick from, males or females by imported sire. Drumbo station. **WALTER HALL, Washington, Ontario.**

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## BLATCHFORD'S CALF MEAL

Our BOOKLET plainly tells the story of Blatchford's Calf Meal, with convincing testimonials from some of the 20,000 progressive farmers who have had excellent success with this perfect milk substitute. It costs about half as much as milk. It prevents scouring. It is the oldest and best. It is free from mill feed. It is cooked. The Booklet is FREE. Write for it.

J. A. Simmers, Toronto, Ont.  
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**2ND CLASS Round-Trip Excursions TO MANITOBA SASKATCHEWAN ALBERTA**

**GOING DATES**  
April 14, 22 June 9, 23 Aug. 4, 18  
May 12, 26 July 7, 21 Sept. 1, 15, 29

Tickets good to return within 60 days  
**VERY LOW RATES** from all points in Ontario.

Ranging from Winnipeg and return \$32.00 between Edmonton and return \$42.50  
Tickets issued to all North-West points.

**TOURIST SLEEPERS** A limited number of Tourist Sleeping Cars will be run on each excursion, fully equipped with bedding, etc. Berths should be secured and paid for through local agent at least six days before excursion leaves.

Rates and full information contained in free Homeseekers' pamphlet. Ask nearest C.P.R. agent for a copy, or write to C. B. POSTER, District Pass. Agt., C.P.R., Toronto

## Shorthorn Bulls



I have for sale four as good young bulls as I ever offered to my customers at my best times. For type, quality and breeding these are up to the standard of first class. Write me for particulars, or come and see.

**ARTHUR JOHNSTON,**  
Greenwood, Ont.

Claremont Stn., C.P.R.; Pickering, G.T.R.

## Shorthorns, Cotswolds, Berkshires



For sale: 2 bulls 18 months, 1 bull 12 months, and 4 from 7 to 9 months; and females all ages. In Cotswolds a few good ewe lambs. Nothing to offer in Berkshires.

**CHAS. H. BONNYCASTLE,**  
P. O. and Station,  
Campbellford, Ont.



**Willow Bank Stock Farm**  
Herd Established 1855

The great Duthie-bred bull, Imported Joy of Morning = 3370, and Scottish Banner = 6103, at head of herd. Young cows bred to the above sires; also bulls and younger heifers for sale. Very choice.

**James Douglas, Caledonia, Ont.**

**NOTED IMP. BULL, DERBY, FOR SALE.**

Having several of Derby's heifers now ready to breed, we have decided to sell him. He is as active as ever, and has kept his conformation well. His breeding and ability need no comment. **W. J. SHEAN & SON,** Box 256, Owen Sound, Ont.

**GREENGILL HERD OF HIGH-CLASS SHORTHORNS.**

We offer for sale choice young bulls from 6 to 18 months old, sired by imp. Lord Roseberry, also cows and heifers, with calf at foot or bred, either imp. or Canadian-bred.

**R. MITCHELL & SONS,**  
Nelson P. O., Ont., Burlington Jct. Sta.

**FOR SALE: 4 Shorthorn Bulls fit for service.** Dairy type. Some of them from imp. cows, and all got by Broadhooks Prince (imp.) 55002. Prices the lowest. Also cows or heifers. 60 head to select from.

**DAVID MILNE, ETHEL, ONT.**

## QUESTIONS AND ANSWERS. Miscellaneous.

### DRAINAGE.

I have a ditch which comes down my lane, and when it comes to the road, or concession, part of the water runs to the west, and the other to the east, that being the natural run of the water, the ditch being put there by the council—both ways on the road. I have no right-of-way to the east drainage. I offered to pay for right-of-way. Can I force it, and what steps must be taken? Ontario.

Ans.—We consider it possible that you might obtain the desired relief by proceedings under the Ditches and Watercourses Act (R. S. O., 1897, C. 285), but we cannot speak definitely without more information as to the facts of the case.

### A STALLION SYNDICATE.

A syndicate, composed of ten shareholders, bought a Clydesdale stallion. One or two of the shareholders have failed to meet their payments.

1. Have the remaining syndicate members authority to expel such defaulting members, and would they lose the payments they have made?  
2. If the syndicate have no authority to act, what can we do, as the "good pays" have to make up all? Ontario.

Ans.—1. It is possible that the agreement between the members gives the syndicate the powers suggested; but, from the foregoing statement of case alone, we do not see that it has such powers.  
2. The defaulters may be sued for the instalments in arrears.

### LAND PLASTER VS. TRUE FERTILIZERS.

In looking over "The Farmer's Advocate" I noticed an advertisement of potash as a land fertilizer, and, as I have some land which is pretty well worn out, I decided to write to you and find out what is the best and cheapest fertilizers. How about land plaster? Some people give it great praise for meadows and turnip ground. However, I have never noticed anything about it in "The Farmer's Advocate." Is land plaster or potash the best fertilizer? Where can these fertilizers be had? How are they applied? How much to each acre? How much would it cost per barrel, delivered at Walkerton Station? J. C.

Ans.—The "best and cheapest fertilizer" is a "home-mixed one," containing phosphoric acid, potash and nitrogen in easily-available forms, and in the proportions suited to the particular crop and soil. The above three ingredients are those of which a soil becomes depleted in the ordinary process of cropping.

Phosphoric acid may be purchased in the form of acid phosphate, basic slag, steamed bone meal, etc.; potash in the form of muriate of potash and sulphate of potash, and nitrogen as nitrate of soda, sulphate of ammonia, tankage, etc. By growing a crop of clover, the soil is enriched in nitrogen, so that an artificial supply of that ingredient is thereby rendered unnecessary.

Land plaster (gypsum) cannot be compared with potash as a fertilizer, since land plaster is not a "plant food" in any sense of the term, its chief virtue lying in the fact that it liberates some phosphate and potash in the soil, rendering them available to plants. Excessive and continued use of land plaster has been the means of impoverishing many soils. The above-mentioned fertilizers may be obtained from the Messrs. W. A. Freeman Co., Hamilton, Ont.

The best use for land plaster is as an absorbent of liquid manure in cattle stables, for which it is valuable.

After thoroughly mixing together the various ingredients, they may be applied broadcast at the rate of, say, 140 lbs. muriate of potash, 500 lbs. acid phosphate, and 120 lbs. nitrate of soda for turnips. For potatoes, use 200 lbs. sulphate of potash instead of the muriate, and reduce the acid phosphate to 350 lbs. per acre.

For full particulars we would refer enquirer to the series of articles entitled "Fertilizers: Their Nature and Use," which appeared in "The Farmer's Advocate" during February and March this year.

B. L. E.

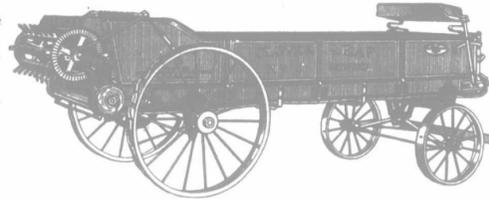
## IT PAYS TO BORROW MONEY TO BUY A MANURE SPREADER

IF you do not have to borrow, so much the better. But in any event have a spreader of your own this year. The increase in the first crop through the use of your spreader will more than pay the principal and interest. It will cut down the labor of manure spreading. It will make the work agreeable. There will be no waste of manure. You will have a more fertile soil for future crops.

A manure spreader should be considered as a permanent investment, not as a running expense. For the only way you can get all the value out of the farm manure every year is to use a spreader. There is absolutely no comparison between results produced by hand spreading and machine spreading.

The Cloverleaf Endless Apron Spreader  
The Corn King Return Apron Spreader

CANADIAN BRANCHES: Calgary, Hamilton, London, Montreal, Ottawa, Regina, St. John, Winnipeg  
INTERNATIONAL HARVESTER COMPANY OF AMERICA, Chicago, U. S. A. (Incorporated)



You will make no mistake in buying either one of these right working, durable I. H. C. spreaders. I. H. C. spreaders are not built excessively heavy, but they have the strength required by such machines. The draft is as light as possible in any spreader.

The machines differ in certain features, but each have good strong broad tired wheels, simple and strong driving parts, are easily and conveniently controlled, and do first class work with any kind of manure.

Any I. H. C. local agent will supply catalogs and explain the distinguishing features of each machine, or show you a machine at work so that you can choose wisely.

If you prefer, write direct to our branch house nearest you for any information desired.

## LIVINGSTON'S OIL CAKE MEAL.

**OLD PROCESS**

Nothing is better for fattening steers quickly and putting them on the market in prime condition than Oil Cake Meal. Thousands of Canadian and English stockmen use Livingston's, and would have no other. It is equally good for milk cows. They give more and better milk when fed Livingston's Oil Cake Meal. Also used for horses, sheep and hogs. Write for information regarding prices, etc., etc., to

**DOMINION LINSEED OIL CO., LIMITED**  
Montreal, Que. Baden, Ont.

## SHORTHORN BULLS For Sale.

At the dispersion of the "Thistle Ha" herd in Jan., 1905, I purchased a few of the best breeding cows. From these cows I now have 6 extra good young bulls for sale. For pedigrees and other particulars apply to

**JOHN MILLER,**  
Brougham, Ont. Claremont Sta., C. P. R.

## J. Watt & Son SALEM ONT.,

Offer 12 or 15 high-class young cows and heifers in calf, or calves at foot, to (imp.) Pride of Scotland. Show stuff of different ages always on hand.

**ELORA STA., G.T.R. and C.P.R.**



We are offering a very superior lot of **SHORTHORN Home-bred Bulls** of the best breeding and quality at attractive prices for the buyer. To see them is all that is necessary. Try to do so if you are in the market. It will pay you.

**JNO. CLANCY,** Manager. **H. CARGILL & SON,** Cargill, Ont.

## The Salem Stock Farm SHORTHORNS

A SPECIALTY. WRITE FOR ANY INFORMATION.  
**J. A. Watt, Elora, Ont.**  
G. T. R. AND C. P. R.

## Choice Shorthorns for Sale!

Some fine young stock, either sex, including some extra heifers from imp. dams, and all got by the Critchbank (Duthie-bred) bull, Sittytan Victor, Imp. = 50093 = (87397). Also young Yorkshires, either sex. Address: **JOHN BRYDONE,** Milverton, C. P. R. & G. T. R.

**MAPLE** Winners at the leading shows have been sired by bulls bred here. We can sell you a good bull to head your herd of SHORTHORNS, or for use on your good grade cows. The bull catalogue explains the breeding. Write for it.

**John Dryden & Son, Brooklin, Ont.**  
Stations: Brooklin, G. T. R.; Myrtle, C. P. R. Long-distance telephone.

**SHAD E.**

## TWO IMPORTED BULLS

Direct from Aberdeenshire, Scotland, of excellent quality, color and breeding, two from imp. sire and dam, and others sired by Joy of Morning (Imp.) = 3370 =. Prices in Shorthorns and Yorkshires will interest intending purchasers.

**GEO. D. FLETCHER,** Binkham P.O., Ont. Erin Sta., C. P. R.

## SHORTHORN BULL OFFERED

Dark roan; real good head and horns; excellent back and quarters; capital legs, properly set; and attractive appearance. Year old April 2nd. He is a **Strathallan**, by Golden Count = 44787 =, and we think is good enough to fit for showing in junior yearling class at Toronto, and head any good herd.

**J. & D. J. CAMPBELL,** Fairview Farm, Woodville, Ont.

## Scotch Shorthorns

Our breeding females are very heavy milkers, also good individuals. For sale are a few young bulls and a few choice heifers, all from imported sires, and a number from imported dams. The imported **Bruce Mayflower** bull, Royal Bruce 55088, heads the herd.

**R. J. DOYLE, Box 464, OWEN SOUND, ONT.**

For full particulars we would refer enquirer to the series of articles entitled "Fertilizers: Their Nature and Use," which appeared in "The Farmer's Advocate" during February and March this year.

B. L. E.

QUESTIONS AND ANSWERS.  
Miscellaneous.

ALFALFA AS HOG PASTURE.

I would like to know, through your paper, if alfalfa is better than red clover for hogs as a pasture. I have a small field near the barn, and would be handy for hogs; it is nearly all middling high land. Would you advise sowing the alfalfa or red clover? Is it good for calves?  
M. S.

Ans.—Alfalfa makes a much better hog pasture than red clover, producing richer and more appetizing feed, and usually lasting much longer, although if too close grazing is permitted this may not always prove to be the case. Properly cared for, on suitable soil, alfalfa should last for a number of years as a hog pasture. It is a perennial, whereas red clover is a biennial, with a slight tendency to perennial habit of growth. Sow the alfalfa, by all means. It makes better feed for calves than red clover, although there is a certain danger of bloating where cattle are grazed on alfalfa alone. In combination with grasses, it makes a safe pasture for ruminants. For hogs, it is better alone.

HENS DYING.

Hens are taking a sore throat. The throat immediately below the ears swells up, and the feathers turn backward. The gullet seems filled. After considerable time they die. Would it be possible barley ends would be lodged in their throats? They have cement floor and all exercise they need.  
N. S.

Ans.—The description of symptoms of an unusual and evidently fatal ailment is too vague and sparse to permit of correct determination. A lot of conjecture and guessing might certainly be indulged in. The most satisfactory way would have been to send a sick, but live, specimen to Dr. Higgins, Biological Laboratory, Experimental Farm, Ottawa, for examination, and report, and such can yet be done if there are any ailing birds. It may be said that death was evidently caused by suffocation, but whether suffocation was caused by canker, diphtheria, or roup, which may be classed as one and the same disease, or by the barley ends, examination, as suggested, would be a likely means of ascertaining. Again, it is noted that it was only after "considerable time" that the birds died. A fatal disease, such as diphtheria, would make great progress in a considerable time. Meanwhile, as a precautionary measure, disinfect the poultry house.  
A. G. GILBERT.

BARLEY AND FLAX—SEEDING FOR PASTURE.

1. I want to know if barley and flax would ripen together, as I want to sow a little flax with the barley.  
2. How would orchard grass and red clover do for pasture, or how should they be mixed?  
J. B.

Ans.—1. While the periods of growth of barley and flax are not dissimilar, an American authority stating that the latter commonly matures its seed in from two and a half to three months, yet this varies according to the types or varieties, and quite considerably according to the climate and region in which the crop is grown, also the depth at which the seed is planted, trials at the North Dakota Experiment Station having demonstrated that excessive depth of planting may cause delays of several weeks in ripening the seed crop. An objection to mixing flax with barley is that the proper date of seeding for flax is somewhat later than that of barley. For this and other reasons it is recommended to grow the flax separately and mix the seed with the grain when grinding.

2. If it is permanent pasture that is wanted, we would strongly recommend the mixture suggested by Prof. C. A. Zavitz, of the O. A. C. If the pasture is desired for only a year or two, the orchard grass and red-clover combination might do fairly well, though we would add a little alsike clover, timothy and meadow fescue, and, if the land is high, some alfalfa. Try: red clover, 8 pounds; alsike, 2 pounds; orchard grass, 6 pounds; meadow fescue, 4 pounds, and timothy, 2 pounds. If the land is adjudged suitable for alfalfa, a few pounds of this seed might be added, and the clover seed proportionately reduced. It pays to introduce considerable variety when seeding down for pasture.

This will Keep the Boy on the Farm

It Will Give Him a Real Start in Life

QUIT worrying about how you're going to "give the boy a better chance in life than his father had." Let up wondering how you're going to manage to give him a start. Fix it so he can make his own start—and have fun doing it. He will stay on the farm if you go at it the right way.

This way: Any normal, healthy boy likes to "fool 'round" with live things—chickens for instance. Make him work at it, and he'll tire of it quick. But give him a little business of his own,—set him to raising chickens on his own hook,—and he won't let up till he makes a success of it.

I can arrange the whole thing for you,—teach your boy how to succeed at poultry-raising for profit,—show him where to save work and worry doing it,—stand right back of him and coach him along,—and find him a good, quick-cash buyer who will pay the highest prices for all the poultry he raises or the eggs he can sell.



The No. 2 (120-Egg Size) 1908 Peerless Guaranteed Incubator

In a word, I will make a BUSINESS poultryman of your boy,—and I don't want a cent for doing it. I want you, for your part, just to help give the boy a start,—like this:

Send for my free book—"When Poultry Pays," That will give you an idea of what there really is in up-to-date poultry raising,—of how much money anybody with hustle and gumption can get out of it.

And the book will tell you what kind of an outfit will get the most money out of poultry, quickest and easiest, and sure,—my Peerless outfit,—the Peerless Guaranteed Incubator, and the Peerless Brooder.

Then I will tell you just how

Write To-day To The Manager of  
**The LEE-HODGINS COMPANY, Limited**  
434 Pembroke Street, Pembroke, Ontario

You Needn't Hurry in Paying For It

you can get an outfit for your boy—either the big size (200 eggs in the incubator—200 chicks in the brooder) or the minor size—(120 and 120)—

Without paying a cent on the outfit until a year from now. By the time that first payment is due, the outfit will have earned far more than its cost, and the boy will know enough about the poultry-raising game to want to stick to it.

I know plenty of young folks who are earning their college money this way—and learning hard business sense as well—learning things that will make them succeed in other lines later in life.

I can show you why that's so. Write to me and ask me why the Peerless makes a worth-while present that will earn the biggest kind of dividends for you and for the boy,—or for the girl, for that matter. Get the free book.

SCOTCH SHORTHORNS

My herd is represented by such noted Scotch families as Victoria, Orange Blossom, Duchess of Gloster, Strathallan, Stamford and Lovely. Mostly from imported sire and dams. Write me for prices on what you want.  
J. F. MITCHELL,  
Burlington Jct. Sta. Burlington, Ont., P.O. & Telegraph.

SHORTHORNS AND LINCOLN SHEEP.

Two bulls, 11 and 12 months old—a Miss Ramsden and a Bessie, both by the good breeding bull, Proud Gift—5077—(imp.), also cows and heifers in calf by him. Inspection solicited. Always have some choice Lincoln sheep for sale at reasonable prices.  
J. T. GIBSON, DENFIELD, ONTARIO.

T. DOUGLAS & SONS

STRATHROY, ONT.  
Breeders of Shorthorns and Clydesdales. 15 bulls, 60 cows and heifers, 1 imp. stallion, imp. and home-bred fillies. Write us what you want or come and see our stock. Farm 1 mile north of town.

Shorthorns!  
BELMAR PARC.

John Douglas, Manager. Peter White, Pembroke, Ont.

Calves for sale by our grand quartette of breeding and show bulls:  
Nonpareil Archer, imp. Proud GR, imp. Marigold Sailer. Nonpareil Keith.  
Females. Imported and from imported stock in calf to these bulls.  
An unsurpassed lot of yearling heifers.

Queenston Heights Shorthorns  
Young bulls from imported and home-bred Scotch cows, and got by such noted bulls as Derby (imp.), Spicy Broadbent (imp.) and Whitehall Ramsden. Priced for quick sale.  
HUDSON USHER, Queenston, Ont.  
Farm three miles north of Niagara Falls.

PLEASANT VALLEY SHORTHORNS

For sale: 3 young bulls by Old Lancaster Imp. from imp. dams, including Lancaster Victor. First prize sr. bull calf at Dom at Sherbrooke, second at C. N. E., Toronto. Correspondence solicited. Inspection invited.  
Geo. Ames & Son, Moffat, Ont., Stn., P.O. C. P. R. Farm 11 miles east of City of Guelph.

5 IMPORTED Shorthorn Bulls HOME-BRED 10  
Herd headed by the grand champion, Prime Favorite, imp. You cannot afford to buy without seeing these bulls. We will appreciate a visit. Females of all ages and most popular lines of breeding. Bell telephone on each farm.  
Burlington Jct. Stn., G. T. R. W. G. Pettit & Sons, Freeman, Ont.

1854 Maple Lodge Stock Farm 1908  
Four handsome young Shorthorn bulls for sale. Heifers also.  
A. W. SMITH, MAPLE LODGE, ONTARIO.  
Lucan Crossing Station, G. T. R.

Valley Home Shorthorns AND BERKSHIRES.

Our herd numbers sixty-five head. We are prepared to give bargains to suit all who wish to buy from one animal up to a carload of females, and 15 bulls from 9 to 18 months old. Also 25 Berkshires of prolific strains.  
S. J. PEARSON, SON & CO., Meadowvale, Ont.  
Stations: Meadowvale, C.P.R.; Brampton, G.T.R.

Herd Bulls for Sale

We now offer our grand show and breeding bull, Biddiswood Marquis—4993—good disposition and sure breeder, and Good Marquis—6999—ross, calved Dec. 16th, 1906, a bull good enough to show anywhere. Our prices are reasonable. Write for particulars or, better, come and see.  
Jno. Lee & Sons, Highgate, Ont.

A. EDWARD MEYER,

Box 378, Guelph, Ont.

Offers for sale two young Scotch-bred bulls of good colors, both from imported sire: one from imported dam and the other from a Clydesdale cow; one is 11 months old, the other 8 months. They will be sold well worth the money. Write, or come and see them. Long-distance phone.

R. H. REID,  
Clover Lea Stock Farm,  
PINE RIVER, ONT.,

BREEDER OF SHORTHORN CATTLE  
Golden Cross (imp.) at head of herd.

SPRING VALLEY SHORTHORNS

We still have three choice young bulls that will be sold very reasonable, as we do not care to run them over; also a choice lot of cows and heifers, bred to the champion, Clipper Chief, imp.  
KYLE BROS., AYR, ONTARIO.

SCOTCH SHORTHORNS!

We now offer four heifer calves 10 and 11 months old. All reds. Bred from imp. sire and dams. Will be sold right.  
G. HARKIN & SONS,  
Wyebridge P. O., Ont., Wyevale Sta.  
MAPLE GROVE SHORTHORNS  
Scotch and dairy bred; up-to-date in type; prize-winners at the local shows. A number of 1 and 2 year old heifers, 1 year old bull, and one 5 months old—the last will make a show bull. Flora bred—will be sold easy.  
L. B. POWELL,  
Wallenstein, Ont., P.O. and Stn., C.P.R.

**BROOKS' NEW CURE**

**FOR RUPTURE**

Brooks' Appliance. New discovery. Wonderful. No obnoxious springs or pads. Automatic Air Cushions. Binds and draws the broken parts together as you would a broken limb. No salve. No lymphol. No lies. Durable, cheap. Pat. Sept. 10, '01. **SENT ON TRIAL. CATALOGUE FREE.**

C. E. BROOKS, 6570 Brooks' Bldg., MARSHALL, MICH.

**Bone Spavin**

No matter how old the blemish, how lame the horse, or how many doctors have tried and failed, use **Fleming's Spavin and Ringbone Paste**. Use it under our guarantee—your money refunded if it does not make the horse go sound. Most cases cured by a single 5-minute application—occasionally two required. Cures Bone Spavin, Ringbone and Sidebone, new and old cases alike. Write for detailed information and a free copy of **Fleming's Vest-Pocket Veterinary Adviser**. Ninety-six pages, durably bound, indexed and illustrated. Covers over one hundred veterinary subjects. Read this book before you treat any kind of lameness in horses. **FLEMING BROS., Chemists, 75 Church Street, Toronto, Ontario**

Am offering at the present time **3 Very Fine Imp. Young Bulls.** Good colors, and of the best breeding; also some extra good Canadian-bred bulls ready for service. Also cows and heifers imported and Canadian-bred. Prices reasonable. **H. J. DAVIS, Importer and Breeder, Woodstock, Ont.**

**SHORTHORNS AND LEICESTERS.**

For sale: One extra good young bull, 11 months old, from imp sire and dam; also a few good young Leicester ewes in lamb. At easy prices for quick sale.

**W. A. Douglas, Tuscorora P. O. Caledonia station.**

**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. Brooklyn & Myrtle Sts.**

**High-class Shorthorns** Royal Chief, a son of Mildred's Royal, at head of herd. We are offering a few choice heifers of show-ring form. Pure Scotch. Terms reasonable. **A. DUNCAN & SONS, Carleton Place, Ont.**

**Shorthorn Bulls**—Ready for service. One will make a show bull. Also young things from Matchless, Crimson Flower, Miss Ramsden, Rosemary, Diamond and Lady Fanny dams, the ges of Chancellor's Model. Prices to suit times. Come and see. **ISRAEL GROFF, Elmira, O. T.**

**FAIRVIEW HERD** is the place to buy your next bull. I can furnish you with a bull sired by our great herd bull, **PONTIAC KORDYKE**, who has 19 daughters in the last year's report that made official records from 18 pounds at less than two years old to over 31½ pounds at four years, and the whole number averaged over 4½ fat. No other bull in the world has ever made such a showing in one year. I have just tested another of his daughters that made 36.50 pounds butter in seven days with second calf. I have over 50 cows and heifers in calf to him. Come and look my herd over before making your selections elsewhere. **E. H. Dellar, Nevelton, St. Law. Co., N. Y., near Prescott**

**Queen City Holsteins** Big smooth cows. The sort that fill big pails the year through. They are officially tested in both seven-day and twelve-month tests. Farm seven miles north of Toronto, near Metropolitan Electric Ry. Long-distance telephone. **E. F. HICKS, Newton Brook P. O., Ont.**

**The Maples Holstein Herd!**

Headed by Lord Wayne Mechtildie Calamity, also in the Record of Merit. Nothing for sale but choice bull calves.

**WALBURN RIVERS, FOLDEN'S, ONT. HILTON STOCK FARM—Holsteins, Cotswolds and Tamworths**—Present offering: Some young cows; a nice lot of young pigs; few boars six months old, and sows in pig. **R. O. MORROW & SON, Hilton, Ont. Brighton Tel. and Stn.**

**HOLSTEINS** Two choice bulls, 10 months. Also calves for April and May delivery, sired by imported Ykema Sir Posch 2nd (Johanna Rue Sarcastic). O. I. C. sires. Largest strain bred in Canada. All ags. Express prepaid. **E. D. GEORGE, Putnam, Ont.**

**QUESTIONS AND ANSWERS. Miscellaneous.****LUMP IN TEAT.**

Young cow has had a small lump in front teat of udder for the last three months, but recently it has given something like clotted blood at times, and is growing into a larger lump, and is quite sore. Do you think it can be put away, and do you think it advisable to keep cow?

**Ans.**—Treatment of these cases is rarely satisfactory. Dry up the quarter as soon as possible, and when the heifer ceases to milk profitably dry her off entirely, and fatten for the block, unless she gives promise of proving an exceedingly good cow, in which case she might be milked for a few years from the three unaffected quarters.

**BLACK SPOTS ON PIGS.**

I purchased a Yorkshire boar, with pedigree, from a breeder of high-class Yorkshires. At seven months old I bred him to a limited number of sows. When they farrowed, some of the young pigs had small black spots on them. Should the pigs all be pure white from a pure-bred Yorkshire boar?

**Ans.**—If the sows were pure-bred Yorkshires, the produce should be pure white. If the sows were Berkshire, or crosses of any black breed, some of the pigs might be spotted, though a pure-bred Yorkshire boar generally gets nearly all his progeny solid white, even from Berkshire or grade sows. The standard for Yorkshires gives black hairs or black spots as a disqualification, and freedom from blue spots on skin as desirable.

**WATER TANK IN ATTIC.**

I would like to get a water tank put in attic above kitchen.

1. Is any support necessary from beneath?  
2. What shape of a tank would be best?  
3. What thickness of galvanized iron would be necessary, tank to hold, say, four barrels of water? The kitchen is 16 feet wide, thus joists are that length, 2½ x 8-in. poplar, 2 feet apart, with the studding tamarack, 2 x 4, on a stone wall. The attic wall is 4 feet high, and the tank will go lengthwise across joists. I want to put a wooden tank outside to make it frostproof. **LORENA.**

**Ans.**—1. Four barrels of water will not weigh more than 1,300 to 1,400 lbs., according to size of barrel. Lay strong planks crosswise of joists, and set tank on these joists. This will distribute the weight over several joists, and no supports will be needed.

2. A cylindrical tank is easier to make, much stronger, and will cost you from 20 to 25 per cent. less than a rectangular one.  
3. Eighteen- or 20-gauge galvanized iron will make a good strong tank. **WM. H. DAY.**

**TWO SILOES OR ONE?**

I have been intending to build a 14-ft. diameter, 30-ft. high, cement silo this summer. I have now a 12 x 30 stave silo, which seems small for 40 head of cattle; an average of 16 of this number dairy cows. Would it be advisable to take down the stave silo and replace with a cement one, 14 x 30, or keep up the stave one and build a new one, 12 x 30? I know that for summer feeding, the small diameter is better as the silage come off fresher. I have a field of alfalfa which might make good ensilage in a wet season. I will have seven or eight acres of corn this year. Please give me advice. **W. J. P.**

**Ans.**—It is difficult to advise wisely in such matters without full knowledge of circumstances. Assuming that the farm is already supporting as much stock as it is intended to keep, we should say build the smaller size, 12 x 30. If an increase of stock is contemplated, 14 x 30 would probably not be found too large. In any case, retain the present silo as long as it preserves the feed well. It might possibly earn its original cost in one season by utilizing a crop of alfalfa that would otherwise spoil. It will also be a convenient means of handling any considerable excess of the corn crop over and above what the other silo will contain.

**FAIRVIEW HOLSTEINS!**

For sale: Just now we have about a dozen cows and heifers, some of them in the R. of M., and all with official backing on both sides, in calf to the Toronto 3-times champion. Also a number of bull calves with official backing. **THOS. HARTLEY, DOWNSVIEW, ONT. Weston and Downsview stations.**

**Maple Hill Holstein-Friesians**

Bull calves from No. 1 dams, sired by bulls with great official backing. Write for prices. **E. W. Clemons, St. George, Ont.**

**Holsteins & Yorkshires**

**R. Honey, Brickley, Ont.**

All surplus stock in Holsteins sold except this crop of calves. Ready to book orders for them. Best bacon type Yorkshires, one to six months, both sexes, at moderate prices.

**SPRING BROOK HOLSTEINS AND TAMWORTH'S.**—Holsteins of richest breeding and highest production. Tamworths of best British blood and ideal bacon type. Herd headed by prizewinning Imp. Knowle King David Stock of all ages and both sexes for sale. Young sows bred to imp boar. Write, or come and see: **A. C. HALLMAN, Breslau, Waterloo Co., Ont.**

**HOLSTEINS**

We must sell at least 25 cows and heifers at once in order to make room for the increase of our large herd. This is a chance of a lifetime to buy good cattle at bargain prices. The best way: arrange to come and look the herd over. If you cannot, we will do our best for you by correspondence. Also a few young bulls: 100 head to select from. Imported **Pontiac Hermes**, son of Hengerveld De Kol, world's greatest sire, head of herd. All leading breeds represented. **H. E. GEORGE, Orampton, Ont. Putnam station, near Ingersoll.**

**To Head Your Herd**

Why not buy **Kordyke Lily De Kol**. Born January, 1904. Sire **Kordyke Queen's Butter Boy**. Dam **Miss Lily**. This is a handsome young bull, and has proved himself a getter of good stock. Write for particulars. We also have a few cows and calves for sale.

**E. & F. Mallory, Frankford, Ont.**

**MAPLE GLEN HOLSTEINS**

Herd of 35 head with A. R. O. breeding, backed up by butter tests of over 16 lbs. as a two-year old to over 26 lbs. as a cow. A good herd to select from. Two spring bull calves on hand. A. R. O. test of one is over 26 lbs. for dam and s. dam. Come and inspect the herd. Any animal will be offered for sale. **G. A. GILROY, GLEN BUELL, ONT.**

**Centre and Hillview Holsteins!**

125 head to select from. 35 in the R. O. M. Stock bulls **Bonheur Statesman**, high official backing, and is closely related to **Colantha 4th's Johanna**. **Brookbank Butke** 4th's sires, out of R. O. M. Boy. All these sires, out of R. O. M. dams, are several young bulls and a few heifers. Prices right. **P. D. EDE, Oxford Centre, Ont. Woodstock Station.**

**LYNDALE HOLSTEINS!**

Bull calves for sale out of cows with records of from 18 to 30 lbs., also 3 heifers coming 2, and a number of young cows in Record of Merit, bred to a grandson of **Pietertje Hengerveld's Count De Kol**. **BROWN BROS., LYN. ONTARIO**

**Only Bull Calves**

FOR SALE. **HOLSTEIN and AYRSHIRE**—Of the best performing strains. **GEORGE RICE, Annandale Stock Farm, Tillsonburg, Ont.**

**Homestead Holsteins**

Bull calves for sale, 2 months old, out of cows with large A. R. O. records, and sired by **Count Me-cens Posch**, whose dam and sire's dam average 25½ pounds butter in seven days. **G. & F. Griffin, Box 43, Burgessville, Ont.**

**Evergreen Stock Farm** For sale: Choice Holstein bull calves from 4 to 5 months old. A. R. O. backing on both sides; also a few females. Write for prices and terms. **F. C. PETTIT, Burgessville, Ont.**

**Ayrshires from a Prizewinning Herd**

Have some nice bull and heifer calves for sale at reasonable prices. For particulars, etc., write to **WM. STEWART & SON, Campbellford Stn., Montic P. O., Ont.**

**D. M. Watt, St. Louis Station, Quebec,** breeder of **HIGH-CLASS AYRSHIRES** Canadian and Scotch-bred. All of deep milking qualities.

**Stoneycroft Ayrshires**

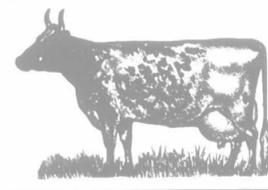
Choice young bulls and heifers of the very best breeding, combining show and dairy quality. **Large Improved Yorkshire Pigs** from imported sires and dams, now ready to ship. **STONEYCROFT STOCK FARM, Ste. Anne de Bellevue, Que.**

**SPRINGBURN STOCK FARM.**—Ayrshire Cattle, Oxford Down Sheep, Berkshire Pigs. No stock for sale. Buff Orpington poultry, eggs \$1 per 13, \$4 per hundred; orders now being booked. **H. J. WHITTEKER & SON, Williamsburg P. O.**

**Ayrshires** Bull 4 years old, two yearling bulls, bull calves from \$12 up. Everything in this herd is bred right up to date. **JAMES BEGG, Box 88, St. Thomas.**

**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.**

**Ayrshires and Yorkshires**

Special offering: Young calves from dams that have qualified for Record of Merit, and others that have made good records. Any ages desired; either imp. or home-bred. If you want an imported bull or heifer write **J. Reison, Fenwick, Scotland**. Orders taken for young pigs or young sows in farrow. Long-distance phone.

**Alex. Hume & Co., Menie, Ont.**

**Jerseys 2 Extra Choice Young Bulls For Sale,** 8 and 9 months old, grandsons of the great **Financial King**, out of large, heavy-milking dams. Inquiries solicited. **ARTHUR H. TUFTS, Box 111, Tweed, Ont.**

**AYRSHIRES** Young bulls from producing dams and same sire, from 1 month up to 9 years. Rare good ones and will speak for themselves. **N. DYMENT, Hickory Hill Stock Farm, Clappison, Ont. Dundas Station and Telegraph.**

**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.**

SUBSCRIBE FOR "THE FARMER'S ADVOCATE AND HOME MAGAZINE."

# ONLY A Common Cold

**BUT IT BECOMES A SERIOUS MATTER IF NEGLECTED. PNEUMONIA, BRONCHITIS, ASTHMA, CATARRH or CONSUMPTION IS THE RESULT.**

Get rid of it at once by taking

## Dr. Wood's Norway Pine Syrup

Obstinate coughs yield to its grateful soothing action, and in the racking, persistent cough, often present in Consumptive cases, it gives prompt and sure relief. In Asthma and Bronchitis it is a successful remedy, rendering breathing easy and natural, enabling the sufferer to enjoy refreshing sleep, and often effecting a permanent cure.

We do not claim that it will cure Consumption in the advanced stages, but if taken in time it will prevent it reaching that stage, and will give the greatest relief to the poor sufferer from this terrible malady.

Be careful when purchasing to see that you get the genuine Dr. Wood's Norway Pine Syrup. Put up in a yellow wrapper, three pine trees the trade mark.

Mr. Wm. O. Jenkins, Spring Lake, Alta., writes: "I had a very bad cold settled on my lungs. I bought two bottles of Dr. Wood's Norway Pine Syrup but it only required one to cure me. I have never met with any other medicine as good."

Price 25 cts., at all dealers.

Extra High Prices for

# SPRING

Ship us all you get. Write for our new complete April price list of

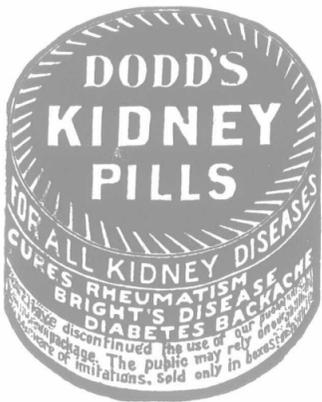
## RAW FURS.

**E. T. CARTER & CO.**  
83-85 Front St., E., TORONTO  
CANADA.

We pay all express charges.

# MUSKRATS

Do not keep too many pigs in one pen unless the space is large and has plenty of troughs. Troughs should be the proper height, with partitions to prevent the pigs crowding each other from the trough, and this also keeps the food clean.



### QUESTIONS AND ANSWERS. Miscellaneous.

#### INAPPETENCE.

Heifer, two years old, quite heavy with calf, is dull and stupid; has but little apparent appetite; chews cud all right, and bowels work regularly; but as she has been very dainty about eating for some time, she is getting weak, and I would be pleased to know what is best to do. I have not attempted to give any medicine.

J. W. S.

Ans.—We would tempt her appetite with small supplies of apples, roots, dry bran and oats, and good clover hay, taking the chill off her drinking water. If medicine appears to be necessary, purge with 1½ pints of raw linseed oil. Follow up with a tablespoonful, three times daily, of equal parts sulphate of iron, gentian, ginger, nux vomica, nitrate of potash and bicarbonate of soda. Given as a drench slowly in a pint of cold water.

#### OYSTER-SHELL BARK-LOUSE.

Please find enclosed section of branch cut from Roxbury Russet. Tree seems to be badly affected with this scale. Can find it on only two trees. What is it, and what should be done with it?

C. E.

Ans.—Oyster-shell bark-lice. The best insecticide to use for it is the lime-sulphur mixture, applied early in spring before growth starts; but plain lime wash, applied to all parts of the tree with a spray pump, will answer almost as well. It is made by using one pound lime to a gallon of water. Two coats should be applied, the second immediately after the first is dry. If the orchard is in sod, plow it shallowly early this spring, and cultivate thoroughly till fore part of July without any crop. About the middle of July, sow a nurse crop of clover, vetches, or anything to check growth of wood and form a good winter protection. Meanwhile apply a dressing of manure and a load or two per acre of good wood ashes. The scale is less prevalent, as a rule, on thrifty, well-fertilized, well-pruned and properly-kept orchards. It abounds in neglected ones.

#### ALSIKE FOR SEED.

I am thinking of sowing 5 acres of alsike for growing for seed, and would like to hear from someone who has been growing and making a success of it as to their method.

1. How much seed per acre does it require for seeding, and how much per acre of yield do you consider a good average crop?  
2. How do you manage it so as to get the best results? Would you pasture for a while in early spring or not? Any information regarding it from the time of seeding to the harvesting of it will be gratefully received as I am an amateur in regard to growing alsike for seed.

S. W. E.

Ans.—Our inquirer evidently wishes to hear from farmers in various sections who have had experience in growing alsike for seed, but as the season is already advanced, we will answer the specific questions briefly:

1. As the seed is very small, 5 lbs. per acre will generally suffice. It commonly yields 3 to 4 bushels of seed per acre, the range being from less than 2 up to 8 bushels. Much depends upon how well the blossoms are fertilized by the bees and other insects.  
2. The first crop must be saved for seed; indeed, alsike produces only one full growth in a season. The best yields of seed are usually obtained from crops of medium vigor, and it is desirable to have the whole field of plants coming on evenly and ripening together. To prevent excessive growth of stems, and to insure even maturity, pasturing for a time is frequently resorted to. The grazing should begin reasonably early and be rather close, until, say, May 24th, or not later than June 1st. If any portions of the field are but partially grazed when the stock is taken off, the mower should be run over the field so as to give all the plants a fairly even start. We shall be pleased to hear from raisers of alsike and other clover seed, giving details of methods and results.

### Cattle and Sheep Labels

Size	Price, doz.	50 tags
Cattle	75c.	\$2.00
Light Cattle	50c.	\$1.50
Sheep or Hog	40c.	\$1.00

Cattle size with owner's name and address, and numbers; sheep or hog size with name and numbers. Sample and circular mailed free. Get your neighbors to order with you and get lower price. F. G. JAMES, Sewmanville, Ont.

## Sheep Breeders' Associations.

American Shropshire Registry Association, the largest live-stock organization in the world. Richard Gibson, President, Delaware, Canada. Address correspondence to MORTIMER LEV-ERING, Secretary, Lafayette Indiana.

## I CAN FURNISH JUST NOW A LARGE NUMBER OF EXTRA GOOD Shropshire & Cotswold Rams

A large number of extra good Shropshire and Cotswold ewes, twelve months old. And a few very high-class Shorthorn bulls and heifers. Any of which will be sold at moderate prices. ROBERT MILLER, STOUFFVILLE, ONT.

### SHROPSHIRE SHEARLING EWES

for sale, bred to high-class imported Butlar ram.

GEO. HINDMARSH, AILSA CRAIG, ONTARIO.

### English Berkshires.

January pigs ready to ship. Orders booked for March pigs. Boars ready for use. Two-year-old shorthorn bull and several choice calves. JOHN RACEY, Lennoxville, Que.

### PINE GROVE BERKSHIRES!

Bred from imp. and Canadian-bred sires and dams, which are of choicest breeding. Stock, all ages, for sale. Some imp in dam. Guaranteed as represented. W. W. BROWNIDGE, Milton, C.P.R. Ashgrove P. O. Georgetown, G.T.R.

### Yorkshires and Tamworths

Either sex. Any age. Sows bred and ready to breed. Yorkshires from imp. stock. Tamworths from Toronto winners. Pairs not skin. Chas. Currie, Morrison, Ont. Shaw station, C. P. R.

### MONKLAND YORKSHIRES

are the easily fed, quick maturing kind. The sort the farmers want. All ages for sale. 100 sows bred now. JAMES WILSON & SONS, FERGUS, ONTARIO.

### Newcastle Tamworths and Shorthorns

For Sale: 100 pigs, both sexes, all ages. Sows from 10 months to 2 years, bred to imp. Chokerton Golden Secret, all descendants of Colwill's Choice and Newcastle Warrior, both Toronto champions. Also two choice Shorthorn bulls, ready for service, from choice milking dams, and sired by a son of imp. Joy of Morning. A. A. COLWILL, NEWCASTLE, ONT.

### LARGE ENGLISH YORKSHIRES

Pigs of the most improved type of both sexes, 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 Deacon 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.

D. C. FLATT & SON, Millgrove, Ont.

### SUNNYMOUNT BERKSHIRES!

Boars fit for service, sows safely in pig, young sows 4 months old, young sows and boars 3 months old, imported in dam. JOHN McLEOD, Milton, Ont., P. O. and Sta., C. P. R. & G. T. R.

## Elmhurst Berkshires

### Yorkshires

A choice lot of boars and sows just farrowed and weaned. Boars ready for service, and sows ready to breed and bred. Bred from imp. and prizewinning stock. GEO. M. SMITH, Haysville, Ont.

### Glenburn Herd of Yorkshires

Winner of gold medal three years in succession. 6 young boars from 6 to 9 months; also 75 young sows, from 6 to 12 weeks old. David Barr, Jr., Box 3, Renfrew, Ont.

Our large brood sows are all imported. Still Pitts Middy, Imp (1886), winner of first at Oxford, 1907, heads the herd. All stock shipped by us as represented or money refunded. Express prepaid. Large stock to choose from. Write us. H. M. VANDERLIP, Importer and Breeder, CAINSVILLE, Ont., BRANT CO.

### LARGE ENGLISH YORKSHIRES.

We have a limited number of choice young pigs for sale, bred from our choicest sows and got by the imported boars, Dalmeny Joe 13577 and Broomhouse Beau 14514. Pigs from the latter won all the first prizes at the Ottawa Fat Stock Show last March for the best dressed carcasses, and sweepstakes over all breeds or grades. We guarantee satisfaction in all mail orders. JOSEPH FEATHERSTON & SON, STRATHVILLE, ONT.

### Large English Berkshires

for sale from imported stock. Sows with pig and pigs for sale. All ages. At reasonable prices. Guaranteed satisfaction. Boars and sows delivered at Woodstock station, C. P. R. or G. T. R. JOSHUA LAWRENCE, OXFORD CENTER, ONT.

### Willowdale Berkshires

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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. Long distance phone. L. E. MORGAN, Milliken, Ont., Co. of York.

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Animals of choicest breeding and individual excellence, both imported and Canadian-bred. Young sows due to farrow in April and May. Boars fit for service. A fine lot of boars and sows from 3 to 5 months old. Pigs of both sexes and any age. Everything guaranteed as represented. Price reasonable. H. S. McDIARMID, FINGAL, ONT., SHEDDENSTATION.

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Large English Yorkshire and Berkshire Swine, Shorthorn Cattle, Barred Rock Poultry. Am offering bargains in choice suckers at very moderate prices, bred from choice prizewinning stock. Can book orders for immediate delivery in any of the above, also for succeeding months. Barred Rock eggs 75c. for 15, and \$3 per hundred. Try me for a bargain in choice stock. Satisfaction guaranteed. Phone connection. IRA L. HOWLETT, Keldon, Ont.

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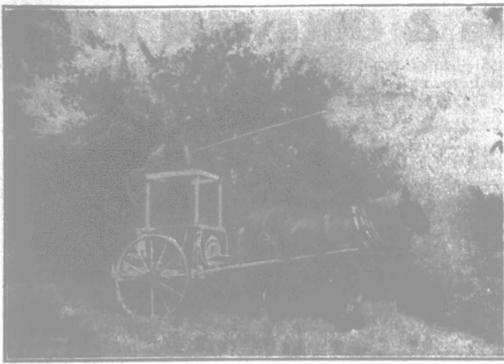
To introduce this fast progressing breed, we are offering a special sale, limited to May 15th, of 100 choice pedigreed pigs, either sex, two months old, bred from prizewinning stock, at \$8 each, or \$15 a pair. Shipped C. O. D. Orders shall not exceed two pigs. One pair only sent to one address. Artemas O'Neil, Birr, Ont.

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Can be used in any position and lock securely. The heavier the load, the tighter it locks. Never destroys the rope in locking. For butchering, stretching wire fences, lifting wagon-boxes, sick or injured animals, etc., it is indispensable to farmers. Saves labor of two or three men. 600 to 5000 pounds capacity. Ask dealers or write **LEWIS BROS., Ltd., Montreal, Can.**



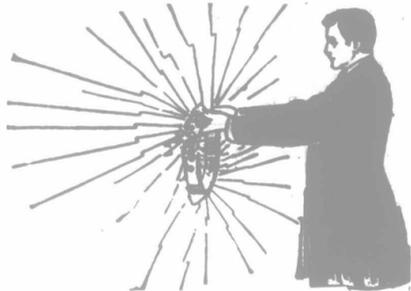
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working on large apple trees with an 8-nozzle cluster. The air tank holds enough reserve pressure to spray one side of a large apple tree, and the pressure will not get too low. Guaranteed 125 pounds pressure with 8 nozzles open. Easy work for one or two horses. Also fitted for vineyard, potatoes, grain crops and orchards. Never have to look at the nozzles, they're always clear. This AD. will not appear again in this paper; therefore, if interested, write now to

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## "A LIFE SAVER FOR WEAK MEN"



Give me a man broken down from dissipation, hard work, or worry from any cause which has sapped his vitality. Let him follow my advice for three months, and I will make him as vigorous in every respect as any man of his age.

I will not promise to make a Hercules of a man who was never intended by Nature to be strong and sturdy. Even that man I can make better than he is; but the man who has been strong and has lost his strength, I can make as good as ever he was.

I can give back to any man what he has lost by abuse of the laws of Nature.

A man who is nervous, whose brain and body are weak, who sleeps badly, awakes more tired than when he went to bed, who is easily discouraged, inclined to brood over imaginary troubles, who has lost ambition and energy to tackle hard problems, lacks the animal electricity which the Dr. McLaughlin Electric Belt supplies.

The whole force of vitality in your body is dependent upon your animal electricity. When you lose that in any manner my Belt will replace it and will cure you.

**FRED. J. CUTTERBUCK**, Brockville, Ont., says: After 30 days' use of your Belt I feel fine—the best I have in years—stomach all right and appetite good. In short, I feel like a new man.

Letters like that tell a story which means a good deal to a sufferer. They are a beacon light to a man who has become discouraged from useless doctoring. I get such letters every day.

My Belt has a wonderful influence upon tired, weak nerves. It braces and invigorates them, and stores up a great force of energy in a man.

I make the best electrical appliance in the world, having devoted twenty years to perfecting it. I know my trade. My cures after everything else has failed are my best arguments.

**O. JOHNSTON**, North Bay, writes: Have used your Belt now for three months, and must say that I feel like a new man. It is far ahead of dosing yourself with drugs, and I strongly recommend it. I thank you from my heart for your wonderful remedy.

They come every day from everywhere. There is not a town or hamlet in the country which has not cures by Dr. McLaughlin's Electric Belt.

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That is my offer. You take my latest improved appliance and use it in my way for three months, and if it does not cure, you need not pay me. My only condition is that you secure me, so that I will get my money when you are cured.

It's as good for women as for men. Worn while you sleep, it causes no trouble. You feel the gentle, glowing heat from it constantly, but no sting, no burning, as in the old-style belts.

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**PLEASE MENTION THIS PAPER.**

### QUESTIONS AND ANSWERS. Miscellaneous.

#### PEAS AND OATS MIXED.

In sowing peas and oats together, so I can cut them with self binder:

1. What is proper quantity of each to mix?
2. How many bushels of the mixture to the acre?
3. How do you set seed drill, at peas or oats scale? S. C. F.

Ans.—1 and 2. From a bushel to five pecks of each per acre.

3. Try it about half way between the marks, and adjust according to the way they seem to be running. Such attention is always necessary, even when a single kind of grain is sown, as something depends on the sample and condition of the seed.

#### STRAIGHTENING AN ANCHOR FENCE POST.

Would you kindly give me an idea for straightening an anchor post, where the brace has broken? I understand it is easily done without taking the wires off. In my own particular case, the stretch of wire is only about 75 yards.

C. G. I.  
Ans.—There are various methods of setting back end posts in vineyards and other places where the pressure is not very great, but to make a good job of straightening an anchor fence post is not so easy. Where a tree or stump is situated conveniently, several strands of strong wire may be run from the tree or stump to the top of the anchor post and twisted up with a piece of stout stick. Possibly a wire-fence stretcher would answer. Where no tree, stump or rock can be made to serve, a temporary post may be planted and braced. With double-pulley blocks, a strong team of horses might draw it back to place, or a screw-jack might be effectively used.

#### ALFALFA FOR QUEBEC.

I would like a little, plain, simple information about alfalfa. Last fall I plowed up old pasture; clay, more or less.

1. What would be the result if I sowed one patch (field) of alfalfa this spring?
2. How ought I to sow it, and how much to the arpent?
3. I have some new land, bush cut off it some ten years ago, and now I am taking out the stumps. This land is sand and black earth in many places. Could I sow alfalfa there and pasture, say, about July?
4. When one sows alfalfa in the spring, how soon can one take a crop off, and when can one cut a second crop?
5. Will this field have, the following spring or summer, a crop, or must alfalfa be sown every year? I want it for milking cows. B. F. C.

Ans.—1. The alfalfa would probably be crowded out by grass in two or three years. Put corn or potatoes on this field this year and cultivate thoroughly so as to get the grass roots killed. Next spring disk-harrow and cultivate till a fine, mellow seed-bed is produced, then sow the alfalfa.

2. It may be broadcasted alone by hand, and disked or drag-harrowed in; or it may be sown by a grass-seeder attachment on the grain drill. If a nurse crop is used, let it be barley, and sown at the rate of not more than a bushel to the arpent. Of the alfalfa seed, sow 15 or 18 pounds to the arpent.

3. It is likely that on this new land a sufficient growth for pasturage would be produced by July, but it is questionable whether the alfalfa would stand the winters well on such a field, especially if it be low or flat. Alfalfa is most often successful in Canada on clay hillsides.

4. Ordinarily, no crop of alfalfa is to be expected the first year. As a rule, it is better to clip what growth there may be in July, and leave it on the field as a mulch, unless it be extra heavy. The second summer it should yield a cutting the latter part of June, or, in Quebec, perhaps the first of July. A second and usually a third cutting may be expected the same season. Usually three cuttings per season are obtained in Ontario from an established field.

5. On suitable soil, especially on clay hillsides, alfalfa will often yield three good cuttings a year, for eight, ten, fifteen or twenty consecutive years without reseeding. It is a perennial.

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Extra-wide firebox, takes full 28-inch wood—other ranges take only 18-inch. This saves. New draft-control gets more heat out of less fuel—holds a fire all night—quick or slow oven at will—perfect baker.

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Ideal baking oven—very roomy, with self-ventilating device that insures perfect results and better baking, without oven odors or steam.

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Edgar's mother, wishing to keep him in bed for a slight cold, thought by darkening the windows to convince the young man that it was still night, and so closed tightly the inside blinds. All was thus dark, except the small, round holes, where the adjusting rods of the blinds worked.

"See," said mother, "it is dark, dark; lie still, now, and sleep until it is light."

"Mamma," queried a voice from the cot presently—"mamma, look at the window; the dark has got holes in it."

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