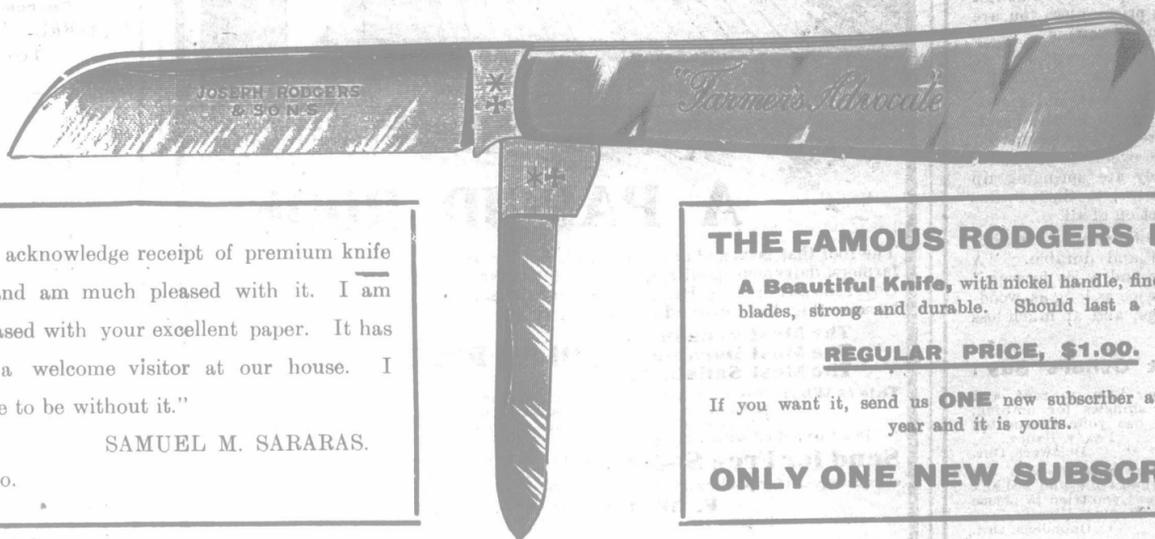


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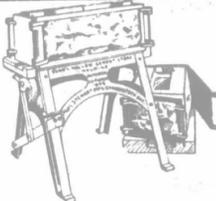
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VOL. XLI.

LONDON, ONT., AND WINNIPEG, MAN., MARCH 15, 1906.

No. 703

EDITORIAL.

Wanted: Good Roads.

Readers of "The Farmer's Advocate" throughout many sections of the Province of Ontario will agree with us that during this season the roads have been notoriously bad. In dry summer and autumn weather, or in winter when frost and snow cover a multitude of municipal sins, both of omission and commission, the highways are passable, but when subjected to the test of continued soft, wet weather, then the things that are rotten in road construction and maintenance become glaringly apparent, and rural traffic suffers a partial paralysis, to the great loss and discomfort of the farmer. Bad roads are a heavy drain upon the resources of the farm, and one of the very greatest hindrances to its progress. People may become hardened to them, as they do to other evils, but that makes them none the less objectionable. We very much question if there is a point at which municipal management has more signally broken down than in the construction and maintenance of the highways. If anybody disputes this, or desires evidence that will settle or unsettle his "hash," let him start out after the next thaw, at a venture, on some of the township or county roads in one of the old and wealthy counties—Peel or Middlesex, for example—and we venture to affirm that he will be convinced, if, indeed, he does not perish in a sea of mud.

Badly laid out, imperfectly drained, and ill-constructed in the first place, the roads evidently were in most cases, and now there seems to be no systematic oversight or policy of maintenance. Many of the roadbeds are too wide, and instead of having a crown to shed the water, they are flat, if not actually hollow, in the center. In many municipalities it is simply a policy of drift. Nothing is done until the road becomes a veritable bog, and then repairs are doled out with a niggardly hand. Gravel, if used, is very frequently of a most inferior character, containing a liberal admixture of soil or muck, and is dumped on, only to be washed away into the ditches and streams at an early date, finding itself back into the original riverbed, ready once more for the contractors who thrive upon the corporation. Cases are cited where the deservedly-condemned statute-labor system was voted out and the taxes commuted, but the last evil is even worse than the first, for, more than ever, it is now a go-as-you-please system of road oversight and work. Once in six or eight years the road grader makes its appearance, and in a spirit of self-preservation the ratepayers are forced to take some sort of care of the highways themselves during the interval. Gravel is piled on loosely for wagons and horses to roll down, to which the people would not so strenuously object were it not for the outrageous proportion of boulders that should have gone through the stone crusher before being laid on the roadbed. The taxes are high enough in all conscience, but the people will not kick at the taxes, if they get good value in the shape of roads to travel over to mill, and market, and factory. Provincial Treasurers boast of revenues and surpluses, and a progressive railroad policy for New Ontario. Our readers would like to hear a little more of the good-roads propaganda in Old Ontario. If the Ontario Government wishes to make a name for itself, let it concentrate on the good-roads policy and strengthen the hands of the Provincial Highway Commissioner. In no direction can it so well and directly serve the interests of the farmer. We commend to the Government the adoption of a liberal good-roads policy.

"Far-off Fields Look Green!"

The letter by Mr. John Campbell, on the depopulation of Western Ontario, should arrest more than passing notice, for his observations are in greater or less measure applicable to a large part of Eastern Canada, though they apply with particular force to certain Ontario counties, which, so far as natural conditions go, are unexcelled by any farming district. We need not dwell upon the conditions so graphically described; suffice to say our observation coincides closely with that of Mr. Campbell, who, as a Farmers' Institute lecturer and live-stock judge, has become acquainted with them by close observation.

What are the reasons for the exodus that has taken place? Inquiry reveals that thousands of the people have gone West. Farm after farm of the finest of land has been sold to rich neighbors, to be seeded down to cattle pasture. Choice districts have lost nearly half their human population, and the ranching business, it would seem, was being transferred from Alberta to Ontario. Some months ago, returning from a trip through North Middlesex and Lambton, we were reflecting on the fact that, just as Ontario had long been incredulous regarding the possibilities of the West, and had left it largely to Americans to reveal that country to us, so had we now gone to the other extreme, and in the height of the Western fever, which seems to have affected public men, press, manufacturers, farmers and laborers alike, were forgetting splendid opportunities right here in our own Province. As we looked out over the broad, fertile fields, presenting scarcely any obstacles to cultivation, and offering a bounteous harvest of good things to the man who could work them aright, the conviction seized us that a reaction must come soon, the people would awake to the blessings of this home land, and a repatriation, ere many years, would bring back the wheat-land seekers in thousands, along with a proportion of city men. These will impart to agriculture in Old Ontario a new uplift, for immigrants give to a country the feeling of prosperity, the basis of hope, and the impulse of progress. We have no objection to the partial peopling of the West by Eastern Canadians. Some are needed there as a leaven on the masses of foreigners who are swarming into that country, but it seems as though the wholesale migration is going too far for the good of Ontario, and for the good of many of the immigrants.

We do not appreciate the East, nor the opportunities that abound to make it a delightful land to live in. The great mass of the people never have appreciated it, as is proven by the vandalism with which they have sacrificed the woodland, one of its chief natural charms. The people who resettle it will possess a partially despoiled country, which they will improve. Where once the forest was ruthlessly hewn away trees will be planted; rows of them will mark the highways, groves of them protect the buildings, and belts of them, ungrazed and thrifty, will adorn the landscape and ameliorate the climate, at the same time yielding in timber as large a revenue as the cultivated fields. Rough, broken lands will be reclothed in forest, seeded to lucerne or to permanent pasture. Underdraining will be done, obstacles to cultivation removed, that work may be accomplished with ease and expedition, as in the West. Corn and clover will enrich the land with a fragrant prosperity, horticulture will flourish, likewise dairying and other phases of intensive agriculture, our farms will be doubled or trebled in production, and our homes made more beautiful. No country in the world lends itself more generously to the mixed-husbandman's effort, and the present cattle ranges will be re-transformed into a blossoming country of homes.

Ontario has every natural requisite of a great farming country. It is a beautiful land to live in, and can be infinitely improved. It has a rich, retentive soil, that can be made richer by a system of mixed husbandry, including rotation with legumes; it is well watered, having not only abundant rainfall, but plenty of pure well-water available for man and beast. These things will make it a great farming country long after the West has squandered its heritage of soil fertility, which, in that climate and under prevailing Western conditions, it will be no easy task to restore.

Encouragement Rather than Compulsion.

It appears some misunderstanding has arisen regarding the motive which prompted the Ontario Fairs and Exhibitions Association, in convention at Toronto last month, to resolve in favor of striking out the clause in the Provincial Agriculture and Arts Act forbidding horse-racing at fall fairs. The reason for this action is the fact that the law has been practically a dead letter, the Government refusing to prosecute or even withhold the grant, private individuals being also loath to take action. Then, too, "speed contests" have been legally recognized by the Act, and, in the event of action against a society, the decision would hinge upon the court's opinion as to whether a certain event were a horse-race or a speed contest. The fact is, anyway, that the law supposed to forbid horse-racing at fairs has not prevented it, about half the societies in the Province, we believe, carrying it on without molestation. It is held by some that the law never was intended to prohibit racing, that the distinction between horse-racing and "speed contests" was a means placed in the society's hands to control their racing and eliminate the professional element. If this is the intent of the law, the fact should be clearly set forth. It is probable that a second circumstance which induced the Association to pass the resolution it did was a not-too-well-considered circular sent out by the Department of Agriculture in August, 1904, pointing out that racing was illegal, and that directors by whose sanction it was carried on were liable to fines and imprisonment. Construing this as a veiled warning, many societies who had arranged for races cancelled them. Their indignation, on finding the Government had not the slightest intention of prosecution, was manifest at the meeting, and the aforementioned resolution was a very natural outcome thereof.

Many societies claim that they cannot afford to dispense with racing, though the experience of exhibitions such as Simcoe, Beachburg and Highgate is evidence that not only can fairs be run successfully without the race-track, but that the agricultural features gain much in attention of visitors by absence of distracting events. The subject cannot be fairly discussed, however without an admission that there are two sides to it, and that the first means of regulating the racing evil may not be the best advised or the most effectual in the end. There are a great many people who are keenly fond of a horse-race, and they have a right to their opinion that it is a harmless amusement. From these comes the question, "Where are we going to see a race, unless at the local fair? It is all right for the Toronto man who can take in the Woodbine to talk about the fall fair not being the place for a horse-race, but the farmer's perspective gives it a different view." We respect these people's opinions, and will go so far as to admit that a good clean horse-race is one of the least objectionable attractions that can be put on at a fair. There are, though, many evils liable to follow the race-track—evils more vividly seen on the

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JOHN WELD, MANAGER.

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American side than in Canada. Even with us, at some of our local exhibitions, the agricultural exhibits are hardly more than an excuse for holding a fair. That these should receive Government assistance for promoting the cause of agriculture is absurd. Does not this suggest that the best step to encourage the purely agricultural fair would be to offer it a good grant, withholding aid from those fairs which allow horse-racing, side-shows and things of that kind? Apportionment of the grant among the former only would increase the amount per fair, and, in time, their success would induce most of the others to follow suit. There is no doubt that the public taste can be cultivated in one direction or the other, and that if racing were cut out entirely, the fairgoers would less insistently demand it. "The Farmer's Advocate" is anxious to see only purely agricultural shows, believing that these do by far the most good and set the people's minds in the right direction, but we do not believe in making laws to be winked at, as the habitual violation of any one law begets a laxness of the public morale, and a contempt for law in general. For this reason we desire to see nothing in the amended Agriculture and Arts Act which is at all ambiguous, and nothing that will not be reasonably sure of enforcement. On the whole, we incline to favor financial encouragement, rather than compulsion, especially since the grant affords such an excellent instrument for encouraging the purely agricultural fair.

It may be mentioned here that any amendment will not affect the law forbidding betting, book-making or gambling, which will remain strictly illegal, and against which we should like to see the arm of the law directed with all its force.

Our Literary Society is booming. Every subscriber is eligible to take part in the debates. Get your neighbors to subscribe, if they don't already, so they too can enter into these very interesting and helpful discussions.

Select Prices for Select Hogs.

Has anybody heard yet of any discrimination made to the hog-raisers in favor of selects? It seems to be about time for some indication of action on the part of the packers to see that the old order of things is altered. They should attend to this in pursuit of a policy of intelligent self-interest; but if they do not, farmers may force the packers' hands by dropping out of the hog business. We would be sorry to see this, for we are persuaded there is money in hogs, and we would deplore the necessity of any policy that savored of cutting off our noses to spite our faces. But something must be done. It is a manifest injustice to pay the same price for barrel-pork hogs as for Wiltshires. Farmers have it in their power to compel a change. We may not do it by organized effort, but it will be done almost as effectively by producers losing confidence in the business when the next inevitable slump in prices comes, and then where will the packers be? The hand of the farmer is strengthening, and not too soon. It is time the producer of wealth was coming to his own.

HORSES.

The Farmer's Horse.

Editor "The Farmer's Advocate":

The question of what style or breed, or mixture of breeds, of horses for the farmer to raise, sell and use, has been for some time past, and will be, I am afraid, for many years, one of the most difficult problems confronting the farmers of Canada. It is only a decade or two since the farm work in the western end of the Annapolis Valley (N. S.) was principally done with oxen, and as the farms, for the most part, are small, and the farmers rather conservative, anything in the shape of a horse that would pull the family to town in a reasonable length of time was considered all that was necessary. As a result, speaking generally, the horses in this section are about as nondescript a lot as can be found in Canada, and for that reason, among many others, I am glad that you have raised this discussion. The present letter will be mainly my own opinion, however, modified by discussion with some of our best farmers in this county. Let us take up your questions in order:

1. Admitting that the market demands, to a certain extent, horses that are unfitted for farm work, such as saddle horses, roadsters, trotters, etc., I would consider that these were better left to what we may call professional breeders, or men who have sufficiently large breeding establishments to warrant the necessity of keeping mares mainly for breeding purposes. The average farmer must, of necessity, work his brood mares for the greater part of the year, and no wise man would attempt, from choice, to do his farm work with mares which would produce first-class carriage horses, saddlers or hunters, and in this age there is little profit in any product of other than first-class merit. For this reason, then, unless the market will allow of a call for such horses as farmers can produce from mares of a type that will do the farm work most comfortably and profitably, he would better be in some other work than horse-breeding.

2. The breed of horses to top the general run of mares is a tough proposition. No one type of stallion will do it. It would be rank folly to breed a Clyde to one of our little nondescript, 900-pound scrubs, or a Standard-bred to a big-boned draft-grade mare. If, however, we take as the general run of mares to be blocky, low-set, strong constituted individuals, of from 1,100 to 1,300 lbs. I consider the lighter-weight Clyde would give the best results for a useful farm horse.

3. There are a lot of horses wanted of from 1,000 to 1,100 lbs., quick movers and tough, hardy fellows for all sorts of purposes, as light delivery in small towns, professional men's family drivers, etc. For these light horses, perhaps grades of the Standard-bred or Hackney would fill the bill.

4. From what I know and can learn of the Clydesdale, I would select this breed, or well-bred grades of it, to bring the surest and best average returns.

5. As the horse for the farmer to produce, both for his own use and for the market, if he have blocky mares of good substance, I would advocate the Clydesdale as the best obtainable breed at present. The general run of farmers are calling for a horse of from 1,200 to 1,400 lbs., not too high up in the air, and with an average speed in light wagon of 7 or 8 miles per hour. Possibly Clydesdale grades are as near as we can get. Personally, because he is shorter-legged and more blocky, I prefer the Belgian; but from the commercial point of view, the Clyde will probably take the lead.

6. I am pretty sure that in the next ten years

the heavy horse and the stylish driver will increase, while the nondescript scrub will fade.

7 and 8. I would say emphatically NO, do not introduce new breeds, but, on the contrary, weed out some more of the useless types, and, considering all things, let us stick to the Clyde with its grades for the farmer.

R. J. MESSENGER.

What Class of Horses Should Our Farmers be Encouraged to Breed?

Editor "The Farmer's Advocate":

The questions contained in your recent article upon this subject certainly call for the serious consideration of every farmer who has at heart, not only the welfare of his own boys, but, as well, the best interests of the horse-breeding industry of this country.

At the outset, I make bold to say that, if we desire to direct the interest of our boys toward the desirable features of farm life and the favorable conditions surrounding our farm homes, rather than to the enticements of the race-track, we cannot impress the fact too strongly that the breeding of light horses, as a business, is one which too often forebodes disaster to the farmer's boy. I have no doubt that almost every community in our Province can furnish examples which show that the light-horse business, which requires an animal to prove itself before what we might call handsome prices are realized, too often attracts our boys off the farm onto the public highway, with the result that the farm loses its attractive features, and some other line of life is sought for a livelihood. This result, along with the fact that our light breeds of horses are not suitable for the performance of farm work, should cause us to realize that, as a business, this is not a suitable one in which to engage.

It is a noticeable fact that altogether too large a percentage of our farmers have, in the keeping of horses, but the one end in view—that of performing the labor of the farm. On the other hand, in order to make the best returns in our business, our aim should be, not only that our work horses should do the work of the farm, but as well yield us an annual profit. If we look at the matter from this point of view, there can be no disputing the fact that the breeding of heavy horses is a surer means of profit than is light-horse breeding. They come into the market at an early age; the market for this class of animals is more extensive, and they are not so apt to become valueless through injury or unsoundness, for a good heavy horse, although he may not be altogether sound, will always command a marketable price. When we consider the fact that (apart from the light breeds of horses) the great percentage of brood mares in our Province have at least two, three or more crosses of the Clydesdale and Shire in their breeding, the question of first importance is, to what breed of sires should these be mated, in order to secure the most satisfactory results.

In the first place, I can see no good results which will follow the introduction of further breeds of heavy horses into our country. I know of no feature which either the Percheron or Belgian breeds possess which would cause us to abandon the Clydesdale or Shire, and fill their place with either of these; and, further, it would certainly be trampling under foot every sound principle of breeding to encourage the crossing of either the Percheron or Belgian sire upon the present mares of our country. The same disastrous results which follow the crossing of Shorthorns and Hereford or Polled Angus, and continue to breed from the cross-bred females, would follow the introduction of such a course. The fact, therefore, cannot be too strongly impressed that if farmers are desirous of encouraging either the Percheron or Belgian breeds, they must get the females also, but never destroy the present breeding qualities of our mares by mixing in their veins the blood of either of these breeds.

To sum up, then, the principal aim of farmers should be to breed a type of horse which will not only be serviceable on the farm, but will also command a ready and profitable price in the market. Considering the standard and breeding of our mares, there is certainly no other class of sires will give the same satisfactory results as the Clydesdales and Shires, as our mares are, to a considerable degree, of this breeding. We know it is a settled principle in stock-breeding that "like begets like," and the longer we breed in one continuous strain, with the infusion of fresh blood of the same kind, the more uniform will that transmission be; whereas, on the other hand, by indiscriminate mixing of all the breeds, the law of reversion or atavism will assert itself to such a degree that our animals would very soon fall back to the species of the original scrub. This result has so plainly manifested itself in many sections of the Province among our milk cows, where dairymen, without any respect to these settled principles of breeding, have gone to work and mixed up all the dairy and some of the beef breeds, with the single idea of obtaining the best milk cow, as to be a standing monument

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against such mis-judgment in the horse-breeding industry.

While I have no objection to the desirable type of Shire horse, yet, when we know that Clydesdales have, to a much larger degree, obtained a firm foothold in this country, with the further fact that, as a breed, their quality of limbs, pasterns and feet are superior to the general run of Shires, would it not be to the advantage of our breeders to endeavor largely to confine their attention to the encouragement of the Clydesdale strain? One fact we should emphasize, that, as there seems to be no chance of encouraging the blending of these two breeds, with the ultimate hope of amalgamation, farmers should decide to make their choice of breed and stick to it, in order that, ultimately, they may have animals eligible to either the Clydesdale or else the Shire books of record. This result they will never accomplish by continually changing from the one to the other, and it is on this account, and because of the fact that to-day Clydesdales in this country are the much more prominent of the two breeds, that I would emphasize the desirability of encouraging their use.

To venture an opinion as to what breed of horses will beget the largest percentage of stock, is something I am not prepared to do. We cannot, however, emphasize the fact too forcibly that, in successful breeding, the handling and treatment of our breeding stock begins some time before conception, and that any irrational treatment of our females during the pregnant period, either in feeding or work and exercise, is inimical to the best development of the young.

Not only is it important that our brood mares be properly nourished, that they be in good healthy, vigorous condition at mating time, but, considering the fact that too many of our sires are kept in comparatively close quarters, without sufficient exercise, during winter, it is doubly a matter of importance that these sires should, for months, be given, daily, miles of exercise before the mating period commences, which, along with proper and judicious feeding, would fit them that we might reasonably expect that they would be in the healthy, vigorous and life-like condition which would enable them, if they are not given too much service, to transmit those desirable characteristics to their offspring. The fact that altogether too many of our sires are given from six to eight services per day, and bred to from one hundred to one hundred and seventy-five females during the breeding season of May, June and July, with the recurring services which such treatment entails, is certainly fatal to the vigorous life of the offspring. If our sires were properly fed and exercised, and confined to the service of from seventy-five to eighty mares during the breeding season, we would hear less complaint of mortality and sickness among foals than we do at the present day.

Huron Co., Ont.

Farmers' Horses.

Editor "The Farmer's Advocate":

It is not at all probable that Canadian farmers can be induced to combine and raise any one breed of horses. Our country is so large and our farmers' interests and needs so varied, it is not to be expected they will ever adopt such a method, notwithstanding the advantages accruing to any country or section thereof when it becomes famous for a product of any kind. However, there is nothing to prevent certain counties or groups of counties forming themselves into societies for the purpose of breeding any class of horses they decide upon as being the most profitable for their particular needs. In such cases they could reasonably look forward to the day when buyers of certain types or classes would know exactly where to look for them.

So far as farmers breeding horses suitable for the farm is concerned, I would not advocate such a plan. Of course, there are more horses used by the farmers of Canada than by all other classes combined, yet is it not a fact that a farmer can get his work done—and fairly satisfactorily, too—by the use of almost any kind of animal, from a roadster of decent size to a mammoth drafter? Also, he can get a lot of work from the breeding mares and the three-year-olds while they are fitting for market. These, and the occasional unsalable ones which will appear at times with the best breeders, should meet his requirements. Farmers nowadays have very little teaming to do, and they are not in need of many high-priced teams. Therefore, it is a farmer's interest to breed what he considers will command the most profit for him when they are sold in the market. He sells very few good horses to the farmers. They are seldom (and should seldom be) purchasers of horseflesh; they should aim to raise what they need. Some want Clydes or Shires, some drafters of some other breed. Let them have them. Others want roadsters, and although the profits from these seldom justify their wants, let them have their choice.

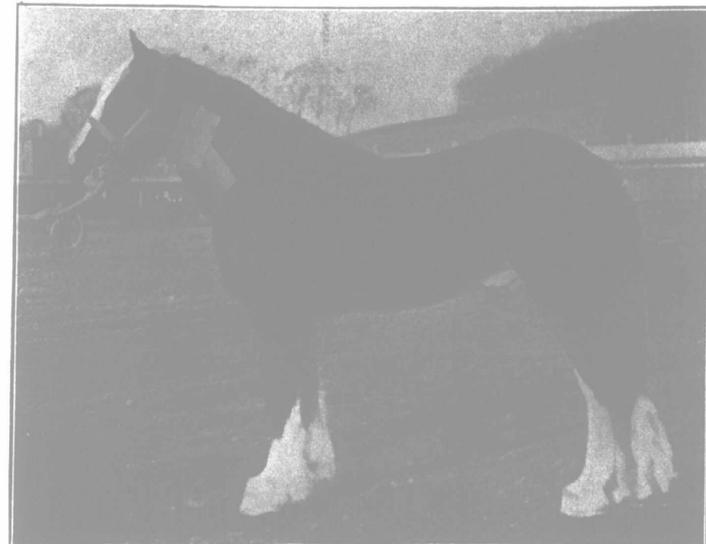
For myself, I always could get more satisfactory farm work from a well-bred carriage or coach horse, about one-quarter to one-half Thorough-

bred, and possessing good strong bone. These have staying properties hard to excel. There is also a pleasure in pulling the reins over such, when well broken, which cannot be got from the heavy breeds. This kind will work for you even though they are thin and tired, but the heavy loafers will not—they simply quit.

Yet, I would say that a farmer is wise who procures a mare of whatever breed suits him, his soil, distance from market, and, in his opinion, most in demand, guaranteeing him a market for surplus animals. This mare should be bred to the most suitable stallion, even if it costs a few dollars extra and a little inconvenience. It is wisdom to breed every year, too, no matter what the price of horses may be, for by the time the colt is three years old, markets may take many turns.

The worst feature of our horse-breeding is that men want to raise a heavy-draft team, a general-purpose team, and a fly roadster, all from the same mare, and in trying to do so, all manner of crossing and mixing is resorted to, with the final result we have a lot of mongrels or scrubs, not belonging to any class, nor suited to any purpose. In addition to their uselessness, they are an eyesore and a burden to the man who raised them. If such a course is pursued, we will never be known as producers worthy the name of such. We should decide as to the class and type we want, and stick to that only.

Wentworth Co., Ont.



Oyama (13118).

Clydesdale stallion; bay; foaled May, 1904; sire Baronson (10981). Winner of first prize in two-year-old class and the 50-guineas Cawdor Cup for stallion any age, Scottish Stallion Show, Glasgow, 1906.

LIVE STOCK.

Care of the Cow and Calf.

As the spring is the season when the majority of cows are expected to freshen, care should be taken that they are in good condition to meet the demands upon the system of advanced pregnancy and of parturition, and to bring them safely through this trying period. The idea that it is unsafe to have cows in good flesh at this time, owing to the danger from garget and milk fever, has ceased to be entertained by intelligent stockmen, who have learned by experience that most of the old-fashioned fads and theories have no foundation in fact. The cow, at calving, should be in the best of condition, and all the better if she has been dry for two or three months and fed liberally with nourishing foods, but for two or three weeks before the end of the term of gestation her rations should be of a laxative nature, such as roots and bran, in addition to good hay or other nutritious roughage, so that there may be no need of dosing to avoid constipation. Where a comfortable box stall can be given her for a few days before calving, this is the ideal treatment, the calf being left with her for a few days to take of her first milk, a little at a time, and as often as it will. Experience and observation has pretty well settled the question that the danger from milk fever is greatly lessened, if not entirely avoided, by only partially milking the cow for the first three or four days. This is nature's way when the cow and calf are left alone on the range, and milk fever is practically unknown under such conditions. The colostrum, or first milk of the cow at calving, is of entirely different composition from that of her milk a few days later. The purpose of the colostrum is to relax and move the bowels of the calf, and, left

alone, it will take only what it needs, and this supply in the udder does not oppress or pain the cow, as does an over-full udder of normal milk. Even if the udder be very large and somewhat caked at calving, there is little real danger from such condition, as it is not in a state of inflammation, and will usually become gradually softer and more pliable in the course of a week or two.

In the case of dairy cows, where the calves are to be raised by hand, it may not be practicable to give each cow a box stall in which to calve, and in that case the cow may calve where she is tied in her stall, as probably most cows in dairy herds do, but she should be well bedded, and an attendant should be on hand to let her loose when the calf is born, or place it near her head that she may lick it dry and make it comfortable, when it should receive its first nourishment direct from the teat, and then be placed in a pen or tied in a stall and given a little of its mother's milk three times a day, either by nursing or from the pail, the fingers being given it to suck until it learns to drink. Some people advocate starving the calf until it will drink without the finger, but this is cruel and unnatural, and is harmful to the calf, tending to cause indigestion and scouring, from gulping the milk instead of taking it slowly in small quantity at a time, as nature teaches, mixing the saliva of the mouth with the milk, an invaluable aid to digestion. Many a calf is ruined in the first week of its life by feeding too seldom and too much

at a time. A quart at a time three times a day is quite sufficient for the first week, and less than that the first two or three days. If possible, it should have its own mother's milk for the first two weeks, and that always fresh and warm. After the calf is three weeks old one-half its ration may be warm skim milk, and at a month old it may be given all skim milk, fed lukewarm. At this age it will have learned to eat a little clover hay, and if some whole oats are placed in its mouth after getting its milk, it will very soon learn to eat oats and bran from a trough, and if regularly fed twice a day at same hour, its quarters kept clean, and it is not overfed with milk, it will be likely to thrive without interruption. If, from any cause, diarrhoea develops, give at once a moderate dose of castor oil, and reduce the ration of milk for a day or two.

The cow, for the first few days after calving, should be fed in moderation, should have all the water she will drink, but not more than a pailful at a time, with the chill taken off, and should be given bran mash and other light food for the first week, after which the rations may be gradually increased.

While it is believed that partial milking for the first three days is the secret of safety from milk fever, it is wisdom to be provided with a bicycle pump, with a rubber tube and teat syphon attached, so that the air treatment may be administered if the symptoms of milk fever should appear. These are, withholding of milk, refusal to eat, quick breathing, stamping and crossing of the hind feet, and a swaying motion of the hind parts. In such case do not hesitate to fill each quarter of the udder with air, tying the teats with tape to prevent air escaping, massage the udder with the hands, and, if necessary, refill with air. This simple treatment almost invariably effects a cure within an hour or two, even in the worst cases, where the cow has fallen into a state of coma or unconsciousness. Dosing for milk fever is not only useless, but dangerous, as with this disease the throat is paralyzed, the cow cannot swallow, and medicine given is almost sure to enter the trachea and lungs, causing inflammation, and ending in the death of the patient. A multitude of cows have been killed in this way.

He Banks on the "Farmer's Advocate."

Please find enclosed \$1.50 for my subscription to "The Farmer's Advocate and Home Magazine" for 1906. I am now sixteen, and have taken "The Farmer's Advocate" for four years, and would not be without it for twice its cost. I take "The Farmer's Advocate" in preference to other farm books, and never go astray.

GEO. S. WICE.

Simcoe Co., Ont.

Early Shearing of Sheep.

The leading sheep breeders in this country now make it a rule to shear their yearling sheep in March or early in April, and the breeding ewes before going out to grass. There is practically no risk of ill effects in the case of sheep in good condition, from shearing during a mild spell of weather in March, if kept in a closed pen free from cold drafts for a few days after shearing. The writer saw a flock of young sheep in January this year that were shorn in that month, and were thrifty and comfortable looking. The advantages of early shearing are that the sheep thrive better in the warm days of spring divest of their winter coats, they are less liable to get cast upon their backs, and are better fitted for show purposes, and more salable in the summer and fall, owing to their having more wool and looking larger at those seasons when buyers are generally looking for sheep. Any loss sustained from selling the wool unwashed is more than made up in the more rapid growth of the next crop of wool during the spring months, when the sheep are improving in condition on the fresh pastures. There are generally fewer "cotted" fleeces when the sheep are shorn early, and less loss of wool from rubbing against fences, as sheep will in warm spring days, especially if troubled with ticks. The work may be done before work upon the land is practicable, and when time is not of so much account. If delayed till after seeding is commenced, it is liable to be left till that season is over, and the sheep may suffer from the heat with their full fleeces on. There is often considerable loss of wool in the shape of tags, in the case of sheep feeding on the early grass, and there is often the loss of a sheep or two from creek washing, to say nothing of the risk to the health of the men who do the work in cold water. Many farmers have to drive their sheep a considerable distance to wash them in a river or creek, and the sheep, being heated by driving, are more liable to illness from being plunged into cold water.

Shearing may be done piecemeal, a few each day between feeding hours, by having a platform about the size of a barn door made of a few boards held together by cross cleats, and which may be stood up and tacked against the wall of the pen when not in use. It is a good plan to trim the hoofs of each sheep with a knife while in hand for shearing, as the hoofs are often overgrown in spring from standing on soft bedding, and they are liable to contract foot rot or other hoof ailments. When all the young sheep are shorn, it is good practice to dip them in a solution of one of the advertised sheep dips, to destroy any ticks that may be upon them and to leave the skin in a healthy condition. The lambs should also be dipped a few days after the ewes are shorn, and the ewes will also be the better for a dip, or for having some of the solution poured on them and rubbed in. If the ewes are in thin condition, we would not advise shearing them until the weather becomes quite warm, say near the end of April or early in May, as animals in their condition are more liable to catch cold than those in good flesh.

Contagious Abortion.

I have a herd of dairy cows that have become badly affected with contagious abortion. Can you tell me where I can get a treatment that is effective and practicable?

C. W. H.

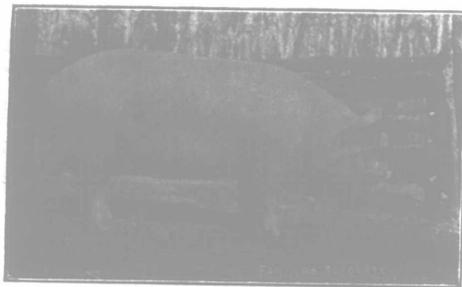
Ans.—When contagious abortion begins to play havoc in a herd, the dairyman has an unpleasant task before him. Nothing calls for more patience and courage. Abortion being a germ disease, germs will lurk about the stable and fields and infect animals for some years, so that a herd is not to be cured in a day, or yet a year, but calls for eternal watchfulness. Disinfectants should be used in all stock stables, as prevention is better than cure. In order to be helpful and plain as possible, I will give just what I should do in the case. If practicable, it would be better to separate the infected cows from the rest of the herd, but I do not think this absolutely essential, as I recommend using disinfectant very freely, spraying gutters, mangers and stalls with some of the advertised preparations—Zenoleum, etc. (directions are always given how to dilute with water for sprinkling), or creolin and water may be used, 1 to 1,000; besides, every animal in the herd should be given, internally, 25 drops of pure carbolic acid, diluted in about a pint of water, and this mixed with bran; or it can be given in the drinking water. To those that have aborted, I would give this 25-drop dose three times a day, or 75 drops a day for each animal for three days, then skip two or three days, and repeat for two or three days, and keep this up for about two weeks. When an animal has aborted or retained the afterbirth, this treatment will clean that animal out, so that the putrid discharge will cease in from two to three weeks, and the organs will remain healthy, and the animal will breed all right again. Without this internal treatment the discharge will continue for months, and the organs will be destroyed in many cases so that the animal will not breed again. In the case of a cow not cleaning, I never attempt now to remove it by hand, nor would I allow anyone to do so—not even a veterinarian. Experience has shown me it is better not to attempt to remove by hand, because

it is impossible to remove all the afterbirth off the "buttons," and they are injured by the fingering. Give these doses of carbolic acid to kill the germs, and nature will do the rest. It looks queer how this carbolic acid gets its work in on that part of the animal's system, I admit, but I know that it does, and knowledge is worth more than theories. It is a tedious business at best, getting abortion out of a herd, and one must have faith in this treatment and not be easily discouraged. Give, then, every animal affected, 75 drops pure carbolic acid, divided into three doses, and dilute each dose in one pint of water. Give every other animal in the herd 50 drops daily, in two doses, diluted in water and mixed with feed, for two or three days; then repeat in three days, and continue to repeat for a couple of days. If there is any germ of that complaint in the cow the carbolic will find it. There are other things probably as good as carbolic, but this drug is so common and so well known as a poison that due care will be used in handling it. Given in doses between 20 and 30 drops, and diluted in water, it is perfectly safe. I give all my cows doses of it occasionally, before calving and after calving, to cleanse them out, and find it a good preventive to give the pregnant cows a few doses every two months or so after they have gone five months in calf. We can never tell when the "germ" is getting in its work on the cow, until we see signs of pending abortion, by swelling of udder or uneasiness, then treatment is of little avail. Keep up the internal treatment in the feed; never mind the other end—the drug works backward, not forward. Occasionally during the year keep using disinfectants liberally about the stable, and abortion will gradually disappear. Do not breed the cows for two months, better three months, after abortion. Those organs must get healthy and strong. GEO. RICE.

A Study of Breeds of Swine.

YORKSHIRES.

The Improved Large Yorkshires, as they are known in America, or the Large White breed, as designated in England, are one of the three principal white breeds of that country—the Large White, the Middle White, and the Small Yorkshire or Small White. The general opinion is that these breeds have come originally from the Old English hog, a large white class of animals, inhabiting Yorkshire and other counties of England from a remote period. The Small Yorkshire owes



A Typical Yorkshire Sow.

its refinement in a measure to Chinese crosses, and the Middle Yorkshire is the outcome of a cross between the Large and the Small Yorkshire breeds. The Old Yorkshire was long in head, in body and legs, was narrow, had very large ears, and was coarse of bone. It was hardy and prolific, but slow in maturing. Their improvement commenced, it is thought, more than a century ago. The White Leicester, introduced early in the last century, and crossed on the Old Yorkshire, effected considerable improvement, and the blood of the Small Yorkshire has also had an influence in the improvement.

Yorkshires of a good size and type were imported to Canada as early as 1850, and probably much earlier. These were more of the type of the Middle White than the Large White of the present day. When, in the early eighties, Mr. Wm. Davies began the advocacy of the Large Yorkshires as the pig the farmers of Canada should raise to meet the demand of the British market for superior bacon, he and others imported to this country a class of Yorkshires that were coarse as well as large. They were coarse-boned, coarse-haired, and lacking in the quality found in the best herds of the present. But leading Canadian breeders, by selecting and breeding them with good judgment, have produced a superior class, combining, to a very satisfactory degree, the desirable qualities of size, with smoothness, strong bone without coarseness, early maturity and prolificacy. They do not mature as early as some of the smaller types, but they may be made ready for market without difficulty at the age of from six to nine months, weighing from 160 to 200 pounds. They graze well, though perhaps not as well as some other varieties, but, owing to their strong limbs and more lengthy bodies, they stand close confinement and pen-feeding better than most breeds. The quality of their meat is unexcelled,

as their sides are long and thick, producing much bacon, with a large proportion of lean to fat. They are valuable in crossing with other breeds and the grade stock of the country, increasing the size, imparting vigor, and improving the quality of the meat, more especially the bacon, and increasing prolificacy, as the sows produce large litters, and are excellent nurses. For these reasons, and because of the demand for the bacon type, and owing to their being so persistently exploited by so many agencies as meeting that demand, they have increased very rapidly in Canada in recent years, and are now more largely raised than any other breed.

Some of the principal points in the standard of excellence for the breed are as follows: Color, white, free from black hairs, and, as far as possible, from blue spots on skin; head moderately long; face slightly dished, wide between ears; ears large, moderately thin, slightly inclined forward, and fringed with fine hair; jaw of good width and muscular, but neat, with no accumulation of flabby fat; neck medium length, but muscular; shoulders smooth, no wider than back; breast wide and full; back medium width, rising slightly above the straight line, forming a very slight arch from neck to root of tail; loin wide as rest of back, strong and full, but not unduly arched; ribs good length and moderately arched; side fairly deep, long, smooth and straight between shoulder and ham; a straight-edge laid over shoulder-point and ham, should touch the side throughout; heart girth full, but not flabby at fore flanks, filled out even with side of shoulder, no tucked-up appearance back of fore legs, nor droop back of shoulder-top; flank full, low and thick; rump same width as back, long, and slightly rounded from a point above hips to tail, and somewhat rounded from side to side over top; ham full, without flabbiness; thigh tapering towards hock, without folds or wrinkles, and carrying flesh well down towards hock; hind legs medium length; hocks set well apart, but not bowed outward; bone clean and strong; pasterns upright; feet medium size, and strongly formed; form long, smooth, all parts proportionately developed, so as to give an impression of a well-balanced, strongly-built animal; top line strong; under line straight; belly trim and neat; action free, easy and graceful.

THE FARM.

The Function of Plant Nutrients.

By R. Harcourt, Professor of Chemistry, O. A. C.

As a food, we value grain or the seed of plants in proportion as it contains those constituents which support life. Animal life has no power to construct from simple substances the complicated compounds which form the different parts of the body. The plant gathers comparatively simple substances by means of its roots and leaves, and from these constructs the complex compounds we find in the most concentrated form in the seed. The animal simply transforms these to suit the needs of the body; consequently, it may be said that animal life preys upon plant life, in that it takes that which the plant has constructed for its own production and uses it to build up body tissues. The object of this article is to show some of the difficulties the plant may have in maturing its seed, and the part played in its development by the more important food constituents.

The seed contains an embryo or germ, which is always extremely rich in albuminoids, fat, phosphates, and potash. It also contains a store of concentrated plant food, intended to nourish the young plant until its root and leaf are developed and it can gather its own food. In cereals this reserve food supply is chiefly starch, while in linseed, turnip seed, etc., there is a large quantity of fat. When the seed is supplied with the essentials for germination, its solid ingredients gradually become soluble and nourish the young plant developed in the embryo until it can reach out into the soil and atmosphere for its food. If the seed is buried too deeply in the soil, it may not germinate for lack of air; or, if germination does take place, the little plant may exhaust the store of food in the seed before it reaches the surface, and must die of starvation.

The future health and vigor of the plant will depend on the supply of food available to the tiny rootlets sent out by the young plant. If the roots and leaves quickly come in contact with nourishment, the development will be rapid; but if the conditions are not favorable, the little plant may become so stunted that it may never make a vigorous growth. A clear conception of the fact that the infant plant, like the infant animal, requires warmth, air, sunshine and abundance of easily-absorbed food, will greatly aid in understanding the conditions under which it will make the best growth. It is only when the leaves are exposed to air and sunlight that they are able to gather the carbon dioxide from the atmosphere, from which, by means not wholly understood, they build up the complicated sugars and starches. Associated with this assimilation of carbon dioxide there must always be a free absorption of nitrogen and the essential ash constituents by the roots. As these can be taken into the plant only when in solution, it is important that they be in a soluble form, and that there be a sufficiency of water to dissolve them. Fortunately, the feeding power of roots is

not confined to the taking up of ready-formed solutions, they are also capable of attacking some of the solid ingredients of the soil, which they render soluble and then appropriate. This important action of roots exists in different degrees with different plants. The action takes place only at the points of contact between the root-hairs and the particles of the soil, and is brought about by the acid sap which the roots contain. The nitrogen, usually in the form of nitrates, is taken into solution by the water in the soil; but the phosphoric acid and potash exist in difficultly soluble forms, and are present in very small quantities in the water; consequently, the action of the root-hairs plays an important part in the supply of these constituents to the plant. It will thus be readily seen that if the soil is not in a condition to hold water, or if it has not been thoroughly pulverized, the roots may seek in vain for food in solution, and the points of contact between the root-hairs and the soil particles may be insufficient to materially help matters.

The development of the plant after germination follows a regular course. With an annual, which produces seed and dies during the first season, there is, after the development of root and leaf, which, as has been mentioned, collect and prepare materials for growth, the formation of the flower stem, and, lastly, the production of flower and seed. The materials furnished by the root predominate in the young plant, and it is, consequently, richer in nitrogenous matter and ash constituents than the older plant. As the plant matures, the proportion of carbon compounds—that is, the starch and cellulose, derived from the action of the leaves—steadily increases. By the time a cereal crop is in full bloom, it will contain all the nitrogen and potash which is found in the mature crop; the assimilation of phosphoric acid continues somewhat later, and the increase of carbon proceeds so long as the plant is in a green state.

Cereal crops, especially those sown in the spring—such as spring wheat, barley and oats—have a short period of growth. Barley, especially, may not have more than two months in which to collect all the nitrogen, potash and phosphoric acid contained in the matured crop. Moreover, barley, in particular, has very short roots, and, therefore, has not a large field from which to gather its food, and has a short time in which to do it. On the other hand, corn, mangels, clover, etc., have a long period of growth, and have deep roots. They are thus able to collect food through a longer time and from a greater depth. Then, too, the crops differ in their ability to take up the various constituents essential for their growth. Thus legumes, because of being able to make use of atmospheric nitrogen, are not in need of nitrogen, but have difficulty in obtaining the potash which they require. On the other hand, cereals make the greater part of their growth at a time when the soil may be deficient in nitrates, and before nitrification commences in the spring; and, further, they appear to lack the ability of appropriating this constituent, but, strange as it may seem, they gather potash with comparative ease. Turnips are shallow-rooted and do not collect phosphates readily, while mangels are deep-rooted and are heavy feeders, but have the greatest difficulty in gathering nitrogen. It will thus be seen that there are very decided differences in the ability of the various crops to gather food from the soil. Crops also differ in the amount of residue they leave in the ground. It is these differences in the characteristics of crops that makes it possible to so arrange them in rotation that one crop will help prepare the soil for the succeeding one, prevent loss of plant food, and help to insure a continuous supply of the constituents most in demand by the crop grown.

(To be continued.)

Prefers Not to Sow Clover Too Early.

Editor "The Farmer's Advocate":

For a great many years my idea in sowing clover in the spring on fall wheat was to sow as soon as I thought hard winter weather was past. At the end of March or first two weeks of April, when the frost was getting out of the ground and the ground settled a little, so that I could walk upon it easier than when it is very soft, I would take frosty mornings sometimes for cleaner footing. This method was to secure a good catch.

I have found out that it was a great mistake, as no doubt a great many others have. Many a time I missed a catch of clover by the above method, but never missed when I sowed later—that is, in spring seeding-time, when growth is starting.

A few years ago I seeded a field of fall wheat as I have described, and had a complete failure, so far as clover was concerned; had a fine catch of timothy, but that was sown with the wheat in the fall. That same year a neighbor of mine was putting in his spring grain; my son crossed over to his field when he was sowing his clover seed, and I remember that was late in the season, but a better stand of clover you would never wish. When the wheat was harvested the clover was well so amongst the wheat, so that the binder clipped it. Some of my neighbors I know do not sow until late for the same reason. As for my part, I have never missed a good stand of clover since I adopted the late method. It was the frost, no doubt, that killed the little germ. In the bottom

of some of the furrows there were some plants, and some found where cracks sheltered the plant. Middlesex Co., Ont. JOHN LAWSON.

[Note.—Mr. Lawson raises an important point. The general opinion is that clover does best when sown early with fall wheat, while the ground is honeycombed with frost, and, on the whole, we favor this early April seeding for localities where the soil is heavy and inclined to bake with drouth, but it may be that more young clover plants have been injured by frost than we are aware of. Can anyone else give us the benefit of his observations on this point?—Editor]

How the Seed Control Act, 1905, is Working.

The Seed Control Act, 1905, has been in force since the first of September. Since that time a large number of letters have been received from seed merchants and seed retailers, asking our interpretation of the different phases of the law in respect to the sale of seeds presents.

During the time the bill was up for discussion in the House of Commons there were a number of impressions which got abroad respecting the Act and its objects that the law itself does not sustain. For instance, letters of inquiry come in asking what is meant by the Government seal to be placed on the package, and where can it be obtained? This arises from a misunderstanding of sec. 3 of the Act, or from some state-



Making Hogs of Themselves.

ments made by the travellers of some of the leading seed firms. From whatever source it emanated, it is evidently a confusion of the requirements of the Act to have all packages, bins or receptacles branded or tagged with the name and address of the seller, the kind or kinds of seed, and the common names of those weed seeds mentioned in sec. 3 of the Act only, where they are found in greater quantities than the margin of tolerance allows for seeds of first quality. This margin of tolerance will be explained in discussing sec. 5 of the Act.

It will be noted that very few of the fourteen weed seeds mentioned in sec. 3 are ever found in samples of grass or clover seeds. Those which do occur most frequently in the seeds of the grasses and clovers are mentioned in sec. 4 of the Act. They are nine in number, and nothing is said about requiring a brand or tag for them when they are present in sufficient quantities to prevent the seed grading No. 1.

The Act wasn't framed to impose any great hardship on the seed merchant or seed retailer, but it was calculated to protect the purchaser against fraud or misrepresentation. It was not intended even to compel a man to buy a better class of seeds than he wished, unless he wanted to buy screenings, the sale of which, sec. 6 of the Act prohibits for seeding purposes in Canada.

If seeds of any kind offered for sale will grade No. 1, or any term meaning No. 1, the law does not require to brand, tag or seal such seed. The seedsmen can be left alone to see that every purchaser of seeds shall know of its quality.

Having settled the branding question, which I trust is clear, and the method for which is described in clauses a, b, c, under sec. 3 of the Act, let us turn to another idea, which, though erroneous, many persons entertain. It is that clause 2, under sec. 3, which deals with the privileges of the farmer in selling his home-grown seed, exempts him entirely from all the provisions of the bill. I believe a careful reading of the Act will show that the farmer is privileged above other men only with regard to sec. 3. So far as the rest of the Act is concerned, it applies to him with equal force as it does to any other citizen dealing in seeds. It has been urged that even this exemption of the farmer will perpetuate the weed nuisance. Clause 2 restricts the farmer from peddling seeds or getting anyone to act as his agent. He must sell his home-grown seed, and sell it on his own premises when the sale is intended for direct seeding purposes. It is generally supposed, too, that where one neighbor deals with another in seed grain, that he has every opportunity of observing the different forms of noxious weed life existing on his neighbor's place.

If the farmer has clover or grass seeds for sale, it must not be forgotten that sec. 4 of the Act applies to his case. Sec. 4 of the Act deals solely with

timothy, alsike and red clover, and it should be understood that the germination test is considered here as well as the purity test. There must also be not less than 99 seeds in every 100 of the sample of the kind represented, or seeds of other useful or harmless grasses and clovers to grade No. 1. That is to say, if more than one per cent. is made up of dirt, chaff, broken seeds and weed seeds of any kind, it will not grade No. 1, and must be so represented.

Sec. 4 says that 90% of the sample must be germinable. There is allowed, however, for discrepancies, 5% more, so that 85% germinable seed will grade No. 1.

Sec. 5 of the Act provides for the margin of tolerance, and this margin may be changed from year to year. Without this clause the Act would call for absolute purity, and this is recognized to be impossible under the present condition of the seed trade. The presence of one wild mustard seed in a bushel of grain would condemn it as a No. 1 sample. It is known by a good many this year that the margin of tolerance is that one noxious weed seed may be present in each 1,500 grains of the sample of grass and clover seeds, and one noxious weed seed per pound in the cereals.

This margin of tolerance was calculated for the protection of the seed merchant, and not for the purpose of seeing how close he could grade his seed to this allowance and still have it grade No. 1. It is also intended as a guide for the Dominion Seed Analyst.

Sec. 6 of the Act gives the minimum standard of five noxious weed seeds per 1,000. If more than that exists in a sample it is to be prohibited from being sold for seeding purposes in Canada. This would allow of the presence of the noxious weed seeds mentioned in secs. 3 and 4 of the Act, of no less than, approximately, 411 in 1 oz. of timothy, 212 in 1 oz. of alsike, and 92 in 1 oz. of red clover.

Sections 11, 12 and 13 of the Act should be carefully noted, which deal with the requirements in taking samples to be sent to the Dominion Seed Analyst for a report. If seed marked as No. 1 is suspected, and the purchaser wants to know about its quality, he must take his sample in the presence of the one who sells him the seed, or before two impartial witnesses. In taking it from a sealed package, he must take the sample on breaking the seal, if from an open package it must be taken inside of seven days from the purchase of the seed. A certified statement is to accompany the sample from the purchaser, giving the name and address of the seller, the way the package was marked from which the seed was taken, and the section or sections of the Act which were alleged to be violated.

Something over 1,100 samples have been examined so far this year in the seed laboratory, and they are now coming in very rapidly, as the trade in seeds becomes more active at this season of the year. Most of these samples, which have been sent us by seedsmen and seed retailers so far have analyzed very well; a great many will grade No. 1, the bulk can be sold for seeding purposes, and there are a few samples that come in the prohibited list. There are a number of samples in which none of the noxious weed seeds were reported. Then there are others in which even as high as 49 noxious weed seeds were found in the five grams of red clover seed—five grams is equivalent to 3,250 seeds. The presence of three noxious weed seeds in the five grams would prevent the sample grading No. 1, and more than 16 to the same amount prohibits its sale.

A great many of the seed retailers are safeguarding their interests by having the samples sent them by the seed merchants tested. This is causing the seed merchants to be very careful what they send out, and is certainly insuring a better all-round grade of seed for the market requirements this spring.

Some who get their reports in purity have trouble in knowing how to classify their seeds. The sheet on seed testing, which accompanies the report, conveys sufficient information to work out that problem quite easily, as it gives the average number of seeds in a gram each of red clover, alsike and timothy to be, respectively, 650, 1,500 and 2,900. Five grams of red clover are taken, and two grams each of alsike and timothy, for examination for purity. There are three things which may prevent the grass and clover seeds from grading No. 1: (1) Too many noxious weed seeds; (2) more than 1% made up of weed seeds and dirt, and (3) the germination of the seeding falling below 85%. New seed can usually be banked upon for germination, but to be absolutely sure of the quality of seed, one should have the purity test.

So many in sending letters and samples of seeds to the Seed Branch use postage, that it is felt that their attention should be called to the fact that not only does the Seed Branch test samples free of charge, but O. H. M. S. brings everything to the Branch instead of postage, when addressed, Seed Branch, Dept. of Agriculture, Ottawa. T. G. RAYNOR. Seed Division, Ottawa.

Spreading the Gospel of Progress.

I think it will be through your valuable paper that the first cement silo will appear in Eastern Ontario. Being an ex-student of the Ontario Agricultural College, I find "The Farmer's Advocate" of great help to me, as you keep in very close touch with the College. I enclose a short article on "Care of Manure." The discussions on such subjects as taken up by "The Farmer's Advocate," are very much appreciated by your readers down here. CLARK HAMILTON. Dundas Co., Ont.

A Good Six-year Rotation.

Editor "The Farmer's Advocate":

The subject of crop rotation is a very important one, and one to which too few of our farmers pay sufficient attention. No farmer can farm to the best advantage unless he has some systematic plan of procedure, and crop rotation is one of the most important ones. If you are going to get the best results from your labors, and at the same time improve the fertility of your soil, you must carry out some rotation, and one in which clover forms a prominent part, as that should be the foundation of all our crops. The man who farms in a haphazard way is working at a great disadvantage. He is not getting from his land all that he might, and, at the same time, his farm is deteriorating in value every year.

Of course, the same rotation will not meet the needs of every farmer. Each one must adopt a plan that will best suit his circumstances. The rotation which I purpose following is: Clover, corn, roots and potatoes; oats and barley; clover; peas and rape; winter wheat and oats, seeded to clover again. My farm consists of 200 acres, part of which is still in its rough state, but bearing abundance of good pasture. My plan is to keep just 75 acres under cultivation, the remainder to be in permanent pasture. The 75 acres is divided into six fields or sections, containing 12½ acres each. Therefore, I have 12½ acres of corn, roots and potatoes, 12½ acres of oats and barley, 12½ acres half of peas, the other of rape, the rape being fed off in the fall to cattle intended for fattening the following winter. The field is divided by a portable fence of hurdles, which can be put up in a very short time. The half of the field which had peas on it will be sown to winter wheat that fall, and the part the rape was on will be sown to oats the following spring, all of which is seeded to clover again. In this way I have 25 acres of clover hay each year, making a lot of excellent feed for the stock during the winter. This plan seems to suit my circumstances, as I keep only one hired man. If I were keeping more help, then I might keep more land under cultivation, but the price of labor nowadays is a great drawback to agriculture, so we must cut our coat according to our cloth.

Bruce Co., Ont. W. H. ARKELL.

A Modern Three-year Rotation.

Editor "The Farmer's Advocate":

Successful farming in the Province of Ontario depends largely upon a proper rotation of crops. Every farmer should have some systematic plan of crop rotation. There may be times and circumstances that it will be difficult for him to follow the plan mapped out—such as the loss of the clover crop from winter-killing—but this does not frequently occur if the land is properly under-drained, either naturally or artificially.

For a number of years we have followed a regular rotation. We first started out with a four-years' rotation, consisting of, first year, grain; second and third years, grass; fourth year, roots, corn and peas, but we have gradually worked into—and now almost entirely—a three-year rotation, having only one year in grass instead of two. We found this suited to our case better, as we grow considerable alsike clover for seed, and as the sod has to be plowed up as soon as the first crop is removed, this put part of the farm under a three-year and part under a four-year rotation, which made it somewhat inconvenient; therefore, we have gradually changed to a three-year course: First, grain; second, clover; third, roots and peas. I may state that we have a large amount of permanent pasture which enables us to carry out this system with greater ease, but a considerable portion of the red clover is pastured up until about the 20th of June, and then it is left to produce a crop of seed. By keeping the stock principally on the clover fields in June, it allows our permanent pastures to get a good growth, which is a great help in carrying the stock through the dry time in the summer. (There is none of this pasture land of the thin, dry or rocky kind, as some might infer, but good, deep soil.)

Objections are sometimes raised to the large acreage of root, corn and pea land, especially where peas have not been doing well, but we have been able to depend upon peas pretty well. Permit me to instance a case where we departed from the usual course the past year. On a farm we purchased two years ago, some fields were very bad with couch grass. We cultivated those fields until about the middle of June, and then put in a crop of buckwheat. After the buckwheat stubble was plowed shallowly, we applied a top dressing of manure, which puts it in good condition for seeding with grain and clover next spring. One of the principal advantages of the short rotation is that we get clover into the land every third year. This adds a great deal of fertility to the land, in the form of nitrogen, that is gathered from the atmosphere, and costs the farmer nothing; the roots of the clover plant go deep into the soil, and bring back the fertilizing elements that have been washed down beyond the reach of the roots of ordinary plants. The combined fertility—that which is taken from the atmosphere, and that which had been buried deep in the soil and brought back—goes to build up the stems and leaves of the plant, which is one of the most nutritious the

farmer grows for the feeding of stock, and in turn makes one of the most valuable manures when returned to the land.

The mechanical effect that these deep-rooted plants have upon the soil is to break it up and pulverize it to a greater depth than any subsoil implement yet invented, without any wear or tear to horseflesh or implements.

The decayed stubble and roots that are left in the ground adds a large amount of humus to the soil, which warms it up, makes it more retentive of soil moisture, easier to work and more certain of getting a catch of clover when it is again seeded.

By a short rotation we get rid of many troublesome weeds without much labor, and the crops of all kinds are greatly increased.

Ontario Co., Ont.

HY. GLENDINNING.

Plans of a 1905 Middlesex Barn.

The accompanying plans are of a barn built in 1905, and have proved very convenient. Many of the timbers of the new barn were from the frames of two old ones, while the old lumber was used for sheeting and for flooring of mows in the new. The wall posts are 18 feet, the roof being what is known as a double-hip roof, the ridge being 38 feet from the sill. The purline posts run

maining boxes and to the horse stable, and the manure is drawn direct to the fields, excepting when the weather is unfit or the land too soft, then a wheelbarrow is used. The doors of boxes open inwards, and are hung four inches clear of the floor, these boxes being cleaned out at least once a week, some of them daily. We do not find any inconvenience from litter, etc., getting behind the doors, and we find them much more convenient than the old stables where the doors opened out; while, should one accidentally be left unfastened, the danger of an animal finding its way out is reduced to a minimum. The door connecting boxes 5 and 6 allows, either separately or together, of both boxes of calves being turned out to the same pasture. Box 7 has a door which may be fastened against the partition, and is really a passage where hay, etc., is put down for sheep, but, in emergency, may be used for sucking calves. Boxes 1 and 2 are fitted with stanchions. No. 1 is for calves being fed from pail, and No. 2 holds eight young cattle. The stanchions are only used at feeding time, so that one may get extra food, and none may get more than its share.

All box mangers have concrete bottoms; these rise six inches to twelve inches from the floor, and all posts are used as door or stall posts, and there is no post in the way.

The cow mangers slope up towards the feed room, while the side next the cows is made with a movable plank which can be slipped between cleats fastened to the sides of the stall. This plan permits of a long stall being made into a short one in a few minutes; the upright on which the chain hangs being also movable, by changing its bolts to other holes bored in the stall for that purpose.

The horse mangers swing into the feed room (see plan, Fig. 3).

We consider both cattle and horses keep in better health in a fairly cool stable, and have no objection to having both in one basement. Plenty of light being a necessity, in addition to the fourteen windows of eight ten-by-twelve panes, there are fanlights above all the outside doors, thus allowing the sunlight at all hours of the day to reach all the way across the stables, all stalls and divisions being low. The windows are in two sections, the upper half being hinged to the lower, allowing them to be opened inwards from the top, providing for much or little ventilation, as required. Up to the present there have been

no stable odors, and the thermometer registering 45 to 50 degrees. The 7-foot doors are on rollers, all others being hinged, while the 3-foot door on the east end, being nearest the house, is the main entry.

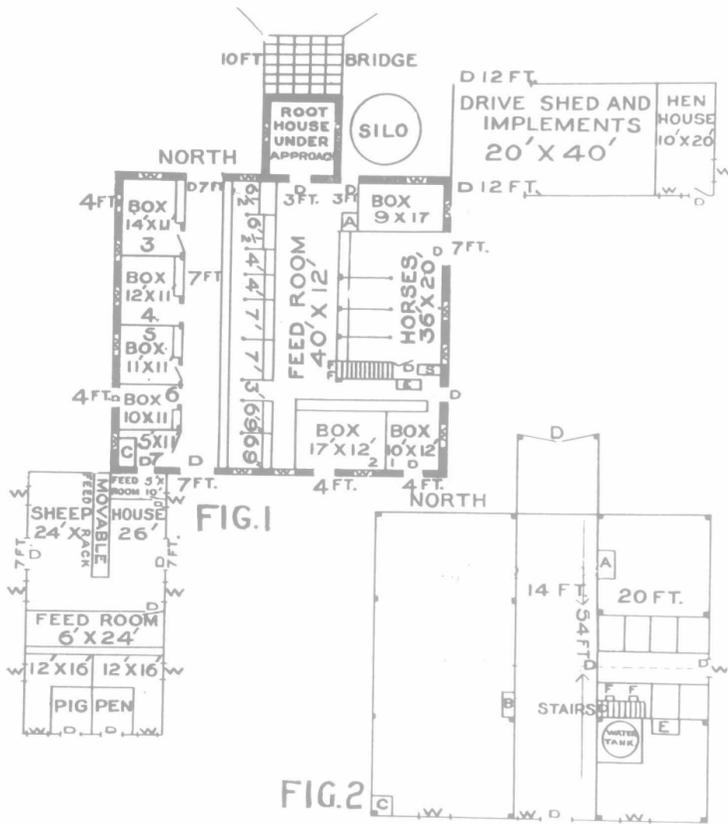
Middlesex Co., Ont.

H. C. GRAHAM.

Likes the Gasoline Engine.

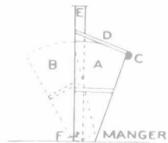
Editor "The Farmer's Advocate":

In the Feb. 15th issue, D. W. B. enquires what kind of power is most convenient for farm uses. Two years ago I purchased a 4-h.-p. gasoline engine. I have it mounted, and take it any place you can take a wagon, as they weigh only 2,700 pounds. As regards danger, I start mine in the barn, with the exhaust pipe within one foot of a stack of grain or hay. The only danger I see is when putting gasoline in tank, when one must be careful and not have any light near; but once the tank is corked up there is no danger. As regards gasoline, you can buy five or ten gallons at a time, and 1½ gallons will run a 2 h.-p. threshing mill all day. I always get a barrel, and as soon as it arrives draw it off into 5-gallon cans, cork tight, and seal with plaster of Paris, then lower them into an old potato hole that I do not use since I have built a cellar. It keeps there fine and cool, and does not evaporate, but never go to the hole with a light for fear of a leak. The hole is about five feet deep, and 200 yards from all buildings. I consider the gasoline



Basement and second-floor plans of H. C. Graham's barn, with plan of other out-buildings. Key to Fig. 1: A, chute for hay, 3x3½ ft.; C, chute for hay or cut straw, 3x3½ ft.; D, doors; E, chute for cut straw, 2x3 ft.; F, F, spouts from bins in granary; S, cream separator; W, windows; ■, posts.

perpendicular, which, in a barn 54 feet wide, leaves room for a horse fork to work between posts (see Fig. 2). The chutes for hay and straw extend nearly to the roof, with the mow side of shaft made in sections of four or five feet, a six-inch board being nailed across between each section. A button on this board holds these sections or doors in place, allowing for their easy removal, as needed. In the basement, a canvas



A—Manger in place.
B—Manger open.
C—Stationary scantling.
D—Bars, 12 inches apart.
E—Post.
F—Bolt on which manger swings.

bag, open at top and bottom, and the same circumference as the chute, is used; this is a continuation of the chute, and reaches the basement floor, thus preventing dust from flying through the stables, while it may be hung out of the way when not in use.

The feed room, centrally located, is large, but not too large, the space usually taken by passages being added to it.

A team is used for cleaning stables, driving right through behind cows and in front of most of the box stalls, and to outside doors of the re-

engine the cheapest power the farmer can use for everything. I grind, thresh, and saw all wood with mine.
Terrebonne, Que.
E. G. H.

Crop Rotation in the Bean District.

Editor "The Farmer's Advocate":

In your issue of February 15th, you put the question, "What is your crop rotation?" While I am not nor do not profess to be a scientific farmer, and, therefore, do not give you my plan of crop rotation as one that is correct and should be followed, I take it that you wish someone to give his rotation so that in any discussion or criticism that may follow there may be some benefit derived for all. To set the ball rolling, therefore, and in hopes of someone giving a better plan, I humbly submit the following, which I have followed, except where rotation was broken by failure of clover catch from drouth or some other cause:

First, clover, simply common red clover, the crop that brings a large part of its own fertilizing elements from the air and leaves the land in better condition than if the crop had not been grown. This crop, to my mind, stands pre-eminently at the top, and cannot under any circumstances be placed in any other position. The horses fatten on it; there is nothing better for cattle; the sheep relish it; the chickens crave for it, and even the hogs take kindly to it. It is the mainstay and backbone of agriculture, the only proposition that I know of whereby the husbandman gets something for nothing. Clover, then, if it is the proper thing to say, is my hobby. I do not sow five pounds of timothy or other grass seeds in as many years, and when I do sow any it is in some very fertile spots (depressions, water runs, or something of that sort). I never miss an opportunity to seed to clover. I sow about 12 pounds to the acre, and always use the very best seed I can buy or grow, irrespective of what the price is. If I get a good stand of clover, no matter how large an acreage I may have, or how badly I may need a crop to turn into cash, I never sacrifice the clover. I take off a crop of hay, then let the after-crop grow well up before molesting it, then turn the stock on that portion intended for next year's pasture. If there is a field that can be spared, clover seed is taken off, if the year is favorable for seed. When I was a boy, I have heard farmers say it would ruin a farm to grow clover seed, but the farmers know better now. In England, the farmers found that when a clover crop was mown twice, and all the hay removed from the field, the land is left in a better condition than if the clover had been mown once and the after crop eaten off by sheep—a result that was surprising, when it is considered that sheep droppings have high fertilizing value. They even satisfied themselves that where the second crop of clover was left to ripen and clover seed harvested, the succeeding crop of wheat was better than where the clover had been mown twice for hay. Voelcker experimenting along this line found that the roots of clover plants that were allowed to go to seed were actually stronger and more numerous than where hay was cut twice, and each of the different layers of soil examined was richer in nitrogen after seed clover than after two crops of clover hay.

Boussignault, a French experimenter, determined that for every 2,000 lbs. of uncured clover hay taken from the land there was 1,600 lbs. of roots and stubble left—a result that will be surprising to many, and goes far to explain why succeeding grain crops thrive so well after clover, when there is such a large amount of decaying vegetable matter and increased nitrogen supply left in the land by the clover plant.

After one crop of hay is taken, I pasture a year and then plow for corn. There may be conditions under which corn will do better than on a clover sod, but I have never found them. The corn stubble is manured, and on my land, which is a sand and gravelly loam, I spread the manure quite thinly; by this means I can manure the ground more frequently, and I believe get better returns. This course is commended by such high authorities as Thaer and Storer. Thaer, in reference to the applying of manure, remarked that "much will depend, of course, upon the character of the soil, and practical men have long held that while it is safe enough to manure clays heavily and seldom, it is better on the whole to dress sandy loams lightly and often." While Prof. Storer, of Harvard University, observed "that it was recognized very early that manure may safely enough be applied freely to compact clays, whereas on sandy soils manure sometimes decomposes so rapidly that it is not easy to recover in crops the full goodness of even moderate applications of it. These experiences naturally led to the putting of small quantities of manure at frequent intervals."

The manured corn stubble is plowed rather shallow and beans planted. The bean crop is well cultivated and kept clean, and on this ground, after the beans are harvested, wheat is either sown in the fall or oats in the spring, and these again seeded to clover. The farmers of Kent County (which is recognized as the bean garden of Canada) have always held that the well-cultivated bean fields are left in the very best condition for either oats or wheat, and in this they are borne out by such practical and scientific investigators as Lawes and Gilbert, of England; Gasparin, of France, and Hillriegel, in Germany. Lawes and Gilbert said clover and beans did not exhaust the surface soil of nitrogen, but seemed to get their supply from other sources, and many of their experiments were conclusive in proving that the grain crops, after beans or red clover, were equal to or even larger than similar crops grown in the same year

after a bare fallow. Gasparin has said, "Beans will bear very well a complete manuring, which causes them to grow rapidly when they are young, while later on the action of the leaves takes the place, so to say, of that of the roots, and the plants appear to be nourished at the expense of the air."

Hillriegel, the great German chemist, proved after many careful and painstaking experiments that various kinds of leguminous plants do constantly obtain nitrogen from the air, and has shown that large quantities of nitrogen are actually accumulated from the air by leguminous plants. My own opinion is that a bean crop is not so exhaustive on the land as a crop of the cereal grains. I have made many examinations of the roots of bean plants, and I have never yet found them without the nitrogen-gathering nodules that give to the whole Leguminosae family such an esteemed position in agricultural economy. Under the present system of harvesting, practically the whole of the bean root is left in the land.

The rotation that I have outlined is: Clover, from which one crop of hay is cut; pasture one year (clover seed if possible), corn on clover sod, then beans (with manure), followed by wheat or oats, and re-seeded to clover. Roots are grown to a limited extent for stock feeding, but not in large enough areas to be considered a rotation crop; probably more roots should be grown.

Turning again to beans, I may say the extent of territory on which beans are grown in Canada is very limited, and the rotation I have suggested will, therefore, be not generally practicable, but in Kent County the bean is king. Beans are the one product of the farm here that is relied upon to bring up the big end of the cash returns of the year's farm operations. For a number of years past the yield and price have been such as to give the farmer no reason for complaint. With myself, the average yield for the past five years was 24 bushels per acre, and the average price at which I sold was \$1.38. The bean stalks or straw is relished by all farm stock, and helps make variety in feeding operations. The soil and climate of this district seems to be particularly adapted to the production of beans, and let me say, Mr. Editor, the beans grown in Kent County, Ontario, are admitted to be, and without a doubt are, the finest beans produced anywhere in the world.
GEO. E. LEE.

Kent Co., Ont.

A Cheap Manure Shed.

In your Feb. 22nd issue I see that Mr. Lawson is criticising Mr. Thompson's method of handling manure, and I think that his criticism is to the point. Not only does the loss by heating or fermentation and loss of time count, but Mr. Thompson will find that the colored water from spring freshets does not carry away nearly so much fertilizing matter as the rain that falls on his big pile before it is sufficiently rotted will carry into the ground on which it stands.

We have tried the different methods outlined by Mr. Lawson, and therefore know whereof we speak when we say we are in favor of green manuring. I might also mention that we spread directly from the wagon, as we consider it a saving of time over the usual plan of unloading in heaps, as practiced by some farmers. We draw a great deal with a sleigh, as it is far more convenient than a wagon. We have not been delayed in seeding by the manure holding dampness or keeping the ground wet when applied to ground we intended sowing, as Mr. Lawson says he has.

A point that I wish to touch is the storing of manure. It is not always convenient or possible for the farmer who has no shed under which to store his manure to draw it directly from the stable, and, with the usual pile of manure just outside the stable, exposed to all storms and under the drip of the eaves, probably one-half of its first value is lost. Now, this loss can be greatly lessened by the use of a manure shed, which can be cheaply constructed. If the stables are fitted with a litter carrier, or can be, which can be used to carry feed as well as manure, probably the best plan would be to build a shed in the most convenient place in the yard, and a track to it. In this way the manure would be easily handled. The best way to build the shed is to set four cedar posts in the ground, as far apart as you wish; if more than eight feet, intermediate posts must be set. Board up this enclosure about two or three feet, put on a cheap, substantial roof, and you have a cheap and handy manure shed. It will be still handier if a driveway wide enough for a wagon or sleigh is kept through the middle; in this way two men can work to better advantage when loading. If this is done, posts as high as it is boarded up will have to be set along the driveway also. If the manure is thrown out in a heap by hand, a roof over it will be a great protection, and will soon pay for itself in saving the manure. As Mr. Lawson says, let those who have good suggestions to offer speak now.
"CANUCK."

Prince Edward Co., Ont.

We are pleased to see so many of our subscribers taking advantage of our premium offers. Have we heard from you?

The Farmers' Banquet.

Dear Fellow Farmer:

With the kind permission of the Editor of "The Farmer's Advocate," I address this letter directly to you. Does it not strike you that we have been having a surfeit of good things in "The Farmer's Advocate" lately? It also strikes me that if we do not discriminate a little in our choice of the "good things," we will be in much the same boat as the fellow who went to the big banquet in Massey Hall recently. A surplus of good things were provided, and if anyone was foolish enough to swallow the whole list, he likely did not know where he was at before morning. So I think we had better use our best judgment, too, and when we hear someone yelling across the table that the Yorkshire and Tamworth are no good, just take it with a grain of salt.

We see the Dominion Department of Agriculture, too, these days, sending out a statement regarding the hog industry, and advising farmers to have their spring litters come in March or April. Say, if they come then, and take about 7 months to grow (and they will on cheap feed), what time of year will they be ready to turn off? I think it will be dangerously near November. And we have heard time and again lately that it is a bad month for low prices. Forewarned is forearmed, though, ain't it?

What do you think about this Consolidated-School business that is being agitated through the country? I hope you don't live in a section with only three children going to school, and the section all settled. If you are a bachelor in that section, I haven't much pity for you. If you are a child, then I have, for it will likely be hard to get a good teacher there. But say, I think the ordinary section in our part of the country here is doing very good work with the children, up to, say, 13 or 14 years of age. I think it is afterwards that our education is deficient in fitting our children for rural life. I would like to see a good lecture-room added to about every third school in our district, with a good shed for horses handy, and a course of lectures, both instructive and entertaining, carried on in the winter months. I think it would nearly solve the problem here. The children or parents, either, could attend from about three sections in the winter months, without any cost for conveyances, and, if needed in the summer, children over 14 years could reach the school on bicycles or with horses. The lectures in the winter would be an enlarging of the influence of the Farmers' Institute and Women's Institute work, and, I think, would be appreciated and perhaps stop the complaint that we hear these days about our not making the use of the Farmers' Institute that we should. A lecture this year on dairying, and next year on the bacon hog, and next perhaps on horses, cannot be very far-reaching, can it? And it would not be nearly so far-reaching as it is if we did not have a medium like "The Farmer's Advocate" to carry it to us. I would be sorry to blame the Farmers' Institute, or those connected with it, but still we have to keep moving, and do you think this would be a move in the right direction? I think it would pave the way so as to make it easy to consolidate two or three schools of younger children, but I don't like the idea of our public schools being done away with, do you? except for a year or two when a section was at a low ebb. I know two neighboring sections in our district here; the one, ten years ago, had about 30 scholars, and the other about 10; to-day the conditions are reversed.

Did you laugh when you read the speech of the Manager of the Bank of Commerce, where he was telling the shareholders about sending to their agencies in August or September last fall a statement that the Northwest wheat crop would be about 84 million bushels, and it turns out now, according to Government reports, to be about 86 million bushels? Wonder where the other 14 million bushels went that we were hearing about last fall when we had our wheat to sell. Curious how the bank knew it so soon.

Guess we better get a good correspondent at every post office and make "The Farmer's Advocate" the bureau. I think we could beat the Gov't. gait in getting out a report.

Well, I guess I better stop writing; but say, when I am at it, I would like to ask you if you understand how all the banks in Canada could have earnings averaging from over 10 to nearly 20 per cent. on their capital? That must, if I understand it right, be after salaries are paid, which are living wages for those who work for them. How many farms in Ontario would pay 10 per cent. on capital account, after the workers have their living out of it, eh? They surely must have more brains in those who work for the banks; or, do they work harder?

Wouldn't there be a howl raised if we were to raise an immigration fund to assist a few German or Russian banks to locate in this country? But, of course, the more competition a farmer has, the better for him. Hoping to hear from you soon, I will now close.
LACHLAN MACKAY.
Maple Avenue, Ont.

Depopulation in Western Ontario.

Editor "The Farmer's Advocate":

As desired by you, I will endeavor to give my opinion of conditions existing in some of the Western Ontario counties, as seen while engaged in Farmers' Institute work last year and during the first two months of this year. Not in all my wanderings, for many years, did I ever meet such surprising conditions and strange contrasts. Here we meet with every appearance of prosperity, of comfort, of trim homes and splendid barns, all indicating remarkable progress and success. The surroundings of these homes show that the soil is most productive, and that good management is returning to the farmer and his family full enjoyment of life, and the pleasure received from winning out, in securing a competence, full and plentiful.

But we go a little further, and what means the remarkable change? Land of similar quality, but where are the men and the women, the boys and the girls? Homes once filled with comfort, still worth hundreds and thousands of dollars, standing with broken windows and slamming doors, meet our gaze; barns, once good and costly, fast going to wreck and ruin; inside fences the same, withal having the appearance of being operated by drunken sots. The bullock and his bachelor master explain the mystery. Why such conditions prevail is beyond comprehension. Enquiries as to why, were met with the plea, "We cannot employ the labor necessary to keep the land in cultivation," while the truth is that the disastrous change is rapidly driving the population off the farms, and so intensifying the evil if the shortage of help.

The existing conditions are serious—most serious—not only to the localities in question, but will surely have a bad effect on our Provincial welfare. Supposing the process be allowed to continue, what then? Schools will be closed, the abandoning of churches will follow, villages will be wiped out of existence, and towns will soon feel the want of, and suffer severely from the lack of, a consuming population. Let the reader not suppose that the above is an imaginary picture, as already one school section, in one of Ontario's most productive western counties, IS NOW WITHOUT A SINGLE CHILD TO ATTEND SCHOOL, and the same county has several thousands less people than it had some years ago, and all the loss has resulted from throwing excellent land out of cultivation. A township in another county has lost sixteen hundred of its population from the same cause, if popular report be correct.

The farms so thrown out of cultivation are not producing in annual returns of dollars more than one-third of the amounts that would be obtainable from them were they kept in mixed farming. Why should the families who once occupied those most fruitful fields dispose of them, and seek far more uncertain prospects, comforts and possibilities elsewhere, is a mystery. They may roam the world over, and cannot find in any country equal opportunities for making life on the farm pleasant and prosperous, or a place where ultimate success is so sure and certain.

The deserted-looking farms are not only hurtful to the general interests of our Province, but are dark blots on the landscape, and injurious to those who remain; for who can feel comfortable in the country, if the majority of his neighbors take flight, leaving just a family here and there? In driving through Middlesex County two or three weeks ago, we drove two and a half miles with fertile-looking land on each side of the way, but only two uncomfortable and untidy habitations were in sight, one or both being the abodes of wealthy bachelors.

The writer takes the stand that the whole condition of the finishing-on-grass cattle business is not at all what it should be, in order to have general prosperity secured, and keep the good land in cultivation. It is some years, in a way, profitable to the professional grazier, but did families attempt to live by it, as we do in mixed farming, it would soon lose its charms. As a rule wealthy men—mostly single men—are they who are in the business. They can, by controlling large acreages of good land, secure considerable of an income, but the one with an ordinary amount of capital would find, if he supported a family, that his surplus at the year's end would not equal the balance on hand resulting from mixed farming, even if he had to lay out considerable in extra help. As it now is, the land is not supporting more than a small fraction of the population it is capable of doing, and is adding to the wealth of our Province only a similar fraction of the wealth obtainable from mixed farming; and cattle finished on grass alone has not made, and never will make, the top price in any of the world's leading markets. The prevailing division of cattle-growing and finishing-on-grass on the excellent farm lands of Western Ontario, is not the most profitable system for the breeder and grower. Where rough land, good for pasture only, obtains in abundance, the growing of stockers may be a necessity, and found profitable where conditions are against the growing of feeds to finish in the stalls.

But on the rich, fertile lands of Western Ontario, the man who breeds and grows good bullocks is the one who should carry them to the highest possible finish. In the finishing process, usually the best profit is found directly and indirectly—directly in putting on the market a higher-valued product, and indirectly in returning to the land a better quality of manure.

The Governments of the past and present, both at Toronto and Ottawa, have done well to the dairy cow and her admirers, but we fail to see where either Governments has done its duty in helping the beefmaker

put his business on a more paying basis. In comparison, the dairy cow has received the bucketful, and the bullock just the drop, of assistance. Beef-growing in Ontario was a most profitable line of our work on the farm years ago, and is yet where properly managed; but the mixing of dairy blood with good steer-producing cows has, in many places, played havoc with the business. As years are passing, it is becoming more and more evident that we must have a clear-cut separation of the dairy breeds' blood from our steer-producing cows and heifers.

I do hope our Governments will look into the difficulty, and deal with it in some such way as is being done in good-roads associations, in furnishing cheese factories and cheese and butter makers with instructors and inspectors, and many other lines of supervision. Our Provincial Government could take means to show Western Ontario men that the prosperity of the Province depends on every part producing the most wealth possible annually, and especially should they have it demonstrated to them in some telling way, that it is disastrous to the general welfare to have the thousands and tens of thousands of our Province's most fertile lands turned to grass, and so taken from supporting numberless families. Means should be taken to stop the fast-growing evil, and soon as possible have those fertile farms populated by a people who, in producing the butcher's bullock, will breed, grow and feed to a finish the profitable kind, which will afford satisfaction and give profitable returns. On many occasions we had at our meetings the steer-grower who sells his good two-year-old animals in the spring; and the grazier who buys and finishes. The discussion frequently led to enquiring, how did the graziers manage to own and rent so much land, and keep on adding to their holdings? The growers' reply was, because they made money out of the business. Immediately the question would follow, "At whose expense?" When the reply came, "At ours." It was accompanied by a lightning-like expression of surprise at their own answer. It appears the hurtful system has grown to its present dimensions unnoticed by those who are the losers.

How long shall the Province-destroying game continue, or be allowed to continue? I do believe it is high time for our Provincial Government to appoint a commission to enquire into the present disastrous drifting, which is rapidly growing. Speculation of a kind, taking chances of getting a large return for little work, seems to be the craze. Last season fortunes were lost, but the gambler's hope is strong, and this year—while many weak operators were wiped out—the game continues. It is too monstrous a condition to think of there being any possibility of its continuing for any great length of time, but it is quite possible that untold harm may be done before people return to their senses; before they realize that nowhere on earth is success so readily obtainable in farming operations as is in reach in carrying on mixed farming on the tens of thousands of acres now lying half wasted or more, and being, besides a crying shame, in having steers only as inhabitants, with a stray man seen occasionally, and all that in some of the very best sections of good old Ontario!

Some, but as yet very few, are waking from their dreams. Some who left, went West for twenty or more years, are now once more settled contentedly on Western Ontario farms; others, young men, who had the Western fever, were talked into wisely considering their present sure positions as owners of unencumbered, good Ontario farms, and stated their determination to remain with the sure thing. The great West is affording and will provide homes for millions, but the family or young man on the farm in Ontario, with moderate or no liabilities, will do well to remain where life can be made more comfortable and enjoyable, and success more certain.

Speakers on public platforms in Ontario have for twenty years been glorifying the West at Ontario's expense. I mean men in our Province who had its welfare at heart, have been thoughtlessly holding forth the possibilities of far-off lands, and had not a word to say about the wonderful goodness of our own grand Province. Need we wonder if the thoughtless words have taken root and have produced evil fruit? That fruit which is now so much in evidence in the dilapidated, tumble-down and most-forsaken-looking tracts, once beautiful, fruitful fields and farms.

People in every Province in the West are intensely loyal to their own district, and we admire them all the more because of their faith and hope. We in Ontario have not been so, yet we have the best all-round country that the sun shines on. Let us retrieve the past, and prove ourselves as citizens of Ontario, faithful to the noble heritage committed to our care.

Victoria Co., Ont. JOHN CAMPBELL.

Approves Our Stand re Preservation of Wood-lots.

Editor "The Farmer's Advocate":

"The Farmer's Advocate" has made great strides in the last 35 or 40 years, when, as a boy, I used to work out the puzzles in it, and I have yet a chromo received as a prize for correct answers. I am pleased with the stand you take re the preservation of our forests. I have about eight acres of woods from which stock have been excluded for twenty years or more. It is a good object lesson to the neighbors. I am sure it would encourage others to do likewise if the preserved woods were exempted from taxation.

Middlesex Co., Ont. MOSES PIERCE.

How Best to Apply Manure.

Editor "The Farmer's Advocate":

The question of how to apply manure with the least possible waste is certainly one which should be fully discussed, as a great deal of a farmer's profit depends on the saving of all the manure possible. I certainly agree with Mr. Lawson's system, described in your issue of February 22nd, about applying manure in the winter time fresh from the stables. Of course there would be some loss from leaching, but this is not to be compared to the loss from fermentation, which must be of no small account when the manure is all piled together. On most farms there is plenty of time to draw the manure in the winter, and the horses would otherwise be idle part of the time if not so employed. We draw the manure out every week, or two weeks at the longest, with a manure-spreader (which I consider is one of the greatest labor-saving implements on the farm), and spread it on the wheat, at the rate of about ten or twelve loads per acre. By doing this way the wheat gets the benefit of the manure, which acts as a mulch, and also protects it from the heaving weather of the spring, and we scarcely ever miss a catch of clover, although without the manure a clover catch is quite uncertain on our heavy clay soil in a dry season. Of course, if the wheat has a very large top it would not do to put the manure on it, but a farmer generally has some that is not too big.

I think if a farmer could have all his straw cut for bedding it would be a great deal better. He could then put a light covering on the fall-plowed ground for barley or oats, and it would not interfere with working the land in the spring.

What manure we make in the spring, after the fields get too soft to draw it on, we either put on a summer-fallow or spread it on grass land to pasture through the summer, and then fall plow for a crop of beans the next season. Each farmer has to handle his manure as best suits his method of farming; but I would say again, draw all that you can in the winter.

Welland Co., Ont.

"SCOTTY."

Prevention of Smut and Apple Scab.

Spring is approaching, and farmers will soon be planting the seed for the season's crop. With some crops clean seed means good crops, and dirty seed poor crops. It is important, therefore, to take a few simple precautions, especially when it is known that these precautions will save much money. Smut is very prevalent in many oat and wheat fields, and the loss to the Province by this disease alone amounts every year to two or three million dollars. Smutty oats and wheat are caused by planting seed oats and wheat that have smut spores attached to them. These spores are so small that it is impossible to see them on the seed with the naked eye. Perhaps the simplest and most effective method that has been devised for killing these attached spores is to sprinkle the seed grain with a dilute solution of formalin, made by pouring half a pint of formalin into ten or twelve gallons of water. The formalin can be procured at almost any drug store for 25 cents. The seed grain should be spread out on a clean floor or wagon-box, and the formalin solution sprinkled over it by means of a sprinkling can. The seed should be thoroughly shoveled over and mixed while it is being sprinkled, so that every grain receives some of the solution. Ten gallons of solution will suffice for 20 or 25 bushels of grain.

When the grain is dry it should be put into clean bags, to prevent the entrance of fresh spores of smut, which are always floating in the air of barns. If this method is carefully followed, no smut heads of grain will be found in the crop.

Apple scab is one of the most serious diseases of the apple. It can be prevented by spraying the trees with Bordeaux Mixture. Four applications should be given, the first just as the leaves are unfolding, the second just before blossoming, the third after blossoming, and the fourth two or three weeks later. If the season is a wet one, it is advisable to give another application in July or August. The formula for Bordeaux Mixture is as follows: Copper sulphate (bluestone), 4 pounds; fresh stone lime, 4 pounds; water, 40 gallons.

Make a stock solution of bluestone by dissolving 25 pounds in warm water in a barrel, and add water to make up to 25 gallons. Every gallon of this solution in this barrel contains one pound of bluestone.

Into a second barrel put 25 pounds of fresh stone lime, and add with stirring small quantities of water to slake it. When fully slaked make up to 25 gallons by adding water. Every gallon of milk of lime in this second barrel contains one pound of lime.

To prepare the Bordeaux, empty four gallons of bluestone solution into the spray tank or barrel, which already should have 25 or 30 gallons of water in it; stir the milk of lime thoroughly, and empty four gallons of it through the strainer into the spray barrel, with constant stirring, then add water to make up to 40 gallons.

The Codling worm may be controlled at the same time if 4 ounces of Paris green are added to every barrel of the Bordeaux Mixture, used in the application made after blossoming.—(O. A. C. Press Bulletin, by Prof. W. Loehhead.

23 Acres for 21 Years in Lucerne.

Editor "The Farmer's Advocate":

We have grown alfalfa successfully for a good many years, and it is to-day principally our hay crop, as well as pasture. Rarely do we seed with red clover, and we sow but very little timothy. We generally mix a very little red clover and timothy with our lucerne seed—just enough to thicken the bottom for the first year's crop, and it helps to form a little sod, so that, in a wet time, it does not cut up so bad with stock on it, as lucerne forms no sward. The second year lucerne thickens up by forming a crown, and there are perhaps four stems to one the first year, and, as it grows very rapidly, other grasses that were sown to thicken up the first year's crop have to give way to the lucerne the second year, and by the third year it practically monopolizes the field, if it has been sown with about 15 or 16 pounds of seed per acre. Meantime, the little grass that was sown along with it has afforded a variety.

We have sown lucerne on low-lying land, properly drained, and it has done well, only on level land there is more risk of ice forming around the crown, which will kill it. I believe it will grow on very low land if it is properly drained and has a bottom so the roots can go down. On level land we ridge up our field in fifteen-foot ridges with a good round to them, and put in lots of water furrows to carry off surplus water when the ground is frozen up.

We had 23 acres sown to lucerne for about 21 years without a break, with the exception of a few small spots where it was killed by ice forming around the crown. Those spots were disked up in spring and reseeded. This was sown on high, hilly clay loam, ridged up in 21-foot ridges, with all the crown we could give them. We put in water furrows wherever needed. These two fields were mown for hay every year, then pastured balance of season. We always considered we got about three tons per acre—a little less in wet years, as it would lodge badly then, and not be such good hay, for properly-cured alfalfa hay is very heavy. In less than three weeks after the hay was off we would have pasture to the knees, no matter how dry the weather was.

We have tried all methods of seeding; have sown it alone on small field, and hand-hood the whole piece between the drill marks. While it did well, it did no better than other seedings with nurse crop to keep down the weeds. We have found 14 bushels barley per acre to be our favorite seeding crop, though it will do well with peas. Oats are not good to seed any kind of grass with, and lucerne does not do well after oats or with fall wheat. Sowing lucerne in spring, it can hardly be covered deep enough, unless the wheat is top-dressed through the winter, and harrowed well twice after sowing the lucerne seed.

We have found it always does better to be well covered, and we sow with drill ahead of hoes, or harrow after the drill with heavy diamond-tooth harrow. We generally top-dress any land we are going to seed through the winter, and never miss a catch.

The reason more lucerne is not sown, I have heard it claimed by many, is that it interferes with the rotation of crops. I don't see how that is, for it can be plowed at any time, the same as clover. It costs a little more to seed down, though not very much, and I will warrant, if properly sown with a little timothy, it will cut as many tons as almost any other kind of hay the first year, and give far more and better pasture. The first crop of red clover is generally pretty rank, and often not good hay. The first cutting of lucerne will all be good. We have very high, steep hillsides on some parts of my farm, so steep that they will at times cave down in spring of year. We used side-hill plows and seeded to alfalfa, where it grows abundantly, and is the sweetest of feed; for stock of all kinds like the hillsides best, and it grows as well there as on any part of the farm. I may say, in conclusion, that the 23 acres that were in alfalfa for about 21 years never was top-dressed, that I remember, in that length of time, and we could see no difference in its growth. In the spring of 1895, I think, there was a very late frost; it was then about 12 inches high. Most all meadows were spoilt for that season. We put the mower in our lucerne, and raked and drew the frozen stuff off, and we got a fine crop of hay after and good pasture. Once tried, it will be always used. JAMES DOUGLAS.

Haldimand Co., Ont.

Durability of Cedar Posts.

Editor "The Farmer's Advocate":

I noticed in your paper an enquiry as to which end of a cedar post to put in the ground. We have a board fence, in which quite a few of the posts were put in the reverse way to which they grew, and these did not last any longer than those put in with the big end down. In this case it did not make any difference noticeable, one lasting about as well as the other. They were all good dry cedar, and in the ground about 20 years. The ground is a very stiff clay.

Since Co., Ont. GEO. F. GAVILLER.

THE DAIRY.

Individual Milk Records Again.

Editor "The Farmer's Advocate":

It being somewhat over a year since we adopted the system of keeping the daily milk records of our dairy cattle, and believing that our experience may prove to be of some benefit to others who are engaged in the dairy business for what they can get out of it, I take this opportunity of bringing before your readers the results of our work in this line for the past year. Our milking herd consists of from 16 to 18 head of cattle, the majority of which are Ayrshire grades, the remainder being grade Holsteins. The keeping of the records is a very simple matter. We have a spring balance hanging in a convenient place, upon which we hang the pail to be weighed, the weight being read in an instant when one becomes accustomed to it. We use the ruled record sheets furnished by the Department at Ottawa for recording the figures, and it is only the work of an unnoticeable amount of time to jot the weight down on the ruled form, which hangs attached to a board close beside the scales. Up to the present time we have not tested our cows regularly for butter-fat, but simply had them tested twice a year, a system which certainly cannot be recommended, where one will take the time necessary to keep composite samples from each individual cow, and have these tested at least once a month.

As to the time expended in the work, we found that the mere taking of the weights and jotting down the figures on the forms was so small as to be unworthy of consideration. However, in reckoning up the figures some time was required. On an average it took me two hours a month to figure them up and keep new forms ready for use. This you can see was a mere

chief benefit to be derived from the keeping of these records lies in knowing accurately how profitable the best cows are, and the degree of inferiority of our poorer ones. In the above example of the exact amount of milk produced by this cow would be inclined to give her a much higher standing, owing to the high per cent. of fat contained in her milk; whereas, knowing the actual facts, she proves to be an unprofitable cow, and one of the kind we cannot get rid of too quickly. It is only by putting the dairy industry upon some solid business basis that we can hope ever to make any advancement. And how can we do this more effectually than by knowing just what each cow is doing, and discarding all cows that do not come up to our standard? I. C.

Brant Co., Ont.

P. E. Island Dairy Association Annual Meeting.

The annual meeting of the Prince Edward Island Dairy Association was held in Charlottetown on the 24th of February. The attendance was small, and did not properly represent the dairy industry. From large sections of the Province where there are dairy stations there were no representatives present. We noted particularly the absence of our Local Government officers, the Commissioner and Secretary of Agriculture. Mr. Whitley, of the cow testing branch of the Dominion Dairy Commissioner's office, was present, and delivered a very interesting and instructive address on the different breeds adapted to the dairy, speaking particularly of the necessity of using scales and Babcock test in order to weed out the non-producers, and get a good producing herd. He strongly advised forming "cow-testing associations," and said that the Dominion Dairy Department would send an expert to conduct the tests for such associations.

The Secretary's report was an exhaustive statement of the dairy business for the year, with some comparisons with last year's operations. The report took a hopeful view of the future, though it showed a falling off of over three million and a half pounds of milk from last year's figures. The total supply of milk received this year at the 47 factories and two skimming stations was 28,151,720 pounds. The gross value of cheese was \$177,291, an increase of \$17,194.40, and the gross value of butter was \$104,633.24, an increase of \$4,336.75 over last year. The net value to patrons for cheese was \$137,393.75, and of butter, \$78,464.36. One reason for the heavy falling off of the milk supply from 1904 was the terribly severe winter and the extreme shortage in feed of the previous winter, which left the dairy cattle in poor condition to begin the season's work at the usual time, June 1st. Many of the cheese factories did very little in June, and some did not open till July, thus shortening the cheese season to about four months. Abundance of feed this winter, together with the expectation of good prices again next season, will, we believe, encourage many more to patronize the dairy stations next year.

The report of Mr. Morrow, the inspector who has the oversight of all the dairy stations, was very flattering to the companies and the factory managers. He said, after reading his report, "You cannot help but notice the continued repetition in my report of the factories being kept so clean. I am glad to be able to say this. I question very much if it would be possible to visit the same number of factories in any other section of Canada and find so uniform a system of make and thorough cleanliness on the part of the makers." This, coming from an inspector, is certainly very complimentary to our cheese and butter makers, as well as to the directors of our co-operative companies. The great need here is to increase the number of patrons and the quantity of milk supplied. The cost of manufacturing is going up higher every year since the milk supply has been falling off. Makers that used to make cheese for 80c. per 100 lbs. are now getting as much as 90c. Supplies have advanced, especially cheese boxes, and milk drawing is costing nearly 50% more at many factories than it did five years ago. The only remedy for this is to increase the milk supply.

The cow census work was carried on here for the first time last summer. The records show that the average for 90 cows in the month of August was 660 pounds of milk, of 3.7 per cent. fat, or 25 lbs. of fat each—a little over 21 lbs. of milk per cow per day. The best cow in the test showed 41 lbs. butter-fat, and the poorest only 14. These tests should certainly educate our dairymen to weed out the small producers from their herds. We look for brighter days for our dairy industry in the near future, but they can come only through the intelligent effort and friendly co-operation of our dairymen. We would respectfully suggest to the officers of the association that they prepare a programme for the next annual meeting, and get some of our most successful dairymen on it, to tell of their methods to those who have not paid particular attention to milk production, the programme to be published some time before the meeting, to induce more factory patrons to attend. The old board of directors and officers were re-elected.

If you need a knife, you should not miss this opportunity of securing one for sending a new subscriber. You will feel well paid for your trouble.



Robert Hunter, Maxville, Ont.

President Canadian Ayrshire Cattle-breeders' Association

bagatelle, amounting, when reckoned at 15c. per hour, to only \$3.60 per year; the work, besides being good practice, was done in time that possibly would otherwise have been wasted.

I do not think that keeping a daily milk record results in obtaining increased yields from a given herd of cows, except in so far as one notices any decrease in the yield, and promptly sets about to ascertain and remedy, if possible, the cause of the shrinkage. However, where hired or disinterested help is engaged in the milking, I am satisfied that the records would prove of greater value.

Does it pay to keep milk records? I answer emphatically, yes. In order to prove my statement, allow me to give the record of our best and also of our poorest cows:

ROSE—	
Lbs. of milk yielded in year	9,083
Per cent. of butter-fat in milk	3.5
Lbs. of butter (reckoning butter-fat, plus 1-6)...	370.9
Value of milk, at 4c. per quart.....	\$145.33
SUSAN—	
Lbs. of milk yielded in year	3,369
Per cent. of butter-fat in milk	4.9
Lbs. of butter	192.5
Value of milk, at 4c. per quart	\$53.90
Difference in value of milk, at 4c. per quart, in favor of better cow	\$91.43
Difference in lbs. of butter in favor of better cow, 178.4 lbs., valued at 20c.....	\$35.68

These figures are self explanatory. I consider the

Easy to Form a Good Habit.

Editor "The Farmer's Advocate":

In your issue of Feb. 15th I noticed you devoted quite a space to weighing and testing milk from individual cows, something I am quite interested in, although I am only a beginner, have only been keeping records so far a little over a year, but it is a great thing, and I am in favor of the daily weighing, instead of three times per month. In the daily weighing there is no guesswork, and should you happen to be away for a few days, you know if your herd has had proper care or not.

Am a breeder of Jerseys, have a herd of forty-five head; milk about thirty in summer; have them freshen at any time during the year; at the present time am milking seventeen. I have only been keeping a daily milk record since Jan. 1st, 1905. I use the sheets that are furnished by the Experimental Farm, Ottawa. Take samples of milk every few days, and test once a month. Some say it is too much time and bother to weigh each cow's milk twice a day. If you have your scales handy and sheet, you will form a habit in just a short time (a good habit). And who wouldn't be willing to spend an extra half hour or so if he could increase the flow of milk a thousand pounds per cow a year? Would he not be willing to devote one minute a day for each cow for that increase—only a matter of five hours a year for one thousand pounds of milk. I can weigh my milk and record it on an average of three-quarters of a minute a day. Am sorry I am not able to give figures as to how much I have increased the milk and butter yield of my herd, as I have been at it too short a time, and this year is against me, as last season being so wet, my corn crop was a total failure. I usually fill two large silos, and my total crop of fodder corn was five loads. At present have only six cows that have finished one year's milk; they averaged 5,000 pounds of milk, testing 5.4-10 per cent. Please don't think these cows were fed high, as they only received four quarts (not pounds) of bran per day through the winter, and none in summer. In keeping a daily milk record, one is able to get increased results, as he has a chance to study the wants of each cow. Some cows will do better on one kind of feed than another. Would like to be able to give a few figures, but don't feel safe to do so, as I have not been weighing long enough. Now, I will not close without saying a good word for "The Farmer's Advocate." I have been a constant reader now for something near 36 years, and would not be without it at almost any price. Wishing you, Mr. Editor, and your paper, every success.

Missisquoi Co., P. Q. ED. H. MORGAN.

Milk Records Save Over \$6.00 a Year per Cow.

Editor "The Farmer's Advocate":

I will make an effort to give you the benefit of the experience I have gained in keeping individual milk records. We milk about fourteen cows of mixed breeding, Holstein and Holstein grades mostly. I send you herewith the record of ten cows, the only ones that I had that were milking all last year, the rest, mostly young things, freshening last fall. I have just started to keep, or, rather, breed Holsteins, and this, along with changing my herd from spring-freshening to fall-freshening, has helped to pull down the record last year, as some of my best came in last fall. I have been keeping records for five years, testing for fat only the cows I want to raise stock from. I have a small four-bottle machine which does for a small herd. I was among the first, I believe, that started to keep records at the suggestion of Prof. Grisdale, who furnished me with blanks. The year previous to testing, the herd averaged \$34 per cow, and from the enclosed record you see an average of \$74.42 per cow, and I feel quite satisfied that I never would have made such advancement without the record system. A few moments' thought put on the enclosed record will show at once the many advantages of such a record, and if it was possible to show the daily record for the year one could see more easily.

Take, for instance, the cow Rose, which for a while gave as high as 50 lbs. per day, and only gave 7,636 lbs. in the year, and compare with Nett, which never went over 37 lbs. per day, and gave 9,123 lbs. in the year. Then compare Georgie with Blackie for the money end, and it can be seen clearly how necessary it is to keep only steady milkers. You will notice that Blackie gave a lot more milk, but she gave a large flow when it was the cheapest. Georgie was a fall cow, and Blackie a spring cow, and so one might go on. Perhaps I should say that I send the milk to the cheese factory in the summer for about five months, and to Montreal the rest of the year, getting 13c. per gallon clear. That accounts for the large difference in the price per cwt. of milk for the respective cows. I give

each cow her dues, dividing up each pay where it belongs.

When keeping records one can detect anything that goes wrong in the feeding, and can also cater to the tastes of the different cows (which to some seems a small matter, but it is in those small things where the profit lies very often), and guard against repeating the same thing. From actual experience I find that when a cow gets a few setbacks, and especially when she is naturally falling off, she is down to stay, and by a close watching of the record one can see more readily which cows are needing special attention. It also makes it so much easier to cull out when you have everything down in black and white.

Say that a person could make a gain of 1 lb. per milking, and a good cow should milk 300 days in the year, which means 600 lbs. milk—this year worth \$6.00, and on a herd of 20 cows, \$120.00. This is putting it very small, and from experience I know well that much more can be done. There are some—yes, a great number—who give for excuse the time it takes, but they could weigh a lot of milk for \$120.00—don't you think? As I said, it is the little things that count at the end of the year.

Actual experience tells me that the time it takes to weigh the milk is very small. I never did time myself, but it is more of custom than anything else. I can now milk my share—the half, or, generally, more—and not bother marking any down until I get done, just merely weighing and keeping them in my mind until after milking, then mark down all at once.

There is nothing I find that will give one more interest in his cows than a record system, and it is so much easier to sell any you have to offer when you are able to show your purchaser the cow's yearly record, or if a calf, the dam's record; yet I feel that I am only half doing it still. I am making ready to weigh the feed next winter, or, rather, keep an individual feed record, as I now weigh, or, at least, approximately weigh in bulk, weighing at different times and keeping as near as possible by measure.

RECORD FOR 1905.

Cow.	Age.	Milk, lbs.	Test.	Returns.	Breed.	Best day's milk, Lbs.
Josephine	12	7746	3.6	\$76.25	Holstein	50
Nett	3	9123	3.4	91.05	Holstein	37
Bessie	3	5708		56.28	Ayr. grade	25
Hally	11	6239	4.0	63.38	Ayr. grade	36
Blackie	9	7274		67.96	Hol. grade	38
Nan	5	7546		72.69	Ayr. grade	36
Rose	9	7636	3.8	72.55	Ayr. grade	45
Clash	11	6127	4.2	59.98	Ayr. grade	37
Lily	7	11474	3.4	117.03	Holstein	60
Georgie	7	5646		67.06	Ayr. grade	35
		74519		\$744.23		

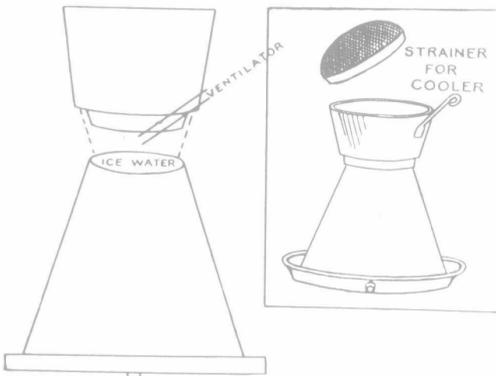
	Milk, lbs.	Money.
Total	74519	\$744.23
Average	7451	74.42

Vaudreuil, Que.

D. D. GRAY.

A Milkman's Aerator.

The milk aerator, cut of which I send you, is one that we use winter and summer, and find that we cannot be without it. It is very easily cleaned and easily filled with ice and water; sometimes we have to fill twice while milking, accord-



A milkman's aerator and strainer.

ing to amount of milk to be cooled. We generally reduce the milk just milked about 20 degrees, and find that it keeps better and has a better flavor for bottling for private customers. The cost of aerator is about \$5 or \$6, complete. I have seen several, and find it the most suitable for our work. It is not set in box which sketch seems to show; the cut will show more clearly how the milk is collected.

Laval, Que.

J. W. DRUMMOND.

"More than pleased," is the way our subscribers express themselves about our premiums.

GARDEN & ORCHARD.**Varieties of Fruit for Home Planting in Nova Scotia.**

I am asked by the editor of "The Farmer's Advocate" to discuss the question of varieties of fruits adapted to this Province, and I cheerfully comply, partly because it is a subject of perennial interest, and partly because, having observed the matter rather carefully in all parts of the Province, I hope I may be in a position to offer suggestions of value to intending planters. I shall speak of it primarily from the standpoint of the home plantation, and will merely refer incidentally to lists of commercial sorts.

Taking the apple first, and beginning with the first of the season, the Yellow Transparent, Red Astrachan and Duchess of Oldenburg are prominent as early sorts. They are hardy everywhere, bear well, and no home orchard is complete without them. Incidentally, they are very profitable for local markets when not grown too largely. These could be followed by the Gravenstein (top-worked in the colder parts of the Province) and the Wealthy. In the better fruit districts of the Province I should also try two other early autumn apples—the Victoria and Williams' Favorite. Both are handsome red sorts of fine quality (the former of the Fameuse type), and are splendid table sorts, either cooked or fresh. Next follows the Ribston Pippin, which, according to my observations, will succeed more generally over this Province than any other standard sort. Go to any exhibition, and you will see good Ribston Pippins from every county. About this date, or a little earlier, come in the Emperor Alexander and the Wolfe River. Personally, I should set them only in the colder sections, yet they have friends even in the Annapolis Valley, and there is no doubt they would take rank as commercial varieties, at least for local markets, in the colder parts of Nova Scotia and in New Brunswick. Next, following these, come McIntosh Red, a superb apple, and hardy everywhere, but spotting badly unless sprayed; the Bishop Pippin, one of the finest apples for cooking and dessert, but not grown for shipment, as it is too tender; Stark, not much better than Baldwin in quality, but hardy; Northern Spy, slow in coming into bearing, but unexcelled when it gets in (should be top-worked); Golden Russet and King of Tompkins, both rather shy bearers, but too good to be left off the list. This already seems like a formidable array of varieties, and, from the commercial standpoint, certainly would be; but the home orchard can stand things that would swamp the commercial one. Even now I have left out a number of varieties which are very popular with certain planters—Wagener, Hubbardston, Rhode Island Greening, Ontario, Hurlbut, and Ben Davis, for example.

In pears, the Bartlett and Clapp succeed almost everywhere, and the Flemish Beauty and Vermont Beauty would, if as generally planted, though, of course, the former usually needs spraying if one is to get clean fruit. These four are about all I should recommend for the cold sections of the Province, but in the better fruit sections, Anjou, Louise Bonne de Jersey and Clairgeau are good sorts to grow.

Plums can be grown almost everywhere, if one selects the right sorts. Even in Cape Breton they are profitably grown, and, for home use, ought to be far more commonly planted. A list of the most generally successful varieties would be Bradshaw, Prince Claude de Bavi, Yellow Egg or Magnum Bonum, Lombard, Fellenberg or Italian Prune, and Prince's Yellow Gage. To this list might be added, for more favored sections, Burbank, Washington and Grand Duke.

If one wants to have his first plantation complete, he ought certainly to plant a few cherries, but he should lay in at the same time a supply of mosquito-netting to cover the trees with when the fruit is ripening, or he will have nothing but trouble to repay him. Wragg and Montmorency are the popular sour varieties, and are practically the only sorts worth setting outside of the Valley and similar localities. Windsor, Gov. Wood, Schmidt's Bigarreau and Black Tartarian are our most successful sweet varieties.

Coming now to small fruits, the list of best family sorts would run about as follows:

Currants—Fay's Prolific, Wilder, Pomona, Comet and North Star for reds; White Grape and Black Victoria for the other colors.

Gooseberries—Industry, Keepsake and Whitesmith, among the large English sorts; and Downing and Pearl, among the smaller American varieties.

Raspberries—London, Columbian, Cuthbert and Shafter for reds; and Gregg, Kansas and Cumberland for blackcaps.

Blackberries—Snyder, Rathbun and Erie.

This completes the list. In every case additional sorts might be given, but I think the best have been included, and I have tried to keep out any doubtful ones. I hope the list may be helpful to some intending planter, and here's hoping the plantation may succeed.

F. C. SEARS.

the Farmer's varieties of I cheerfully t of peren- g observed ts of the on to offer ers. I shall ont of the incidental-

g with the parent, Red are pre- rdy every- d is com- y are very grown too the Graven- the Prov- fruit dis- two other Williams' ts of fine e), and are resh. Next rding to erally over sort. Go see good y. About e in the fe River, only in s even in ight they s, at least s of Nova following pple, and ly unless the finest not grown ark, not ut hardy; ring, but o-worked); both rather of the list. array of andpoint, hard can commercial umber of h certain Island avis, for

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Cuthbert sas and e. se addi- the best keep out e help- hoping EARS.

Pruning Fruit Trees.

By L. Woolverton, Grimsby, Ont.

Two extremes in pruning are to be avoided—too little use of saw and clippers, and reckless butchery of the trees. Some there are who insist on sawing off all the lower limbs, big and little, until the bearing wood is often beyond the reach of the longest ladders, while others contend that a tree should be largely left to Nature, and the result is a tangled mass of brush and no fruit worth picking.

If the pruner would more closely define in his own mind the objects in view, he could do more intelligent work. Every cut should be made with a reason, and each tree should be pruned annually, so that it may seldom, if ever, be necessary to cut off large limbs.

I remember hearing Prof. Roberts, of Cornell University, give an address before the New York State Horticultural Society in 1892, in which he emphasized very strongly the importance of thorough and judicious pruning. Here is one paragraph from my notes: "It is not possible," said he, "to prune the orchard on the same principle as we prune the grapevine." Is the plant food improved in quality by transporting it through 80 feet of wood before reaching the fruit which it is destined to support? We grow too much timber in our apple orchards. We ought to separate forestry from fruit-culture. Our orchards are growing too much wood, too many seeds, and too many poorly-flavored apples. If by heading back the top and furnishing a reasonable amount of plant food, by fertilizing, cultivating, or by feeding sheep in an orchard, we can remedy this difficulty, a great advance will be made.

Pruning may be done at almost any time, but, as a rule, the month of March, when the severe cold of winter is past, is the most favorable; and next to this we favor the autumn, just after the leaves have begun to fall. Light pruning may be done in summer; indeed, a favorable time for healing wounds is June and July, when the growth is most rapid. Summer pruning is, however, a check to the vigor of the tree, because it robs the tree of a certain amount of potash and phosphoric acid, which is at that time in the foliage. Before the leaves fall in autumn this is mostly given back to the wood cells of the tree, so that the tree does not suffer any check in vigor by the natural loss of foliage at that season. If, however, a tree is making too much wood, a summer pruning tends to check it and throw the tree into bearing. The same effect would be produced by ceasing cultivation or withholding fertilizers. If a tree is making less than a foot of new wood, it needs fertilizing, shortening back, cultivating, and such treatment as will encourage growth; if more than a foot of young wood, these means of increasing vigor may be withheld.

THE APPLE TREE.

The pruning of an apple tree should begin with the day it is planted out in the orchard. The nurseryman usually tops them at about four or



Fig. 1—An apple tree pruned for planting.

Fig. 2—At the end of the first season.

five feet high to cause the formation of a head; the farmer, in planting, should prune the branches back somewhat, as shown in Fig. 1, being careful that a crotch is not formed which might afterward split open. With a Baldwin or a Greening there is little danger of this, but with a Spy it is very common. We have often lost large branches, and in one instance a whole tree, 20 years planted, by its splitting down on all sides with a heavy load of fruit.

At the end of the first season the tree will have somewhat the form shown in Fig. 2. The pruning now and henceforth will be more a matter of judgment than of rule, having in view the future form of the tree. The weaker limbs, and those crossing, should be cut away, and the growth of the others somewhat directed.

Different varieties, however, have their own habits of growth, and these must be encouraged. The Greening, Roxburg Russet, Fameuse, Fall Pippin, King, etc., are spreading in habit, and

for them the form shown in Fig. 2 is a correct start. But the habit of the Spy, and to some extent that of the Baldwin, is pyramidal. For them, a leading upright shoot may be allowed; indeed, if one were to attempt to make a Spy



Fig. 3—Habit of growth of a Greening apple tree.

spread like a Greening, the tree would be full of suckers. Fig. 3 (after Bailey) shows the open head and spreading branches of a well-trained Greening apple tree, and Fig. 4 that of a Spy or Baldwin.

The height of the trunk should afford easy tillage. In forming the top, it must be remembered that when trees come into bearing the



Fig. 4—Habit of growth of a Baldwin.

limbs will droop more and more, and become very troublesome to the plowman. He then vows vengeance upon those limbs, and off they come, without the least regard to the symmetry of the tree. This must be avoided by forming the head a little higher than is usual, say at least five feet from the ground.

For myself, I always hesitate to cut a large limb off an apple tree. I study to avoid the

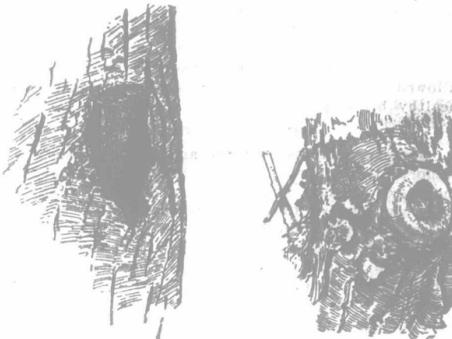


Fig. 5—A common fault—stub left.

Fig. 6—Wound that will heal over.

necessity of it by annual pruning, and by always cutting out the smaller limbs rather than the larger ones in thinning out the top. I somehow feel a kind of sympathy for those unfortunate trees in orchards where the pruner saws or chops off large limbs, in the mistaken notion that he is giving it a proper pruning. These great wounds seldom heal over, but rot away into the heart of the tree and make it hollow; besides, think how

much tree energy was expended upon those great branches which, rightly directed by annual and intelligent pruning, would have been conserved for growth and productiveness. If, however, large wounds must be made, they should be painted over, to preserve the cut surface from rotting until healed over.

In many instances, the cutting of large limbs shows ignorance of the principal object in view, which is to thin the wood in such a manner that every part will be productive, not simply to lessen the size of the whole top of the tree, or, if not ignorance, it must be laziness, for, in order to do the work quickly, the pruner saws off half the tree, leaving the remaining half still as much in need of trimming as before. Such a pruner will cut off the lower limbs bodily which he can easily reach, until the tree loses all symmetry, and reminds one of one of those old Shanghai chicks of our grandfather's barnyard.

An important point to be observed in cutting off large limbs is to cut close to the main trunk. It is a common fault to leave a stub, as shown in Fig. 5 (after Bailey). This stub will not heal over. It will remain hard and dry, until finally it rots and decays into the heart of the tree. All such cuts should be made as close as possible to the main trunk, so that the growing bark can gradually cover the cut surface, as shown in Fig. 6.

The Fruit-growers' Conference.

Editor "The Farmer's Advocate":

I enclose a skeleton programme of the Dominion Fruit-growers' conference, March 20th, 21st and 22nd. Each of the Provinces has assigned to individual members of their delegations certain subjects that they will bring before the conference, from the standpoint of their Provincial conditions. We are not seeking to make this what might be called a popular meeting. We expect the bulk of the work to be done by the delegates themselves, and while we think it would be a most excellent opportunity for the general public to be informed upon various topics, and probably help in a variety of ways to improve conditions, the active part of the work will be confined very largely to the delegates representing the Provincial Fruit-growers' Association, and experts who may be specially invited.

PRELIMINARY PROGRAMME.

- Tuesday, March 20th. 10 a.m.—Opening address, Chairman (J. A. Riddick). Address of welcome, Minister of Agriculture. Appointment of Committee on Programme. Appointment of Committee on Credentials. Appointment of Committee on Resolutions. Statistics and Fruit Crop Reports. 2.30 p.m.—The Fruit Marks Act (amendments). Packages. Wednesday, March 21st. 9.30 a.m.—Transportation. 2.30 p.m.—Fruit Exhibits and Fall Fairs. Adulteration of Fruit Products. 8.00 p.m.—Evening meeting. Thursday, March 22nd. 9.30 a.m.—Experimental Station Work. Markets and Marketing. 2.30 p.m.—Horticultural Publications. Is a Permanent Dominion Organization Desirable? Miscellaneous. Ottawa. A. McNEILL, Chief, Fruit Division.

Good Apples, Properly Packed, Sell Well in Britain.

Editor "The Farmer's Advocate":

A consignment of 1,700 boxes was shipped from Halton Co., Ont., in the fore part of December last, and consigned to the well-known firm, L. & H. Williams, Ltd., fruit brokers, the Bazaar, Glasgow, Scotland. The shipment realized splendid prices all through, and some particulars as to how the fruit was handled should be of use to shippers sending apples to the Old Country markets. The entire pack was sold in the Glasgow market the Friday before Christmas at unusual prices, though there was only a limited number of buyers present at the sale. The apples were packed in three grades, viz., XXX, extra, extra; XXX; the XX, grade being packed in barrels. Kings brought \$3.00, Spies \$1.87 to \$2.00, Greenings and Baldwins \$1.62 to \$1.80, "Various" bringing \$1.00 to \$1.25 per box. In picking, the apples were put in boxes, and hauled on spring wagons to a packing-house and stored, until the entire crop was under cover. Packing the apples commenced immediately, the package used being the 42-pound box, the inside measurements of which are 18 x 10 x 9. The package was prepared as follows: A border of fancy paper was pasted around the sides of the box, meeting in the center, then a band of white tissue paper was placed down the center, and a square of corrugated paper placed on the bottom. In packing the large varieties, it was sometimes found necessary to place the apples on their sides, otherwise the fruit was put in stem-end, downwards. Every apple was sized and sorted, making an even grade as to size, uniformity and color, and placed in the package by hand, a piece

of thick white paper being placed between each layer. Corrugated paper and excelsior were put on the press end of the box, eliminating the possibility of bruising during transit to a minimum. Packing tables having wooden frames and duck canvas tops expedited matters in culling and grading.

The dimensions of the Government standard box is 20 in. by 11 in. by 10 in., and should meet all the requirements of the fancy-apple trade. We believe nothing but the best varieties of apples should be shipped in boxes, as past experience and results from this shipment prove conclusively that the class enumerated as "various" do not pay when shipped in boxes. The cost of boxes, packing material, paper, etc., brings the cost of the bare package up to 22c. per box, not including labor. The unprecedented price the Kings fetched, excelling the famous Californian Newton Pippin, and the keenness the various buyers showed in their efforts to secure all they could of this variety to meet the requirements of the Christmas trade, go to prove that only the very best varieties, most carefully put up, should be sent in boxes. If shippers adopt the above-mentioned method, and packing the ordinary varieties in barrels, leaving the XX at home for evaporating purposes, they will establish their brand in the markets of the Old Country, which the consumer there will eagerly look for, besides getting gratifying returns for the extra time and care taken in making the package high-grade and attractive.

ORCHARDIST.

APIARY.

Beginning Beekeeping: How Much Will it Cost?

It is not necessary to have a very elaborate or expensive outfit of hives and fixtures to start beekeeping on a small scale (which is the only safe way to start). It is important when beginning, to begin properly, with a good movable frame hive, and other things as they should be. The man who thinks he can keep bees just as well and profitably the way his grandfather did it, had better not try to keep them at all. Bees in a box-hive are like a chipmunk in a stone fence—you know where he is all right, but that's about as far as your knowledge or control of him goes.

Let us see what the beginner in beekeeping should have, and get an idea of what it will cost him. First, a colony of bees in a good hive, will cost in the spring about \$5.00, or perhaps a little more. Buy them from a reliable man who lives at a considerable distance, for a beekeeper never wants to sell bees to a near neighbor; and quite naturally so, for it is something like inviting said neighbor to turn some stock loose in his pasture, and not many farmers will do that. Here it may be remarked that, if many bees are kept in a neighborhood, it will seldom prove profitable to try and crowd more in. But to get back to business. It is necessary to have an empty hive to put a swarm in when it comes, for the bees may be expected to swarm at least once. This, with a top story for the swarm to store honey in, will cost about \$2.00; a top story for the parent colony, 75 cents; enough comb foundation to fill the frames in these hives will cost about \$1.50, if full sheets are used, as they should be. A small extractor may be bought for \$5.50, and this, with a honey-knife and a smoker, each costing about \$1.00, will get things going. The total cost of this outfit, \$16.75, may look very big to the person who thinks that three or four dollars should start him going in the bee business. But, with a good season, and careful management, he can get enough honey to pay most of the initial expense, and if he then wants to sell out, he has an outfit that is worth something. In running for comb honey, the first expense would be a few dollars less; but after that it would be greater, and the first receipts, as well as the receipts for three or four years, would almost surely be smaller, for it requires much more experience to make a success of producing comb honey than extracted honey, and only an expert can manage the bees so as to secure anything like as much of the former as of the latter.

The first hives should be bought from a regular manufacturer of bee supplies, and, for a beginner, it might be advisable to have one of them made up at the factory, so he can see just exactly how the pieces should go together. After he learns how to handle the hives and frames, and realizes the importance of absolute accuracy and uniformity, he may make the hives himself, if he is a fairly handy man with a saw and plane. The Langstroth hive is generally recognized as the standard, and is a safe hive for any beginner to adopt. There is no patent on this hive or any of its parts, so that anyone is at liberty to make it if he wants to do so. Bees in this style of hive will sell from 10 to 20 per cent. higher than in other size hives.

Victoria Co., Ont.

E. G. H.

POULTRY.

Rearing Turkeys.

Part I.

This is the first of a series of three articles on the subject, by W. J. Bell, Simcoe Co., Ont., an expert, practical turkey-raiser, who has lectured on turkeys the past four years to the poultry class at the Ontario Agricultural College.

Turkeys forage for more of their food than any other fowl, and the bulk of what they consume is absolutely waste products, or, worse, a positive injury to crops, such as grasshoppers, crickets, bugs and weed seeds. On this account there is no cheaper meat produced, and yet turkey meat, when placed upon the market, usually commands the highest price. For this reason turkeys are a very profitable crop for those who are successful in raising them.

LOCATION.

The first requisite to success in rearing them year after year is ample range. The nature of the soil is not really important, but I should hesitate about rearing them in even a moderate flock on land inclined to be wet. Wet of itself is not so very fatal to young turkeys, but wet and cold combined most certainly are. I consider gravelly land with a running stream the ideal location, and to do their best not more than fifty birds should be reared in one flock. For these fifty birds I should like to have one hundred acres of range. Of course, I am aware that half this amount of range would carry the above number of birds in many seasons, but for those who intend to stay in the business year after year, with a certainty of raising not less than forty choice birds, I should say by all means have the hundred acres. By the large number of questions I have been asked through the mails the past season on turkey ailments, I am forced to the conclusion that the average turkey flock is not nearly so healthy as formerly. I attribute this condition largely to the increased number of turkeys and other fowl that it is being attempted to raise in the one flock or upon the same premises. In the report of the Live-stock Associations for 1904, Mr. Robert Miller, in an article on sheep-breeding, says: "I have a farm of 140 acres that is well adapted for sheep, but not for a heavy stock of sheep. I can scarcely grow lambs on that farm now, because there have been thousands of sheep on it from year to year for a good many years, and it has now got to that condition that it is so filled with a certain poison that apparently comes from sheep, that young sheep up to six or eight months old won't thrive there, and I have to change and put my sheep on another farm, and if I had kept just a reasonable number of sheep there it would never have got to that condition." In my judgment this applies exactly to raising turkeys, and so sure as you double and treble the number of fowl on your premises, just so sure will you double and treble the chance of killing the young turkeys. The nature of the range as to crops is not really important, pasture land being good, also meadow stubble, which is generally cut before the young start roaming much. However, I notice they like a change, and for this reason a grain and hay farm presents the ideal range after the crop is taken off.

BUILDINGS.

In the matter of buildings, they are easily supplied, and I would not care to contradict the person who would say that they are healthier and stronger if allowed to roost on the fences and trees the year around. Upon no condition should they be compelled to roost with hens in a warm henhouse. I get mine to roost during the winter months in a cattle shed open to the east, and single boarded on the other three sides. The modern farm barn plays no small part in the number of sickly turkeys we now hear about. In bygone years the farm buildings were usually in the form of an L, which protected them from the cold winds, and where they could scratch all day in the straw, which was usually there in abundance. Contrast this with the large single building now in use, with scarcely so much as a straw allowed outside. The latter are not conducive to healthy breeding stock.

BREEDING STOCK.

My experience is that the age of the breeders is not important, but good, strong, healthy, well-matured females, of medium size, mated to a large, long, lively male, will prove the most prolific mating, and on an average it will require five females to make sure of the fifty poults. These breeders should only be in moderate flesh, and as the females have a tendency to becoming fat towards spring, all grain should be withheld from them at this time. The male, however, should have one good feed of oats or wheat each day. In selecting breeders, give the preference to those that are long in body and short in leg, as they do not show such a prominent breastbone when dressed as the short, deep-bodied ones. With reference to the breeding stock, I do not see the necessity of changing the males every season, as is so generally practiced. The impression prevails that so-called "inbreeding" reduces the size of the birds. I selected my best birds for many years in the beginning of my turkey-raising experience, and bred them together, irrespective of relationship. I found by doing so the size was increased instead of decreased, but that deformities, such as crooked toes, wry tails and crooked breasts were becoming very common. I

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now practice occasionally buying a female from some good flock, and mating her to one of my best males. From the produce I take the best female, and mate the following season to her sire. I now have them three-fourths the blood of the sire, and I will select the best male and breed to my original females. I find this is sufficient fresh blood to bring into my flock in order to hold their size, color and shape. All this dread of inbreeding is caused by the retaining of the worst specimens in a flock for breeders. There are probably those who will question that it requires five females to ensure fifty poults, because they can break up the hen from hatching after laying her first clutch of eggs, and have her lay a second lot. I do not practice this plan, and am not going to advise anyone to follow it, as I much prefer a turkey to hatch and rear the young to any other plan, and one early-hatched turkey is generally worth two late-hatched ones. Besides, the latter are always the first to contract disease, and in many cases will introduce it into a flock that otherwise would remain healthy. By "early-hatched," I mean hatched about first of June, and by "late hatched," those that hatch after the first of July. On an average, June 1st is early enough in this section to hit favorable weather, but in Southern Ontario, probably one week earlier would be better. This hatching time is more important than many will think, as no amount of feeding or care will make up for a setback caused by a cold, wet time.

THE FARM BULLETIN.

Eben W. Gowan, Norfolk Co., Ont.: "I received the premium knife some time ago, and am much pleased with it. Thanking you, I remain."

A solution of dried casein prepared by the use of acid is said to be an excellent cement for wood, china, and anything that will stand the coagulation temperature.

If Subscriber, Norfolk Co., Ont., who sent us three questions about stallions, will forward his name and address, we will, if he is on our subscription list, attend to his inquiries.

If "Faithful Reader and Friend," of York County, who sent an enquiry about lame horse, will send his name and address, his question will be answered, if his name is on our subscription list.

Mr. R. L. Borden, M.P., Leader of the Opposition in the Dominion Parliament, has sent a typewritten letter to several Deputy Ministers, explaining that he is asking members of the Opposition to send him an intimation as to what information they may desire during the coming session, the idea being to facilitate the securing of such information, and thus shorten the session. Evidently Mr. Borden feels that he should do something to earn his salary.

A Montreal despatch stated that a consultation was held last week, at the instance of Hon. L. P. Brodeur, Dominion Minister of Marine and Fisheries, by representative cattle shippers and steamship agents, with a view of deciding on some means to prevent abuse in the engagement of men to take care of cattle being transported across the ocean. Affidavits produced by Secretary Robb, of the Shipping Federation, proved that many men had been badly treated by employment agencies, which had practically been conducting a crimping business. As a result of the meeting, shippers and steamship men will consider the advisability of conducting employment agencies of their own.

The Kingsville Percheron Sale.

The auction sale on February 28th, of the Percheron stallions, mares and geldings belonging to Messrs. I. A. & E. J. Wigle, of Kingsville, Essex Co., Ont., was well attended, there being upwards of 500 present, including buyers from a distance of over 400 miles, who were delighted with the quality and character of the horses, and availed themselves of what the Messrs. Wigle say were bargains, considering the class of stock, as they claim there were mares in the sale that weighed over 1,800 lbs. On the whole, however, they call the sale a success. Mr. Wm. Prosser, of Leamington, was the auctioneer, and proved himself an exceedingly capable salesman. The average price for the 22 head sold, old and young, was \$460. Following is the list of sales:

Takon, stallion, 4 yrs.; Gosfield Horse Club.....	\$1,500
Coquet, s., 7 yrs.; Neville & Fox, Ruthven.....	1,000
Comptoir, s., 3 yrs.; A. Golden, Kingsville.....	1,200
Fearless, s., 2 yrs.; Wm. Beley, Rosseau.....	710
Bayonne, 2 yrs.; Rodney Smith, Ruscom.....	240
Britain, 2 yrs.; R. McIntosh, Toronto.....	700
Allie, mare, 3 yrs.; C. Johnston, Kingsville.....	450
Idol, m., 7 yrs.; Albert Cady, Ruthven.....	470
Queen, m., 4 yrs.; E. Beck, Olanda.....	460
Laura, m., 7 yrs.; J. Steenman, New Hamburg.....	360
Daisy, m., 4 yrs.; L. Wigle, Kingsville.....	485
Venetia, m., 3 yrs.; J. W. Biley, Rosseau.....	350
Bettie, m., 3 yrs.; C. Johnston, Kingsville.....	250
Bretienne, 3 yrs.; Albert Cady.....	250
Twilight, m., using 2; Geo. McGarven, Chatham.....	290
Joel, m., 1 yr.; Lambert Wigle.....	270
May, 1 yr.; J. Rosebrook, St. George.....	250
Joe, g., 1 year; Geo. McLean, Harrow.....	210
Ruba, m., 8 mos.; J. Steenman, Hamburg.....	225
Alberta, 10 mos.; G. Wigle, Ruthven.....	205
Billy, 5 months; J. Steenman.....	190

Dairy Instruction in Ontario, 1906.

The Ontario Department of Agriculture and the Eastern and Western Dairymen's Association are again co-operating in furnishing instructors to visit factories and creameries periodically throughout the season, from May till October, inclusive, for the purpose of assisting makers in improving their methods, giving advice, as to equipment, drainage, ventilation, etc. The Department requires that each factory receiving instruction pay \$15 for the season. This amount represents about half the actual cost to the Department. The instructors, in addition to giving instruction to the makers, will devote some attention to giving advice to farmers as to the best method of cooling and taking care of their milk. Each instructor will be supplied with leaflets, giving the most approved methods of caring for milk, and will have pleasure in leaving one with each producer as visited, and a few extra copies will be supplied to each maker. It is particularly desired that new factories or factories which are operating under a new name, inform the Department of Agriculture, Toronto, of the name of the factory, together with list of officers. We would be pleased to have your paper draw the attention of your readers to the work which is being done to better the position of dairying in the Province. We would be glad to have factories in Western Ontario apply, at an early date, to G. H. Barr, London, and those in Eastern Ontario to G. G. Publow, Kingston.

ABRIDGED COPY OF CIRCULAR LETTER.

Dear Sir,—At the recent annual conventions of the Dairymen's Associations, the work of dairy instruction as carried on during the past year was commended, and resolutions were passed, asking that a system of sanitary inspection of cheese and butter factories be provided for. In order to make the work of instruction and the proposed work of sanitary inspection more thorough, it is desired that as many factories as possible be included in the syndicates to be formed for the coming season's instruction work. The Department, as you are aware, is devoting a large sum of money to the work of instruction, and are anxious to make it as effective as possible during the coming season.

The fee for the coming season will be the same as in 1905, namely, \$15. This should be sent to my address not later than Sept. 15th. Cheques and post-office orders must be made payable to the order of the "Treasurer of Ontario," not to my order.

Even though this work has been carried on throughout the Province for several seasons, there has been a misapprehension in some quarters as to the duties of the instructors. First and foremost, their duty is to instruct, not only the cheesemakers and proprietors as to proper equipment, methods in manufacture, care of cheese, etc., but also to call upon the individual producer and advise with him as to the proper care of milk on the farm, to discuss sanitary conditions about the stables, proper location of milk stand, place for storing milk, best method of cooling, etc.

GEO. A. PUTNAM,

Director of Dairy Instruction.

Parliament Buildings, Toronto.

Have Asked for Sanitary Inspection.

On March 6th, a joint deputation, representing the Eastern and Western Ontario Dairymen's Associations, waited on Hon. Nelson Monteith, Provincial Minister of Agriculture, to ask for the appointment of inspectors to inspect and supervise Ontario cheese factories, creameries and dairies. The Minister, in reply, conceded that the deputation had made out a strong case, but reminded his interviewers that it took money to start these things and keep them going. They must see, too, that the law conferred on the men sent out full power to carry out the duties assigned them. As they considered two men might be sufficient to start with, he would see what he could do. "I, for one member of the Cabinet," he said, "will do what I can to forward your request."

Prof. C. C. James, the Deputy-Minister, thought that inspection of cheese factories and creameries would be all that could be done this season. Later the scope of the inspectors' duties might be extended to include some supervision of the farms of factory and creamery patrons.

Western Grain Output.

The Globe's Ottawa correspondent says: Lake ports grain returns for the first six months of the crop year, which includes the principal shipping season, show a heavy increase in the grain output of the West. The total grain receipts at Fort William and Port Arthur were 42,312,558 bushels, against 26,292,244 for the same period of the year before. The receipts of wheat alone at the two ports for the half year were 31,091,123, and for the previous period 28,831,883. The shipments of wheat during this time were 34,794,323 bushels, as against 18,604,109 for the corresponding six months of last year. There are in store at the two ports 6,421,875 bushels of wheat, against 5,505,993 at the same time last year.

Another Cow-testing Association.

On March 5th the seventh Cow-testing Association in Canada was organized at St. Edwidge de Clifton, near Coaticook, Que., with 26 members and 310 cows. The officers are: President, A. Charron; Vice-Pres., H. Ladoncur; Sec., L. Ladoncur; Committee, A. Chappellaine, O. Desrosiers and J. B. Herbert.

The Sugar Season.

"Sap's running." How the discovery electrifies the boy! What visions of sap and syrup and sugar, of plodding through the snow in the woods, distributing buckets, tapping trees and then gathering the sap and boiling it over the arch in the sugar house; or, if he is so unfortunate as to have an up-to-date father, in the modern evaporator, where it runs from one compartment to another, until at the last one the boiling point of 220 degrees F. indicates that it is sufficiently dense to be drawn off as syrup. There isn't so much fun in the business as there used to be; the woods are thinner and there are not many that have the sugar shanty so well screened that you can't see, daylight from it through the trees. This is too bad, but, fortunately, the modern boy doesn't realize what he is missing. Time was when the writer considered that any boy whose father's farm did not have a good bush with maple trees to tap in spring, and with a nut crop to harvest in the fall, was deprived of at least one-half the pleasures of country life. Even yet the feeling lingers that making maple syrup in a good, dense, thrifty bush, "where you can't see out," is about the sweetest, unadulterated joy known to the heart of man or boy. Every smudge of grime is an additional pleasure, every extra trip for a tub of sap an added zest, every evening spent boiling in the sugar shanty, making the sap sputter and hop, throwing off clouds of fragrant steam, is a dream of bliss; every gallon of the pure amber fluid, like a harvest of yellow gold ore. Yet some people think syrup-making is a slavish job! No wonder there are people who do not like the farm. The writer has made syrup every spring but three or four since he was big enough to toddle about the arch, and never has he seen the buckets gathered without a pang of regret that there could be no more use for them for ten or eleven months.

But if there is less fun there is still money in the business, where it is carried on for profit. Labor-saving has been reduced to a fine art in some instances. Down in Clinton Township, County of Lincoln, along the edge of the limestone plateau, which drops abruptly away to the north towards Lake Ontario, there are some magnificent hard-maple bushes growing, apparently right on the rock, with nothing to feed on but a little leaf mold and what silt there is in the crevices of the weather-beaten rocks. The sap starts early here, some bushes having been tapped as early as February. There is one bush of this kind on the farm of Andrew Thompson, which now contains hardly any trees but maples, and where over 1,400 are tapped every year. Tin spiles

this case is only an instance of thousands, where beautiful woodland, that should be a source of perennial profit, comfort and pleasure, is being sacrificed to the cow's mouth.

A few directions for the inexperienced may not be amiss. Don't tap too early; while the earlier the sap runs the better the quality, still a succeeding spell of cold, windy weather dries up the trees, and the total cold, windy weather dries up the trees, and the total season's run of sap is reduced. The best sap weather is a thaw after a freeze-up, when there is a good white frost every night or so. The nightly frosts prolong the flow of sap and increase the volume obtained. After the first run is over, and another seems likely to begin, the spiles may be drawn and the trees freshened by the reaming. This increases the flow and improves the quality of the sap. Tin spiles are advised, and tin buckets with covers, made of a sheet of tin, with one corner dog-eared and a whole cut in it through which the spile is passed. The sap cannot be too carefully protected, or too often gathered. Rain water dripping from the branches above colors it, and reduces the crystallizing quality of the syrup, which is a disadvantage if it is desired to make sugar. Leaves and bits of bark have the same effect. The sap should be gathered promptly and boiled in not too large batches, and if proper care is exercised the color will be almost like that of water. Indeed, we have seen syrup boiled in porcelain-lined kettles that was as clear as melted granulated sugar. Of course, some knowing market women are suspicious of the Simon-pure article, but if one works up a regular private trade, he can command a premium for the pure goods not colored or tainted with the so-called "genuine maple" flavor. It used to be a practice with some, who used the apple spiles and brick arch, to cleanse the syrup before it got to the proper consistency, by boiling in it a mixture of milk and eggs. This is unnecessary, as by letting the syrup settle a time before finishing off the pure liquid may be poured off and the "settlings" collected for a sugaring off. Standard syrup weighs 13 pounds 2 ounces to the gallon; if lighter, it will ferment, if heavier, it will crystallize.

Eastern Ontario Fairs Association.

About forty delegates, representing twenty-four agricultural societies, attended the annual meeting of the Eastern Ontario Fairs Association, held in Ottawa on March 7th. The meeting was of businesslike character, but chiefly educational in its purpose. There was no mention of any probability of the Association discontinuing its work as an organization. R. H. Field, Brockville, President, conducted the two sessions. In his opening address he suggested that a representative of the Association should be appointed to assist the Superintendent of Fairs in the compilation of an Eastern Ontario circuit. Later in the meeting this work was delegated to the Secretary.

The election of officers resulted as follows: President, R. H. Field, Brockville; First Vice-President, B. Mosher, Merrickville; Second Vice-President, John Brown, Beachburg; Secretary, Treas., R. B. Faith, Ottawa. Directors: B. C. Hughes, Prescott; D. Hurley, Vankleek Hill; W. K. Farlinger, Morrisburg; W. M. Bass, Newboro; R. W. Hodgins, Shawville; W. J. McNaughton, Lancaster; J. G. Harkness, Cornwall.

Only one resolution was passed. It was that all agricultural societies should be provided by the Government with a uniform treasurer's book similar to that in use by municipalities. The discussion and vote on this question was unanimously favorable. H. B. Cowan, Superintendent of Fairs, asked the opinion of the meeting as to whether secretaries should be appointed annually, or elected to serve during the pleasure of the directors. A dissent to the question was made that it was put for political reasons. Mr. Cowan said he had never heard that objection urged before at any agricultural meeting. The president and others spoke strongly to the effect that those who had the agricultural welfare of the country at heart did not consider politics in the matter at all. A vote on the question showed the meeting to be in favor of leaving the law as it is.

In a paper on "The Duties of a Secretary," Mr. W. E. Smallfield, of Renfrew, explained a very complete and labor-saving system of bookkeeping for agricultural societies. He said the secretary's duties were both secretarial and managerial. He had to look after probable new exhibitors and what their exhibits were likely to be, keep in touch with all the avenues of publicity, adopt labor-saving plans, and keep posted as to new departures and what others were doing. "The Duties of Directors" was dealt with by John McLaughlin, of



The Modern Sugar House—Too Much Daylight Aroun this Shanty.

and covered tin buckets are used, that the sap may be kept perfectly pure. It is gathered with an ordinary upright draw tub on a sleigh, hauled to a point "on the mountain" just above the sugar house, and here run off through a rubber hose into a receiving vat, thence through an iron pipe thirty or forty rods down "the mountain" side to a number of elevated vats just outside the sugar house, which building is between 30 and 50 feet lower than the bush, and is with-in an easy stone's throw of the farmhouse. From the large vats outside it is drawn off by a tap into a Champion evaporator, where it runs by a siphon system from one compartment to another, till it is tapped off as syrup, being then run through a felt strainer to remove the lime precipitate. The sap is not handled from the time it is dumped into the draw tub till it is put up in gallon tin cans and labelled for market. The make runs in the neighborhood of 200 gallons of syrup a year, all disposed of to private customers.

Unfortunately, the bush is dying, for it is closely pastured, and the absence of undergrowth gives the wind a chance to sweep through and blow out the leaves, so that the leaf mold is decreasing, and the trees one after another going hollow at the heart. It seems a pity to see such a magnificent protection sacrificed, especially as the land is of doubtful value for other purposes, but

Roxborough Township Agricultural Society. In the discussion following, the advisability of having directors who were also exhibitors was touched upon. It was generally conceded that the two positions were not inconsistent, but a director on exhibition day should confine his attention entirely to his public duties as director.

It should be mentioned that the secretary was deputed to confer with the Superintendent of Fairs, with regard to securing expert judges to go from fair to fair. Mr. Cowan pointed out that it was probable that expert judges in future would cost about \$5 per day, as it had been found that the best men would not act for the \$3 per day which had been the customary allowance. It was generally agreed that if judges were worth having they were worth paying for.

R. H. Field gave a very sensible address upon "What are Objectionable Attractions?" He said that what constituted attractions in one place might not be suitable for another. While in some places people went solely to see the agricultural exhibits, in others they were not interested in them to so great a degree. Side-shows "for men only" were particularly objectionable. Games of chance should be put off the grounds. The horse-race was a worthy attraction, provided gambling and pool-selling were eliminated. He took no exception to merry-go-rounds and features of that character, but could find no place for freaks of nature that had no educational effect. He favored acrobatic exhibitions and the time-honored balloon, but favored, on the whole, that the larger part of the outlay of every fair should be assiduously devoted to the promotion of agricultural interests.

Eastern Live-stock and Poultry Show.

The officials and energetic workers in connection with the Eastern Ontario Live-stock and Poultry Show, held at Ottawa, March 5th to 9th, feel quite proud of the success of the exhibition, and they have very good reasons to congratulate themselves.

CATTLE.

In the cattle classes, as in poultry, greater numbers, as well as greater excellence, prevailed than at any former Winter Fair held in Ottawa. The veteran fat-stock showmen, Jas. Leask, Greenbank, and Jas. Rennie & Son, Blackwater, were present, as well as Messrs. Armstrong and Black, of Fergus, to share the awards with Reid & Co., Hintonburg; N. A. Robertson, Arnprior; R. C. Sparrow & Son, Arnprior, and others in Eastern Ontario, which assured a good showing in the different classes of cattle. As usual, a very large proportion of the grades were of Shorthorn blood, and, with the large numbers of pure-bred Shorthorns, made it look almost like an exhibit of that breed, notwithstanding that in one barn a handsome bunch of Polled Angus steers were stalled.

While Mr. Robertson secured a majority of the 1st awards in the Shorthorn class, Rennie & Son, as well as Reid & Co., carried away red ribbons, and Armstrong & Co. secured first on heifer under two years. In all the sections the prizewinners were nicely brought out. Armstrong, Black & Co. made the exhibit of Polled Angus, and, while their entries were not in high flesh, they were smooth, and showed good breeding.

In the Grade class stronger competition prevailed than in any of the other sections. Jas. Leask had a nicely-fleshed two-year-old steer for first prize, and Armstrong & Co. showed one larger, but not having quite as good quality of flesh, coming second. Armstrong & Co. had a very smooth, soft-haired steer first in yearling class. They were third and fifth in this section also, while Leask had a very smooth, nicely-lined, well-covered steer for second, and a fit fourth also.

Leask's first-prize steer under one year was, perhaps, the best steer in the show—a very nice, even back, with that firm, mellow flesh we are advised to look for in the best bullock, and at the same time showing a depth and thickness at heart girth, spread and depth of rib and vigor which indicates strong constitution and profits to the producer. The third prize also went to Leask. Armstrong & Co. had a good second.

The grade cows over three years were not so good a lot as in some of the other sections, which seems usually the case. It would possibly be better if those over four years old should be excluded. The class for two-year-old heifers was much better, and had several good entries. But it was in the heifers under two years that the keenest competition came into the ring. Messrs. Rennie showed a well-grown heifer, nearly up to the two years, that showed a wonderful thickness of flesh and smoothness as well, and only harshness of touch forced her to take second place to Mr. Leask's younger heifer, which, although not carrying so much thickness of flesh, had a covering of remarkably even flesh all over the back and ribs.

The export steer class rivalled any showing that has been made in this class, no less than six trios coming into the ring; and they were eighteen good steers, although some of them were not quite well enough finished to class as good exporters; they nearly all showed good quality. The closest competition came between the first-prize lot of Mr. Leask and those of Messrs. Rennie. The first lot were nearer the type sought by the feeder, as well as having well-padded backs. They had a sappiness and thickness of flesh not found on the second-prize lot, and yet the latter had wonderfully well-padded backs, and were evidently much fatter than those placed first.

SHEEP.

The sheep barn was far too much crowded, and comprised an excellent showing of most of the mutton

breeds, the Shropshires being the only class not represented. Much more interest was taken in the sheep ring than usual, which may be accounted for by the great reviving interest taken in the business. Cotswolds were shown by Messrs. Lyons, of Norval; Wright, of Glanworth; Luxton, of Milton—Lyons securing all firsts. L. Parkinson, Eramosa, and Armstrong & Co., Fergus, had the Lincoln exhibit, and showed some good lambs. A. W. Smith, Maple Lodge, and A. G. H. Luxton, Milton, had a nice exhibit of Leicesters, Mr. Smith's winners at Chicago being in the lot, and appear to have gone on well since that time, all the first prizes going to his pens. Oxfords had a good showing from W. E. Wright, Glanworth, J. A. Richardson, South March, and Armstrong & Co., Wright winning ten firsts. Telfer Bros., Paris, and J. Jackson, Abingdon, showed Southdowns, and had a beautiful and excellent class of those beautiful quality sheep, including first-prize winners at Chicago. Telfer Bros. got the majority of firsts. Dorsets were shown by Harding, Thorndale; Richardson, South March, and Luxton, Milton. Mr. Harding's lambs were those winning at nearly all the previous large shows this season, and were an extra good lot, winning all firsts. The Hampshire and Suffolk class was perhaps as large as any in the show, excepting, possibly, the Leicester. J. Bowman, Guelph, had first-prize yearling wether, and Telfer Bros. secured all other firsts. A large exhibit of grades and crosses was present. A. W. Smith won all first prizes.

SWINE.

The swine classes were generally well filled, and around the pens was indicated the very general interest now taken in this profitable branch of agriculture, and many profitable sales were made.

Berkshires were shown in good form by Mr. Lyons, Norval, Ont., of excellent type; and Reid & Co., Hintonburg, Lyons getting the firsts. J. E. Brethour, Burford, and Jas. Featherston, Streetsville, contested the place of honor in the Yorkshire class, and seldom is competition much keener, nor a better exhibit, Bethour getting all the firsts. Reid & Co., and A. H. McNish, Lyn, Ont., divided the honors in Tamworths. The export bacon hogs made one of the finest exhibits that has been seen. Brethour was first for three pure-breds, and Featherston for three grades. Featherston won first for barrow 6 months and under 9, Brethour for barrow under 6 months. In the carcass competition, Featherston won first in the bacon hogs, both in pure-bred and grade sections, with Brethour second. Brethour's first-prize pen alive, however, were not killed. The whole dressed-carcass exhibit was very well presented, and showed care and taste in dressing, toothsome-looking carcasses in bacon hogs, cattle and sheep being shown in profusion, while the dressed poultry was the best ever shown in Ottawa.

The dairy contest was extensive, and, while no phenomenal showings in production were made, the test as a whole was very instructive.

Never has there been at a Winter Fair in Ottawa such good attendance at the lectures as was present this year, and the close attention and intelligent interest shown all through the series indicated that good results must follow the efforts of the Winter Fair Board in getting as good men as were available to take part in the educational part of meetings.

POULTRY.

No part of the Eastern Ontario Live-stock and Poultry Show is more indicative of growth and progress than the poultry department. The entries were a big increase over the previous year. The total of tickets issued was 1,570, nearly 800 more than 1905. The bulk of the exhibits were, of course, from Ottawa and the Ottawa Valley, but Western breeders thought the show of sufficient importance to send a large representation. In this respect London came loyally forward with over 200 entries. About 120 birds were sent from Milton in charge of Mr. F. Wales, a large number of these being his own, while others were sent by Telfer Bros. and E. G. H. Luxton.

The poultry department had nothing to complain of in its judges. "Are you satisfied?" your correspondent asked of several exhibitors, and was given in every case an affirmative reply. The judges were Sharpe Butterfield, of Windsor; L. C. Jarvis, Montreal; and N. Cosh, Port Dover. All spoke very highly of the show. "Of course, it is not up to some of the others in size," said one, "but the quality is up to the standard seen anywhere."

The Barred Rocks were a feature of the show. These, with the White Wyandottes and White Leghorns, constituted the best-filled classes. In Barred Rocks, there were 21 cocks in the selling class, and 21 cocks and 21 cockerels in the prize classes. There were 34 entries in the White Wyandotte selling class. The turkey classes were not particularly well filled, nor the ducks, but there were some fine entries of geese. In ornamental fowl, Mr. J. A. Richardson, of South March, showed two fine families of peafowl.

Greig President Winnipeg Exhibition.

A despatch from Winnipeg announces the election to the presidency of the Winnipeg Industrial Exhibition Association of Mr. Geo. H. Greig, Live-stock Commissioner for Manitoba, and former editor of the Winnipeg "Farmer's Advocate." Mr. Greig, from his extended experience as a director of the Association, and his intimate acquaintance with the needs and requirements of live-stock exhibitors and of the farming community generally, is eminently qualified for the duties of the important position to which he has been elected. We understand the managership has been offered to Dr. Bell, of Toronto.

Experiments with Farm Crops.

The members of the Ontario Agricultural and Experimental Union are pleased to state that for 1906 they are prepared to distribute into every township of Ontario material for experiments with fodder crops, roots, grains, grasses, clovers and fertilizers. Upwards of 1,600 varieties of farm crops have been tested in the Experimental Department of the Ontario Agricultural College, Guelph, for at least five years in succession. These consist of nearly all the Canadian sorts and several hundred new varieties, some of which have done exceedingly well in the carefully-conducted experiments at the College, and are now being distributed free of charge for co-operative experiments throughout Ontario. The following is the list of co-operative experiments in agriculture for 1906:

No.	Experiments.	Plots.
1	Three varieties of oats	3
2	(a) Three varieties of six-rowed barley	3
	(b) Two varieties of two-rowed barley	2
3	Two varieties of hullless barley	2
4	Two varieties of spring wheat	2
5	Two varieties of buckwheat	2
6	Two varieties of field peas	2
7	Emmer and spelt	2
8	Two varieties of Soy, Soja or Japanese beans	2
9	Three varieties of husking corn	3
10	Three varieties of mangolds	3
11	Two varieties of sugar beets for feeding purposes	2
12	Three varieties of Swedish turnips	3
13	Kohl-rabi, and two varieties of fall turnips	3
14	Parsnips, and two varieties of carrots	3
15	Three varieties of fodder or silage corn	3
16	Three varieties of millet	3
17	Three varieties of sorghum	3
18	Grass peas and two varieties of vetches	3
19	Two varieties of rape	2
20	Three varieties of clover	3
21	Sainfoin, lucerne and burnet	3
22	Seven varieties of grasses	7
23	Three varieties of field beans	3
24	Three varieties of sweet corn	3
25	Fertilizers with corn	6
26	Fertilizers with Swedish turnips	6
27	Sowing mangels on the level and in drills	2
28	Two varieties of early, medium, or late potatoes	2
29	Three grain mixtures for grain production	3
30	Three mixtures of grasses and clover for hay	3

The size of each plot in each of the first twenty-seven experiments, and in Nos. 29 and 30, is to be two rods long by one rod wide; and in No. 28, one rod square. Each person in Ontario who wishes to join in the work may choose any ONE of the experiments for 1906, and apply for the same. The material will be furnished in the order in which the applications are received until the supply is exhausted. It might be well for each applicant to make a second choice, for fear the first could not be granted.

J. BUCHANAN, Director.

Ontario Agricultural College, Guelph.

The London Shire Show.

At the annual London, England, Shire Horse Show, February 27 to March 2, there were 590 entries, and these were more select than usual, owing to new rules restricting the number of entries received. The quality, therefore, was of a very high order.

Several of the contests were interesting and exciting, especially in that for the honors in the big stallion class, the final heads of the class being Messrs. Forshaw's "Present King II," a newcomer to the show; Earl Egerton's "Tatton Friar," a noted sire, and champion at the Royal Lancashire Show; and Lord Rothschild's "Girton Charmer," last year's champion in London. In the end, on the decision of the umpire, these three splendid horses were placed in the order in which they are here mentioned. They all had their admirers. "Present King" also won the championship, where, again, "Tatton Friar" stood reserve, the junior championship going to Earl Egerton's "Tatton Dray King." Again, for mares, Messrs. Forshaw secured the championship with one fresh to the highest honors, in "Sussex Bluegown," a gray, bred in the South of England, with Lord Rothschild's famous "Princess Beryl" in reserve. The championship in the younger mare classes fell to Sir P. Albert Muntz's "Dunsmore Fuchsia," and it should be noted that the famous Dunsmore sire, "Dunsmore Jameson," again heads the list of sires of winners, with eighteen to his credit, the late Mr. Cross' "Lockings Forest King" coming next with nine. Further particulars next week.

Col. McGillivray is President.

At the first meeting of the newly-elected directors of the Toronto Industrial or Canadian National Exhibition Association, held March 5th, Lieut.-Col. J. A. McGillivray was, on the first ballot, elected to succeed Mr. W. K. McNaught, M.P.P., as President of the Association. Col. McGillivray's past experience as a director, his intimate knowledge of and sympathy with the requirements of live-stock exhibitors, and those of the agricultural community generally, eminently qualifies him for the position, while his genial and gentlemanly manner, even disposition and approachableness by the most diffident of farmers, should make his election peculiarly acceptable to that important class of the patrons of the exhibition. Mr. W. K. George was elected First Vice-President and Mr. Geo. H. Gooderham, Second Vice-President.

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Means more than interest paid only half-yearly or yearly. You as a business man will see the advantage, be your account large or small.

Deposits of \$1.00 and upwards received.

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MARKETS.

Toronto.

LIVE STOCK.

Export Cattle—Choice are quoted at \$4.60 to \$5.15; good to medium, \$4 to \$4.50; others, \$3.75 to \$4; bulls, \$3.50 to \$4, and cows, \$2.75 to \$3.50.

Butchers' Cattle—Picked lots, \$4.50 to \$4.75; good to choice, \$4.10 to \$4.40; fair to good, \$3.50 to \$4; common, \$2.50 to \$3; cows, \$3 to \$3.60; bulls, \$3 to \$4; canners, \$1.50 to \$2.

Stockers and Feeders—Trade fairly active. Short-keep feeders, \$4 to \$4.50; heavy feeders, \$3.85 to \$4.15; medium, \$2.50 to \$3.50; bulls, \$2 to \$2.75; good stockers, \$3 to \$3.65; light, \$2.75 to \$3; rough to common, \$2 to \$2.75, and bulls, \$1.75 to \$2.50.

Calves—3½c. to 6½c. per lb. Sheep and Lambs—Export ewes quoted at \$4.75 to \$5 per cwt., and bucks at \$3.75 to \$4.50. Lambs, \$6.75 to \$7.10 for grain-fed, and \$5.50 to \$6.50 for mixed.

Hogs—Selects, \$6.85 per cwt., and lights and fats at \$6.60.

HORSES.

Apparently the market has entirely recovered from the slight depression, and business is brisk again in all departments. Offerings have increased in a striking way, and buyers have an exceptionally good chance for selection. Unfortunately the complaint is still heard that too small a percentage of the receipts are of really high-class quality, and really first-class animals are scarce and high. For the commercial classes, the enquiry is brisk, and contractors are again attending the sales in larger numbers. Shipments to the West continue large, and remunerative prices are being obtained for everything of the right stamp. Delivery horses and the general-purpose stamp are in good request, while drivers and saddle horses find a ready sale. In fact, anything good can be disposed of, and while much of the demand is of a speculative nature, the market is none the less healthy for that. Following is the range of values in the

sale-rings—Single—cousters, 15 to 16.1 hands, \$125 to \$170; single robe and carriage horses, 15 to 16.1 hands, \$140 to \$200; matched pairs and carriage horses, 15 to 16.1 hands, \$300 to \$500; delivery horses, 1,100 to 1,200 lbs., \$140 to \$195; general-purpose and expressers, 1,200 to 1,350 lbs., \$110 to \$200; drafters, 1,350 to 1,750 lbs., \$170 to \$210; serviceable second-hand workers, \$70 to \$90; serviceable second-hand drivers, \$70 to \$100.

COUNTRY PRODUCE.

Butter—Creamery, 25c. to 26c.; solids, 23c. to 24c. Dairy lb. rolls, good to choice, 18c. to 19c.; large rolls, 17c. to 18c.; medium, 16c. to 17c.

Cheese—18½c. for large, and 14c. for twins.

Eggs—15½c. to 17c. for new-laid, and 13c. to 14c. for storage.

Poultry—Choice dry-plucked are quoted: Fat chickens, 11c. to 12c.; thin, 7c. to 8c. Fat hens, 8c. to 9c.; thin, 6c. to 7c. Ducks, 12c. to 13c.; thin, 6c. to 7c. Geese, 10c. to 11c.; turkeys, 14c. to 15c., for choice small lots.

Potatoes—Ontario, 65c. to 75c. per bag, on track, here; 75c. to 85c., out of store; Eastern, 70c. to 80c., on track, and 80c. to 90c., out of store.

Baled Hay—\$8 per ton for No. 1 timothy, and \$5.50 to \$6 for No. 2 in car lots, on track, here.

Beans—Hand-picked, \$1.75 to \$1.80; prime, \$1.65 to \$1.75; undergrades, \$1.25 to \$1.50.

Honey—\$1.25 to \$2 for combs per dozen, and 7c. to 8c. per lb. for strained.

FARMERS' MARKET.

(Retail Prices.)

Dressed hogs, light, cwt., \$9.25; heavy, \$8.75. Butter, 26c. to 28c. Eggs, 25c. to 26c. Spring chickens, dressed, 12c. to 14c.; live, 9c. to 11c. Old, dressed, 8c. to 10c.; live, 8c. to 10c. Turkeys, dressed, 15c. to 20c.; live, 12c. to 14c. Geese, live, 10c. to 11c.; dressed, 10c. to 12c. Potatoes, per bag, 85c. to \$1. Beef, hind quarters, 7c. to 8c.; fore quarters, 4½c. to 5½c. Veal, 3½c. to 10c.; carcasses, 8c. to 7c. Mutton, 8c. to 9c. Lambs, 10c. to 11c.

BREADSTUFFS.

Wheat—Ontario—No. 2 white, 75c., outside; mixed, 75c.

Oats—No. 3, to arrive in Toronto, 35c. to 35½c.

Corn—47½c. for No. 3 yellow, to arrive Toronto.

HIDES AND TALLOW.

E. T. Carter & Co., 85 East Front St., wholesale dealers in wool, hides, calf skins and sheep skins, tallow, etc., quote: Inspected hides, No. 1 steers, 10c.; inspected hides, No. 2 steers, 9c.; inspected hides, No. 1 cows, 9½c.; inspected hides, No. 2 cows, 8½c.; country hides, flat, 7½c. to 8c.; calf skins, No. 1, selected, 12c.; sheep skins, \$1.35 to \$1.50; horse hides, \$3 to \$3.25; tallow, rendered, 4½c. to 4¾c.; wool, unwashed, fleeces, 15c. to 16c.; wool, washed, 25c.

SEEDS.

High-grade seeds move well on an active demand for seeding purposes. Prices asked by local dealers per 100 lbs. are: Red Clover—Fancy, \$15.50; No. 1, \$15. Alsike—Extra fancy, specially milled, \$18; No. 1, \$15. Alfalfa—Good demand, \$16.

Montreal.

Live Stock—Shipments from St. John, N. B., and Portland, Me., continue fairly liberal, although it is claimed Americans are the principal shippers. Local live-stock markets have shown a firmer tendency for choice cattle, owing to scarcity of these. Choice have sold up to 5½c., and from that down to 5c., while fine ranged from 4½c. to 5c., and good from 4c. to 4½c., medium being 3½c. to 4c., and common, 2½c. to 3½c. Hogs, 7½c. to 7¾c. for mixed to selects, off cars, fats being probably obtainable at somewhat less. The supply of calves, sheep and lambs continues small, and prices steady. Calves will increase slowly from this forward. They are now selling at \$2.50 for poor to \$6 for fair. Sheep, 4½c., and lambs, 6c. per lb. Milch cows are offering at from \$35 to \$60 each.

Horses—Prices steady. Coal-cart horses, weighing 1,350 to 1,450 lbs., sell at \$175 to \$225; express horses, weighing 1,100 to 1,300 lbs. each, \$150 to \$200; heavy-draft, 1,500 to 1,700 lbs. each, \$250 to \$300; light-draft, 1,400 to 1,500 lbs., \$175 to \$225 each; choice saddle or carriage horses, \$300 to \$500 each, and broken-down old animals, \$75 to \$125.

Butter—It is thought that stocks here last week did not exceed 20,000 packages, which should be readily absorbed during the next six weeks; receipts moderate. Dairies, 17c. to 19c.; winter-made creamery, 21c. to 22c.; choice Octobers, 22c. to 22½c.

Cheese—12c. to 13½c. Poultry—Finest turkeys, 14c. to 15c., in a jobbing way; ducks and geese, 11c.; chickens, 12c. to 13c. for choice, and fowl, 9c. to 10c.

Eggs—Market gradually rose to the highest point in weeks. New-laid sold at 20c. to 21c.; held eggs also strengthened, and sold at 12c. to 15c. Prices, however, have gone back somewhat, and are not expected to go so high again.

Dressed Hogs, etc.—Fresh abattoir stock selling at 10c. to 10½c. per lb., country-dressed being 8½c. to 9½c., Manitoba-dressed hogs coming in between ordinary-dressed and fresh abattoirs. Lard steady at 7½c. for compound, and 12c. to 13c. for pure.

Potatoes—60c. to 65c. per 90-pound bag.

Seeds—The market for red clover is rather stronger again. Dealers are now paying \$7 to \$7.50 per bushel for it, country points, alsike being steady at \$4 to \$6.50. Timothy is arriving slowly; prices, \$2.25 to \$3.50 per 100 lbs., and flaxseed, \$1.20 per bush., Montreal.

Grain—A drop has taken place in prices of oats. No. 2, 39c. to 39½c., store, in car lots; No. 3 being 38c. to 38½c. Stocks increased largely last week, being estimated in the vicinity of 180,000 bushels.

Hides—Prices paid are 11c. for No. 1 hides, 10c. for No. 2, and 9c. for No. 3, per lb., f. o. b. Montreal, and selling to tanners at an advance of ½c. per lb. Calf skins continue scarce, although they are gradually increasing. They are quoted at 12c. per lb. for No. 1, and 10c. for No. 2. Sheep skins are \$1.10 each. Horse hides are steady at \$2 for No. 1, and \$1.50 for No. 2. Rendered tallow is quoted at 4½c. per lb., and rough, 1½c. to 2½c.

Buffalo.

Cattle—Prime steers, \$5.40 to \$5.75; shipping, \$4.75 to \$5.35; butchers', \$4.25 to \$5.15; heifers, \$3.25 to \$5. Veals—\$5.25 to \$9.50. Hogs—Heavy, mixed and Yorkers, \$6.60; pigs, \$6.50; roughs, \$5.75 to \$6; stags, \$4 to \$4.75. Sheep and Lambs—Lambs, \$6.25 to \$7.35; yearlings, \$6 to \$6.25; wethers, \$5.75 to \$6.15; ewes, \$5.50 to \$5.75; sheep, mixed, \$3 to \$5.75; Western lambs, \$6.90 to \$7.15.

Chicago.

Cattle—Common to prime steers, \$3.85 to \$6.40; cows, \$3.65 to \$4.50; heifers, \$2.50 to \$5; bulls, \$2.40 to \$4.85; calves, \$3 to \$7.75; stockers and feeders, \$3 to \$4.75. Hogs—Choice to prime, heavy, \$6.25 to \$6.35; medium to good, heavy, \$6.20 to \$6.25; butchers' weights, \$6.25 to \$6.30; good to choice heavy, mixed, \$6.20 to \$6.25; packing, \$5.80 to \$6.25. Sheep and Lambs—Sheep, \$4 to \$6.25; yearlings, \$5.50 to \$6.40; lambs, \$6.25 to \$7.

British Cattle Market.

London.—Cattle are quoted at 10½c. to 11½c. per lb.; refrigerator beef, 7½c. per lb.; sheep, dressed, 12½c. to 13½c. per lb.; lambs, 14½c., dressed weight.

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.

Miscellaneous.

REGISTERING OLYDES.

1. Will a mare register with four registered crosses of Clydesdale sires?
2. Is the imported Clydesdale stallion, Pride of Campbellford, registered in the Canadian studbook—imported by Stewart, of Chesley?
W. B. G.

Ans.—1. Yes, if the four sires are registered.
2. Pride of Campbelltown [321], foaled in 1881, imported by J. Stewart, owned by Neil Stewart, Chesley.

TANNING HIDE FOR ROBE.

Please let me know how to tan a bear hide with hair on for a robe. M. M.

Ans.—If dry, soak thoroughly until completely softened, and scrape off carefully all flesh. Make a tan liquor of equal quantities of alum and salt dissolved in hot water, using twelve pounds of water to every seven pounds of alum and salt. Leave hide in the tan about ten days, then stretch by tacking on barn, and scrape with a dull knife. Put into tan again for a day or two, then stretch until dry, and again scrape. Now, give a heavy dressing of tanners' oil, and fold, and lay in damp sawdust until dry. Scrape again, and work by pulling over a pole to soften. It would probably be more economical and satisfactory to have this work done at a tannery.

AN EFFECTIVE WILL.

My grandfather died about fifty-five years ago. He owned a farm of one hundred acres. He had two sons, Patrick and Dennis. He willed the farm to Dennis, during his life only. He was a bachelor, and no children. Then after his death, he willed it to my father, Patrick, and his heirs. My father has seven children. He died about ten years ago, and willed me his interest in the farm. Now my six brothers and sisters claim equal rights on the ground that my father could not will what he never owned. My uncle Dennis is only dead about ten days.

Ontario.

Ans.—You are legally entitled, under your father's will, to the entire farm.

A TWIN HEIFER.

I attended an auction sale and purchased a pure-bred heifer. No catalogues were furnished, but it was advertised that certificates would be furnished on day of sale. The proprietor stood in the ring, and stated what families the different animals represented as they entered the ring, and also read a few of the top crosses. After the animal was knocked down to me, although not my bid, I wanted to see certificate, but proprietor refused, saying he had not time. When the animal was shipped, and I got the certificate, I found she was a twin, and she has since proven a free-martin. As no mention was made of her being a twin on day of sale, and I paying a price which should guarantee a breeder, can I collect damages?
W. B. S.

Ans.—We think you are entitled to damages, and to recover same by suit.

At a directors' meeting of the B. O. Stock Breeders' Association, held February 28th, it was decided to hold a spring stallion show at New Westminster, on March 21st and 22nd. There is to be an auction sale of pure-bred live stock at the same place and date, which should draw a large number of farmers from various parts of the country.

THE CANADIAN BANK OF COMMERCE

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HOME MAGAZINE

Life, Literature and Education.

F. A. and H. M. Literary Society.

Owing to the fact that we are giving the leaders in the debate a chance of replying to the arguments advanced by the opposing sides, we shall not be able to publish the debate until next week.

In the meantime, however, we seize the opportunity of urging you once more to try what you can do with the "Dream of Fair Women" topic. If you haven't a "Tennyson," why not get one? The investment will be a good one, and we shall certainly have some more topics based on his works, so that the book may be of use to you again in the near future.

Don't be afraid of the present topic. You'll not be able to write on it by one, or two, or perhaps three readings of the poem, but keep at it. It isn't the prize you may or may not win, that counts. We never even pretend that for a moment. The prize is only a little recognition of your interest—that is all. It is the real mental effort that is the main thing—the whole thing in all of these literary contests. You know you cannot exercise your brain in any way without increasing in mental power in all ways. Neither can you let your brain lie fallow, without losing, to a certain extent, just so much power of thinking things out.

To think out the whole meaning of the "Dream of Fair Women" may not seem to you to be of much practical importance. But if you think so you are mistaken. Studying out this poem, studying out any poem or any topic, and making a habit of doing such things, cannot fail to give you a mental grip on all other things, a power of reasoning and balancing absolutely necessary to everyone who would develop himself to the uttermost, and be of the most use to himself and his environment. Besides this, there is the pleasure that always comes of the study of literature, and the culture which is, to a considerable extent, the inevitable outcome of it.

We intend our F. A. & H. M. Literary Society to be a real literary society, and we want you to help us make it so. We shall introduce many literary topics, so you may as well begin now, and find yourself developing along literary lines with the development of the Society.

In discussing the present topic, it is not absolutely necessary for you to place the right name on the right woman in every instance. The main thing is to write a good essay on the poem, then name the women, as they seem to you, as an incidental. If you happen on all correctly, why all the better. At least, do your best with the topic, and be sure you send your essay so that we may have it by the last day of March.

A Reply from Mr. Taylor.

In view of the criticisms a recent letter of mine, on reading, has called forth, and as few others seem disposed to take up the cudgels on behalf of solid literature, in opposition to fiction, while the champions of fiction seem to be multiplying on every hand, I have felt constrained to offer a reply, although I have no desire to unduly monopolize your space.

Perhaps, as Mr. Savage says, I did rather sweepingly censure all fiction, or perhaps it might be nearer the mark to say that I did not discriminate enough between good and bad fiction, for it must be admitted that fiction has, and does to-day, exert a very real and helpful influence in very many ways, and yet for all that, speaking for myself, as I did in my former letter, I consider that I have not the time to spend reading fiction. Some who have more time for reading may profitably choose a more promiscuous reading, and yet I would express the opinion that even they would find it to their advantage to be very discriminating and sparing in their reading of fiction.

Then, Mr. Harris takes up the most of his letter enumerating the different kinds of literature I did not mention. In answer to that, I might say that in the compass of a four- or five-hundred-word article, I did not consider it wise to attempt to discuss the whole range of literature; rather was my object to offer a protest against the prevalent novel-reading habit of to-day, a habit, I still believe, in spite of all that has been said in favor of it, we would do well to resolutely keep in check.

Then, Mr. Patterson makes a plea for fiction, on the ground that it is a good medium to get young people started to read, when, he says, they will advance to more solid forms of literature. I must take issue with him there. Fiction and the more solid forms of literature are, to my mind, so diametrically opposed to each other, that I doubt very much if the reading of fiction would ever lead to the more solid forms of reading. Yes, I did begin by reading fiction, but in my case the reading of fiction did not lead to other forms of reading. On the other hand, I believe, that my ability to appreciate solid literature was weakened by my reading of fiction. It has been said that the eating of spices and such condiments tends to weaken the taste for wholesome food, and I believe it is much the same in reading. Fiction may be compared to the seasoning extracts in our food, which, if we indulge in too freely, will destroy our taste for more wholesome reading. The way I advanced from the reading of fiction to more solid reading was by resolutely making up my mind to quit reading fiction, and as resolutely making up my mind to read solid literature, and it was only by resolutely keeping at it that I developed a taste for solid reading. Another thing that helped very much was a Reading Circle, which I attended, the discussions of which on the books we were reading lent a very real interest to reading I could scarcely comprehend alone.

Mr. Patterson, too, finds fault with the list of books I recommended because it was too deep, and he chooses, as an example, one that certainly is

very deep, viz., the "Life of Gladstone." If he will take a second look over that list, I believe he will find, as I have said, literature all the way from lighter and more entertaining reading, on which a start may be made, to literature that will require real mental effort to comprehend its meaning.

J. D. TAYLOR.

Charles Lamb.

A life chiefly of hardship, poverty and self-sacrifice; the central figure of these abstractions, a little man with a slight figure, clad in solemn black, and "dwindling away down almost to 'irmaterial legs'; a Jewish face, clear-cut as a cameo, and dark as that of a Moor; yet a countenance fitful, changeful, strangely sweet often, as ever indexed a noble soul. Such is a flash of the personality which comes before one at the mention of Charles Lamb, a personality as unique as ever graced the pages of English biography. "His black hair curled crisply about an expanded forehead," writes his friend Talfourd, "his eyes, softly brown, twinkled with varied expres-



Charles Lamb.

sion, though the prevalent feeling was sad; and the nose slightly curved and delicately carved at the nostril, with the lower outline of the face regularly oval, completed a head which was finely placed on the shoulders, and gave importance and even dignity to a diminutive and shadowy stem. Who shall describe his countenance, catch its quivering sweetness, and fix it forever in words?"

And the details of the life which helped to develop this countenance, with its lights and its shadows? Briefly—for to understand the whole circumstance of it one must go to his biographers—Charles Lamb was born Feb. 10, 1775, in Crown Office Row, the Temple, London, in the very heart of the great metropolis which he came to love afterwards with a devotion so unvarying as to induce Wordsworth's not wholly deserved criticism of him, "scorner of the fields." His father, John Lamb, was a clerk to Samuel Salt, one of the Benchers of the Inner Temple, and from him, probably, Charles inherited the diminutive figure which so impressed his contemporaries. Delightful indeed is the picture which the illustrious son has drawn, under

the cognomen of "Lovel," of this little man: "A quick little fellow," with an eye ever upon Salt, the phlegmatic, the absent-minded, who had acquired a repute for talents "by the mere trick of gravity," and who "never dressed for a dinner party but he forgot his sword or some other necessary part of his equipage," and so justified his claims to "Lovel's" supervision. "I knew this Lovel," says Lamb. "He was a man of an incorrigible and losing honesty. A good fellow with all, and he 'would strike.' In the cause of the oppressed he never considered inequalities or calculated the number of his opponents. . . . L. was the liveliest little fellow breathing, had a face as gay as Garrick's . . . Turned cribbage boards and such small cabinet toys to perfection; took a hand at quadrille or bowls with equal facility; made punch better than any man of his degree in England; had the merriest quips and conceits, and was altogether as brimful of rogueries as you could desire."

The earliest part of his life the future essayist spent chiefly in the school "Christ's Hospital," which he left at fourteen years of age, but with an education seldom attained by a lad of such tender age. He had already read, as recorded by Talfourd, Virgil, Sallust, Terence, Lucian and Xenophon, and had evinced "considerable skill in the niceties of Latin composition," but was debarred from going on to clerical orders (as all graduates of the school were supposed to do) not, presumably, for want of a religious temperament, which Lamb, in spite of certain waywardness, possessed deeply, but because of a stammer which clung to him all his life. "A stammering buffoon," he calls himself in that pathetic, half-hopeless bit of introspection, "New Year's Eve." "What you will; lay it on, and spare not." However that may be, and whatever he may say of the limitations of this school, and of the shortcomings of the upper master, the "rabid pedant," Boyer, who "would laugh, aye and heartily, but then it must be at Flaccus's quibble about Rex, or at the tritum severitas in vultu. . . of Terence—thin jests which, at their first broaching, could hardly have had vis enough to move a Roman muscle"—the fact remains that, at Christ's Hospital, Lamb came under an influence which affected his whole after life powerfully, and that there he formed friendships destined to affect him scarcely less powerfully, notably that with Samuel Taylor Coleridge, the strange, dreamy lad, already, at sixteen, deep in the study of metaphysics and the writing of verses worthy of mature poetry.

As the family was by no means in affluent circumstances, Lamb, a short time after leaving school, accepted a situation in the East India House, where his brother John, twelve years older than he, and, according to Lamb's delineation of him as "J. B." in "My Relations," the jolliest aggregation of wit, love and self-importance in Christendom, had a lucrative position, whose emoluments he chose rather to squander on art and dandyism than to spend in relieving the want necessities of the little household in Queen St. In this time, Lamb remained

for over thirty years, until finally well-pensioned by the Company, and during this time the best of his work was accomplished, under conditions, too, which, for the most part, rendered his light-heartedness a marvel.

There was a streak of insanity in the family, and shortly after Charles' entrance to the India House it broke out violently in his sister, the "Cousin Bridget Elia" of whom he speaks so affectionately in his essays, who stabbed her mother to the heart, and seriously wounded her now invalid father before her insane strength could be mastered. Charles was present, and himself wrested the knife from her hand. "God has preserved to me my senses," he wrote to Coleridge, and, a little later, with a quietness that showed the invincibility of the determination that had entered his soul, he wrote again, announcing his decision to live henceforth for his father and his sister, a course from which he never once swerved, although, in keeping it, he was forced to forego much that makes life sweet. Even before this he had fallen in love with a Hertfordshire girl, the "Anna," and "fair-haired Alice" of whom he wrote, even late in life, when she had been long since wedded to another; but, by reason of his sister, and the taint he had had reason to fear in his own blood, he never told her of his regard.

During the long years that followed he lived with his sister, whose insanity only came upon her at intervals, moving from one dingy set of apartments to another, but revelling ever in books, and keeping open house always for the friends who came flocking to hear him talk, but who increased in numbers until at last they proved a serious hindrance to him, so that he was obliged to flit further and further "to be rid of men."

But during this time—for we must hasten—his works appeared, first a few poems, and those articles on current subjects which appeared in the London papers and marked him as a new star in the firmament of humor and criticism; later, his two plays—which were, as far as the stage was concerned, ignominious failures—and the "Tales from Shakespeare," and other juvenile stories, written in collaboration with his sister, and their first real source of literary revenue. After these came the inimitable "Essays of Elia," written for the London Magazine.

Of these essays we may say: Read them once; though you must recognize at once the purity and beauty of their English, you may not be especially drawn to them. Read them again, and their matchless individuality begins to appear with such brilliancy that you wonder where, formerly, were your mental eyes. Yet once again, and you have taken Lamb to your heart. You know him and see him, and the friends, relatives and acquaintances whom he has portrayed in his volume—the most unique and most living portrait gallery, perhaps, in existence. . . . Read his life to the end, and when you come to his pathetic record, in a last loneliness, consequent upon the removal of his sister to the asylum to which she had so frequently to go, your heart aches for him, and you wish that you might have taken his hand. "When I took leave of our friend at Charing Cross, 'twas heavy unfeeling rain, and I had nowhere to go. Home have I none. What I can do, and do overdo, is to walk; but deadly long are the days. . . . I pity you for overwork, but I answer you no work (he had retired from the India House) is worse. The mind preys on itself. . . . I have killed an hour or two in this poor scrawl. I am a sanguinary murderer of time, and would kill him inch-meal just now. But the snake is vital." Brave soul, it was the only time he had ever wholly faltered, and even now he rouses himself to add, "Well, I shall write merrier anon." Soon afterward, in the dull December days of 1834, a few months after the death of Coleridge, he sank quietly to rest, meeting bravely the death he had always hated, serene in the consciousness of leaving his sister as well provided for as might be.

We have attempted no critical literary estimate of Lamb. We have merely tried to arouse interest in a man, often spoken of as "best loved among English men of letters," and suffice it to say, most of all, that, in reading his essays, we best reach the man Lamb himself. Though he has been called "The Humorist," with an emphasis often on the "the," his humor is of a quality so delicate that it never once provokes to laughter, though it often induces a smile, and we smile scarcely less at the naivete with which he rambles away about himself with the most delightful egotism in the world, and with which he parades his relations, friends and acquaintances,

with all their little failings, yet ever kindly, before a public interested in spite of itself, than at the felicitous turns of expression, the exquisite portrayal of characteristics which have made him an artist among humorists and writers.

Just one point more. In reading the "Essays of Elia," one must guard, nevertheless, in accepting every statement as literal biography. With that perverseness which occasionally made him act before those whom he disliked, literally, the "buffoon" which he described himself, and which occasioned Carlyle to look upon him as a specimen of "diluted insanity," he has occasionally, and without apparent reason, indulged in a bit of a hoax, as when he endows himself with the personality of Coleridge, in telling of his experiences at Christ's Hospital. Yet, on the whole, the main part of "Elia," as biography, may pass at face value. When you "know" Lamb, you may the more readily discriminate between the reality and the by-play, and, beneath all, you will see his strong underlying love of humanity, after all the strongest force in his nature.

BRIGHT IDEAS FOR ENTERTAINING.—We are pleased to be able to announce to our readers that we have made arrangements by which we can supply a very valuable little book, "Bright Ideas for Entertaining," as a premium to all who send us in the name of ONE NEW SUBSCRIBER to "The Farmer's Advocate and Home Magazine." We can also supply the book for 60c. cash. "Bright Ideas for Entertaining" does not belie its name. It actually gives what it says, "bright ideas" for conducting all sorts of house parties, garden parties, etc. We are sure you will be pleased with it.

This picture is one of kindred subjects often chosen by this artist, who is a frequent exhibitor at the Royal Academy, the Royal Institute, and the Art Gallery of Liverpool, England. Evening has settled down upon the tiny hamlet on the loch shore. The kine know it, as they chew the cud after their turn at milking time; the children have ceased their romps, and are being called "ben" to their beds, and Gaffer and Gammer are having their last "crack" as they sit side by side upon the bench outside their cottage door. Presently, the last boat will be drawn up on the little beach, and the sounds of labor will be hushed into the stillness of night. H. A. B.



J. Farquharson, A. R. A.

Evening on Loch Duich.

News of the Day.

British and Foreign.



Ex-Premier Rouvier.

The French Ministry has resigned, following on a defeat in the Chamber of Deputies. The defeat ensued on account of a debate over Church disorders, and the resignation of the Ministry, coming just at the time of an important climax in the Franco-German contest at Algieras, may have an important bearing on the outcome of the Conference.

A revolutionary movement against Venezuela is afoot, and the revolutionists are gathering on the island of Trinidad.

Princess Ena of Battenberg, who will marry King Alfonso of Spain, was received into the Roman Catholic Church, at San Sebastian, on March 7th.

It has been learned that the loss of life during the recent cyclones on the Society Islands has been greatly overestimated, although much destruction of property has been reported, especially from the City of Papeete.

The Czar seems to be having a rather difficult task in trying to grant reforms and still preserve his autocratic authority. His latest announcement runs as follows: "The reforms promulgated October 30th are progressing without deviation. While the rights accorded to the people remain unaltered, my autocratic power will ever remain as it always has been."

The Chinese Government has decided to instruct its ministers abroad to assure the Powers that there is no cause for uneasiness. The boycott of American goods will, however, be prosecuted more vigorously than ever, and is said to be due to the efforts of an influential Chinaman, King, whose family was subjected to much indignity last year by a customs officer at Boston, and who became enraged at all Americans in consequence. There are still those who predict that troubles are just beginning in China.

Canadian.

Prince Arthur of Connaught, on his return from Japan, will arrive in Toronto on April 21, having previously visited Niagara. While in Toronto he will be a guest at Government House, and will attend the Horse Show.

A committee of Commercial Travelers has waited on members of the Ontario Govt., with the request that the local-option law be amended so as to compel municipalities to provide good accommodation for the travelling public. Our local-option districts should see to it that no such step as this is necessary.

Mr. Hamar Greenwood, the Canadian recently elected as member for York, Eng., has been appointed Parliamentary Secretary to Winston Churchill, Under-Secretary for the Colonies.

The Crosses on the Wall.

(A Legend of Primiero.)

Come, children, listen to what I tell,
For my words are wise to-day;
From Primiero among the hills
Was the legend brought away.

And when a burden is hard to bear—
And such burdens come to all—
They tell the story I am telling now,
Of the crosses on the wall.
'Tis a pearl of wisdom, gathered far
In the dim and distant past;
But ever needed, but ever new,
As long as the world shall last.
For never has been since earth was made,
And surely shall never be,
A man so happy or wise or great,
He might from the cross be free.
The tale it is of a widow poor,
And by trouble sorely pressed;
Of how, through sorrow and many tears,
At the end her soul was blest.
She had not been always poor and sad,
For her early years were bright,
With a happy home, and with parents
kind,
And herself their hearts' delight!
A mother's darling, a father's pride,
She was fair in form and face;
A sunny creature, a joy to all,
For her sweet and winning grace.
Then, early married to one she loved,
She had still been shielded well;
For her he labored, for her he thought,
And on her no burden fell.
She worked, indeed; but what work was
hers
Through the short and happy hours?
To pluck the fruit from her orchard
trees,
Or to tend the garden flowers;
To sit and spin, and to sing the while
In her porch with roses gay;
To spread the table with plenty piled,
And to watch the children play.
Their home was a little nest of peace;
'Twas a mile beyond the town,
In that sheltered valley, green with
woods,
Where the river murmurs down,
And she never dreamed of change to
come,
(Though a change must all expect),
Till the blow, like lightning, on her fell,
And her happy life was wrecked.
But who could have thought the man
would die?
There were few so strong as he!
From his forest work they bore him
home,
Struck dead by a falling tree.
A petted child, and a wife beloved,
She had hardly sorrow known,
Till the strong, brave man was borne
away,
And she faced the world alone.
Alone, with a babe too young to speak,
And with other children five:
"Oh, why," she asked, "are the strong
removed
And the feeble left alive?"
But where is the good of asking
"why" ?
When our helpers disappear?
That question never was answered yet,
And it never will be, here.
There was little time to sit and weep;
She must rise, and bear the strain;
Alone she stood, with the home to keep,
And the children's bread to gain.
The best of herself had gone with him;
She had no more faith nor trust;
She could not bow to the Lord's decree,
For she felt it all unjust.
The good Lord cares for a widow's need,
But on Him she did not call.
She labored hard, and she fought with
fate,
And they lived—but that was all.
She fought her battle with fate, and
failed,
As many have failed before;
If against the thorns we push and press,
They will only prick the more.
She could not bear with the children
now,
And she called them rude and wild;
Forgetting quite, in her sullen grief,
That she had been once a child.
Yes, wild they were; and like all wild
things,
They were light, and swift, and strong;
And her poor, sick spirit turned away
From the gay, unruly throng.
They swam the river, they climbed the
trees,
They were full of life and play;
But oft, when their mother's voice they
heard,



They hid from her sight away.
They did not love her, and that she
knew,

And of that she oft complained;
But not by threats nor by angry words
Could the children's love be gained.
Respect and honor we may command;
They will come at duty's call:
But love, the beautiful thornless rose,
Grows wild, when it grows at all.
And she grew bitter, as time went on,
Grew bitter and hard and sore,
Till one day she cried in her despair,
"I can bear my life no more!
Look down from Heaven, good Lord, and
see
And pity my cruel fate!
Oh, come, and in mercy take away
My burden, for 'tis too great!
My heart is breaking with all its load,
And I feel my life decline;
Never I think did the woman live
Who has borne a cross like mine!"
To her cry for help an answer came,
And solemn it was, and strange!
For a silence deep around her fell,
And the place seemed all to change.
She stood in a sad and sombre room,
Where from ceiling down to floor,
Along the wall and on every side,
There were crosses—nothing more.
There were crosses old, and crosses new,
There were crosses large and small;
And in their midst there was ONE who
stood
As the Master of them all.
Before His presence her eyes dropped
low,
And her wild complaining died;
For she knew the cross that He had
borne
Was greater than all beside.
And He bade her choose, and take away,
From among the many there,
Another cross, in exchange for hers,
That she found too great to bear.
She looked for those that were least in
size,
And she quickly lifted one;
But oh, 'twas heavy, and pained her
more
Than her own had ever done!
She laid it back with a trembling hand—
"And whose cross is that?" she cried;
"For heavier 'tis than even mine!"
And a solemn voice replied:
"That cross belongs to a maiden young,
But of youth she little knows;
For the days to her are days of pain,
And the night brings scant repose.
A helpless, suffering, useless thing!
And her pain will never cease,
Till death in pity will come one day,
And her troubles end in peace.
She never has walked the pleasant fields,
Nor has sat beneath the trees;
The hospital wall that shuts her in
Is the only world she sees.
She has no mother, she has no home,
And in strangers' hands she lies;
With none to care for her while she
lives,
Nor weep for her when she dies."
"But why is the cross so small, my
Lord,
And why does her heart not break?"
"She counts it little," the answer came,
"For she bears it for My sake."
The widow blushed with a sudden shame;
To her eyes the tears arose;
She dried them soon, and again she
turned,
And another cross she chose.
It fell from her hand against the wall,
And she let it there remain;
"That cross shall never be mine," she
said,
"Though I take my own again!
And whose is this that I cannot hold?
For it seems to burn my hand!
And never, I think, was heart so strong
That could such a weight withstand."
"The cross it is of a gentle wife,
And she wears it all unseen;
With early sorrow her hair is white,
But she keeps a smile serene.
She gave her heart to an evil man,
And she thought him good and true;
And long she trusted and long believed,
But at last the truth she knew.
She knows that his soul is stained with
crime,

But the worst she still conceals;
Abuse and terror her sole reward,
And the Lord knows what she feels!
She cannot leave him, for love dies hard,
And her children bear his name;
But she prays for grace, to keep and
guard

Their innocent lives from shame.
She trembles oft when his step she hears
On a lonely winter night;
And she hides her frightened babes afar
From their cruel father's sight.
And she dares not even hope for death,
Though his hand might set her free:
'Twere well for her in the grave to rest;
But where would the children be?"
The widow shuddered, her face grew pale,
And she no more turned to look;
She reached her hand to the wall near
by,

And a cross by chance she took.
'Twas not so large as the first had been,
But it seemed a fearful weight!
"And whose am I holding now?" she
asked,
For it did not look so great.
"A mother's cross is the one you bear,"
So the voice in answer said;
"And she once had children six, like you;
But her children all are dead.
She has all besides that earth can give;
She has friends and wealth to spare,
And house and land—but she counts
them not,

For the children are not there.
Time passes slowly, and she grows old;
But she may not yet depart.
In lonely splendor she counts the years,
With an empty, hungry heart.
And she knows by Whom the cross was
sent,

And she tries her head to bow;
But six green mounds by the church-
yard wall

Are the most she cares for now."
The widow thought of her own wild
brood,

And she felt a creeping chill:
And, "Oh, give me back my cross!"
she cried,

"I will keep and bear it still.
Forgive me, Lord" (and with that she
kneel,

And for very shame she wept).
"I know my sin, that I could not bow,
Nor Thy holy will accept.

Oh, give me patience, for life is hard;
And the daily strength I need!
And by Thy grace I will try to bear
The burden for me decreed.

I'll change my ways with the children
now,
Though they give me added cares.
Poor babes! I know, if they love me
not,

That the blame is mine, not theirs!"
She kept her word as the weeks went on,
And she fought with fate no more;
'Twas now with a patient, humble heart
That her daily cross she bore.

The children wondered to see her change
So greatly in look and speech!
She met them now with a smile so kind,
And a gentle word for each.

And soon they learned, from her altered
ways,
What her words had vainly taught;
Their love, that long she had claimed in
vain,

Came back to her all unsought.
There were merry shouts and dancing
feet,
When the mother came in sight;
There were little arms around her
thrown,

There were eyes with joy alight.
With love for teacher, they learned to
help,
There was work for fingers small;
Her heart grew soft like the earth in
spring.

And she thanked the Lord for all.
Her girls so pretty, her boys so brave,
And so helpful all and kind!
She wondered often, and thought with
shame

Of how she had once repined.
For in their presence she oft forgot
Her burden of want and care,
Forgot her trouble—forgot, almost,
That she had a cross to bear!

—Francesca Alexander.

Park Hill, Feb. 4, 1906.

Dear Hope,— "The Quiet Hour" is a
favorite page in our home, and I thought
I would like to tell Mrs. Hayward how
much we enjoyed her letter and the two
beautiful pieces of poetry she had con-
tributed in last week's Advocate. I
thought the latter one, "Jesus knows
and understands," would be read and ap-
preciated by many of the wives and
mothers in our farm homes. Ours is an
ideal life when we once learn the secret of
living the simple life, and I think so
many are learning this lesson in our farm
homes.

His ways are so wonderful, and we are
so slow to learn His ways are best. Just
last Easter, I came across a few verses
in one of our weekly church papers,
"His Hands and Mine," and pinning
them up beside me, while I was busy
with the sewing, I committed them to
memory, and enclose them, hoping they
may be helpful to someone:

"My hands were filled with many things
That I did precious hold,
As any treasure of a king—
Silver, or gems, or gold.
The Master came and touched my hands.
The scars were in His own;
And at His feet my treasures sweet,
Fell shattered one by one.
I must have empty hands, said He,
If I would work my works through thee.

"My hands were stained with marks of
toil,
Defiled with dust of earth;
And I my work did ofttime soil
And render little worth.
The Master came and touched my hands,
And crimson were his own.
And when amazed, on mine I gazed,
Lo, every stain was gone.
I must have cleansed hands, said He,
If I would work my works through thee.

"My hands were growing feverish,
Cumbered with much care,
Trembling with haste and eagerness,
Not folded oft in prayer.
The Master came and touched my hands,
And might was in His own,
And calm and still to do His will
Were mine. The fever gone.
I must have quiet hands, said He,
If I would work my works through thee.

"My hands were strong in fancied
strength,
But not in power divine,
Bold to take up tasks at length
That were not His, but mine.
The Master came and touched my hands,
And power was in His own,
And mine since then have helpless been,
Save as His are laid thereon,
And it is only thus, said He,
That I can work my works through
thee."

Shortly after learning these verses I
was laid aside in the hospital, and what
a blessing these verses were to me, as
so often I thought of tasks I wanted to
do that were not His, but mine; and so
I learned the lesson of being content
with doing the daily task, etc., and in
leaving all to Him, knowing all is well.
Wishing you, dear Hope, every success in
your effort to help others to the better
part, I am,
A FARMER'S WIFE.

The Throstle.

"Summer is coming, summer is coming.
I know it, I know it, I know it,
Light again, leaf again, life again, love
again,"
Yes, my wild little poet.

Sing the new year in again under the
blue,
Last year you sang it as gladly.
"New, new, new!" Is it then so new
That you should carol so madly?

"Love again, song again, nest again,
young again,"
Never a prophet so crazy!
And hardly a daisy as yet, little friend,
See there is hardly a daisy.

"Here again, here, here, here, happy
year!"
O, warble, unhidden, unbidden!
Summer is coming, is coming, my dear,
And all the winters are hidden.

—Alfred Tennyson.

Friends or Foes.

An English noble had a park, The trees were grand and old, The pretty deer roamed all about, And freedom made them bold.

Elizabeth and Caroline (Two little maidens small), Came down to spend a day or two With "Uncle at the Hall."

The sun had melted all the snow, The grass was green with showers; "It is the spring," said Caroline, "Come out, and pick the flowers."

But while they bent with shining eyes Above the violets blue, The deer came gently up behind, And close and closer drew.

Elizabeth and Caroline Looked up, and shrieked to see, The brown-eyed fawns stand all about, No shelter but a tree!

"I never thought," wept Caroline, "Wild beasts lived in these woods!" "They'll eat us," cried Elizabeth, "All but our cloaks and hoods!"

"These queer young things, what can they be?" The deer thought in surprise. They smelt about, then on the pair They fixed their great mild eyes.

Just then came Uncle through the park, The dreadful monsters braved. The deer ran scampering down the glade; The maidens both were saved.

C. D.

Victory in Defeat.

Betty Haskins lived on a farm ten miles from the academy. Her three years' course of study had been bought by many sacrifices and by much patient work. Betty had not counted her own toils—boarding herself, walking home on Friday nights, making one gown do for Sundays and week days, ignoring worn shoes and a hat of forgotten fashion—and now the end was in sight, and Betty was valedictorian of her class.

It was the Saturday before graduation.



Betty's essay was finished and committed to memory. Her white gown was freshly ironed. As she stood on the chapel steps after her last rehearsal she was glad to be alive, and conscious only of that joy—save for one pin-prick of anxiety as to why she had not had her usual note from her mother during the week. But that was lost in the happy surmise that the parents meant to surprise her by a visit to-morrow.

Suddenly she caught sight of her father in a buggy, driving rapidly down the street. She sprang to meet him, quick to see that his face was grave.

"Betty, child, you'll have to come home with me. Three of the children are down with the measles. Mother is ailing herself. The neighbors have been good, but they are worn out, I can see. Mother wants you. Seems as if nobody

else would do. The baby—my dear, I'm afraid he's going to die!" "O, father, he musn't! I'll be ready in five minutes."

Not a word was said of the relation of this hasty summons to the coming Wednesday and its valedictory.

When Wednesday came, Betty was too busy to think much about the academy. She was grateful that she had had a course of emergency lessons there, and that the doctor said she was as good as a trained nurse. She was fighting for the baby's life.

Three weeks later the baby was getting rosy and plump again. Mother was back at her post, and Betty was tired and restless, and could not sleep very well. She found herself dreaming herself back to the academy, and wondering how the chapel looked on commencement day, and



From painting by

Friends or Foes?

Phil R. Morris, A. R. A.

finding it hard to see how her disappointment had been right.

One afternoon, however, the principal of the academy knocked at the door of the farmhouse. He had in his hand a blue-tied roll.

"I've come to bring you your diploma, Betty," he said. "I thought you would be glad to hear that Kate Fisher read your essay at commencement, and it had more applause than any of the others. The folks seemed to like your being at home with the baby. And, by the way, the trustees want to know if you will come over to the academy to teach English next year. They seem to think that a girl who could write that essay could teach other girls and boys to write. The salary would be ten dollars a week and 'found'."

Betty's face was worth seeing just then. It was a curious coincidence, too, that her subject of that same essay had been, "Victory."

Indian Boy's Trouble.

Superintendent John Fliin, of the Indian school, of Chamberlain, S. D., has at his tongue's end many quaint stories of Indian children, says the Kansas City Journal.

Anent fatigue he said one day: "A little redskin, Black Eagle, accompanied me on a tramp of 16 miles."

"The boy walked well for his age, but the last two or three miles went hard with him. He gave pretty plain evidence of fatigue."

"Tired?" said I. "No," he answered, "I am not tired, but I'd be glad if I could only take off my legs and carry them under my arms."

We Know Better.

John Burroughs was talking about the increased interest that the world now takes in nature and her works and ways.

"A modern girl from New York," he said, "would not be apt to say, as I heard a girl say thirty years ago, as she looked at a multitude of tadpoles in a pond:

"Oh, look at the tadpoles! And to think that some day every one of these horrid wriggling things will be a beautiful butterfly!"

About the House.

Tides in House-furnishing.

It seems, sometimes, as though a steady tidal motion is not all confined to the great floods that come creeping up and up the shore by the yet greater sea, and then fall back and back, leaving the rocks glittering, and the starfish stranded on the sand. In many other things there is also a continuous ebb and flow, the going on and on until a climax is reached, and then the retrogression, more or less gradual, to a sometimes opposite pole. We see this tendency even in such trivial things as the "fashions," as, for instance, when sleeves grow bigger and bigger, until they have surpassed all bounds of sense or beauty, then edge off and off with the inevitable reaction, until at last they are as diminutive as the proportions of the arm beneath will permit.

We see it, too, in architecture, the customs and manners of men, art to some extent, house-furnishing, and a myriad of other things; and, unwilling to attribute such variability to fickleness in the human mind, we feel tempted to cast about for some more worthy reason. Surely the very human desire for change cannot be at the bottom of all such fluctuations. There must be a right or wrong somewhere—a happy medium—which should endure.

That there is such a happy medium, there is little cause to doubt; and the reason for the eternal ebb and flow would seem to hinge, not on the non-existence of a medium, but on the fact that people do not recognize when the medium is reached, and go on and on, until they have accomplished a positive surfeit of the thing that has seemed good. Then, as in the case of all surfeits, comes the reaction, sometimes with a gradual retrogression, as though the mind were unwilling to give in to a mistake, very occasionally with a sudden "slump," which, for the time being, may prove rather unsettling.

Nearly four centuries ago there was one of those sudden slumps; one which, however, was then, in many respects a beneficial one. In later days, it came to be known as the "Renaissance"; and at the time, and ever since, for that matter, it affected literature, art, architecture, and, dragging on the heels of the latter, interior decorations and furnishings. Primarily, it came of a new awakening to the beauties of the ancient literature—long neglected—of Greece and Rome. With the study of the ancient poets and philosophers, which sent men delving into the life and language of a thousand years back, came a new admiration for all things ancient. The present, the future, were as nothing; men must take all their ideals from the past. Hence churches and houses—since it is from the architectural standpoint we must look to-day—were built after the old models, and stained and half-effaced

carvings were dragged out from heaps of rubbish, dug up from the earth, and hacked out of quarries to serve as models for imitation. That last statement may call for explanation. It is a melancholy fact that in many parts of Italy, and even in Great Britain (among old Roman tumuli) some of the finest ruins were long used as quarries, many priceless decorative specimens being thus, no doubt, heedlessly burned into lime.

Then the high-tide set in—up, and up, and up. Not satisfied with exactly following the ancient models, modern ideas were introduced. For instance, in buildings, pillars and pilasters were put in lavishly, and for ornament only, not for real use as by the ancients. In the old Greek temples, the removal of a single pillar would have weakened that portion of the structure. In many of the Renaissance buildings, all of them might be taken away without injuring the

strength of the whole, in the least. Keep a watch for this style—for Renaissance architecture is still with us—among some of the public buildings that you pass, and you will know what we mean. . . . And so ornamentation followed ornamentation, until—although many of the constructions were very beautiful—the thing was often overdone. Renaissance furniture, to come right down to our topic, became a veritable mass of decorative work, permissible enough when it represented the hand work of artists in design, but contemptible when, as was inevitably the case, cheap imitation of the style was resorted to. Then it was that the reaction took place. Eastlake began to manufacture furniture of simple design. The rather severe, so-called "Queen Anne" styles followed. Simple designs became the rage, and the over-decorated "imitation" Renaissance tables, bedsteads and chairs became subjects for the second-hand shops.

Since those days of simplicity, the tide has again been on the up-grade. Once more has the passion for decoration resulted in over-decoration. Think of all the parlors you know overloaded with ornament, machine-carving, pictures, vases, easels, foot-stools, and you must recognize that this is so. . . . And once more are we on the verge of a revolution. . . . People are sick of over-decoration, and are returning to simple lines. The Arts and Handicrafts movement, of which more will be said anon, is but an expression of this awakening tendency of our times. True, the rage for simplicity may become a fad; yet there is so much that is commendable in it that we shall deserve no small portion of blame if we permit it to become merely a fad. Contrast the living-room shown in our illustration with the ordinary be-draped, be-calendered curiosity-shop which passes as the modern "parlor," and you must, we are sure, agree with this.

There is little in this room that is not useful. Ornamentation has been introduced, but with discretion, and with an artistic touch. The air of coziness and



MODERN LIVING-ROOM.—The hanging beams may be omitted in such a room as this, if preferred.

comfort is unmistakable. . . . Neither is this room a very expensive one. The fire-place is of plain brick. The windows are of small-paned, ordinary glass, and are not even provided with long curtains. The couch is simply an upholstered cot. The chairs and table are, of course, "good," and the rug is a fairly expensive one; but, so far as the last item is concerned, a rag rug might be substituted very well. So much we owe to Arts and Handicrafts movement, which has brought rag rugs again to the fore. But, they must be a new type of rag rugs, a sort of glorified version of the old kind, all pretty much of a color—warm brown, or olive green, or old blue—with, perhaps, a border in a darker or harmonizing shade. Rugs in two harmonizing colors, or in two tones of the same color, in which the rags have been well mixed, are also effective. There will, of course, be the trouble of dyeing

the rags, but that is a small consideration when placed against the result.

It is comparatively easy for those who are furnishing for the first time, and who are prepared to put the necessary amount of thought into the matter, to have things in harmony. When, however, one already has the "things"—chosen, often, without regard to anything else in the room, there are more complications. Yet, now that spring house-cleaning is so near, it should be no great sacrifice for those who happen to have such over-decorated rooms to do a little judicious weeding. One can, at least, try the effect of substituting books and plants for milkweed sachets and cheap vases. Later, and by degrees, good prints may be put in place of highly-colored chromos, if there are any, and substantial, usable cushions in place of merely ornamental ones. We are sure that those who make such changes, will not, after a short time be willing to go back to the old way.



Banbury Tarts.

As the following recipes differ slightly, I shall give them all, and now I am sure everyone will be able to make Banbury tarts. We thank all of those who have so kindly contributed.

1. From Miss Hilda Kern, Port Huron, Mich.:

"Chop a cupful of seeded raisins and two ounces of citron peel. Add a cupful of sugar, the grated rind and juice of a lemon, a little salt, and a beaten egg. Place on rounds of pastry. Brush half the edge with cold water; bring the other half over the mixture, and press the edges together with the tines of a fork dipped in flour. Bake in a moderate oven."

2. From "Irish Girl":

"Dear Dame Durden,—I have been a silent admirer of your circle ever since we have taken 'The Farmer's Advocate.' I enjoy so much reading the many helpful letters which appear every week in the Ingle Nook, and am sending you the recipe for Banbury tarts: Line pattytins with puff paste, and bake; then fill with the following mixture, which has been cooked and cooled: One cupful chopped and stoned raisins, the grated rind and juice of one large lemon, half a cupful sugar, a dessertspoonful butter, one teaspoonful cornstarch, one-third teacupful water. Boil in a double boiler until it thickens like jelly."

3. From "Amaryllis," Perth Co., Ont.:

"Make a rich pie paste, and for the filling take one cup currants, 1 egg, 1 cup sugar, juice and rind of 1 lemon. Boil together for a few minutes, then fill tart shells, and bake, or may be used as filling for pie with top crust."

4. From "A Subscriber," and "Ubba," York Co., Ont.:

"One cup raisins, 1 cup sugar, 1 cracker, 1 egg, juice and grated rind of 1 lemon. Stone and chop raisins; add sugar and egg (slightly beaten), and cracker (rolled fine). Roll pastry $\frac{1}{2}$ inch thick; cut pieces $3\frac{1}{2}$ inches long by 3 inches wide. Put 2 teaspoons of mixture on each piece; moisten edge with cold water half way round; fold over, and press edge together with fork dipped in flour. Bake twenty minutes in slow oven. It is also an excellent filling for oatmeal cakes."

"Ubba" also contributes the following recipe for English tarts: One egg, 1 cup sugar, 1 cup currants, $\frac{1}{2}$ cup butter. Bake in tart shells.

We were much interested to hear that Ubba's father has been a subscriber to "The Farmer's Advocate" from its first number.

We will close this series with "A Banbury Tart." Can anyone answer her question re a leaky furnace pipe?

Dear Dame Durden,—Like Forget-me-not, it is not long since I gave up teaching for farming, and ever since I have lived on a farm I have been deeply interested in your corner of "The Farmer's Advocate." May I come in now for just a few

minutes to help about those Banbury tarts? It takes a dear old English grandmother to know how to do them properly. My grandmother made the best I ever tasted. This is her way: Make a good pastry as for pies. Roll out thin, and cut into squares about two and a half inches each way. Take one cup of currants, a tablespoon of brown sugar, half a teaspoon of essence of lemon, and a few drops of water (enough to moisten the mixture). A little chopped citron peel is an improvement, but is not necessary. Put a spoonful of the mixture in the center of each square, and fold over the edges like a turnover. Bake in a good oven. The tarts, when finished, should be about an inch wide, and two and a half inches long. The above quantities will make about two dozen tarts.

Could someone in the Ingle Nook tell me what to do with a leaky furnace pipe? We have burned good, dry hardwood in our furnace all winter, have kept the pipes and chimney clean, and yet that dirty black stuff (is it condensed smoke?) has leaked over everything. The wall paper and matting on the floor are quite spoiled. People tell us it is all the fault of the chimney, but no one seems to know why. Will someone please come to our rescue?

Hoping I have not taken up too much of your valuable space.

A BANBURY TART.

York Co., Ont.

We hope this "Banbury Tart" will be always with us.

Fruit Cake.

"Amaryllis" writes for a recipe for plain fruit cake.

She might try the following:

1. Two eggs, $1\frac{1}{2}$ cups molasses, $\frac{1}{2}$ cup sugar, 1 cup butter, 1 teaspoon each of cinnamon and cloves, $\frac{1}{2}$ teaspoon soda, 1 cup raisins, 1 cup currants, 3 cups flour. Bake rather slowly for 2 hours.

2. Fruit Cake Without Eggs.—Two cups buttermilk, 2 cups brown sugar, 2 cups raisins, 2 cups currants, $\frac{1}{2}$ cup butter, $1\frac{1}{2}$ teaspoons soda, spice to taste, $4\frac{1}{2}$ cups flour. Will keep two or three weeks in a cool place, and is very good.

Cement.

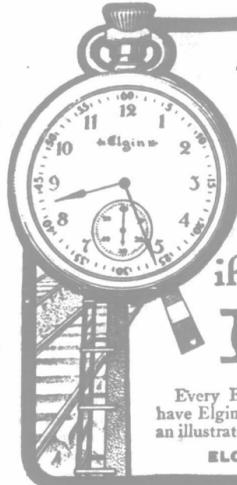
"A Subscriber's" question re cement walks has been handed in to the "Questions and Answers" department, where it will be answered.

Cleaning Teakettle.

Contributed by "Irish Girl": "Fill kettle with water, and throw in a large handful of salty pork rinds. Boil for a couple of hours. This will loosen the hard coating, and it can be knocked off quite easily."

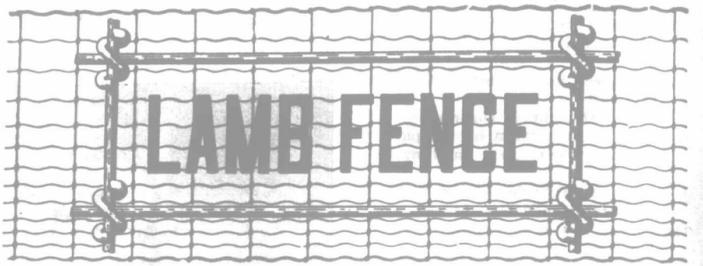
Evening Entertainment.

"Busybody" writes: "I wish you'd ask the chatterers to describe little 'evenings' they have given, with new games and luncheons—anything out of



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Mark Twain tells how, when Mme. Bernhardt visited Hartford, two charitable young women wanted to attend her performance, but finally decided that it was their duty to send the necessary \$6 to two poor neighbors, who thankfully accepted it and used it to buy tickets for the Bernhardt performance.

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the ordinary. I think it would be interesting, and would help a fellow out sometimes."

Canning Beef.

Dear Dame Durden,—I have been an interested reader of the Ingle Nook chats for some time, and have found some of the recipes very helpful. As I am a farmer's wife, I thought I would like to help some other farmer's wife if I could. I saw in a late issue, "A Young Housekeeper" asking for a recipe to can beef in glass sealers. I have, for three or four years, canned from twenty-five to thirty cans. This winter I have canned thirty-two, and I always have the best results, and find it very handy in the summer, as we live quite a long way from a butcher shop. Now, in the first place, I always use one-quart sealers, and see that the rubbers are all new, and that the glass for the top hasn't any check in it. Scald and dry; don't have the least water in the can. Then cut your beef in pieces, as you would to fry or to stew; fill your can, as full as you can, putting the fat and pieces that are not quite so nice on top; then put your top on tight and put your sealers in boiler in cold water,

and boil for three hours. If the beef is tough and old, you might boil longer. Don't let the water come over the top of the can, keep it just below the rim. When done, take your sealers out, and tighten as tight as you can. When cold, the liquid should be jellied in the can. Keep in a cool place. I do twelve in my boiler at once. I have a board for the bottom of the boiler with holes in. I hope this will not be too long, and that it will be helpful to someone.

A FARMER'S WIFE.

Oxford Co., Ont.

I hope the chatters will forgive me for abridging some of their letters this week. I don't like to do it often, and don't intend to, as I want to keep the letters in all their "chattiness." But this time, the correspondence had got a little behind, some way, and was accumulating so that I had to do something. However, come again, everybody. There will be a corner for each of you, even though you may have to wait several weeks sometimes before seeing your letter in print. Next week we shall have room for "Clara," "A Lankshire Lass," "An Extended Paw," from P. E. I., and others.



Re Pæonies.

A Subscriber's Daughter, Mulgrave, Ont., wishes to know how and when to transplant Pæonies. This may be done either in spring or fall, although the best time is early in the fall so that new rootlets may have time to form before frost sets in. Set the tubers in so that the crowns will be two inches below the surface. The best soil is a deep, rich loam; the plants are gross feeders, hence plenty of well-rotted cow manure should be worked into the bed. Keep the ground well tilled, give plenty of water, especially while in bloom, and cover with a top-dressing in November. Liquid manure applied occasionally during the growing season will be found very beneficial. The best flowers will not appear until the plants are well established. Have you seen the single Pæonies? They are beautiful.

book on gardening, but they are very apt:

"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."

Now, to come down to the practical, in planning your garden, you will, of course, not neglect to make arrangements for having the tallest plants at the back of the borders, or center of the beds, and so on, by gradations down to the border; otherwise many of your choicest specimens may be hidden entirely. The following list has been prepared to give you some help in the matter:

1. Tall Plants.—Giant Sunflowers, Hollyhocks, Golden Glow, Dahlias. Shrubs of course, always are effective as backgrounds, also Sweet Peas and Nasturtiums if planted in rich soil and permitted to run up on netting. The Nasturtiums will need some training.
 2. Plants which may be placed in front of these: Perennial Larkspur, tall Phlox, Lilies, Foxgloves, Russian Sunflowers, Cornflowers, Cosmos, tall Poppies.
 3. Next row, plants from one to two feet in height: Asters, Coreopsis, Funkias, Columbines, Marigold, Shirley Poppy, Snapdragon, Zinnia, Anemone, Canterbury Bells, Stocks.
 4. One foot or under: Candytuft, Alyssum, Eschscholtzia, Mignonette, Ageratum, Feverfew, Dusty Miller, Tuberos Begonias, Phlox Drummondii, Rock Cress, Pansies, Daisies.
- It is to be understood that this list is not exhaustive; neither are the measurements invariable, so much depends upon soil and care—but the list may serve somewhat as a guide to a few, likely to prove satisfactory in Canada.
- Next week we shall try to give a few hints as to duration of bloom.

FLORIST.

Recipes.

Loaf-seed Cake.—One loaf dough made with "Five Roses" flour, 1 cup brown sugar, 1/2 cup butter, 1/2 ounce caraway seeds, a little spice, 2 eggs. Mix, and set to rise. When light, bake.

Fruit-cream Cake.—One cup brown sugar, butter size of an egg, 1 egg, 1 cup cream, 1 teaspoon soda, 1 teaspoon cinnamon, 1 small nutmeg, 2 cups "Five Roses" flour, 1 1/2 cups seeded raisins. Bake in a loaf tin.

I received the ladies' hand-bag you sent as a premium. I am well pleased with it. It is really better than I expected. I am going to try to get two more new subscribers, and get another one.

(MRS.) JAS. CALLANDER.

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Sleeplessness, irritability, indigestion, headache and general lack of energy and ambition are among the early indications of nervous troubles, and with women the result is not infrequently derangements and irregularities of the feminine organism.

If a committee of experts on diseases of the nerves were to prescribe for you they would give you just such a formula as that of Dr. Chase's Nerve Food, for this medicine is composed of the most powerful nerve restoratives known to medical science.

This is no idle boast, as we shall be pleased to prove to you if you will have your physician call at these offices and examine the formula.

What we consider as better proof of what Dr. Chase's Nerve Food will do for you is to be found in the letters of recommendation published from time to time in Dr. Chase's Almanac, and in the newspapers of this country.

Naturally and gradually this great food cure forms new, rich blood, the substance from which the brain creates new nerve force. This is the only means by which diseases of the nerves can be actually cured. Stimulants and narcotics give temporary relief, but with great expense to the nervous system. Dr. Chase's Nerve Food slowly but certainly revitalizes the wasted nerve cells and by filling the body with vitality overcomes weakness, sickness and disease.

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HER CONTRIBUTION.

Visiting Philanthropist—"Good morning, madam; I am collecting for the Drunkards' Home."

Mrs. McGuire—"Shure I'm glad of it, sor—if ye come round to-night yez can take my husband."

THEY MADE THIS COUPLE HAPPY

Dodd's Kidney Pills Doing Good Work Around Port Arthur.

Mr. Dick Souvey and Wife Both Had Kidney Troubles, and the Great Canadian Kidney Remedy Cured Them.

Port Arthur, Ont., March 12th—(Special).—That Dodd's Kidney Pills cure the Kidney ills of men and women alike has been proved time and again in this neighborhood, but it is only occasionally they get a chance to do double work in the same house. This has happened in the case of Mr. and Mrs. Dick Souvey, a farmer and his wife, living about seven miles from here. In an interview Mr. Souvey said:

"My wife and myself have used Dodd's Kidney Pills, and have found them a big benefit to our health. We had La Grippe two winters and were exposed to much frost and cold. Our sleep was broken on account of urinary troubles and pain in the Kidneys. We each took six boxes of Dodd's Kidney Pills and now enjoy good health."

Spring Fashions.

We have just been taking a jaunt through the stores, looking at all the pretty spring things now displayed in full force everywhere; and, as many of you may not have had the opportunity so far of doing likewise, it may not come amiss if we jot down a bit of what we saw. First and foremost, gray everywhere—dark gray, medium gray, steel gray, light gray—yes, gray promises to be "THE" pre-eminent color, and be sure you spell it with a big "T," for the coming season. Needless to say that all sorts and conditions of women will be wearing it, whether becoming or not. It always seems that it is a particularly trying color to poor complexions, and that only fair women with fluffy golden hair and brow and cheeks like hawthorn buds and rose petals can wear it to the best advantage. However, much may be done by the judicious introduction of another color next to the face. Even a very dark woman can wear gray quite safely, if she sees to it that plenty of soft cream lace or chiffon is worked in about the top of the bodice.

As to design, checks are everywhere in evidence—pin checks, large checks, and over checks, not plaids, but suggestions of plaid in two tones, say dark gray and light gray, brown and light lawn, green and navy, etc. These, of course, will be worn in suits and shirt-waist dresses, and are chiefly in light-weight tweeds, French delaines, and such materials. In plain goods, cashmeres and henriettas head the list, although voiles, twine cloths, crepe-de-chines and veilings will all be quite fashionable. Panama is a good light-weight material, which has the advantage over voile that it does not require lining. Sicilians, lutres and mohairs are all "in" again, though not to such an extent as last year. They will, however, on account of their dust-proof qualities, find favor with many for shirt-waist suits.

For wear during hot weather, legions and legions of things are shown, such beautiful airy things, fairly piling the counters with billowy suggestions of summer, and sunshine, and soft breezes! Among them, perhaps, the prevailing

characteristic is "floweriness," if we may coin the word. There are muslins, delaines, challies, silks, all flowered, most of them in the daintiest of designs and softest of coloring, but—whisper it low—there are also a few hideous affairs, with great "plasters"—one can't call it anything else—of roses and daisies trailed all over the ground in the manner of old-fashioned wall papers. From these, as you are a civilized woman, turn aside.

Safer ground is reached among the dotted Swisses, shown in black, cream, white, and white with black dots, all daintier, it seems, than ever. Then there are the gingham and chambrays in plain effects and pretty checks, all "safe," provided the coloring be soft. White, of course, is always good, and organdies, mulls, fine lawns, and linens in white will be worn as much as ever.

As to the making? Why, big sleeves and rippling skirts, that about covers the ground. For suits, the Eton and bolero jackets will hold full sway, with skirts of many gores, all the way from nine to twenty-one. You may conceal the seams by pleats, if you choose. Folds have again appeared on the skirts, and will be set close to the hem. For trimming gowns of thin material much lace will be used, especially of the fine variety. Valenciennes will be quite "correct" for frill edgings, "made" yokes, etc.; but all-over embroidery still meets with much favor, and, for white shirt-waists, raised embroidery in Mount Mellick stitch. For thin, dressy gowns, elbow sleeves will be quite the mode. In fact, the elbow sleeve has struck the country like a cyclone. It is a pretty fashion for house gowns, afternoon dresses, and evening costumes, and it is to be hoped that it will not kill itself, or be killed, rather, by being worn in all sorts of unsuitable places. Such abbreviations scarcely seem appropriate for business occasions, or business offices, and yet, as we heard a girl say the other day, "Think of the saving on cuffs!"

Now, then, there seems little more to say just at present re the fashions. Perhaps our readers will be interested in the fact that we hope soon to publish some fashion plates. Does this meet with the unqualified approval of everyone?

Glengarry School Days.

A STORY OF EARLY DAYS IN GLENGARRY.

By Ralph Connor—Rev. C. W. Gordon.

CHAPTER IX.—Continued.

"If that were always true a man would soon be rid of his evil heart. But," he continued, as if eager to turn the conversation, "you will be talking with my woman about it. She's a wonderful wise woman, yon."

Somehow the opportunity came to Hughie to take the old man's advice. On Saturday evening, just before leaving for home, he found himself alone with Mrs. Finch, sitting beside the open window, watching the sun go down behind the trees.

"What a splendid sunset!" he cried. He was ever sensitive to the majestic drama of nature.

"Ay," said Mrs. Finch, "the clouds and the sun make wonderful beauty together, but without the sun the clouds are ugly things."

Hughie quickly took her meaning. "They are not pleasant," he said.

"No, not pleasant," she replied, "but with the sunlight upon them they are wonderful."

Hughie was silent for some moments, and then suddenly burst out, "Mrs. Finch, does God forget sins, and will he keep them hid—from people, I mean?"

"Ay," she said, with quiet conviction, "He will forget, and He will hide them. Why should He lay the burden of our sins upon others? And if He does not why should we?"

"Do you mean we need not always tell? I'd like to tell my—some one."

"Ay," she replied, "it's a weary work and a lanely to carry it oor lane, but it's an awfu' grief to hear o' anither's sin. An awfu' grief," she repeated to herself.

"But," burst out Hughie, "I'll never be right till I tell my mother."

"Ay, and then it is she would be carrying the weight o' it."

"But it's against her," said Hughie, his hands going up to his face. "Oh, Mrs. Finch, it's just awful mean. I don't know how I did it."

"Ye can tell me laddie, if ye will," said she, kindly, and Hughie poured forth the whole burden that had lain so long upon him, but he told it laying upon Foxy small blame, for during those days, his own part had come to bulk so large with him that Foxy's was almost forgotten.

For some moments after he had done Mrs. Finch sat in silence, leaning forward and patting the boy's bowed head.

"Ay, but he is rightly named," she said, at length.

"Who?" asked Hughie, surprised.

"Yon store-keepin' chiel." Then she added, "But ye're done wi' him and his tricks, and ye'll stand up against him and be a man for the wee laddies."

"Oh, I don't know," said Hughie, too sick at heart and too penetrated with the miserable sense of his own meanness and cowardice to make any promise.

"And as tae ye're mither, laddie," went on Mrs. Finch, "it will be a sair burden for her." When Mrs. Finch was greatly moved she always dropped into her broadest Scotch.

"Oh, yes, I know," said Hughie, his voice now broken with sobs, "and that's the worst of it. If I didn't have to tell her! She'll just break her heart, I know. She thinks I'm so—oh—oh—" The long pent-up feelings came flooding forth in groans and sobs.

For some moments Mrs. Finch sat quietly, and then she said, "Listen, laddie. There is Another to be thought of first."

"Another?" asked Hughie.

"Another?" asked Hughie.

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yes, I know. But He knows already, and indeed I have often told Him. But besides, you say He will forget, and take it away. But mother doesn't know, and doesn't suspect."

"Well, then, I addie," said Mrs. Finch, with quiet firmness, "let her tell ye what to do. Mak ye're offer to tell her, and warn her that it'll grieve ye baith, and then let her say."

"Yes, I'll do it. I'll do it to-night, and if she says so, then I'll tell her."

And so he did, and when he came back to the Finch's on Monday morning, for his mother saw that leaving school for a time would be no serious loss, and a week or two with the Finches might be a great gain, he came radiant to Mrs. Finch, and finding her in her chair by the open window alone, he burst forth, "I told her, and she wouldn't let me. She didn't want to know so long as I said it was all made right. And she promised she would trust me just the same. Oh, she's splendid, my mother! And she's coming this week to see you. And I tell you I just feel like—like anything! I can't keep still. I'm like Fido when he's let off his chain. He just goes wild."

Then, after a pause, he added, in a graver tone, "And mother read Zaccheus to me. And isn't it fine how He never said a word to him?"

"Hughie was too excited to be coherent—but stood up for him, and—here Hughie's voice became more grave—"I'm going to restore four-fold. I'm going to work at the hay, and I fired that old pistol into the pond, and I'm not afraid of Foxy any more, not a bit."

Hughie rushed breathlessly through his story, while the dark face before him glowed with intelligent sympathy, but she only said, when he had done, "It is a grand thing to be free, is it no?"

CHAPTER X
The Bear Hunt.

"Is Don round, Mrs. Cameron?"

"Mercy me, Hughie! Did ye sleep in the woods? Come away in. Ye're a sight for sore eyes. Come away in. And how's ye're mother and all?"

"All right, thank you. Is Don in?"

"Don? He's somewhere about the barn. But come away, man, there's a bit bannock here, and some honey."

"I'm in a hurry, Mrs. Cameron, and I can't very well wait," said Hughie, trying to preserve an evenness of tone and not allow his excitement to appear.

"Well, well! What's the matter, whatever?" When Hughie refused a "bit bannock" and honey, something must be seriously wrong.

"Nothing at all, but I'm just wanting Don for a—for something."

"Well, well, just go to the old barn and cry at him."

Hughie found Don in the old barn, busy "rigging up" his plow, for the harvest was in and the fall plowing was soon to begin.

"Man, Don!" cried Hughie, in a subdued voice, "it's the greatest thing you ever heard!"

"What is it now, Hughie? You look fairly lifted. Have you seen a ghost?"

"A ghost? No, something better than that, I can tell you."

Hughie drew near and lowered his voice, while Don worked on indifferently.

"It's a bear, Don."

Don dropped his plow. His indifference vanished. The Camerons were great hunters, and many a bear had they, with their famous black dogs, brought home in their day, but not for the past year or two; and never had Don bagged anything bigger than a fox or a coon.

"Where did you see him?"

"I didn't see him," Don looked disgusted. "But he was in our house last night."

"Look here, now, stop that!" said Don, gripping Hughie by the jacket and shaking him.

But Hughie's summer in the har-



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vest-field had built up his muscles, and so he shook himself free from Don's grasp and said, "Look out there! I'm telling you the truth. Last night father was out late and the supper things were left on the table—some honey and stuff—and after father had been asleep for a while he was awakened by someone tramping about the house. He got up, came out of his room, and called out, 'Jessie, where are the matches?' And just then there was an awful crash, and something hairy brushed past his leg in the dark and got out of the door. We all came down, and there was the table upset, the dishes all on the floor, and four great big, deep scratches in the table."

"Pshaw! It must have been Fido."

"Fido was in the barn, and just mad to get out; and, besides, the tracks are there yet behind the house. It was a bear, sure enough, and I'm going after him."

"You?"

"Yes, and I want you to come with the dogs."

"Oh, pshaw! Dear knows where he'll be now," said Don, considering.

"Like enough in the Big Swamp, or in McLeod's beech bush. They're awful fond of beechnuts. But the dogs can track him, can't they?"

"By jingo! I'd like to get him," said Don, kindling under Hughie's excitement. "Wait a bit now. Don't say a word. If Murdie hears he'll want to come, sure, and we don't want him. You wait here till I get the gun and the dogs."

"Have you got any bullets or slugs?"

"Yes, lots. Why? Have you a gun?"

"Yes, you just bet! I've got our gun. What did you think I was going to do? Put salt on his tail? I've got it down the lane."

"All right, you wait there for me."

"Don't be long," said Hughie, slipping away.

It was half an hour before Don appeared with the gun and dogs.

"What in the world kept you? I thought you were never coming," said Hughie, impatiently.

"I tell you it's no easy thing to get away with mother on hand, but it's all right. Here's your bullets and slugs. I've brought some bannocks and cheese. We don't know when we'll get home. We'll pick up the track in your brûlé. Does any one know you're going?"

"No, only Fusie. He wanted to come, but I wouldn't have it. Fusie gets so excited." Hughie's calmness was not phenomenal. He could hardly stand still for two consecutive seconds.

"Well, let's go," and Don set off on a trot, with one of the black dogs in leash and the other following, and after him came Hughie running lightly.

"In twenty minutes they were at the manse clearing."

"Now," said Don, pulling up, "where did you say you saw his track?"

"Just back of the house there, and round the barn, and then straight for the brûlé."

The boys stood looking across the fallen timber toward the barn.

"There's Fido barking," said Hughie. "I bet he's on the scent now."

"Yes," answered Don, "and there's your father, too."

"Gimmini crickets! so it is," said Hughie, slowly. "I don't think it's worth while going up there to get that track. Can't we get it just as well in the woods here?"

There were always things to do about the house, and besides, the minister knew nothing of Hughie's familiarity with the gun, and hence would soon have put a stop to any such rash venture as bear-hunting. The boys waited, listening to Fido, who was running back and forward between the brûlé and the house, barking furiously. The minister seemed interested in Fido's manoeuvres, and followed him a little way.

"Man!" said Hughie, in a whisper, "perhaps he'll go and look for the gun himself. And Fido will find us, sure. I say, let's go."

"Let's wait a minute," said Don, "to see what direction Fido takes, and then we'll put our dogs on."

In a few minutes Hughie breathed more freely, for his father seemed to lose his interest in Fido, and returned slowly to the house.

"Now," said Hughie, "let's get down into the brûlé as near Fido as we can get."

Cautiously the boys made their way through the fallen timber, keeping as much as possible under cover of the underbrush. But though they hunted about for some time, the dogs evidently got no scent, for they remained quite uninterested in the proceedings.

"We'll have to get up closer to where Fido is," said Don, "and the sooner we get there the better."

"I suppose so," said Hughie. "I suppose I had better go. Fido will stop barking for me." So, while Don lay hid with the dogs in the brûlé, Hughie stole nearer and nearer to Fido, who was still chasing down toward the brûlé and back to the house, as if urging someone to come forth and investigate the strange scent he had discovered. Gradually Hughie worked his way closer to Fido, until within calling distance.

Just as he was about to whistle for the dog, the back door opened, and forth came the minister again. By this time Fido had passed into the brûlé a little way, and could not be seen from the house. It was an anxious moment for Hughie. He made a sudden desperate resolve. He must secure Fido now, or else give up the chance of getting on the trail of the bear. So he left his place of hiding, and bending low, ran swiftly forward until Fido caught sight of him, and hearing his voice, came to him, barking loudly and making every demonstration of excitement and joy. He seized the dog by the collar and dragged him down, and after holding him quiet for a moment, hauled him back to Don.

"We'll have to take him with us," he said. "I'll put this string on his collar, and he'll go all right." And to this Don agreed, though very unwillingly, for he had no confidence in Fido's hunting ability.

"I tell you he's a great fighter," said Hughie, "if we should ever get near that bear."

"Oh, pshaw!" said Don, "he may fight dogs well enough, but when it comes to a bear, it's a different thing. Every dog is scared of a bear the first time he sees him."

"Well, I bet you Fido won't run from anything," said Hughie, confidently.

To their great relief they saw the minister set off in the opposite direction across the fields.

"Thank goodness! He's off to McRae's," said Hughie.

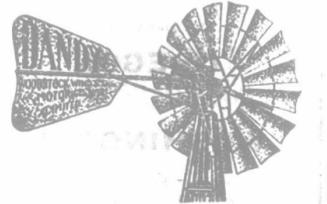
"Now, then," said Don, "we'll go back to the track there, and put the dogs on. You go on with Fido." And Hughie set off, with Fido pulling eagerly upon the string.

When they reached the spot where Fido had been seized by Hughie, suddenly the black dog who had been following Don at some distance, stopped short and began to growl. In a moment his mate threw up his nose and began sniffing about, the hair bristling stiff upon his back.

"He's catching it," said Don in an excited tone. "Here, you hold him. I must get the other one, or he'll be off. He was not a minute too soon, for the other dog, who had been ranging about, suddenly found the trail, and with a fierce, short bark, was about to dash off when Don threw himself upon him. In a few moments both dogs were on the leash, and set off upon the scent at a great pace. The trail was evidently plain enough to the dogs, for they followed hard, leading the boys deeper and deeper into the bush.

(To be continued.)

WINDMILLS



Grain Grinders, Tanks, Water Boxes and Foundry Supplies. Write for our free catalogue. Estimates cheerfully given.

WOODSTOCK WIND MOTOR CO., Limited,
Woodstock, Ont.

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.

BARRED ROCKS exclusively. Fine young cockerels. Eggs, \$1 per 13. Fred Auston, Brighton.

BUFF ORPINGTON—Eggs \$1.50 per 13. All stock. Good hatch guaranteed. W. H. Biggar, Trafalgar, Ont.

CHOICE BARRED PLYMOUTH ROCKS. Winter layers. Eggs \$1 setting. Incubator settings: 10 dozen for \$5. Mrs. Howard, St. Julian's, Sutton West, Ont.

EGGS for hatching—Mammoth Bronze turkeys, Silver-Gray Dorkings, Barred Rocks, from imported stock. Alfred E. Shore, White Oak, Ont.

FOR SALE—Barred Rock eggs for hatching, 75c. per 15; incubator lots, \$4 per 100. Satisfaction guaranteed. Ethel Stuart, Eganville, Ont.

FOR SALE—Mammoth Bronze Turkeys, heavy birds, bred from prize-winning imported toms, stock from the first-prize Pan-American winners. Pairs and trios mated not skin. Also an incubator and brooder. R. G. Rose, Glanworth, Ont.

FOR SALE—Beautiful pair young black turkeys. Both 1st prize last winter fair. Two fine white Holland toms. Big Pekin and Rouen ducks and drakes. Two good Emden ganders. Barred Rock cockerels. All bred from winners. We can and will please you. Baker Bros., box 317, Guelph, Ont.

FOR SALE—White Wyandotte cockerels (Feltch's strain). Grand blocky birds. Eggs now ready. J. A. Ceraswell, Bond Head.

FANCY FOWLS—Eight-page price list free. Address: G. G. Shoemaker, P. O. box 61, York, Pa.

FOR SALE—Mammoth Bronze Turkeys, heavy birds, bred from prize-winning imported toms, stock from the first-prize Pan-American winners. Pairs and trios mated not skin. R. G. Rose, Glanworth, Ont.

ONE large Toulouse gander, \$2.50, or would exchange for a Chinese goose. Rouen duck eggs, \$1 per 10; Brown Leghorn eggs, \$1 for 25. Alfred Robson, Norwood, Ont.

ONE VARIETY—Barred Plymouth Rocks. Eggs, \$1 a setting; \$5 a hundred. A few choice cockerels for sale. Miss Emily Spill, Colborne, Ont.

SPECIALTY—Buff Orpingtons only. 15 of 15 fertile eggs from my choice stock. \$2. A. Cole, Grafton, Ont.

WHITE Wyandottes exclusively. Choice quality and fine winter layers. W. D. Monkman, Bond Head, Ont.

WHITE Wyandotte eggs from select stock. Wilmur, Berlin, Ont.

WHITE PLYMOUTH ROCK eggs, \$1 per 13. Good layers. Large stay-white strain. C. E. Smith, Scotland, Ontario.

187 EGG STRAIN Buff Orpingtons. Bred from England's greatest layers. Five years' experience breeding and importing. \$1 per 15; \$5 per 100. Everard Brown, Haysville, Ont.

MEN WANTED to advertise and introduce our stock and poultry compounds to farmers and dealers. Work during spare time or permanently. This is an exceptional opening for a hustler. Write for particulars.

GOLDEN CREST CO., London, Can. 48 Bathurst St.,

Glen Rouge Jerseys

FOR SALE: A fine St. Lambert bull 14 months old. Solid color. Dam Naomi of St. Lambert 5088. Sire Exile Roter King 50326. Also one eight months old from Adelaide of Glen Rouge 19353, a granddaughter of the celebrated cow Adelaide of St. Lambert. For particulars address

Mrs. F. A. Rolph,
Glen Rouge Farm, Markham, Ont.

COSSIP.

The attention of our readers is directed to the advertisement, on another page, of the dispersion sale by auction, on March 28th, 1906, of the entire herd of 15 head of Shorthorn cattle and three Clydesdale fillies, by the great champion and sire of champions, McQueen, the property of Mr. C. C. Hanson, of Coaticook, Quebec, all of which will be sold without reserve on a year's time, as the owner has rented his farm.

THE ALFRED RICE HOLSTEIN SALE.

Breeders of Holstein cattle and dairy-men generally will do well to apply early for the catalogue of the grand herd of Mr. Alfred Rice, of Currie's Crossing P. O., Oxford County, Ont., about five miles from Woodstock, to be sold by auction, on March 21st. There are 14 fine young cows, besides heifers and bulls, 22 head in all of registered Holsteins, in excellent condition—the cows heavy milkers, and all bred from great producing families. Sires bred from great milk-producing dams have been continuously used in the herd, and the cows have been bred to the same sires used in the great herd of Mr. Geo. Rice. Look up the advertisement, read again the notes regarding the offering on page 381 in "The Farmer's Advocate" for March 8th; send for catalogue, and attend the sale.

IMPORTANT SHIRE HORSE SALE.

The announcement in our advertising columns of a great auction sale, at the Repository, Toronto, on March 28th, of imported and Canadian-bred Shire stallions, mares and fillies, belonging to Messrs. Morris & Wellington, of Fonthill, Ont., comprising a special importation, selected for their suitability to the Canadian trade, should attract the attention and attendance of farmers from far and near. The Shire fills the bill for the breeding of quick-selling horses at highest prices, with substance and quality, combined with a good disposition and capacious breadbasket and strong constitution. The proprietors claim that this will be the greatest Shire sale ever held in Canada, and probably in America, six of the 28 head in the offering being horses, and the balance mares and fillies. Look up the advertisement, and write for the catalogue early to Burns & Sheppard, Toronto.

AN IMPORTANT CLYDESDALE SALE.

As announced in an advertisement in this issue, Messrs. Prouse & Innis, of Ingersoll and Woodstock, Ont., will sell by auction at the Royal Hotel Stables, Woodstock, Ont., on Friday, April 6th, 40 imported Clydesdale mares and fillies, personally selected by one of the firm for size, quality and breeding of the highest class. The excellent character of the best importation of Clydesdales by these gentlemen, sold at Woodstock, in November, 1905, was acknowledged to be one of the best lots ever brought to this country, and the sale was entirely without reserve, every animal offered being sold to the highest bidder. The present importation is said to be even better individually, and will be sold in the same place and in the same straightforward manner. This will be a good opportunity to secure a good young brood mare, capable of doing any farm work.

THE MUTUAL LIFE.

The 36th annual report of the Mutual Life Assurance Company of Canada, whose head office is at Waterloo, Ont., published in this issue of "The Farmer's Advocate," makes a very satisfactory showing. This company has been carefully, economically and well managed during its whole history, and probably carries a better all-round class of risks than most if not of any similar company. The gains in income in 1905 were, in round numbers, \$231,210; in assets, \$1,075,561; in surplus, \$179,928, and in insurance in force, \$3,296,000. The average rate of interest realized on their funds was 5.1 per cent., and the assets at the close of the year were \$8,846,658, consisting of mortgages, debentures and bonds, loans on policies, premium obligations, real estate and cash in banks and at head office. The financial statement is a creditable one, and will bear the closest scrutiny.

The Mutual Life Assurance Co. of Canada.

36th Annual Statement for the Year 1905.

Table showing INCOME: Premiums \$1,547,506 45; Interest and rents 407,563 94; Profit from sale of Real Estate 1,448 52; Total \$1,956,518 91.

Table showing ASSETS: Mortgages \$4,265,533 86; Debentures and Bonds 3,245,401 89; Loans on Policies 988,670 39; Premium Obligations 28,810 60; Real Estate 56,281 08; Cash in Banks 257,780 37; Cash at Head Office 4,280 28; Due and Deferred Premiums (net) 272,121 08; Interest and rents due and accrued 177,312 65; Total \$9,296,092 15.

Surplus on Government Standard of Valuation, \$1,261,905.00.

Table showing GAINS IN 1905: In Income \$231,210 01; In Assets 1,075,561 70; Total \$1,306,771 71.

Audited and found correct. Waterloo, February 1st, 1906. J. M. SCULLY, F. C. A., Auditor.

Table showing DISBURSEMENTS: Death Claims \$231,924 10; Matured Endowments 159,450 00; Purchased Policies 64,168 88; Surplus 87,928 85; Annuities 6,422 56; Expenses, Taxes, etc. 348,491 76; Profit and Loss 1,519 18; Balance 1,058,593 78; Total \$1,956,518 91.

Table showing LIABILITIES: Reserve for each \$1 per cent. and 3 per cent. \$8,210,000 00; Reserve on lapsed Policies, liable to revive or surrender 2,400 21; Death Claims unadjusted 64,680 00; Present value of Death Claims payable in Instalments 35,654 88; Premiums paid in advance 34,873 49; Amount due for medical fees 5,583 50; Accrued Rents 7,895 28; Credit Ledger Balances 1,024 25; Surplus on Company's Valuation Standard 923,001 19; Total \$9,296,092 15.

INSURANCE ACCOUNT.—The volume of new business was 9,637 Policies for \$6,014,876, being an increase over 1904 of 185 Policies for \$966,408. With the exception of \$65,000 written in Newfoundland, the new business was all written within the Dominion of Canada. The total amount of insurance in force is \$44,199,664 under 29,798 policies, being an increase over 1904 of \$3,722,984.

INCOME.—The total income for the year was \$1,956,518.91, derived from Premiums \$1,547,506.45; Interest \$407,563.94, and profit from the sale of Real Estate, \$1,448.52.

PAYMENTS TO POLICY-HOLDERS.—The payments to Policy-holders consisted of Death Claims, \$231,924.10; Matured Endowments, \$159,450; Purchased Policies, \$64,168.88; Surplus, \$87,928.85; and Annuities, \$6,422.56; being a total of \$552,914.19. The Death Claims which fell in during the year amounted to \$266,214, and though slightly in excess of those in the preceding year, were very light, and much below the expectation.

THE EXPENSES AND TAXES were \$348,491.76, and Profit and Loss, \$1,519.18, making a total of \$350,010.94, or 17.8 per cent. of the total income.

ASSETS.—The cash assets at the close of the year were \$9,246,658.22, and consisted of Mortgages, \$4,265,533.86; Debentures and Bonds, \$3,245,401.89; Loans on Policies, \$988,670.39; Premium Obligations, \$28,810.60; Real Estate, including the Head Office building, \$56,281.08, and cash in Banks and at Head Office, \$261,990.60; adding to this the due and deferred premiums, \$272,121.08, interests and rents due and accrued, \$177,312.65, the total assets amount to \$9,296,092.15. It will be observed that, as in the past, we still continue to invest our funds in securities of a non-speculative character, and that we hold them on our books at their net cost.

The interest on our investments has been very well met, especially in the City of Winnipeg, where on mortgages amounting to \$745,555, the interest in arrear at the close of the year was only \$327. In the Province of Manitoba and the West generally, there is a tendency to defer payment of instalments of principal on account of the desire to purchase more land. All payments, both for interest and principal, have, however, been very well met, and were quite equal in that respect to the previous year. In Ontario and elsewhere the Mortgage collections have been exceptionally good, and at the close of the year there was interest in arrear of only \$16,317, the largest part of which fell due in the closing days of the year, and has since been paid. The active demand for money during the year kept our funds well employed at good rates of interest. The average rate realized on our funds was 5.1 per cent.

THE LIABILITIES were again computed on the same standard as in former years, viz.: Combined Experience Table with 4 per cent. interest for all business up to January 1st, 1900. From that date to January 1st, 1905, on the Institute of Actuaries' Table, with 3 1/2 per cent. interest, and thereafter on the same table with 3 per cent. interest. The reserve computed upon this standard of valuation amounts to \$8,210,064.24, and the total liabilities are \$8,349,991.08. The Surplus over all liabilities on the Company's standard of reserve, as above mentioned, is \$954,001.12, being an increase for 1904 of \$181,928.25. On the Government standard of valuation our surplus would be \$1,263,905.

As in former years, the Executive Committee has examined all the securities and verified all the entries relating to them on the Company's books.

Head Office - Waterloo, Ont.

IMPORTANT AUCTION SALE OF IMPORTED

Clydesdale Mares and Fillies

At the Royal Hotel Stables, in the City of Woodstock,

FRIDAY, APRIL 6th, 1906.

40 Imported Clydesdale mares and fillies, carefully selected for size, quality and breeding by one of the proprietors. Sale to commence at 1 o'clock sharp. For catalogues apply to owners:

S. J. PROUSE, Ingersoll, Ont. J. W. INNIS, Woodstock, Ont.

Auctioneer: T. E. Robson, Ilderton.

DON'T THROW MONEY AWAY



THE SETTING HEN—Her failures have discouraged many a poultry raiser.

You can make money raising chicks in the right way—lots of it.

No one doubts that there is money in raising chickens with a good incubator and brooder.

Users of the Chatham Incubator and Brooder have all made money. If you still cling to the old idea that you can successfully run a poultry business using the hen as a hatcher, we would like to reason with you.

In the first place, we can prove to you that your actual cash loss in eggs, which the 20 hens should lay during the time you keep them hatching and brooding, will be enough to pay for a Chatham Incubator and Brooder in five or six hatches, to say nothing whatever of the larger and better results obtained by the use of the Chatham Incubator and Brooder.

If you allow a hen to set, you lose at least eight weeks of laying (three weeks hatching and five weeks taking care of the chickens), or say in the eight weeks she would lay at least three dozen eggs. Let the Chatham Incubator on the hatching, while the hen goes on laying eggs.

Our No. 3 Incubator will hatch as many eggs as twenty setting hens, and do it better. Now, here is a question in arithmetic:—

If you keep 20 hens from laying for 8 weeks, how much cash do you lose if each hen would have laid 3 dozen eggs, and eggs are worth 20 cents per dozen? **Ans.—\$2.00.**

Therefore, when the Chatham Incubator is hatching the brooder of eggs that twenty hens would hatch, it is really earning in cash for you \$2.00 besides producing for your profit chicks by the wholesale, and being ready to do the same thing over again the moment each hatch is set.

Don't you think, therefore, that it pays to keep the hens laying and let the Chatham Incubator do the hatching?

There are many other reasons why the Chatham Incubator and Brooder outclass the setting hen.

The hen sets when she is ready. The Chatham Incubator is always ready. By planning to take off a hatch at the right time, you may have plenty of broilers to sell when broilers are scarce and prices at the top notch. If you depend on the hen, your chicks will grow to maturity just when every other hen's chicks are being marketed, and when the price is not so high.

The hen is a careless mother, often leading her chicks among weeds, bushes, and in places where rats can confiscate her young.

The Chatham Brooder behaves itself, is a perfect mother and very rarely loses a chick, and is not infested with lice.

Altogether, there is absolutely no reasonable reason for continuing the use of a hen as a hatcher and every reason why you should have a Chatham Incubator and Brooder.

We are making a very special offer, which it will pay you to investigate.

Small Premises Sufficient For Poultry Raising.

Of course, if you have lots of room, so much the better, but many a man and woman are carrying on a successful and profitable poultry business in a small city or town lot. Anyone with a fair sized stable or shed and a small yard can raise poultry profitably.

But to make money quickly, you must get away from the old idea of trying to do business with setting hens as hatchers. You must get a Chatham Incubator and Brooder.

To enable everybody to get a fair start in the right way in the poultry business, we make a very special offer which it is worth your while to investigate.

We can supply you quickly from our distributing warehouses at Calgary, Brandon, Regina, Halifax, Chatham, factories at Chatham, Ont., and Detroit, Mich.

The MANSON CAMPBELL CO., Limited, Dept. No. 1, CHATHAM, CANADA

Let us quote you prices on a good Fanning Mill or good Farm Scale.

Gray & Hamilton

REAL ESTATE

Regina, - Saskatchewan.

Box 317.

We make it a point to handle only the Best Land in the Best Wheat Country.

Improved farms at reasonable rates. Wild lands in the Saskatchewan Valley.

TO SECURE THE BEST PAYING RESULTS Advertise in the "Farmer's Advocate."

The Chatham Incubator and Brooder has created a New Era in Poultry Raising.

The setting Hen as a Hatcher has been proven a Commercial Failure.

The Chatham Incubator and Brooder has always proved a Money Maker.

A Light, Pleasant and Profitable Business for Women

Many women are to-day making an independent living and putting by money every month raising poultry with a Chatham Incubator.

Any woman with a little leisure time at her disposal can, without any previous experience or without a cent of cash, begin the poultry business and make money right from the start.

Perhaps you have a friend who is doing so. If not, we can give you the names of many who started with much misgiving only to be surprised by the ease and rapidity with which the profits came to them.

Of course, success depends on getting a right start. You must begin right. You can never make any considerable money as a poultry raiser with hens as hatchers. You must have a good incubator and brooder, but this means in the ordinary way an investment which, perhaps you are not prepared to make just now, and this is just where our special offer comes in.

If you are in earnest, we will set you up in the poultry business without a cent of cash down. If we were not sure that the Chatham Incubator and Brooder is the best and that with it and a reasonable amount of effort on your part you are sure to make money, we would not make the special offer below.



No. 1—80 Eggs
No. 2—120 Eggs
No. 3—240 Eggs

THE CHATHAM INCUBATOR—Its success has encouraged many to make more money than they ever thought possible out of chicks.

Every Farmer Should Raise Poultry

Almost every farmer "keeps hens," but while he knows that there is a certain amount of profit in the business, even when letting it take care of itself, few farmers are aware of how much they are losing every year by not getting into the poultry business in such a way as to make real money out of it.

The setting hen as a hatcher will never be a commercial success. Her business is to lay eggs and she should be kept at it. The only way to raise chicks for profit is to begin right, by installing a Chatham Incubator and Brooder.

With such a machine you can begin hatching on a large scale at any time.

You can only get one crop off your fields in a year, but with a Chatham Incubator and Brooder and ordinary attention, you can raise chickens from early Spring until Winter and have a crop every month. Think of it!

Quite a few farmers have discovered that there is money in the poultry business and have found this branch of farming so profitable that they have installed several Chatham Incubators and Brooders after trying the first.

Perhaps you think that it requires a great deal of time or a great deal of technical knowledge to raise chickens with a Chatham Incubator and Brooder. If so, you are greatly mistaken. Your wife or daughter can attend to the machine and look after the chickens without interfering with their regular household duties.

The market is always good and prices are never low. The demand is always in excess of the supply and at certain times of the year you can practically get any price you care to ask for good broilers. With a Chatham Incubator and Brooder you can start hatching at the right time to bring the chickens to marketable broilers when the supply is very low and the prices accordingly high. This you could never do with hens as hatchers.

We know that there is money in the poultry business for every farmer who will go about it right. All you have to do is to get a Chatham Incubator and Brooder and start it. But perhaps you are not prepared just now to spend the money. This is why we make the special offer.

IS THIS FAIR?

We know there is money in raising chickens. We know the Chatham Incubator and Brooder has no equal.

We know that with any reasonable effort on your part, you cannot but make money out of the Chatham Incubator and Brooder.

We know that we made a similar offer last year and that in every case the payments were met cheerfully and promptly, and that in many cases money was accompanied by letters expressing satisfaction.

Therefore, we have no hesitation in making this proposition to every honest, earnest man or woman who may wish to add to their yearly profits with a small expenditure of time and money.

This really means that we will set you up in the poultry business so that you can make money right from the start, without asking for a single cent from you until after 1906 harvest.

Write us a post card with your name and address, and we will send you full particulars, as well as our beautifully illustrated book, "How to make money out of chicks." Write to-day to Chatham.

Winnipeg, New Westminster, B.C., Montreal.

QUESTIONS AND ANSWERS. Miscellaneous.

IMPURITIES IN SAMPLE OF CLOVER AND GRASS SEED.

Kindly tell me what weed seeds are present in the enclosed packet of clover and timothy seeds? C. W. P.

Ans.—Among the noxious weed seeds present—by that, meaning those mentioned in the Seed Control Act, 1905—we found catchfly, ox-eye daisy and Canada thistle. Under the head of other weed seeds may be mentioned that there were present, Chenopodium, lamb's-quarters, chickweed, bugle weed, cinquefoil, common plantain, green foxtail, pig-weed, sheep sorrel, ergot, shepherd's-purse, witchgrass and yarrow. The mixture of grass seed contains alsike, bluegrass, white clover and red clover.

T. G. RAYNOR.

Department of Agriculture, Ottawa.

PREPARING SOIL FOR ONIONS—IMPLEMENTS FOR ONION CULTURE—DRILL FOR SOWING RAPE.

1. We wish to plant half an acre of onions. Would like to know the best way to prepare the soil?

2. What kind of implements are necessary to plant the seed and keep them clean?

3. What kind of drill is used for sowing rape? L. W. H.

Ans.—1. Land for onions should be very fine and smooth on the surface, and firm below. Fall-plowed land worked fine in spring with harrow, clod-crusher and rake suits well.

2. A hand garden seeder is used for sowing seed, and what is called a wheel hoe for keeping down weeds. The fingers have to be used sometimes.

3. A turnip drill.

LAWN FENCING WHERE ROCK IS NEAR SURFACE.

What kind of fence is best to enclose lawn where rock is near the surface? Prescott Co., Ont. SUBSCRIBER.

Ans.—Many ornamental iron fences are advertised, some of them at reasonable prices. Most companies who sell such have their own style of iron posts, and, no doubt, some of these would be suitable for your ground. We know of a style of iron post (blacksmith-made) which has stood the test of years, in which the post was kept solid by an iron brace on each side, the ground ends of which were bent up in the form of a hook, and into this hook or curve a stone was laid, the whole being buried a few inches only. It might be advisable to put up an ornamental wire fence, as it would require but few posts, and use either tubing or solid iron for posts, drilling a hole into the rock for each one.

MISCELLANEOUS.

1. What will keep worms out of onion stalks in summer?

2. How would you advise treating lambs that will not suck, even when the teat is put into their mouth?

3. Would you give me a plan of a simple horse-power for running small machinery on the farm? I have an old binder, "Toronto make," which I intend getting the gearing and bolts out of—power for one or two horses only. G. S. W.

Ans.—1. Remove and destroy affected onions. Sprinkle kerosene emulsion near the onions. Change the onion bed each year.

2. First put a finger in the mouth, and with the other hand milk some milk into its mouth, then place the teat in its mouth and draw or force some milk from it into the mouth, when, as a rule, the lamb will take to sucking. Failing with this, would try a rubber nipple on a bottle, enlarging the opening with a knife, so that milk would run freely, milking into the bottle and placing nipple in lamb's mouth.

3. We have known two instances, at least, in which farmers have used the gearing of old reapers for a power for churns and cutting boxes. The drive wheel was placed horizontally above the other machinery, and an arm fastened to it. The frame was made to fit the machinery.

FREE
A \$3,000 STOCK BOOK
CONTAINS 183 LARGE ENGRAVINGS.

The cover of this book is a beautiful live stock picture printed in six colors, and is entirely free from advertising. The book contains 164 pages, gives history, descriptions and engravings of the various kinds of horses, cattle, hogs, sheep, colts, calves, pigs, poultry, etc. Also an **UP-TO-DATE VETERINARY DEPARTMENT** that will save any farmer or stockman money. We will mail this absolutely free, postage prepaid. Write us today and answer the following questions:
1st. Where did you read this?
2nd. How many head of cattle have you?
INTERNATIONAL STOCK FOOD CO
Toronto, Can.



3 Feeds for One Cent!
International Stock Food Co., Toronto. Creek Bank, Ont., Aug. 22nd, 1904.
Gentlemen: I enclose \$15 for the "International Stock Food" I received some time ago on trial, and it gave me very satisfactory results on feeding it to stock. It fattens stock quickly.
Yours truly,
ROAH MILLER.

International Stock Food.
INTERNATIONAL STOCK FOOD is a scientific medicinal preparation, composed of roots, herbs, seeds, barks, etc., and is fed to stock in small quantities in addition to the regular grain ration, for the purpose of aiding digestion and insuring perfect assimilation. The cost is not much, and we positively guarantee that it will **SAVE YOU MONEY** over your ordinary way of feeding and more than your original outlay.

CAPITAL, \$100,000. SHARES, \$20 each.

The Farmers' Mfg. & Supply Company, Ltd.

Are you a shareholder in the Farmers' Mfg. & Supply Co., Limited? If not, you should become one at once, and participate in the benefits of organization. We already have about 2,000 farmers who have learned of the value of association and of the added weight which co-operation for a set purpose brings by becoming shareholders in this practical Co-operative Co. What we do not manufacture we buy direct from the manufacturers, and do away with the middleman's profits, which profits do not add to the value of the article. You save from 15 to 40% on your household goods, implements, wire fence, and feed corn, etc. Last week we had three cars of feed corn go to some of our shareholders, and they saved 5c. per bushel. One shareholder got 300 bushels, and saved \$15. The benefits are too numerous to mention here. Write to Head Office.

FARMERS' MANUFACTURING & SUPPLY COMPANY, LIMITED
Durham, Ontario.

QUEBEC HERD SHORTHORNS
FOR SALE BY AUCTION.

C. C. HANSON, of Coaticook, Que., will sell by public auction, at his farm, near Coaticook, on the Portland Division of the G. T. R., on

WEDNESDAY, MARCH 28th, 1906,

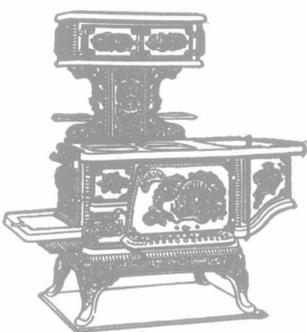
His entire herd of **Registered Shorthorn Cattle**, 15 head of that grand old Levis strain. Also a lot of grade cattle and **10 horses**, including three registered **Glydesdale Fillies**, by Macqueen. The above stock will be sold positively without reserve, as the farm is let. Conveyances will meet morning and noon trains on day of sale. **Sale commences at 1 o'clock.**

Terms: One year's credit on approved notes, at 6 per cent.
EDWIN HOWE, Auctioneer. **C. C. HANSON, Prop., Coaticook, Que.**

Laurentian
STOVES AND RANGES
Are Second to None in Canada.

Be sure you buy the best. If your dealer is not handling our lines, write direct to us for our catalogue containing cuts and descriptions and prices of our goods. Manufactured only by

The Gould Manuf'g Co., Ltd.
Smith's Falls, Ont.



Pulls Stumps or Standing Trees.
Clears a two acre circle with one sitting—pulls anything the wire rope will reach; stumps, trees, grubs, rocks, hedges, etc. A man and a boy with one or two horses can run the

COMBINATION STUMP PULLER,
Stump Anchored or Self Anchoring.
A minute and a half's silt takes for the ordinary stump. No heavy chains or rods. Note the strong wire rope with patent coupler—grips the stump at any point. Does not chafe rope; far ahead of old-style "take-ups." Smallest rope we furnish stands 40,000 lbs. strain. It generates immense power and it's made to stand the strain. We also make the Iron Giant Grub and Stump machine, the L. X. L. Grubber and Hawkeye Grub and Stump Machine. Write for free illustrated catalogue.
Largest manufacturers of Stump Pullers in the World.
Established 1894.

MILNE MFG. CO.,
288 8th St., Monmouth, Ill.



QUESTIONS AND ANSWERS.
Miscellaneous.

SHARE OF TENANT.

1. If a farmer lets his farm on shares, and finds everything to work with, also seed grain and pays tax, and has all rough feed and grain fed up on farm, finds a house for man to live in, etc., what share should the man receive of everything?

2. What share should I give a man, he to do all the work, get up wood, and I to pay for sawing, pay tax, threshing bill and smith's bill? He is to milk cows, make butter, raise calves, etc. I want grain and hay fed up on farm to hogs, cattle and sheep, and raise colts, etc. Now, I should like to have some person that has some experience to give a plan, so as to give a man that does the work a good chance, and be satisfactory for both parties. W. H. S.

Ans.—1. When a farm is rented on shares, and the tenant has his own stock and implements, it is quite common for the owner to receive one-third of all sales. In the case you mention, we think owner and tenant should have about equal shares. So much depends, however, on the productiveness of the farm, and on the system of farming to be pursued, that it is impossible to give an exact answer.

2. In this case considerably more than half should, we think, come to the owner. We suggest that in making such a bargain, the average yearly receipts from the farm be the basis from which the proportion justly falling to the man who does all the work should be determined. He should be decidedly better paid than an ordinary hired man. T. B.

INQUIRIES CONCERNING TEMISKAMING.

1. What are the general prices of horses and other stock in Temiskaming?
2. During winter, or while crop is growing, what are the chances for employment, and at what wages?
3. How far are the unlocated quarter-sections from the railroad?
4. What is the best time to come up?
R. B.

Ans.—1. Teams, from \$250 up; milch cows, \$30 up; young pigs, \$4 each, up; fowls, 75c. to \$1, and upwards.

2. During winter, plenty of work in lumber camps, at \$30 to \$35 a month, with board; also work on rail and in mines at similar wages. During summer, railroad work and mining offer steady employment, \$1.75 a day average pay, without board. Temporary work on roads, etc., also, at about same scale of pay. Plenty of employment all year round for steady men. Those with knowledge of carpentry and similar trades can make good money in the towns.

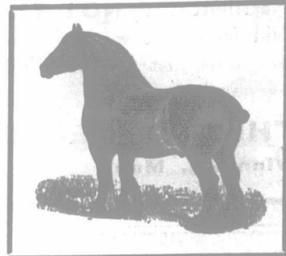
3. There are some vacant lots still left in older townships fairly near railroad, but as a general rule they have been left unlocated for some fault, such as swamp or stone. Some new townships, however, will, in all probability, be opened for location this spring, bordering on and extending northwards along the railroad, which will, I understand, pass through them early this year. It would be advisable to obtain official information from the Crown Lands Agent, Heaslip P. O., Temiskaming, as soon as he is in a position to speak definitely.

4. For the man with no capital, the fall is the best time to come up, as then he can obtain steady employment for the winter, and earn enough to enable him to live on his lot all summer. The man with a little capital might come up in April, ready to commence as soon as the snow goes; though even he, if he arrived in the fall, could get up a shanty and do some chopping during the winter, ready for spring operations. Speaking generally, fall would be the best time—say mid-October. G. W. W.

The minister's wife and an unwelcome visitor in a very talkative scandalmonger, so the minister went out for a stroll. Returning half an hour later, he called out: "That old cat gone, I suppose?" "Yes," said his wife (who had still her guest talking to her), "I sent it home in a basket, my dear, this morning." What do you think of that for presence of mind and absence of cat?

THE
REPOSITORY

Corner Simcoe and Nelson Streets,
TORONTO, ONTARIO.
BURNS & SHEPPARD, Proprietors.



Great Special Auction Sale

IMPORTED REGISTERED

SHIRES

Stallions, Mares and Fillies

ON

Wednesday, March 28, '06

At 1 p.m. Sharp.

By instructions from **MESSES. MORRIS & WELLINGTON**, Props. Fonthill Stock Farm, Fonthill, Ont., we will sell on the above date a special importation of Shires (stallions, mares and fillies), selected with great care by a competent judge, with a view to meeting the requirements of the Canadian market. Included in the shipment are some extra choice registered Canadian-bred animals.

Catalogues containing full descriptions and pedigrees may be had on application to

BURNS & SHEPPARD, Toronto.

C. A. BURNS, General Manager and Auctioneer.

THIS SKIMMING
MACHINE takes the cream quicker than wringers squeeze water from clothes. It gets a quarter to a half more cream than by setting, because it uses centrifugal force—a force thousands of times stronger, quicker, more effective than the force that makes cream rise in pans.

Sharples
TUBULAR
CREAM SEPARATORS

Skimming finished five minutes after milking, because boy of ten can run Tubular during milking. No skim milk to warm, because skim milk is fed still warm from cow. Half less washing, labor and expense, because only cream is put away. Catalog X-198 explains clearly.
THE SHARPLES SEPARATOR CO.
Toronto, Can. West Chester, Pa. Chicago, Ill.

ALBERTA
FARMS
CHEAP

Do You Want One?
WE SELL THEM.

Samis & Bush,
Calgary.

Write to-day.

SHORTHORN BULLS
and HEIFERS

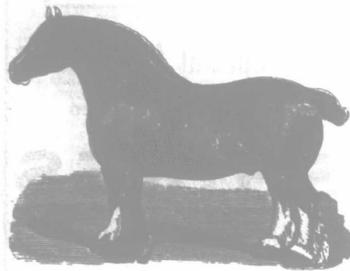
Sired by the Scotch bull, Scottish Lad 45061
FOR SALE.
S. DYMENT, Barrie, Ontario.



WANTED

Every farmer in Canada, who has not already done so, to **PROVE** for **HIMSELF** that **CARNEFAC** is an absolute necessity for the **SUCCESSFUL** raising of **CALVES** and **PIGS**, as well as the **BEST TONIC** on earth for horses or cattle that are **NOT THRIVING** properly. These are cold, solid facts, and we invite you to prove them. We offer no gifts or premiums, just **CARNEFAC**, the tonic used by all good feeders. See our dealers, or write us direct, at once.

THE CARNEFAC STOCK FOOD CO.,
Winnipeg, Man. Toronto, Ont.



Clydesdales and Hackneys

DALGETY BROS., Dundee, Scotland, and London, Ont., have on hand just now at their stables, London, Ont., a choice selection of above, including several prizewinners in this country and Scotland. All combining size and quality. Come and see them.

JAMES DALGETY, Glencoe, Ont.



Clydesdales French Coachers, Imp.

Scottish and Canadian winners at the leading shows of both countries. 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.

ROBT. NESS & SON, Howick, Quebec.
Long-distance Telephone.

"PEERLESS"

INCUBATORS AND BROODERS



"THE POULTRY-RAISER'S FAVORITE"

Built on Honor. Fully Guaranteed.
A Canadian Triumph in Artificial Incubation.

Our **Improved Chick Drawers** not only add 25 per cent. to the air capacity of the egg chamber, but permit the chicks to be removed without interfering with the hatching eggs.

Our **Tubular Copper Tank** is the best, most practical and most economical system of heating ever devised for incubator or brooder use.

Our **Regulator**, once adjusted, will permanently control the heat with a degree of accuracy heretofore considered impossible.

Catalogue and prices on application.

The Lee-Hodgins Company Limited
PEMBROKE, ONT.

GOSSIP.

Attention is called to the new advertisement of Mr. S. Dymont, of Barrie, Ont., offering for sale Shorthorn bulls and heifers, sired by Scottish Lad =45061=, a richly-bred bull, of the Jilt family, having for his sire Imp. Gladiator =32064=, and for dam, Imp. Tiltouces Duchess.

Messrs. J. Crouch & Son, LaFayette, Indiana, write: We have just received a new importation, consisting of 170 head of fine stallions, consisting of German Coach, Percheron and Belgians, and have imported 608 head in the last 20 months. They are the greatest horses that money can buy, and our Percherons we sell from \$800 up to \$2,400, and our Belgians from \$1,200 up; Coachers from \$1,000 up.

Mr. W. E. Rothwell, Manager of the Stewart Straw Cutter Co., Toronto, who was in London last week, writes that he has been making a hurried trip amongst the manufacturers of threshing machinery in Ontario, all of whom report business prospects as good, and receiving more enquiries for Stewart Straw Cutters than ever before; while the head office of the S. S. C. Co. have enquiries from all parts of Canada and many from the United States.

GEO. HERRINGTON'S SHORTHORN SALE.

The auction sale on Feb. 28th of the small herd of Shorthorns belonging to Mr. Geo. Herrington, Edville, Ont., was very largely attended, and the cattle, a useful lot without special fitting. The 19 head sold made an average of \$79.20, the highest price, \$155, being paid by J. Colwill, Tyrone, for Tyrone Maid, five years old. \$125 was paid for the four-year-old, Edville Beauty, by W. Winters, Wicklow, two others going at \$100 and \$101. Mr. Fred Silversides, as auctioneer, did good work.

THE PORT PERRY SALE.

At the annual sale at Port Perry, Ont., on March 2nd, of pure-bred cattle, under the auspices of the Scugog Agricultural Society and the Live-stock Branch of the Ontario Department of Agriculture, Shorthorns only were entered, and 22 of the 36 head catalogued were sold for an average of \$83.50. The highest price was \$245, for the red 11-months' bull, Marchioness Hero =60473=, bred by Wm. Ormiston, Jr., Columbus, Ont., sired by Imp. Merry Master; dam Imp. Marchioness 23rd, by Lord Lovat. He was bid off by D. Cotton, Brooklin, for a man in Orillia. Oxmead Belle, a red four-year-old cow, bred by Mr. Ormiston, brought the second highest price, \$163, Chas. Jenkins, Oakwood, being the purchaser.

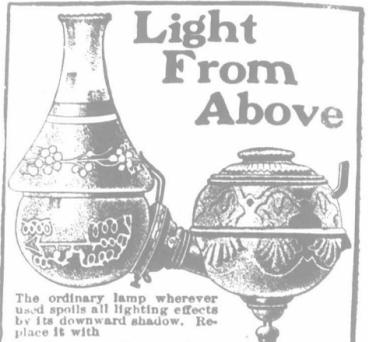
QUESTIONS AND ANSWERS. Miscellaneous.

REMEDY FOR RINGWORM—GEAR OF BICYCLE—SPEED OF CIRCULAR SAW—PLANTING EVERGREENS.

1. Give remedy for ringworm on calves.
2. How to find the gear of a bicycle?
3. How to find the speed of a circular saw run with a gear jack? The gear runs three to one, and a 15-inch pulley to a 5 1/2 inch on the same shaft.
4. How much speed will a circular saw stand?
5. What is the best time to plant evergreens? Will they grow taken from a swamp and planted on high land?

S. M. P.

- Ans.—1. Rub with a mixture of sulphur and lard, to which a little coal oil is added.
2. Multiply the diameter of the wheel in inches by the number of points on the large sprocket wheel, and divide by the number of points on the small wheel.
3. Three multiplied by 15, divided by 5 1/2, gives 8 2/11 times faster than the saw runs than the shaft which drives the gear jack.
4. It depends on the diameter of the saw. The smaller the saw the higher the possible speed.
5. Just after spring seeding is a splendid time, though they will succeed planted as late as June. Evergreens taken from a swamp grow better than if taken from high ground, the reason probably being that as the roots are nearer the surface more of them are removed with the top on being dug up.



Light From Above

The ordinary lamp wherever used spoils all lighting effects by its downward shadow. Replace it with

The Angle Lamp

and the improvement will surpass belief. "No under-shadow" is a great feature. But for the quality of its light alone it is superseding gas and electricity in city and country homes. Its light has all of their power with none of their glare and unsteadiness—soft, mellow, eye resting, and absolutely none of the smoky and offensive odors of ordinary lamps, either. There is nothing like it for convenience. It lights and extinguishes like gas, without removing globe—one fitting burns 16 to 22 hours, costing about 15 cents a month for oil. Compare that with the monthly gas and electric bills, or even the cost of that troublesome, smoky, smelly lamp you are using. For quality of the light, economy and satisfaction for all lighting purposes, there can be no comparison. It is the cheapest and the best kind of illumination.

30 DAYS FREE TRIAL to show its superiority. You are sure to buy it if you know it. Write at once for our book which explains all. Ask for catalogue No. 30

THE BACH SPECIALTY CO.,
355 1/2 Yonge Street, - Toronto, Ont.

JOHN R. GREEN.

Moose Jaw, Sask. Real-Estate Dealer. I have been in this district 18 years, and can put you right.

I HAVE A CHOICE HALF-SECTION OF unimproved land close to Pasqua Junction, near Moose Jaw. There is nothing finer in the Moose Jaw district.

ALSO 480 ACRES PARTIALLY IMPROVED, with buildings and cultivation, 3 1/2 miles from Pasqua. This is A1.

ANOTHER HALF-SECTION JUST WEST of Pense, unimproved, nice smooth, level prairie, in the big crop district.

SEVEN THOUSAND ACRES ON KIRKELLA branch, near Lipton, for sale, en bloc or retail. Write me for particulars. There is big money in this. Will send government surveyor's report on request.

TWO HUNDRED RESIDENTIAL LOTS IN the growing city of Moose Jaw; also several good business sites

\$500 Reward

Offered for the conviction of the party or parties that blistered my horse, Knight of Glamis, at recent Spring Stallion Show, held in Grand's Repository.

THOS. MERCER, Markdale, Ontario.

Bull Wanted—Durham grade, not over 18 months old; red or roan color. Apply **BURSAR, Asylum for Insane, LONDON, ONT.**

CLYDESDALES

Imported Clyde stallions for sale. The choicest breeding and good individuals. Prices low for good horses.

ALEX. MCGREGOR, Uxbridge, Ontario.

A girl baby was brought to a Seattle clergyman to be baptized. He asked the name of the baby.

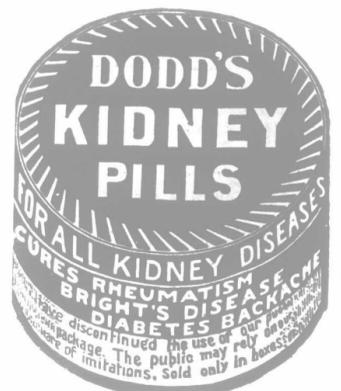
"Dinah M.," the father responded.

"But what does the M. stand for?" asked the minister.

"Well, I don't know yet. It depen's upon how she turns out."

"Why, I do not understand you," said the minister.

"Oh, if she turns out nice and sweet and handy about the house, like her mother, I shall call her Dinah May. But if she has a fiery temper and bombshell disposition like mine, I shall call her Dinah Might."—[Post.]



DODD'S KIDNEY PILLS
CURES ALL KIDNEY DISEASES
RHEUMATISM
BRIGHT'S DISEASE
DIABETES
BACKACHE
Discontinue the use of any other medicine when you begin to take this medicine. The public may be misled by imitations. Sold only in boxes.

GET IN TOUCH



With **OAKLAWN FARM** if you want a stallion. This is the greatest breeding and importing establishment in the world. Nowhere else in like measure can you find the essentials of your permanent success. The best stallions, individually and as breeders, are here. Prices are most reasonable and terms liberal; the guarantee the most liberal and safest for you given anywhere.

Percherons, Belgians and French Coachers

A superb collection to choose from. Send for new illustrated catalogue to-day, which shows the facts, and visit us before you buy. It is to your own advantage to do so.

DUNHAM & FLETCHER,
DU PAGE COUNTY, ILLINOIS.

WAYNE,

125 Percheron, Shire and Hackney Stallions & Mares

At the World's Fair at St. Louis I won more Premier Championships than any other exhibitor.

At the Chicago International, 1905, I won more first prizes than any other exhibitor.

For the next 90 days I will sell the best in America at prices below competition.

LEW W. COCHRAN, 109 1/2 South Washington Street,
CRAWFORDSVILLE, IND. OFFICE:

HODGKINSON & TISDALE

Breeders of High-Class Clydesdales and Hackneys
BEAVERTON, ONT.

Our present stock of mares and fillies are the best lot we ever had together. Among them are championship, first, second and third prize-winners at Toronto. Our prices are consistent with quality. We have something that will suit you.

BEAVERTON P. O. & STATION. Long Distance Telephone.

J. B. HOGATE'S Shires, Clydes, Percherons, Hackneys and Spanish Jacks.



My latest importation includes 45 head of Shire stallions and fillies, Clyde stallions and fillies, Hackney and Percheron stallions and Spanish Jacks, many of them prizewinners in England, Scotland and France. This is a gilt-edged lot and the best we ever imported, combining size and quality.

Stables at **WESTON, ONT.** Telephone connection.

J. B. HOGATE, Proprietor.

GRAHAM BROS.

"Cairnbrogie," CLAREMONT,

IMPORTERS OF

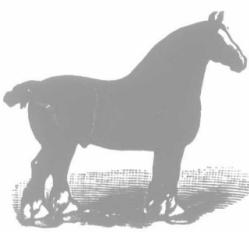
HACKNEYS and CLYDESDALES



Established 30 years, and winners at all large shows in Canada and United States. Best of stock always on hand for sale. New importation of Royal winners just arrived.

GRAHAM & RENFREW'S

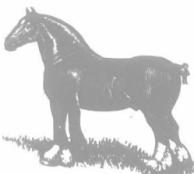
CLYDESDALES and HACKNEYS



Our Clydes now on hand are all prize-winners, 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 4483.

GRAHAM & RENFREW, Bedford Park.

Clydesdales & Hackneys



Our new importation of Clydes (stallions and fillies) combine size and quality to a marked degree. Their breeding is unsurpassed. Their individuality cannot be duplicated on the continent. Come and see them. We sell cheaper than any other importer. Also, we have a few gilt-edged Hackneys on hand.

G. & J. HAY, Lachute, Que.
A few miles from Ottawa.

QUESTIONS AND ANSWERS. Miscellaneous.

WHEN TO SPRAY.

In your issue of Feb. 22nd I saw a piece on the treatment of San Jose scale and any other plague to fruit trees. I thought it was a very good piece, and intend to try it; but would like to know when to spray to obtain best results?

SUBSCRIBER.

Ans.—Spray with the lime-sulphur mixture just before buds open in spring.

MATERIAL FOR WALLS—SILAGE FOR SHEEP—RAPE ON LIGHT LAND—TARIFF ON WOOL.

1. Which do you consider the best walls for stabling, brick, stone, cement or cedar blocks?
2. Is silage good for sheep? If so, what amount should be fed?
3. Will rape do well on light land?
4. Is there a tariff on wool coming into Canada from foreign countries?

H. S. W.

Ans.—1. Economy considered, we recommend cement concrete for localities where gravel is reasonably accessible. Stone is perhaps a little cheaper, but not so good a non-conductor of heat. Brick is rather expensive. Cedar blocks have been used with, we believe, fair satisfaction, but their economy in most parts of Ontario would be doubtful.

2. In small quantities, say about one-third the ration, and fed in two or three feeds daily, silage is considered a profitable feed for sheep.

3. Yes.

4. The duty on wool, viz., Leicester, Cotswold, Southdown combing wools, or wools known as lustre wools and other like combing wools, such as are grown in Canada, is 3 cents a pound. On the free list are wool and the hair of the camel, alpaca, goat and other like animals, not further prepared than washed.

N. E. S.

GOSSIP.

PERTH SHORTHORN SALE.

The annual show and sale of Shorthorns at Perth, Scotland, Feb. 20-21, was unusually successful; prices at the sale reaching high-water mark, and sensational prices, the average for the 251 bulls sold being £84 15s., as compared with the average of £49 11s. last year. The judges were Messrs. W. Duthie, A. M. Gordon, John Handley and Geo. Harrison. In the senior yearling class for bulls, the first-prize winner was Lord Lovat's Broadhooks Champion, a red son of Master Millicent (bred by T. B. Earle), dam Rose of Underby VII, by Royal Star. This bull topped the sale, going at 1,500 guineas (\$7,875), being purchased by Mr. Miller for the Argentine. Mr. Durno, of Jackston, had the second winner, the roan, Diamond Gift, by Diamond Mine, out of Geraldine V., by the Kinellar-bred, First Choice, a uterine brother to the champion, Choice Goods. He sold at 410 guineas to Mr. McKay. Burgie Lodge, Elgin. Durno of Westerton had the third winner, Diamond Emerald, by Diamond Mine, and he was taken at 340 guineas, by Mr. McLennan for Argentina. In the junior yearling class, the Westerton first-prize Diamond Earl, by the same sire, was taken by the Earl of Moray at 700 guineas, the second highest price of the sale. Mr. Stewart, Millhills, was second with Roan Favorite, by Proud Favorite, bred at Uppermill. It is said the Millhill's bull was favorite with many. Mr. Murray, Polmaise, Sterling, was third and fourth with Hazel King and Handsome Prince, by Record of Sanguhar. The former was taken at 200 gs. by Mr. McLennan. Some of those passed over by the judges brought stiff prices. The Lovat bull, Baron Broadhooks, realized 700 guineas, paid by Messrs. Dean, of Lincolnshire. The Westerton bull, Diamond Baron, made 500 guineas, paid by Mr. McLennan, and the Cromby Bank bull, Golden Hero, was taken at 300 gs. by Mr. Wilson, Pierriemill.

The principal averages for herds in round numbers were: Lord Lovat's 8 bulls, £471; McKay, Burgie (2), £236; Durno, Jackston (5), £262; Durno, Westerton (12), £232; Stewart, Millhills (6), £246.

The 66 females sold made an average of £36 17s. as against an average last year of £25 12s.

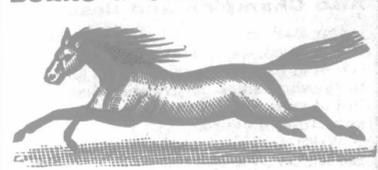
HORSE OWNERS! USE GONBAULT'S CAUSTIC BALSAM.

A safe, speedy and positive cure. The safest, Best BLISTER ever used. Removes all bunches from Horses. Impossible to produce scar or bluish. Send for descriptive circulars.

THE LAWRENCE-WILLIAMS CO., Toronto, Can.

The Repository

BURNS & SHEPPARD, Props.



Cor. Simcoe and Nelson Sts., Toronto

Auction Sales of

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

Special Sales of Thoroughbred Stock conducted

Consignments solicited. Correspondence will receive prompt attention.

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

Hackney Stallion

Ridgewood Danegelt—140—, rising four years, first at Western Fair, London, 1904 and 1905, sire Langton's Danegelt, dam by Barthelemy Performer (imp.).

Shire Stallion

Deaford Marquis (imp.), first at Western Fair, 1904 and 1905, a proved sire of quick-selling stock at highest prices.

These will be sold well worth the money, as the owner, Mr. E. O. Attrill, is giving up farming. For prices, apply to **Mr. Chas. Garrow, Agent,** Coderich, Ont.

Shire, Percheron, Clyde, Belgian, Standard-bred and Coach Horses, also SPANISH-BRED JACKS, for Sale.



Specialty made of forming companies, if desired.

W. R. GRAHAM, Box 88, Kincardine, Ont.

NEW IMPORTATION

I have landed one of the best importations of

CLYDESDALES, SHIRES and HACKNEY STALLIONS,

males and fillies ever landed in America. They are got by such sires as Baron's Pride, Everlasting, Up-to-Time, Marcellus, Pride of Blacon and others, Scotland's greatest sires. Mares and fillies all bred in Scotland to the best sires obtainable. Have size and quantity, and I am offering these at just one half less than other importers are asking for theirs. For full particulars write

DUGALD ROSS, Streetsville, Ontario.

CLYDESDALES

Imp. Stallions and Fillies.

The get of such notables as Baron's Pride, Prince Alexander, Moncrieffe Marquis, The Dean, Montrave Mac and Battle Axe; they combine size and quality, their breeding is unsurpassed, and I will sell them cheap.

GEO. G. STEWART, Howick, Que.
Long-distance Phone.

My motto: "The Best is None too Good." Imported and home-bred Clydesdale and Shire Horses, Scotch Shorthorn Cattle, Leicester Sheep.

A choice lot of reg. fillies and Shorthorn calves to choose from. Our stock exhibited have won the highest honors at the largest shows in America.

WESTON P.O., C.P.R. and G.T.R., 10 miles west Toronto. Telephone at house and farm.
J. M. GARHOUSE.

No more blind horses—For Specific Ophthalmia, Moon Blindness and other sore eyes, **BARRY CO., Iowa City, Iowa,** have sure cure.

Trumans' Champion Stud

Bushnell, Illinois.

SHIRE, PERCHERON, BELGIAN AND HACKNEY STALLIONS

Read our record at the great International Show recently held in Chicago. We won the following prizes on Shire and Hackney stallions:

4-year-olds	-	-	1st, 3rd and 4th
3-year-olds	-	-	1st, 2nd, 3rd and 5th
2-year-olds	-	-	1st and 4th

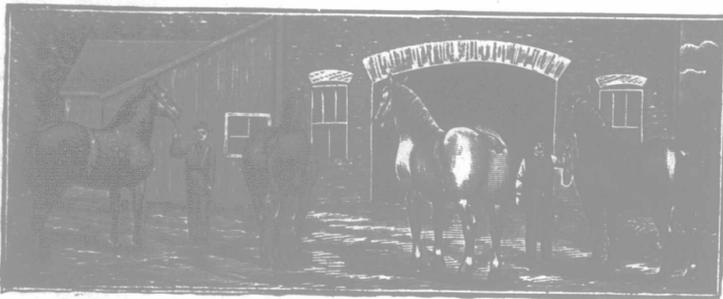
Also Champion and Reserve Champion Hackney Stallions

Our stallions were admired by all who saw them. Before buying a stallion of either breed, we respectfully ask that you write and let us know your wants. We can save you money. Our prices and liberal guarantee will astonish you. Our record in the show-rings is evidence that we keep nothing but the best. Our barns are full of prizewinners, and they are all for sale. We insure stallions against death from any cause, if desired.

Write for illustrated catalogue of our horses. Importations arrived, July, September and November.

TRUMANS' PIONEER STUD FARM

H. W. TRUMAN, Manager, LONDON, ONT.



25 Percherons, also French Coachers, Hackney and Clyde Stallions

Have just arrived, Aug. 16, 1906, from Great Britain and France with our new importation of high-class stallions, many of them prizewinners in their native lands, bred by the best breeders. The Percherons are large blocky fellows, 3 to 5 years old, descendants of such noted champions as Brilliant, Besique and Romulus. Blacks and dark dapple greys, weighing from 1,600 to 2,100 lbs., with the right kind of legs and feet, and can go like trotters. We personally selected every horse ourselves, using extraordinary caution to select nothing but good sound serviceable horses that will do our customers and the country good. The French Coachers, Hackneys and Clydes are also of the best breeding, some of them prizewinners in England, Ireland and Paris. We will sell you a better stallion for less money than any other importers in America, with a guarantee as good as gold. Intending purchasers should visit our stables before buying elsewhere. Inspect our stock and get our prices. Terms made to suit purchasers.

Hamilton & Hawthorne, Simcoe, Ont. 22 miles S.W. of Toronto, on G.T.R. & Wabash

THE VERY BEST SHIRE STALLIONS

and High-class Pedigree Colts



are owned by that well-known breeder, Clement Keevil. An importation direct from his Blagdon Stud, England, can now be seen at

R. KEEVIL, Crampton, Ontario. Two miles from Putnam, C. P. R.



LaFayette Stock Farm

J. Crouch & Son, Proprietors.

Largest importers in America of

OLDENBURG
GERMAN COACH,
PERCHERON

AND
BELGIAN STALLIONS.

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Write us at London, Ont., or LaFayette, Ind.



INNIS & PROUSE

New importation of CLYDESDALE STALLIONS represent such noted blood as: Baron's Pride, Hiawatha, Sir Everard, Up-to-time, Pride of Bacon, The Dean, Prince Fauntleroy and Lord Stewart. They were selected with great care; combine size and quality. They are an A1 lot. 21 head to choose from.

INNIS & PROUSE,
Woodstock and Ingersoll.

QUESTIONS AND ANSWERS. Miscellaneous.

ITCHING LEGS.

I have a young horse with itching in his hind legs. He stamps his feet on the floor; his skin is very red; he bites his legs. X. Y. Z.

Ans.—Eczema. Give purgative of 8 drams aloes and 2 drams ginger. Follow up with 1 ounce Fowler's solution of arsenic three times daily every alternate week. Wash the legs once weekly with strong warm soft-soap suds, applied with a scrubbing brush, and then rub until dry. Dress the affected parts twice daily with corrosive sublimate, 20 grains to a quart of water.

GRAIN LODGING ON LOAM—LOAM OR CLAY.

1. I have noticed that grain crops seem to lodge worse on loam than on heavy clay. Is it because of something lacking in the soil? Can it be helped? If so, how?

2. Which would you consider better on a farm, a loam or a clay soil, dairying being the chief work?

Ans.—1. We believe the main cause of the grain lodging more on the loam soil is the greater growth of straw, though a deficiency of lime, phosphoric acid and potash, as compared with the nitrogen supply, may have something to do with it. Prof. Harcourt, O. A. C., Guelph, has been conducting some experiments along this line, and the results will appear in the course of his present series of articles. A dressing of lime would be the first thing we would try. If this did not improve the stiffness of the straw, we would try unleached wood ashes, fifty bushels per acre, or else 200 pounds nitrate of potash, and with either of these, about 400 pounds Thomas' phosphate, or 200 pounds acid phosphate per acre. We do not presume to advise authoritatively in this matter, and are doubtful whether anyone else can. We simply counsel experiment with lime, ashes and phosphates.

2. A medium loam is very much preferable to a genuine clay. Such is extremely hard to work, and does not yield so well as more friable soils. There are degrees, though, and what our correspondent refers to as a clay may be nothing heavier than a clay loam, which is a very desirable soil.

DOG WITH MANGE—OAT BRAN.

1. Pup, seven months old, has a dry, hard scab over her back in spots, some of which are 2 or 3 inches long. They are very itchy.

2. What is the feeding value of oat bran (from oatmeal mills) for feeding? I can get it for \$15 per ton. Would it be good to mix with corn meal for cows or hogs? READER.

Ans.—1. The trouble is, doubtless, mange. Give in form of drench about ½ ounce of salts, and repeat the dose in a few days, if necessary, gauging according to action of first dose. Wash well with warm water and castile soap, and rub well into the skin every three days an ointment made as follows: Tanner's oil, 1 quart; spirits of turpentine, 1 large wineglassful, and sufficient sulphur to make a thin plaster. Continue this for three weeks, and again wash well with castile soap and warm water. If the pup be not now cured, continue treatment as prescribed.

2. Oat bran has not a high feeding value. Analysis by W. P. Gamble, Assistant Chemist at the Ontario Agricultural College, Guelph, showed quite a variation, but gave the following average results as compared with wheat bran:

	Crude protein.	Ether extract.	Soluble carbohydrates.
Oat bran	6.74	1.16	49.75
Wheat bran	14.99	3.74	56.99

It is doubtful economy to purchase a feedstuff containing so much crude fibre as oat hulls or bran. Probably if wheat bran were worth \$20 a ton, oat bran might be worth \$5 to \$8, depending somewhat on the analysis of the particular sample. For mixing with corn meal for cows, it might have a slightly higher value than we have given, but it is one of those low-class foods on which the purchaser is liable to be fooled, if he does not watch himself sharply.

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, 45 Church Street, Toronto, Ontario.

Dr. Page's English Spavin Cure.

For the cure of Spavins, Ringbone, Curbs, Splints, Windgalls, Capped Hock, Strains or Bruises, Thick Neck from Distemper, Ringworm on Cattle, and to remove all unnatural enlargements.



This preparation (unlike others) acts by absorbing rather than blistering. This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin, or money refunded, and will not kill the hair. Manufactured by Dr. Frederick A. Page & Son, 7 and 9 Yorkshire Road, London, E. C. Mailed to any address upon receipt of price, \$1.00. Canadian agents: om

J. A. JOHNSTON & CO., Druggists, 171 King St. E., Toronto, Ont.

You Can't Cut Out A BOG SPAVIN or THOROUGHPIN, but ABSORBINE

will clean them off, and you work the horse same time. Does not blister or remove the hair. Will tell you more if you write. \$2.00 per bottle, delivered. Book 5-B free. ABSORBINE, J.E., for retail, \$1.00 bottle. Cures: Varicose Veins, Yarrow, Hydrocele, Ruptured Muscles or Ligaments, Enlarged Glands, Allays Pain. Genuine mfd. only by

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

Shire Horses



We breed the very best and soundest, which from birth are kept in their natural condition, neither forcing nor overfeeding for showing purposes.

Canadian buyers visiting England are invited to call and see what we have.

No fancy prices, and all delivered free Liverpool landing stage. Correspondence invited. om

Station: Althorp Park, L. & N.-W. Ry.

JOHN CHAMBERS & SONS,
Holdenby, Northampton, England

Wanted to Buy

Imported and Canadian-bred Clydesdale or Shire mares, registered, from 1 to 8 years old. Must be sound and from 1,450 to 1,650 pounds. Name cash price and where to be seen.

Trotter & Trotter, Brandon, Manitoba.

J. A. LATTIMER, box 16, Woodstock, Ont.

BREEDER OF

Clydesdales and Shorthorns

Has now to offer some good young bulls, sired by Imp. Bapton Chancellor. Speak quick if in need of such, as they will soon go at the price asked.

23 IMPORTED CLYDESDALE STALLIONS

for sale; also 8 Hackney Stallions. Inspection invited and prices right.

O. SORBY, GUELPH, ONTARIO.

DISPERSION SALE
OF HIGH-CLASS
HOLSTEIN CATTLE
ON
Wednesday, March 21st, 1906

ALFRED RICE, of Currie's Crossing P.O. (6 miles south of Woodstock, on Port Dover & Stratford Division of G. T. R.), will offer for sale his entire herd of Holstein cattle: 14 fine young cows, several heifers and young bulls (22 head of registered cattle). Also heavy **Clydesdale Mare** with foal, heavy team, 3 and 4 years old, and other horses. Well-bred **Yorkshire Brood Sows**, and several young sows that would make good breeders. Catalogue ready March 5th.

Terms: Seven months' credit on approved joint notes, or 6% per annum off for cash. **Sale commences at 1 o'clock p.m. sharp. Farm implements** will be sold first. Train arrives from Woodstock and Stratford at 11.15 a.m., from Norwich Jct. and south at 8 a.m. Train out of Currie's at 5 (north) and 6 (south) p.m.

Farm one mile from station. Luncheon at noon.

P. IRVINE, E. R. ALMAS, Auctioneers.

Valley Farm Shorthorns



WM. HENDRIE, Hamilton, Ont.

For sale, at reasonable prices, four yearling bulls, four yearling heifers, and cows in calf and with calves at foot. This stock by our imported bull, Magstrand. This stock, strong-boned, hardy constitution, and have just lately been taken up from pasture field.

Fifty fall-farrowed **Large Yorkshires**, three months, young sows. Your choice, three for \$15.00. Above stock reasonable in price to an early purchaser.

WM. HENDRIE, JR.,
Manager, Hamilton.

A. SUMMERS,
Supt., Aldershot P.O.

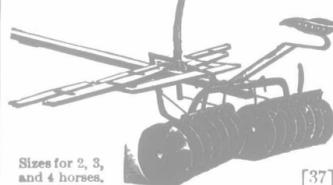
Joseph Rodgers & Sons
Limited,
SHEFFIELD, ENGLAND.

Please see that this **EXACT MARK** is on each blade.

James Hutten & Co., Montreal, SOLE AGENTS IN CANADA.



THE BISSELL



is known among farmers as the **Best Disk Made**, because it has the **Capacity, the Knack, the Get There, which others lack.** Try the Bissell for making a good **Seed Bed**—for pulverizing **Corn or Root Ground**, or for any tough job. It's the best by far. None genuine without the name "**BISSELL**." For Sale by Agents. Manufactured by

T. E. BISSELL, ELORA, ONT.
Ask for Booklet "W"

FIVE NICE, SMOOTH
HEREFORD BULLS
FOR SALE.

Two about 16 months and three from 8 to 10 months old. Priced right to do business.

W. BENNETT,
Box 428, Chatham, Ont.

Broxwood Herefords

Young bulls for sale from 6 to 18 months old, all from imported sire and dams, prizewinning stock at Royal and leading English shows.

R. J. Penhall, Nover P. O., Ont.

THE SUNNYSIDE HEREFORDS
Twelve high-class bull calves and 4 yearling and 2-year-old bull, we will place at a price that will move them quick. Some choice cows and heifers are yet left for sale. Address: **A. F. O'NEIL, Maple Grove P.O. or M. H. O'NEIL, Southgate P.O. Elderton Sta., L. H. & B.; Lucan Sta., G. T.**

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

For **ABERDEEN-ANGUS CATTLE** or a two-year-old **CLYDESDALE STALLION**, write
JAMES BOWMAN, Elm Park, Guelph, Ontario.

TWEEDHILL ABERDEEN-ANGUS
Some good bulls for sale from ten to twenty-one months.
JAMES SHARP, ROCKSIDE, ONTARIO.
Cheltenham stations, G. T. R. and C. P. R.

When Writing Please Mention this Paper

We are offering **Yorkshire Boars** weighing 40 lbs. at \$7 each, registered, f. o. b. cars. Three yearling Shorthorn bulls, good breeding and colors, at \$75, registered, f. o. b. cars.
W. R. BOWMAN, Mt. Forest, Ontario.

Aberdeen-Angus cattle and Chester White Hogs. Principal prizewinners at Ottawa and Sherbrooke. Breeding stock and young things for sale. Write for prices.
A. G. SPAFFORD, Compton, Que.

HIGH-CLASS SHORTHORNS.

The great Duthie-bred bull, Scottish Beau imp. (36009), formerly at head of R. A. & J. A. Watt's herd, now heads my herd.

Present offerings: two bulls seven months old and females of different ages. Also for sale Clydesdale mare and foal.

N. S. ROBERTSON, Annprior, Ont.

MAPLE + GROVE + STOCK + FARM
Scotch and SHORTHORNS
Scotch-Topped SHORTHORNS

Present offering: Two choice nine-months-old bulls, by Captain Mayfly 2nd; also young cows and heifers at very reasonable prices. For particulars write to

L. B. POWELL,
Elmira Sta. and Tel. Wallenstein P.O.

SCOTCH SHORTHORNS.
RIVER VIEW STOCK FARM is offering young stock for sale from Marr Stamford, Scottish Maid and Rosemary dams, and sired by Scott's Choice—43670—
A. J. ROWAND, Dumblane, Ont.

SHORTHORNS AND LEICESTERS.
4 extra choice young bulls ready for service 4. Also bull calves, all from imp. sires. Leicester ewes and lambs of both sexes for sale. Address
W. A. DOUGLAS,
Caledonia Station, Tuscarora P.O.

SHORTHORNS, LINCOLNS & OXFORD DOWNS
Herds headed by imp. Royal Prince and imp. Abbot's Star. For sale: Nine bulls, six months to one year, three from imp. dams and imp. sires; also females. Oxford Down sheep and Barred Rock cockerels **John McFarlane & W. H. Ford, Dutton, Ont.,** Elgin County.

Canada's 1905 Mineral Production.

Canada's mineral production during 1905 aggregated over sixty-eight and a half million dollars, as compared with \$60,073,897 for the previous year, and \$62,600,434 for 1903. The leading items of production were:

Metallic ores—		Quantity.	Value.
Copper, lbs. ...	47,696,502	\$ 7,420,451	
Gold		14,486,833	
Iron ore (export), tons ...	116,779	125,119	
Pig iron from Canadian ore, tons	70,554	1,047,860	
Lead, lbs.	53,961,000	2,634,084	
Nickel, lbs.	18,876,315	7,550,526	
Silver, ozs.	5,974,875	8,605,957	
Cobalt		100,000	
Metallic products, including zinc, lbs.	240,000	180,000	
Total		\$37,150,886	

Non-metallic ores—		Quantity.	Value.
Asbestos, short tons	50,670	\$ 1,486,859	
Coal, sh't tons	8,775,933	17,658,615	
Corundum, short tons	1,644	149,152	
Grindstones, sh't tons	5,172	57,200	
Gypsum, s't tons	435,789	581,543	
Limestone for flux, sh't tons	341,614	258,759	
Mica		168,043	
Mineral water...		100,000	
Natural gas ...		814,249	
Petroleum, bbls.	634,095	849,687	
Pyrites, s't tons	32,744	123,574	
Salt, sh't tons	45,370	310,858	

Structural clay and clay products—		Quantity.	Value.
Cement, bbls....	1,360,731	\$ 1,928,014	
Granite		209,555	
Sands and gravels (export), tons	366,935	152,805	
Sewer pipe		382,000	
Build'g material		6,095,000	

The total production of pig iron in Canada last year from native and imported ores amounted to 527,932 short tons, valued at \$6,492,972. Of this it is estimated that 70,550 tons, valued at \$1,047,860, should be attributed to Canadian ores. The metallic class gives an aggregate increase of about six and a quarter million dollars, and, omitting the Yukon placer gold, which decreased by \$2,172,800, the general mineral industry of the rest of the Provinces shows a considerable augmentation, approaching eleven million dollars. Coal forms 25.77 per cent. of the total mineral production of Canada; gold, 21.14 per cent.; nickel, 11.02 per cent.; copper, 10.83 per cent.; brick and stone, lime, 8.62 per cent.; silver, 5.26 per cent.; lead, 3.84 per cent.; cement, 2.81 per cent.; asbestos, 2.19 per cent.; pig iron from Canadian ore, 1.53 per cent., and petroleum, 1.24 per cent. Coal, it will be noticed, occupies the largely predominant position, and when added to the value of the metallic products, about 80 per cent. of the production of the country is accounted for.

CLYDESDALE STALLION HIRINGS.

In no former year has the hiring of Clydesdale stallions commenced so early as in this. At the recent Stallion Show at Glasgow, Mr. Matthew Marshall, Stranraer, hired his successful breeding horse, Baronson, the sire of the Cawdor Cup winner, Oyama, to the Scottish Central District for 1907, and now he has let his beautiful three-year-old, Memento, to the Stranraer District Horse-breeding Association for the same year. From this, it is quite apparent that the rivalry of district societies to secure the best is extremely keen. Memento has only been twice exhibited, at Kilmarnock as a yearling, when he was first, and at the Stallion Show, where he not only won the Glasgow junior premium, but was first in the open class, and secured the Brydon challenge shield of 100 gs. He is by Baden Powell, a son of Sir Edward, out of a mare by Prince Robert, the sire of Hiawatha, and is a wonderfully fine-moving black colt, with great fore legs and feet.

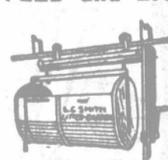
Do Not Feed Hbageum by the Handful.

Use a tablespoonful and do not heap it. An even tablespoonful, or 1/4 of an ounce, is a feed. This is 64 feeds to the pound, and when fed regularly will give better results than a larger feed. Hbageum is neither a food nor a medicine. It simply gives the flavor necessary to insure thorough assimilation. An even tablespoonful of Hbageum is the right quantity of the right material to give the right flavor to an animal's feed. A handful, or a heaped tablespoonful, will not give as good results as an even tablespoonful, and the cost is four times as great. Remember this: An even tablespoonful is a feed, and there are 64 feeds of Hbageum to the pound.

Do not feed Hbageum by the handful, and then complain that Hbageum is too expensive to feed regularly. It is not expensive; 25c. worth will make 1 1/2 tons of skim milk equal to new milk for calves. One cent's worth makes five feeds for three calves or three young pigs, and one cent's worth makes five feeds for a horse, cow, steer or hog. Hbageum does and will give profitable results. Do not let prejudice prevent you from testing the matter. If you have a horse or other animal that is not thriving as it should thrive, you are in a position to test Hbageum, and to do it to advantage and with profit. Throw prejudice aside, and make the test.

L. C. SMITH

FEED and LITTER CARRIERS



Patented June 16, 1905. Can be adapted to any barn or farm building. Write us for particulars.
LYMAN C. SMITH,
Oshawa, Ont.

CEDARDALE SHORTHORNS



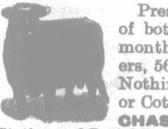
For immediate sale: Four young bulls and a few heifers, a nice thick, well-put-up lot, and bred on heavy-milking lines. Will be sold cheap.
DR. T. S. SPROULE, M.P.
Markdale, Ont.

Shorthorn Cattle and Lincoln Sheep

Shorthorn bulls, cows and heifers for sale at greatly reduced prices for the next 60 days.

J. T. GIBSON, Denfield, Ont.

Shorthorns, Cotswolds, Berkshires



Present offerings: Calves of both sexes, from 1 to 7 months; also cows and heifers, 56 head to select from. Nothing to offer in Berkshires or Cotswolds.
CHAS. E. BONNYCASTLE,
Station and Post Office: Campbellford, Ont.

Shorthorns FOR SALE

Two red bull calves; 6 heifers, sired by that grand bull sire of unbeaten Fair Queen and sister, Queen Ideal. First prize senior heifer calf at the International, 1904. Also first prize and junior champion, and reserve grand champion at Winnipeg, 1905.
H. K. FAIRBAIRN, - Thedford, Ont.

SEORTHONS

Young bulls for sale, sired by Spectator, imp. Prices reasonable. Apply to
JOHN McCALLUM, Springbank Stock Farm, M. C. R. and P. M. R. Box 91, Iona Station.

MAPLE LEAF STOCK FARM

4 Choice Young Bulls for Sale. Also some cows and heifers, and prizewinning Berkshire pigs. Terms reasonable.
ISRAEL GROFF, Alma P.O. & Stn., G.T.R.

ROWAN HILL SHORTHORNS

Herd bull for sale: Greengill Archer, imp., 45184, as some of his heifers are of breeding age, and herd is not large enough to keep more than one bull; also a few young bulls and heifers.
A. DUNCAN & SONS, Carleton Place, Ont.

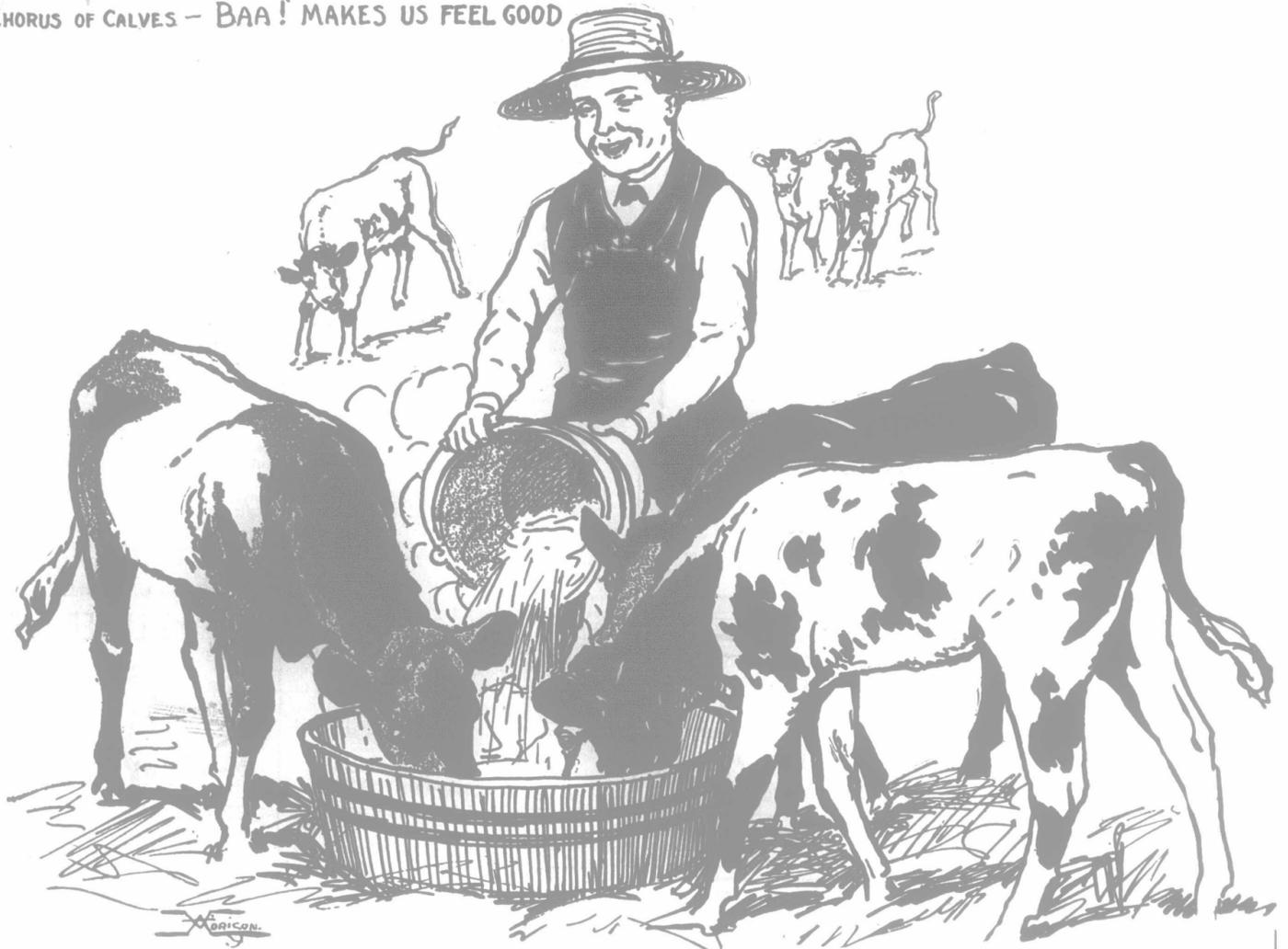
SHORTHORNS

A few good bull calves for sale at reasonable prices; all from a milking strain.
JOHN RACEY, JR.,
Lennoxville, - Que

Young Shorthorn Bulls for Sale—One 2

years old and several under one year. Also a number of females. Good milking strain. Prices right.
GEORGE LEWIS, Ballymote, Ontario.

BOY—MY THIS CREAM EQUIVALENT SMELLS GOOD
CHORUS OF CALVES—BAA! MAKES US FEEL GOOD



BIBBY'S CREAM EQUIVALENT FOR RAISING CALVES.

Robust healthy Calves are ensured when this meal is used. Easily prepared—
anyone can do it. Directions in every Bag. Sold at a moderate price in 50 lb. Bags.

*Cream Equivalent for Young Calves.
Bibby Meal for Fattening Live Stock.
Dairy Meal for Milch Cows.*

ASK YOUR DEALER.

WM. RENNIE CO., Limited,
TORONTO.
WINNIPEG AND VANCOUVER.

QUESTIONS AND ANSWERS.

Veterinary.

LAME HORSE.

Horse goes lame in front. The blacksmith says it is not in the foot. The lameness increases on exercise.

W. H. B.

Ans.—More definite symptoms are necessary to enable a man to make a diagnosis. I am inclined to the belief that the trouble is in the foot, although the fact that exercise increases the lameness indicates splint. If he walks sound, but goes lame when trotted, examine carefully for splint. If you locate a splint, blister it; if not, blister the coronet. Take 2 drams each biniodide of mercury and cantharides, and mix with 2 ounces vasoline. Clip the hair off all around the hoof; rub well with blister daily for two applications; tie so that he cannot bite the part. On third day, wash off and apply sweet oil. Turn horse in box stall now, and oil every day. Continue until lameness disappears, and repeat the blistering once monthly as a preventive.

V.

DEHORNING STOPS LOSS.

Cattle with horns are dangerous and a constant menace to persons and other cattle. Dehorn them quickly and with slight pain with a **KEYSTONE DEMORNER** all over in 2 minutes. Not a harsh method. Leaves a clear, clean cut. Cows give more milk; steers make better beef. Send for free booklet. **E. H. McKenna, Pictou, Ontario, Can.**



J. Watt & Son SHORTHORNS

Have still two very nice bull calves for sale; also a number of good young cows and heifers in calf or with calves at foot, of the most up-to-date pedigrees.

SALEM P.O. Elora Stations, G.T.R. and C.P.R.

SHORTHORNS

Will sell or exchange Kinellar Stamp, my famous Golden Drop show bull. Have for sale also young heifers and bulls got by him. Tracing Imp. Pansy Lily and Beauty.

SOLOMON SHANTZ, Haysville, Ont.
Plum Grove Stock Farm. Baden Station.

SCOTCH-BRED SHORTHORNS.

Four bulls 8 to 11 months old; all rouns; also several young cows and heifers in calf to "Good Morning," imp.; at living prices.

L. K. WEBER, Hawkesville P.O.
St. Jacob's Station, G.T.R.

CEDAR VALE SCOTCH SHORTHORNS

Present offering: A few Scotch-bred heifers, sired by Scott's Choice—13670. For particulars write to

JOHN SCOTT, Dumblane P.O.
Port Elgin station and telegraph.

THREATENED ABORTION.

Mare, due to foal in May, had slight swelling in mamma early in the winter. This disappeared in a few days. She then had some lumps on her back, but they also disappeared. About a month ago she had an attack of spasmodic colic. Two days ago, she had another slight attack. To-day I drove her about three miles and put her in a warm barn. When I went back for her, she was discharging a reddish fluid from the vulva.

A. W. L.

Ans.—The present symptoms indicate abortion, and while the attacks of colic may have had a tendency to produce it, or the symptoms simulating colic may have been caused by uterine irritation, the lumps mentioned had no connection. Cases like this require immediate professional attention, and it is very probable she will either have aborted, or the symptoms have passed off before you see this. If she still retains her fetus, use her very carefully; feed on small quantities of good hay and bran, with a little chopped oats. Give regular, but gentle exercise. If she shows symptoms of abortion, give 2 ounces laudanum in half a pint of cold water as a drench, and repeat every two hours, until the symptoms disappear. If the water has run out, she must be bled.

The "STAY THERE"
Aluminum Ear Markers
are the best. Being made of aluminum they are brighter, lighter, stronger and more durable than any other. Fit any part of the ear. Nothing to catch on feed trough or other obstacle. Your name, address and any series of numbers on each tag. Sample tag, catalogue and prices mailed free. Ask for them. Address **WILCOX & HARVEY MFG. CO.** 104 Lake St., Chicago, Ill.

PEAR GROVE SHORTHORNS & SHROPSHIRE

We are now offering 20 Shropshire ewes, one and two shear, imp. and from imp. stock, a big, strong, well-covered lot; also a few Shorthorn heifers. No fancy prices asked, for quick sales.

T. H. MEDCRAFT & SON, Sparta P.O.
St. Thomas station. Long-distance telephone.

SCOTCH-TOPPED SHORTHORNS

Five choice young bulls, 8 to 12 months; also four heifers. **W. H. WALLACE,**
Woodland Farm, Mt. Forest, Ont.

For Sale—Three Shorthorn bulls, two 20 months and one 9 months. Triumvir (imp.) heads the herd.

DAVID CLOW,
Whitechurch P.O. and Station.

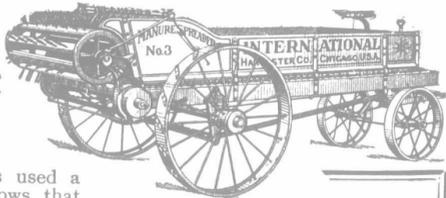
Shorthorns for Sale—Some choice young bulls and heifers, with a little British Flag, imported from deep-milking cows, registered. Prices moderate.

C. & J. CARRUTHERS, Cobourg Stn. and P.O.

Shorthorn Bulls—Imp. Scottish Peer—40424—4 years old, sure, and a good sire. Also 3 excellent young bulls of his get, and an 8 year old Clyde stallion. Come and see, or address.

JAMES SNELL, Clinton, Ont.

Double Manure Value.



EVERY man who has used a manure spreader knows that it doubles the value of the manure pile.

Those who have not had that experience will be convinced with the first trial.

It is not because the manure spreader puts more manure on the land, but because it so tears apart, disintegrates and makes it fine that it all becomes available as plant food.

Of course it takes the right kind of a spreader to do this work perfectly. The I. H. C. Spreader fits the case exactly.

It is not only an unusually strong, well built machine, thus being durable and continuing long in service, but it has features peculiarly its own. For instance: It is the only manure spreader

having a vibrating rake in front of the beater or cylinder which levels the load as it passes backward toward the spreading mechanism.

You know, of course, that perfect spreading can only result when the load is level.

This spreader is entirely controlled and regulated in all its working parts by a single lever. It will spread from three to thirty loads per acre, and the change necessary to produce these desirable results can be made instantly while the machine is in motion.

Power is applied to the apron of the I. H. C. Spreader from both sides—both rear wheels. This insures an even, steady feed and no strain, side draft or breakage.

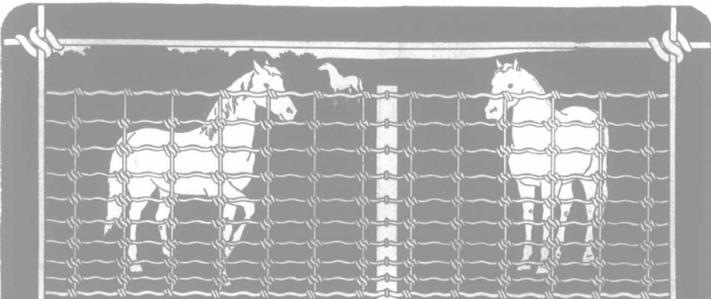
The I. H. C. Spreader is equipped with broad faced steel wheels which are best, because they are at once the lightest and strongest.

It will spread any and all kinds of manure in any condition, and can be equipped with special attachments for spreading in drills and broadcasting lime, compost, ashes, cottonseed hulls, land plaster, etc.

Made in several sizes to suit all classes of work and every section.

Call on the International Agent for information or write nearest branch house for catalog.

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



IDEAL WOVEN WIRE FENCE

When you build fence, you ought to be thinking of permanent improvements. Tinkering does not pay. Fences made of light wire, and wires that break rather than give when it gets cold; fences that an unruly animal could break through; fences not properly stayed—these are not paying fences. It takes only a glance at the Ideal fence to see that it is the right kind. It is made of No. 9 hard steel wire from top to bottom, and is heavier and stronger than any fence on the market. Remember, it costs no more to dig your post holes, set your posts, stretch your fence and staple it when the heavy Ideal fence is used than for a light, flimsy article. And notice how the Ideal fence is locked at every crossing. It is heavily galvanized to keep off rust. It will adapt itself to the greatest extremes of heat and cold, and always presents a handsome, well stretched appearance. You do not buy poor cattle because it does not pay, and you cannot afford to buy a light, cheap fence for exactly the same reason. It pays to study the matter over thoroughly before you buy any kind of a fence. We have prepared a little book that will tell you all about Ideal fence. It gives fence pointers and details that we cannot give here. Write and let us send it to you. A postal will do; write to-day.

McGregor-Danwell Fence Co., Dept. B, Walkerville, Ontario.

Farm Labor Problem

The question with every farmer is what shall be done to solve the Farm Labor Problem?

The scarcity of help has made it necessary that every possible means for facilitating the work be employed.

We would like to help you out and would suggest that you buy a

National Cream Separator

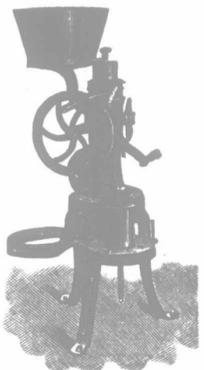
It will save time and labor in your dairy, as well as increase the quantity of your cream.

The National

is easily operated, easily cleaned, and a perfect skimmer.

Manufactured by

The RAYMOND MFG. COMPANY OF GUELPH, Limited
GUELPH, CANADA.



4 SIZES:

- National style B.
- National style No. 1.
- National style No. 1A.
- National style No. 5.

QUESTIONS AND ANSWERS. Miscellaneous.

RINGWORM AND WARTS.

I have two young cattle troubled with ringworm and warts. Can you tell me the cause and cure? W. S. L.

Ans.—Ringworm is the work of a parasite, which may live in and cling to the walls of a stable. It is easily cured by two or three applications of a mixture of lard or sweet oil and sulphur, with a little coal oil added, and well rubbed in. Warts, it is said, may be removed by repeated applications of castor oil.

SHEEP WITH BLIND STAGGERS.

What is the matter with my sheep? They throw up the head, stagger backward, fall down, lose all use of their limbs, and die in a few days. Give treatment. C. W. P.

Ans.—This may be the result of indigestion and constipation from too much dry fodder without any succulent food, in which case a purgative of one-quarter pound Epsom salts should be given as soon as symptoms appear. Or it may be from grub in the head, resulting from the eggs of the gadfly being deposited in the nostrils in summer. Some have claimed to have effected a cure by filling the nostrils with tobacco juice, causing violent sneezing and so dislodging the grubs. Veterinarians claim a cure may be effected by trepanning; that is, making an opening in the skull, and removing the grubs with probe. We cannot say we have much faith in either treatment, and should have little hope of recovery of the animals.

PERMANENT PASTURES, GRASSES, ETC.

1. What is the best mixture of grass seed, and what quantity of each kind to the acre to sow, for a permanent pasture on a clay loam soil that is under-drained?

2. Is alfalfa a lasting plant, or does it run out the same as red clover?

3. Is silage as good for young cattle as it is for cows?

4. What is best to give cows to bring them in heat for service? Is rennet any good? If so, how should it be given?

INQUIRER.

Ans.—1. No matter what varieties of grass might be sown, after a few years it would be found that most had vanished, and that blue grass and white clover had taken their place. The grasses that are permanent in character take usually a few years to become thoroughly established, so that even for permanent pasture it is well to sow timothy and clover to occupy the ground, while the others are getting a firm foothold. We would recommend in addition to your ordinary seeding of timothy and clover, that you sow, per acre: 1 pound of alsike, 2 pounds alfalfa, 3 lbs. orchard grass, 3 pounds meadow fescue, and 3 pounds Kentucky blue grass.

2. Alfalfa will last for many years, if not pastured too closely. See article in this issue in "Farm" department re alfalfa.

3. Yes, except, perhaps, for calves; but for either it should be only a part of the ration.

4. We do not think that anything is better than generous feeding. Rennet has been claimed by some to have the desired effect. A piece the size of a man's hand, soaked in salted water for twelve hours, then cut up fine, and the juice and all mixed with feed given.

Mr. Robert Miller, Stouffville, Ont., in ordering additional advertising space in "The Farmer's Advocate," says: "Since writing you last week have sold the imported yearling Shorthorn bull, Leopold =60850=, to Messrs. F. R. Hamilton, Cromarty, and R. Norris, Staffa, Ont. Leopold is just turned two years old, is a very dark roan, of the Lancaster family, with three splendid Duthie bulls as his top sires, making him one of the best of this favorite Cruickshank family. He is large and smooth, with beautiful head and horns, and with plenty of substance. He should be a good sire from every source of reasoning. Have just received an order from Mexico for three rams, as good as can be found, to be sent 2,000 miles into the interior by express. The cost will be about \$100 each for delivery, and this illustrates what will be done in some cases to secure the best."

INDIGESTION!

Stomach trouble is not really a sickness, but a symptom. It is a symptom that a certain set of nerves is ailing. Not the voluntary nerves that enable you to walk and talk and act—but the AUTOMATIC STOMACH NERVES over which your mind has no control.

I have not room here to explain how these tender, tiny nerves control and operate the stomach. How worry breaks them down and causes indigestion. How misuse wears them out and causes dyspepsia. How neglect may bring on kidney, heart and other troubles through sympathy. I have not room to explain how these nerves may be reached and strengthened and vitalized and made stronger by a remedy I spent years in perfecting—now known by physicians and druggists everywhere as Dr. Shoop's Restorative (Tablets or Liquid). I have not room to explain how this remedy, by removing the cause, usually puts a certain end to indigestion, belching, heartburn, insomnia, nervousness, dyspepsia. All of these things are fully explained in the book I will send you free when you write. Do not fail to send for the book. It tells how the solar plexus governs digestion and a hundred other things everyone ought to know—for all of us, at some time or other, have indigestion. With the book I will send free my "Health Token"—an intended passport to good health.

For the free book and the "Health Token" you must address Dr. Shoop, Box 52, Racine, Wis. State which book you want.

Book 1 on Dyspepsia.
Book 2 on the Heart.
Book 3 on the Kidneys.
Book 4 for Women.
Book 5 for Men.
Book 6 on Rheumatism.

Dr. Shoop's Restorative Tablets—give full three weeks treatment. Each form liquid or tablet—have equal merit. Druggists everywhere.

Dr. Shoop's Restorative.

PURE SCOTCH

SHORTHORNS

Herd bulls: Imp. Prime Favorite -45214-, a Marr Princess Royal.

Imp. Scottish Pride -36106-, a Marr Roan Lady.

Present offering:
20 young bulls.
10 imported cows with heifer calves at foot and bred again.
20 one and two-year-old heifers.
Visitors welcome. New catalogue just issued.

W. G. PETTIT & SONS, Freeman, Ont.
Burlington Jct. Sta. Long-distance telephone in residence.

SHORTHORNS

The champion herd of Canada, 1905, is headed by the great show and breeding bull Mildred's Royal and Springhurst. Cattle of all ages for sale, whether for the breeding herd or the show-ring.

R. A. & J. A. WATT,
Salem Post and Telegraph Office, Elora Stn.
13 miles north of Guelph, on the G. T. R. & C.P.R.

Shorthorns for Sale

Two real good 12 and 13 months' old bulls, Strathallans, sired by the Brawith Bud bull, "Golden Count" =44787=; also a 4-year-old Strathallan cow with a choice 3 months' old heifer calf at foot, sired by Golden Count. She has again been bred to same bull. Will sell a few 2-year-old Strathallan heifers, bred since the New Year.

JOHN CAMPBELL, Fairview Farm, Woodville, Ont.

Wm. Grainger & Son, Hawthorn Herd of deep-milking Shorthorns. Aberdeen Hero (imp.) at head of herd. Eight grand young bulls by Prince Misty =57864=, Prices reasonable.
Londeshore Sta. and P.O.

SHORTHORNS AND DORSETS.

3 bulls, seven to nine months old; also a few ewe lambs and ewes in lamb for sale. Prices reasonable.

R. H. HARDING, Thorndale, Ont.
Mapleview Farm.

SPRING VALLEY SHORTHORNS.

Imp. Bapton Chancellor =40859= (78286) heads the herd. We have for sale a choice lot of young bulls of the very best breeding and prices right. Inspection and correspondence invited.

Address: KYLE BROS., Agr. C.P.R., Paris, G.T.R.

For Sale: Shorthorns—Four young bulls, from 10 to 15 months old; also cows and heifers, all ages. Queenston Archer =45896= at head of herd. Shropshires all ages and sex. Also 1 Clyde filly rising 3 years old, 1 Clyde mare rising 6 years old.

BELL BROS., "The Cedars" Stock Farm, Bradford, Ont.

BARREN COW CURE

makes animals breed. Abortive Cow Cure prevents animals aborting. Cures guaranteed or money refunded.
L. F. SELLECK, Morrisburg, Ont.

BRUCE'S RECLEANED FARM SEEDS

The Seed Control Act of 1905, an Act respecting the inspection and sale of seeds, which took effect on the 1st of September last, makes it a criminal offence to sell or have in possession for sale, for the purpose of seeding in Canada, any seeds of Cereals, Grasses, Clovers, and Forage Plants, unless they are free from the seeds of certain noxious weeds, which are enumerated in the Act. The Act admits that absolute purity in respect to the seeds of the weeds named is not possible of attainment, and provides a minimum standard of purity under which seeds cannot be sold without the seller being held liable to the penalties imposed by the Act. Under the conditions named we have been scrupulously careful in selecting the best qualities obtainable, and with our excellent facilities for re-cleaning our seeds our patrons' interests will be carefully safeguarded. Our Clovers and Timothy Seeds will be sent out in sealed bags, and samples of the seeds we offer have been tested in the laboratory of the Seed Department at Ottawa.

We offer for immediate orders, as market fluctuates, subject to being unsold, prices here, as follows:

SEED GRAINS, ETC.		SEED GRAINS, ETC.		CLOVER SEEDS.	
Per bushel.		Per bushel.		Per bushel.	
Barley, Improved, 6-rowed.....	\$0 70	Oats, Mortgage Lifter.....	\$0 65	Alsike, Extra Fancy.....	\$10 00
do Mandscheuri.....	75	do New Silver Mine.....	65	do Fancy.....	9 50
do Success.....	80	do Waverley.....	65	do Choice.....	9 00
do Hulless, white.....	1 20	do American Banner.....	60	do and Timothy, Mixed.....	4 50
do Hulless, black.....	1 20	do Australian White.....	65	do and White Clover, Mixed.....	8 00
Beans, white, hand-picked.....	2 10	do Giant Swedish.....	65	Crimson, Fancy.....	7 50
do Marrowfat, hand-picked.....	2 40	do Holstein Prolific.....	65	Lucerne, Fancy.....	9 00
do Soja or Soy.....	3 60	do Ligowo.....	65	do Choice.....	9 50
Buckwheat, Common.....	85	do Siberian.....	60	Red, Extra Fancy.....	9 25
do Silverhull.....	85	do Sensation.....	65	do Fancy.....	9 50
Corn, Compton's Early.....	1 25	do 20th Century.....	65	do Choice.....	9 00
do Angel of Midnight.....	1 25	Peas, Blue Prussian.....	1 20	Mammoth, Fancy.....	9 50
do Canada Yellow.....	1 25	do Golden Vine.....	1 00	do Choice.....	9 00
do White Flint, North Dakota.....	1 25	do Grass, Bug-proof.....	1 00	White, Extra Fancy.....	15 00
do Longfellow.....	1 25	do Potter.....	1 15	do Fancy.....	13 50
do King Philip.....	1 25	do Marrowfats.....	1 50	Yellow, Fancy.....	7 50
do Mortgage Lifter, New.....	1 10	Potatoes, Extra Early, Ohio.....	1 10		
do Butler Dent.....	1 10	do Bruce's White Beauty.....	1 10		
do Improved Leaming.....	1 10	do Early Six Weeks.....	1 10		
do Cloud's Dent.....	1 10	do Pride of Aroostook, New.....	2 00		
do Cuban Giant.....	1 10	do Noroton Beauty, New.....	5 00		
do Mastodon.....	1 10	do Early Bovee.....	1 10		
do White Cap Dent.....	1 10	do Sir Walter Raleigh.....	1 00		
do Wisconsin White Dent.....	1 10	Rye, Spring.....	1 25		
do Selected Red Cob.....	95	do Speltz, per 40 lbs.....	90		
do do Mammoth White.....	90	Tares, Black.....	1 75		
do do Yellow Dent.....	85	Vetch, Hairy.....	5 50		
do Evergreen Ensilage, 40 lbs.....	1 60	Wheat, Wild Goose.....	1 25		
Cow Peas, Whippoorwill.....	2 10	do Manitoba Red.....	1 40		
do do Mixed.....	1 85				
Oats, Scotch, Black Tartarian.....	1 20	Flaxseed, Screened.....	Per 100 lbs. \$3 00		
do Canadian Black Tartarian.....	70	do Meal, pure.....	3 25		
do Black Goanette.....	80	Oil Cake, fine ground.....	1 75		
do Daubney.....	85	Rape, Dwarf Essex.....	6 00		
do New Scottish Chief.....	85	Sugar Cane, Amber.....	6 00		
		Kafir Corn.....	5 00		

Remit 20 Cents Each for Two-Bushel Cotton Bags; 25 Cents Each for Clover Seed Cotton Bags.

Our Beautifully Illustrated Catalogue of Seeds, Implements, and Poultry Supplies—96 pages—mailed free to all applicants.

LITTLE GIANT GEARED HAND SEED SOWER—The best seeder offered; gives universal satisfaction; \$1.75 each; smaller size, \$1.50 each.

JOHN A. BRUCE & CO., SEED MERCHANTS Established 1850 **HAMILTON, ONTARIO.**

QUESTIONS AND ANSWERS. Miscellaneous.

COAL ASHES AS FERTILIZER.

Are coal ashes of any use as a fertilizer? What would I do with them if not? Wishing you good success in the future.

SUBSCRIBER.

Ans.—They are of no use, except, perhaps, to lighten up a heavy clay soil, and for this purpose they have to be applied in considerable quantity. They help to make a good road, if used for that purpose.

DEPTH FOR FOUNDATION.

In building a stone wall for basement under barn, is it absolutely necessary to dig the trench deep enough so that frost will not penetrate to the bottom, or will a less distance do, provided a solid foundation is reached, at, say, 18 or 20 inches?

READER.

Ans.—The depth you mention is quite sufficient, especially if site be well drained.

HOW TO FIND AMOUNTS OF CEMENT AND GRAVEL NEEDED.

Please give the formula for finding out the amount of cement and gravel and stone filling it takes to build a wall. I would like to be able to figure it out. Some people have been asking me what amount of material it would take to build a square cistern to hold twenty barrels of water. How do you figure out how much of the different materials it takes to lay a stable floor under a barn, where the mangers are raised up, also how to find water content of cistern?

D. C. McF.

Ans.—A barrel of cement contains four cubic feet. That is sufficient for ordinary wall purposes, if good Portland cement is used to mix with one-fourth to one-third a cord of gravel (32 to 43 cubic feet). Find the cubical contents, in feet, of wall or floor, divide by 30, and up to 40, according to strength of concrete, and you have the number of large loads of gravel required, and at the same time the number of barrels of cement needed. Estimate for fine surface work has to be made separately. The more stone that is imbedded in the concrete, the less of other material is required. There are about six and one-fourth gallons in a cubic foot. To estimate the capacity of cistern, find cubical contents in feet, multiply by 6 1/4, and you get the number of gallons it will contain.

HOMEMADE LIGHTNING RODS.

Give description how to make homemade lightning rods. You recommend nine strands of No. 9 wire twisted together.

A SUBSCRIBER.

Ans.—Find the total length of lightning rod needed, and run out the nine strands of wire, one after another the required length, allowing for six inches of shrink per 100 feet in the twisting. One end of the wires can be fastened to a stake, driven into the ground and well braced, by being passed through an auger hole, and the ends bent around and made firm; the other ends can be hooked one by one around the spokes of a wagon wheel close to the hub, care being taken to have wires of even length, and all fairly but not very tight. They will tighten and shorten a little while being twisted, so fasten ends securely. Have the wagon braced in some way to stand the draw, raise the wheel off the ground as if for greasing, and turn until the cable is twisted sufficiently. The rod can be attached directly to the building by staples, though some put corks under to give the appearance of being clear of it and separate. In case of an ordinary single barn, it is well to have the rod run along the whole length of the ridge, and descended at either end to the ground, thus having two ground connections. The ends should be buried at least six feet deep, if possible.

The upright points, which should be five feet high and about twenty feet apart, can be attached after the rod is in position, but before it is fastened down. Pieces of the rod for this purpose should have been cut off, each six and a half feet long, the extra foot and a half being for the purpose of being untwisted and wrapped around the main rod. This makes good electrical connection. The wires at the upper end of points should be opened up a few inches and spread apart, each wire end to be filed to a point.

T. B.

6 Shorthorn Bulls 6

One two-year-old from imported Mayflower cow, and by an imported Archer bull. Also BERKSHIRES, 4 to 5 months old, bred from large show stock and prolific strains.

S. J. PEARSON, SON & CO., Meadowvale, Ont.
Stations: Streetsville and Meadowvale, C. P. R.

BELMAR PARO SHORTHORNS

10 bull calves.
16 heifers under two years.
All of the choicest breeding and practically all of show-yard quality. You can buy anything in the herd at a reasonable figure.

JOHN DOUGLAS, PETER WHITE, JR., Manager, Pembroke, Ont.

PLEASANT VALLEY SHORTHORNS

Herd headed by imp. Old Lancaster = 50688 = Grand champion, Toronto, 1905, and consisting of females of the leading Scotch families; can spare a few young cows bred to imp. Old Lancaster.

GEO. AMOS & SON, Moffat Stn. and P.O., C.P.R.

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 telephone. **WM. SMITH, Columbus, P.O.** Brooklin and Myrtle Stns.

Oak Grove Shorthorns—Present offering is: Several imp. females, several heifers and several young bulls, all sired by Imp. Nonpareil Duke and out of imp. dams; also the stock bull, Imp. Nonpareil Duke, a choice offering. Prices right. **W. J. ISAAC, Cobourg Sta., Harwood P. O. Co. Northumberland.**

SCOTCH-TOPPED SHORTHORNS. Three young bulls, from nine to thirteen months old; also several young heifers by Scottish Baron (Imp.) for sale. Prices reasonable.

H. GOLDING & SONS, Thamesford, Ont. Stations, Thamesford, C.P.R.; Ingersoll, G.T.R.

Sunnyside Stock Farm—8 superior young Shorthorn bulls for sale. All from imp. bulls, four from imp. cows. Good enough to place at head of any herd. Apply **JAMES GIBB, Brookside P.O. and Telephone.**

Brown Lee Shorthorns—Present offering is 3 young bulls from 9 to 15 months old, a nice straight, good-doing lot, sired by Blenheim Stamp; also females of all ages, daughters of Imp. Sir Christopher and Imp. Beauchamp. Prices very reasonable. **DOUGLAS BROWN, Ayr P.O. and Station.**

SHORTHORNS

- 2 imported bulls of gilt-edged breeding and of the finest quality.
- 4 bulls from imported sires and dams; thick, sappy, good feeders, from my best cows.
- 4 bulls from imported sires and from straight Scotch cows of the best breeding.
- 4 imported cows with calves at foot, or nearly due, on which I am making an interesting proposition.
- 6 cows and heifers, bred here from straight Scotch parents, a grand lot.

No man has ever been in such form in Canada to offer such Shorthorns as the above at such moderate prices. Ask for catalogue and prices, they say a lot, but the cattle will speak for themselves if you come and see them.

Am taking orders now for **SHOW or BREEDING SHEEP** of the following breeds: Shropshires, Oxford, Cotswolds, Southdowns, Dorsets or Hampshire, to be imported in time for the coming show season.

Telephone, telegraph, post office and railway address:
ROBERT MILLER, Stouffville, Ontario.

GREENGILL HERD of high-class SHORTHORNS

We offer for sale 12 bull calves, 2 yearling bulls, a number of them from imported sire and dam; also high-class females, all ages, either imported or Canadian bred. The herd is headed by (Imp.) Lord Roseberry.

R. MITCHELL & SONS, Nelson P.O., Ont.; Burlington Junc. Sta.

SHORTHORNS CLYDESDALES

Just now: One pair of matched geldings 5 and 6 years old; show team.

JAS. McARTHUR, Goble's, Ont.

BONNIE BURN STOCK FARM Offers Scotch and Scotch-topped bulls, cows and heifers, 50 Shropshire rams and ewes, and Berkshire pigs, from imp. dams and sires, not akin. A bargain for quick sale. **D. H. RUSSELL, Stouffville, Ont.**

Willow Bank Stock Farm | Established 1855 Shorthorn Cattle, Leicester Sheep. Imp. Rosierucian of Dalmeny = 45220 = at head of herd. Choice young stock for sale. **JAMES DOUGLAS, Caledonia, Ont.**

HILLVIEW STOCK FARM SHORTHORNS, CLYDESDALES and COTSWOLDS

Present offerings: Choice young bulls and heifers. Also a few good young cows. Apply to **JOHN E. DISNEY & SON, Greenwood, Ont.** Stations: Claremont, C.P.R.; Pickering, G.T.R.; Brooklin, G.T.R.

1884 + HILLHURST FARM + 1905 SHORTHORN CATTLE

Herd of thirty. Stock bull: (Scottish Hero) (Scottish Archer (59893), Missie 134th, by William of Orange. Prince Horace, bred by W. Butterfly) S. Marr, Butterfly 46th (Sittytan Butterfly).

JAS. A. COCHRANE, Compton, P. Q.

GLENAVON STOCK FARM. Shorthorns and Berkshires

Will be sold cheap if sold before the 1st of April, the following: 3 bulls (Shorthorns) and one Berkshire boar. **W. B. ROBERTS, Sparta P. O.** Sta.: St. Thomas, C.P.R., M.C.R., G.T.R.

MAPLE HILL SCOTCH SHORTHORNS STOCK FARM of best families. Herd headed by the grandly bred Lavender bull, Wanderer's Star = 48885 =. A few choice young bulls. **Box 426. WM. R. ELLIOTT & SONS, Guelph, Ont.**

ANSWERS.

TILIZER. use as a fer- with them if success in the BSCRIBER. use, except, a heavy this purpose considerable make a good ose.

ATION. for basement necessary to so that frost bottom, or will ided a solid ay, 18 or 20 READER. tion is quite e be well

OF CEMENT ED.

r finding out gravel and d wall. I figure it out. ng me what ould take to hold twenty ou figure ou materials it nder a barn, ed up, also of cistern? D. C. McF.

contains four for ordi- Portland ce- one-fourth to (32 to 43 contents, in by 30, and ght of con- ber of large at the same s of cement surface work The more

he concrete, is required. -fourth gal- estimate the el contents ou get the ain.

RODS. make home- recommend twisted to- SCRIBER.

h of light- ut the nine ther the re- x inches of isting. One ned to a d and well through an ent around nds can be e spokes of ev, care ven length, ght. They little while s securely. me way to eel off the turn until ntly. The o the build- put corks e of being nse of an ll to have length of her end to ground con- buried at

ould be twenty feet the rod is s fastened this pur- each six a foot and being un- the main rical con- end of few inches end to be T. B.

Special 30-Day Offer

For thirty days we will send, absolutely free of charge, one regular pint size of **New Zealand Dip and Disinfectant** with every pail of

WORTHINGTON'S STOCK TONIC

Ordered at regular price. We are making this offer in order that all may have a chance to try **New Zealand Dip and Disinfectant**, one of the best non-poisonous dips known to chemical science. In offering **Worthington's Stock Tonic** we feel that it is the greatest digestive agent known to the stock-raiser of to-day. Not only does it insure perfect assimilation of all the food, but keeps the animal in the best of health, causing it to eat its food with a relish that cannot be obtained in any other way. Do not miss this opportunity, send in your order to-day. We pay freight.

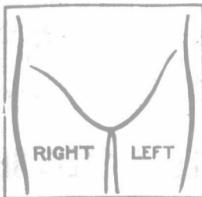
25-lb. pails, \$2.00; 50-lb. pails, \$3.75.

MANUFACTURED BY

BOGARDUS & CO., Chemists, GUELPH, ONT.

THE NEW QUICK WAY TO CURE RUPTURE

Is Without Operation, No Pain, No Danger, No Loss of time From Daily Work.



This Remarkable Simple NEW WAY TO CURE RUPTURE has opened up a new era in the treating of this terrible dangerous, dreaded, hitherto considered incurable malady, Rupture. You ruptured people who have borne the painful agonies of Rupture surely will be glad to see this notice, for it means a NEW lease of life for you—one free from pain and suffering. Won't it be grand to be cured? You can be sure—hundreds of Canadians have been. Cut out this notice. Mark on the diagram position of Rupture. Answer questions and send all to me at once. I will send you Free A FREE TEST to show you how quickly you can be cured right in your own home. I'll also send you a valuable Book of Information for the Ruptured. You must write for these at once. Remember they are FREE. No ruptured person who has had these would part with them for money. You wouldn't either. Write at once.

DR. W. S. RICE, 2 1/2 East Queen St., Block 279 Toronto, Ont.

Do you wear a truss?..... Does rupture pain?.....
On which side ruptured?..... Ever operated on for rupture?
Age..... Time ruptured.....
Name..... Address.....

KENWOOD STOCK FARM. SHORTHORNS.

Headed by (Imp.) Jilt Victor—45187—, 10 grand young bulls; also heifers; from imp. and home-bred cows, for sale. Choice Lincoln sheep; Berkshire and Tamworth hogs offered.

HAINING BROS., Highgate, Ont. Kent Co.

Riverview Shorthorns and Oxfords

Shorthorns represent **Crimson Flowers, Atholstanes, Lady Janes and Roses.**

We have for sale eight bulls, including our stock bull, four yearlings, and the balance calves; also a few one, two and three year-old heifers. A thick, straight, mossy lot. Also some spring and one-year-old Oxford rams.

Peter Cochran, Almonte P. O. and Sta.

SHORTHORNS AND LINCOLNS.

Present offerings: 4 choice young bulls 2 to 14 months; also a few good heifers, Lincolns, descended from the best English flocks.

JOHN LEE & SONS, Highgate, Ont. 40 miles west St. Thomas, on M.C.R.R. & P.M. Ry.

CLOYER LEA STOCK FARM SHORTHORNS

Imp. Golden Cross at head of herd. 6 young bulls, three reds and three roans, from six to twelve months old. Parties wishing to visit the herd will be met at Ripley station and returned.

R. H. REID,

Ripley Sta., G.T.R. Pine River, Ont.

A. EDWARD MEYER

Box 378, Guelph, Ont.

SCOTCH SHORTHORNS

a specialty. Herd bulls—Scottish Hero (imp.), a Shethin Rosemary; Radium, a Cruickshank Mysie. Correspondence solicited. Visitors welcome. Long-distance phone in house.

GEORGE D. FLETCHER, Breeder of Scotch Shorthorn Cattle and Large English Yorkshire Swine.

Herd headed by the Duthie-bred bull (imp.) Joy of Morning, winner of first prize at Dominion Exhibition, Toronto, 1903.

Present offering: young Shorthorns of either sex; also a choice lot of Yorkshires of either sex, six months old, from imp. sire and dam. Prices easy.

Binkham P. O., Ont. Erin Station and Tel.

CLEAR SPRING SHORTHORNS.

Imp. Spicy Broadhooks at the head of herd. Young bulls from 6 to 11 months old, females of all ages.

Prices reasonable. Call or write

JAMES BROWN, Thorold.

JOHN GARDHOUSE & SONS, Highfield P.O., Ont.

Breeders of Scotch and Scotch-topped Shorthorns, Lincoln and Leicester Sheep and Shire Horses.

A good selection of young stock of both sexes always on hand for sale. Scottish Prince (imp.), Vol. 48, at head of herd. Royal Albert (imp.), 2257, at head of stud. Farms 3 1/2 miles from Weston, G. T. R. and C. P. R., and electric cars from Toronto.

T. DOUGLAS & SONS, Strathroy, Ont.

SHORTHORNS and CLYDESDALES Present offerings: 19 young bulls, of No. 1 quality, ready for immediate service; also cows and heifers of all ages. Also one imp. stallion and two brood mares. Prices reasonable. Visitors welcome. Farm one mile from town.

Pine Grove Stock Farm.

Breeders of High-class Scotch Shorthorns, Choice Shropshire Sheep, Clydesdale and Hackney Horses.

Herd catalogue on application. Address: C. W. WILSON, Supt., Rockland, Ont. W. C. EDWARDS & Co., Limited Props. om

Maple Lodge Stock Farm.

1854.

An excellent lot of Shorthorn bulls and heifers for sale now. Have choice milking strains. Have a few Leicesters left yet. Bargains in ewes.

A. W. SMITH, Maple Lodge, Ont.

Queenston Heights Shorthorns

Choice yearling heifers, Straight Scotch.

Two bull calves at easy prices.

HUDSON USHER, Queenston, Ont.

GOSSIP.

Parties contemplating going to the Canadian Northwest this spring to settle or to seek for good investment in farming lands will do well to note the advertisement of Mr. John R. Green, of Moose Jaw, Sask., and write him for information concerning that section of the country and the character of the lands he has to offer. Moose Jaw is the most important railway center on the main line of the C. P. R., in the Province of Saskatchewan. The harvest in Moose Jaw district last year was heavy, 520,000 bushels of wheat were marketed at Moose Jaw alone, and including that marketed at other stations, 10 to 15 miles distant there, the grand total shipments for the district was 1,418,574 bushels. And it is estimated that over 2,000,000 bushels will be raised in the district this year. Moose Jaw is a thriving and rapidly-growing town. To get a fuller statement of the record and possibilities of Moose Jaw district, write Mr. Green for the report of the Board of Trade of Moose Jaw for 1906, and study its contents.

Messrs. J. & W. Russell, Richmond Hill, Ont., advertise in this issue for sale 12 young Shorthorn bulls of Scotch breeding and type. This standard herd has a prizewinning record, and a fame for production of champions equalled by few, if any, in the Dominion. Founded on first-class representatives of the leading Scottish herds, and having had the benefit of the services of International prizewinning sires, the desirable qualities of easy keeping and early maturity, together with substance, thick flesh and mossy coats, are found in the herd in the highest degree. This herd, it will be remembered, produced the great champion bulls, Lord Stanley, Moneyfuffel Lad, and Topsman, a triumvirate, it is safe to say, unequalled as coming from any one herd in America. The principal sire in service at present is Imp. Stephen Fitz-Forester, by Stephen Fitz-Lavender, bred by Mr. Deane Willis, and sired by Bapton Javelin, by Count Lavender, of the Sittytou Lavender family. Parties looking for thrifty, vigorous young bulls of the best breeding should write Messrs. Russell, or, better, call and see their stock at the farm, which is convenient to Toronto; the electric railway passing the gate nearly every hour of the day.

Messrs. John Gardhouse & Sons, Highfield, Ont., report the following sales for February: "To Mr. Wm. Hodgins, Portage du Fort, Quebec, the fine imported stallion, Coleshill Royal Albert [383] (20367), sired by the great sire, Moorland Paxton (16259), dam Stenson Duchess (7114), by Royal Albert (1885), at a long price. This horse is just the kind that should make a name for himself any place, being possessed of what is required in draft horses—both size and quality. To Mr. A. S. Will, Mynard, Neb., U. S., the imported-in-dam Shire stallion colt, Monarch, sired by Eskham Waggoner, dam Princess May (imp.) [212]. This is a grand good colt, and should make a splendid horse. To Mr. Neil McCallum, Brampton, Ont., the imported mare, Princess May [212]. She is a very large mare, and seems like being a splendid breeder, being the dam of the stallion colt, Monarch, sold by us to go to Neb. To Mr. William Clarkson, Malton, Ont., a nice stallion colt, by Coleshill Royal Albert, and the excellent Campbell Rosebud cow, Lady Marjory—33923—, by Brampton Hero—16932—, and her beautiful roan heifer calf, Lady Rosebud—72406—, by Scottish Prince (imp.)—50090— (84728). We still have for sale a few nice fillies and the stallion colt, Royal Prince, by Coleshill Royal Albert, dam the great show mare, Laura [112]. In Shorthorns, we have a few nice young bulls fit for service—Cruickshank Lovelys, Campbell Clarets and Rosebuds—all sired by the grand show bull, Scottish Prince (imp.). These are fit to make herd headers. Also a number of young cows and heifers, bred to our stock bulls, Imp. Scottish Prince and Imp. Prince of Archers."

CAUGHT COLD ON THE C.P.R.

A. E. Mumford Tells How Psychine Cured Him After the Doctors Gave Him Up.

"It is twelve years since Psychine cured me of galloping consumption." The speaker was Mr. A. E. Mumford, six feet tall, and looking just what he is, a husky, healthy farmer. He works his own farm near Magnetawan, Ont.

"I caught my cold working as a fireman on the C. P. R.," he continued. "I had night sweats, chills and fever and frequently coughed up pieces of my lungs. I was sinking fast, and the doctors said there was no hope for me. Two months' treatment of Psychine put me right on my feet, and I had no return of lung trouble since."

If Mr. Mumford had started to take Psychine when he first caught cold he would have saved himself a lot of anxiety and suffering. Psychine cures all lung troubles by killing the germs—the roots of the disease.

PSYCHINE

(Pronounced Si-keen).

REMEMBER—Psychine cures Consumption, but its greatest work is the cure of those diseases that lead to Consumption. Psychine cures Colds, LaGrippe, Pneumonia, Bronchitis and Catarrh. \$1 per bottle at all druggists, or Dr. T. A. Siccum, Limited, Toronto.



ARTHUR JOHNSTON Greenwood, Ont.

Offers for sale, at moderate prices, 12 high-class yearling bulls, all sired by imported bulls, and most of them from imported dams. Also imported and home-bred cows and heifers of all ages.

SCOTCH SHORTHORNS

9 heifers, yearlings. 20 heifers, calves. 4 bulls, yearlings. 26 bulls, calves.

All out of imported sires and dams.

Prices easy. Catalogue.

John Clancy, N. GARGILL & SON, Manager, Gargill, Ont.

Maple Shade

Cruickshank Shorthorns and Shropshire Sheep

16 choice young bulls of Cruickshank breeding, from which you can select high-class herd headers. If you wish to see the breeding we shall be pleased to mail a catalogue.

JOHN DRYDEN & SON, Brooklin, Ont.

Stations {Brooklin G.T.R. Long-distance telephons. Myrtle, C.P.R.

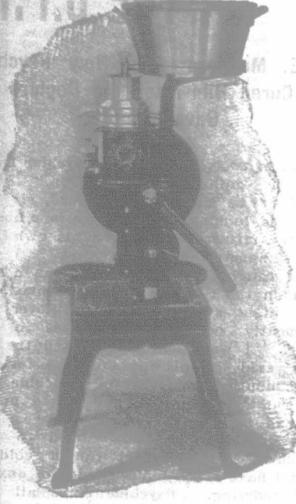
SMITHFIELD FARM SHORTHORNS.

Herd headed by the Missie bull, Aberdeen Beast, by Imp. Scottish Beau. Present offering: Two choice young bulls, one full brother to first-prize and highest-priced calf at Ottawa sale of 1905.

R. E. WHITE, BALDERSON, ONTARIO Lanark Co.

WHERE CHEAP IS DEAR

Folks are constantly confusing "cheapness" and "profitableness"



DeLAVAL CREAM SEPARATORS

Outwear 3 to 10 of the cheap kind

3 "Cheap" Machines, at \$50 - \$150.00
1 DeLaval, at - 100.00
DeLaval Cost less by \$ 50.00
and suppose it was 10 cheap ones.

77 York Street

TORONTO

Montreal

Winnipeg

For Sale. - Fine young JERSEY and GUERNSEY bulls. Six to fourteen months old. From stock of exceptional breeding and individuality. Full particulars on application to DENTONIA PARK FARM, Coleman P. O., Ontario.

HIGHGROVE JERSEY HERD. Our present offering is a few choice heifer calves from 2 to 8 months old, which, considering quality, will be sold reasonable.

ROBT. TUFTS & SON, Tweed P.O. & Sta. Brampton Jersey Herd - We have now for immediate sale 10 heifers, from 6 to 18 months old, descended from St Lambert or imported stock; also females of all ages. In order to reduce our stock, we are making a special offer. For full particulars, address, S. H. BULL & SON, Brampton, Ont.

An extra nice Jersey Bull, fit for yearling, vice. Also two bull calves. Prices reasonable. F. S. WETHERALL, - Rushton Farm, Cookshire, Que.

AYRSHIRES AND YORKSHIRES

Young bulls, 9 Aug., 1904, sired by Prince of Barchoeskie (imp. in dam); 1 March calf, sired by Royal Star (imp.). Heifer calves, 2-yr. old heifers and young cows. Young sows ready to mate. Pigs ready to ship. Prices right. Correspondence solicited. ALEX. HUME & CO., Menie, Ont.

Ayrshire Bulls

For Sale 12 Ayrshire bulls one to two years old. Bred from deep milking stock, both by sire and dam. Price reasonable. Correspondence and inspection solicited.

W. Owens, Monte Bello, Que. Riverside Farm.

THREE PRIZEWINNING AYRSHIRE BULLS FOR SALE

One 5-year-old bull, 3rd-prize winner at Central Canada Exposition; one 2-year-old bull, 1st-prize winner at Central Canada Exposition, and one bull calf, 12 months old, 3rd-prize winner at Central Canada Exposition. These bulls are fit to head any herd in Canada. Terms reasonable. Write A. KENNEDY & SON, Hillview Stock Farm, Winchester Stn., C. P. R. Vernon, Ont.

Meadowdale Farm Ayrshire Cattle, Shropshire sheep, Berkshire pigs, B. P. Rocks and B. Oringtons. Young stock for sale. A. E. YULL, Prop., Carleton Place, Ont.

Maple Cliff Dairy and Stock Farm Breeders of Clydesdale Horses, Ayrshire Cattle, Berkshire and Tamworth Pigs. Young stock for sale at all times. R. REID & CO., Hintonburg, Ont. Farm adjoins Central Experimental Farm.

AYRSHIRES - Choice stock of either sex, different ages, for sale. Prices reasonable. For particulars apply to N. DYMENT, Hickory Hill Stock Farm, Dundas Stn. & Tel. Clappison, Ont.

Registered Ayrshires - Bright Smile of Maple Grove - 16593 - 5 years old; gave 40 lbs. a day last year on grass alone. Due to calve April 1st. Lady Clare; dam Bright built, as above; in calf. Joseph Hudson, Lyn, Ont.

AYRSHIRES

The famous Reford Herd at St. Anne de Bellevue, Que., now owned by Sir William C. Macdonald.

Several yearling bulls for sale; also a number of bull calves. Quality and appearance extra good, bred from the best milking strains, noted for robust constitution and large tests. For particulars apply to

MACDONALD COLLEGE St. Anne de Bellevue, Quebec.

WOODBINE HOLSTEINS

Herd headed by Sir Mechthilde Posch, absolutely the best official-backed sire in Canada. Dam Ianthe Jewel Mechthilde, 25.8 pounds butter in seven days. Champion cow of Canada over all breeds. Sire's dam, Aaltje Posch 5th, holds the world's largest two-day public test record - 8.5 pounds butter. Young bulls of the choicest quality for sale. A. KENNEDY, Ayr, Ont. Ayr, C.P.R.; Paris, G.T.R.

SPRINGBROOK HOLSTEINS & TAMWORTHS

Two choice bulls, 11 and 12 months old, Toronto prizewinners, rich breeding; yearling Tamworth boar, 2nd prize at Toronto, good stock-getter; Tamworth sows, bred, and young pigs, pairs not akin. All high-class stock. Come and make your own choice. Prices right. A. C. Hallman, Waterloo Co., Breslau, Ont.

SHANNON BANK STOCK FARM FOR AYRSHIRES AND YORKSHIRES

Young stock of both sexes for sale from imported stock. W. H. TRAN, Cedar Grove, Ont.

AYRSHIRES FROM A PRIZE-WINNING HERD

Have some nice bull and heifer calves for sale at reasonable prices. For particulars, etc., write to W. M. STEWART & SON, Cambellford Stn. Menie P.O., Ont.

SPRINGBROOK AYRSHIRES.

Averaged nearly 7000 lbs. of milk last year, testing 3.9% butter-fat. 1 yearling bull; 1 bull calf six months, also females for sale. W. F. STEPHEN, P.O. Box 101, Huntingdon, Que.

QUEEN CITY HOLSTEINS

If you would like to purchase a young Holstein bull whose sire's dam has an official record of 550 pounds of milk and 26 pounds of butter in seven days, write to R. F. HICKS, Newton Brook P.O., York Co.

Holsteins at Ridgedale - A few choice bull and heifer calves on hand for sale, sired by Prince Pauline DeKol 6th. Ages up to ten months. Write for what you want, or come and see them. Shipping stations: Port Perry, G. T. R., and Myrtle, C. P. R., Ontario Co. R. W. WALKER, Utica P.O., Ont.

HOLSTEINS AND CHESTER WHITES.

Our Holsteins are producers and prizewinners. Young bulls and a few choice heifers for sale, also some extra good young Chester White pigs, both sexes. D. G. GOODERHAM, Thornhill P.O. G. T. R. and street cars.

MAPLE GLEN STOCK FARM

Can now offer one young bull, born last spring, and four bull calves, born in Aug., Sept. and Oct., from select cows, and sired by the great imp. bull, Sir Alta Posch Beets. Any female in the herd can be secured at their value. C. J. Gilroy & Son, Glen Buell, Ont.

IMPERIAL STOCK FARM HOLSTEINS

A prizewinning herd of imported, officially tested stock. Bulls of all ages for sale, also a few cows. W. H. SIMMONS, New Durham, Ontario.

GOSSIP.

Mr. Peter White, Jr., Pembroke, Ont., in ordering a change in his advertisement of Shorthorns, writes: "I recently sold to Mr. R. T. McLaughlin, Alba P. O., Renfrew County, a yearling daughter of our show cow, Carrie Nation, which stood third in Toronto last fall, and a splendid, blocky young Missie bull, sired by Merryman (imp.). Mr. McLaughlin has made an extremely wise choice, and has laid the foundation for a herd of good useful cattle, and will, no doubt, be heard from in the near future."

Mr. L. K. Weber, Hawkesville, Ont., writes: "I have still four young Shorthorn bulls to sell - thick-fleshed, low-down, blocky fellows from 8 to 11 months old. Can also spare several cows and heifers in calf to Good Morning (imp.). He is developing into a very deep, heavy-fleshed animal, full of quality, smooth and straight in his lines, and he is of the best Scotch breeding, tracing on his dam's side to Miss Ramsden. He was bred by Wm. Anderson, Scotland, and imported by J. Watt & Son, Salem. My females are also rich in Cruickshank blood, and full of size and quality, and my prices are as low as any of similar breeding. I am also offering a pair of heavy-draft Clyde mares in foal to Sir Walter."

A GREAT FUTURE.

Rev. James Allen, Superintendent of New Ontario Missions, speaks in the most sanguine manner of the future of Northern Ontario. The sixteen million acres of rich clay land north of the Height of Land was said to be as good as that at the head of Lake Temiskaming. He had met settlers in that district from all parts of old Ontario, and they assured him that the soil was as good as any in the south or west of the Province, which practically meant as good as any in the world. There was reason to hope that electric smelting of ores would prove practicable, and this with our abundance of water power would supply the want of coal and a great future in mining and treating the minerals was sure to come. The salt-water fisheries of Hudson's Bay would prove another extremely valuable asset, probably not less than those on the Atlantic or Pacific. The development of these industries, together with lumbering, meant that very soon villages and towns would spring up all over New Ontario. Besides the trunk lines of railway and branches that would follow, the country had excellent waterways, which would facilitate communication, and the Hudson's Bay would provide for part of the year a short route to England.

CEDARDALE SHORTHORNS.

A few days ago, while in the vicinity of Markdale, Ont., an Advocate representative had the pleasure of calling on Dr. T. S. Sproule, M. P., of that place, and was shown over his splendid farm, Cedardale, on which are comfortably quartered 24 head of up-to-date Shorthorns, representing the Mayflower, Flora and Beauty families. The females are a big, deep-bodied, thick-fleshed lot, and are exceptionally heavy milkers, as the thick, plump and fat sucklings amply testify. The stock bull is Royal Trilby, a Mayflower, by the Miss Ramsden bull, Royal Standard - 27134 -, dam Trilby - 27737 -, by the Merry Maiden bull, Lord George, a son of Imp. General Booth. Royal Trilby is a grand type of modern Shorthorn, and is proving a sire of exceptional worth. There is also a red-roan yearling bull, out of Trilby, and with an imported sire that is the making of a good one, and another sixteen-months-old, by Markdale Chief - 47369 -, out of a Beauty dam that shows splendid form, and will certainly develop into a very large, thick-fleshed bull. Still another is a six-months-old, out of the big, thick Flora cow, Ida of Brookdale, by the stock bull - a grand good calf. All these bulls, including the stock bull, are for sale, and will be sold cheap, considering the quality they possess. There are also a few heifers for sale, one and two years of age, bred on heavy-milking lines, and, individually, just the sort to do good in any herd. The Doctor is also somewhat extensively engaged in the breeding of Yorkshire hogs, and has always on hand both sexes of various ages for sale.

Boo Spavin. Cure the lameness and remove the bunch without scarring the horse - have the part looking just as it did before the bluish came. Fleming's Spavin Cure (Liquid) is a special remedy for soft and semi-solid bluish - Bog Spavin, Thoroughbred Splint, Curb, Capped Hock, etc. It is neither a liniment nor a simple blister, but a remedy unlike any other - doesn't irritate and can't be imitated. Easy to use, only a little required, and your money back if it ever fails. Fleming's Vest-Pocket Veterinary Adviser describes and illustrates all kinds of bluish, and gives you the information you ought to have before ordering or buying any kind of a remedy. Mailed free if you write. FLEMING BROS., Chemists, 45 Church Street, Toronto, Ontario.



You need a HOLSTEIN BULL to head your herd. Sired by such noted sires as Flobe De Kol, whose dam and sire's dam records average 619.3 lbs. milk, 37.31 lbs. butter in 7 days, or "Duchess Aggie De Kol Beryl Wayne," grandson of the famous "Beryl Wayne," 82 lbs. milk in one day, 37.87 lbs. butter in 7 days, 17.15 lbs. milk in 104 months. We have 13 imported and home-bred bulls to offer of such breeding; also heifers and young cows. Just imported, 35 head in the past six months. 73 head from which to select. It will be to your interest to enquire before buying elsewhere.

H. E. GEORGE, Crampton, Ont. Seven miles from Ingersoll.

Cows from the ANNANDALE HOLSTEIN HERD

Have won during the past show season at Ottawa first and sweepstakes on cow, first on 3-year-old, first on 2-year-old class. At Guelph (dairy test) first and sweepstakes on cow, first and second in heifers. At Chicago (National) first and sweepstakes on cow, second prize cow, second and third on 2-year-olds, second on 1-year-old heifers, and a host of other prizes (different cows at different shows). Bull calves, 4 months and under only, for sale from great dams and greatest of sires. Buy young if you want them from Annandale Stock Farm.

GEO. RICE, Tillsonburg, Ont.

RIVERSIDE HOLSTEINS

80 head to select from. Six young bulls, from 4 to 7 months old, whose dams have official weekly records from 16 to 21 lbs. butter; sired by Johanna Rue 4th's Lad, a son of Sarcastic Lad, Grand Champion prize bull at World's Fair, St. Louis, 1904.

MATT. RICHARDSON & SON, Caledonia, Ontario.

Hill and Centre View Holsteins

Herd numbers 95 head. Stock bulls are bred on high-producing lines. Our milkers are all in the Advanced Registry, with official records of from 15 to 22 1/2 lbs. For sale are 20 bulls from 4 to 16 months old, sired by our stock bulls, and all out of Advanced Registry dams. Females of all ages. Write quick if you want one. Guaranteed as represented.

P. D. EDE, Oxford Centre P.O. Woodstock Station.

With Cheese at 12c. and Butter at 25c. why not

Buy a Holstein Bull

and Improve Your Dairy Herd? I have them Right in Breeding, Right in Quality, Right in Price. Order early if you want one.

G. W. CLEMONS, ST. GEORGE, ONT.

Lyndale Holsteins.

A number of bull calves from one to four months old, out of Record of Merit cows, and sired by Beryl Wayne Paul Concordia, whose four nearest dams have official butter records averaging 23 lbs. 11 ozs. each. We also have three young bulls fit for service. BROWN BROS., LYN, ONT.

MAPLE GROVE HOLSTEIN-FRIESIANS

For Sale: Three bull calves, sired by Lord Wayne Mechthilde Calamity, and all out of Advanced Registry cows. Apply

WALBURN RIVERS, Folders' Corners.

Grove Hill Holsteins - Herd contains 55 head, in the advanced registry. Our stock bulls have all been backed up by high records. Present offering: Several young bulls and a few females. F. R. MALLORY, Frankford P. O. and Sta., C. O. R.

"GLENARCHY" HOLSTEINS

We have for immediate sale several young bulls, and a number of young females, that for ideal type and superior quality, backed up by glided breeding, are unsurpassed. G. MACINTYRE, Renfrew P.O. and Sta.

Rex Flintkote ROOFING



A Perfect Poultry House

means bigger and healthier birds and increased egg production. The best is none too good, especially since the best can be had with the least possible trouble. For instance, pictured above is a poultry house covered (roof and sides) with Rex Flintkote Roofing. Besides the few rolls it took to cover the buildings, it required merely a hammer and as much of an ordinary farmhand's time as would have been required to lay so much carpet.

It produced a poultry refuge, cool in summer, warm in winter; proof against rain, wind, snow, and danger from falling sparks.

Rex Flintkote Roofing

is made of chemically treated long-fibre wool, both sides covered with fire-proof compound and protected by a covering of flint, making the only conceded absolute resister of water, temperature, acid, alkali, rot and fire.

SEND FOR FREE SAMPLES

Make your own tests. We send also our book which shows other buildings of all kinds subjected to all kinds of climatic conditions, which are to-day proving the superiority of Rex Flintkote for all roofing purposes. Contains valuable information about roofing that every house builder and owner should know. The best dealers sell Rex Flintkote—always bears above trade mark. "Look for the Boy"—take no substitutes.

J. A. & W. BIRD & CO.
20 India St., Boston, Mass.
Agents everywhere

SOUTHDOWNS

For Sale: 25 ewes in lamb to the imported rams, Babraham Hodge, Pattern and Glory.

COLLIES

Puppies by imported New York Show winner, Wishaw Hero, out of noted prize-winning dams.

ROBERT McEWEN, Byron, Ontario.

Sheep Breeders' Associations.

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

Leicester Sheep—Choice ram and ewe lambs; also a few yearlings for sale. For particulars write to CHAS. F. MAW, Milton Stn. and Tel. Omagh P.O.

Oxford Down Sheep, Shorthorn Cattle, Yorkshire Hogs.

Present offering: Lambs of either sex. For prices, etc., write to John Cousins & Sons, Buena Vista Farm, Harriston, Ont.

SHROPSHIRE

Choice ram and ewe lambs for sale; also a few aged ewes.

GEO. HINDMARSH, Alisa Craig Ont.

COTSWOLDS

Some good shearing ewes and ewe lambs, and a few choice ram lambs, right type, for sale. Prices moderate.

E. F. PARK, Burgessville, Ont.

Hollywood Production 70785, is offered at the small fee of \$5 to a limited number of approved bitches for a short time. Send for stud card. free. R. E. CLARK, Glensair Kennels, West Lorne, Ont.

Seed Grains and Dorset Horn Rams

Emmer and Tarter King oats. All grains well cleaned. Write for samples and prices. Glensair Farm. JAMES DICKSON, Orono, Ont.

BROAD LEA OXFORDS.

Present offerings are 28 ranch shearing rams, seven shearing ewes, one show ewe four years old. Will also book orders for ewe and ram lambs from imported rams.

Correspondence promptly answered. Visitors always welcome.

R.R. Stations: Milmay, G. T. R. W. H. ARKELL, Teeswater, Ont.

DORSET HORN SHEEP and SCOTCH SHORTHORNS

The latter representing the Nonpareil, Miss Ramsden, Missie and Gloster families exclusively, and the former comprising more Royal winners and more St. Louis prizewinners than any other flock in the world. Stock for sale always on hand.

JOHN A. MCGILLIVRAY, North Toronto, Ontario

HIDES SHEEPSKINS, FURS

Consignments Solicited. Top Prices. E. T. CARTER & CO., TORONTO

100 Shropshires 100 & Cotswolds 100

One hundred head for sale. Ten shearing rams, fifty ram lambs, and sixty shearing ewes. Rams are good enough to head any flock. The ewes are a choice lot and will be bred to imp. ram.

John Miller, - Brougham, Ont

Asthma

Climate wear out. Smokes, Sprays and "Specifics" relieve only temporarily; they cannot cure. Our CONSTITUTIONAL treatment, founded 1883, permanently eliminates the CAUSE of Asthma and Hay Fever, so that nothing brings back the old symptoms or attacks. Write for BOOK \$7 P. containing reports of many illustrative cases that have GRAYED CURED for years. Mailed FREE. Write P. HAROLD HAYES, Buffalo, N. Y.

QUESTIONS AND ANSWERS. Miscellaneous.

MECHANICS' LIENS.

B contracts to build a barn for A. B sends C to do the job. C brings other men to help him. A pays B all the money, and he, B, does not settle with C and the others, and B is not worth anything. Can C and the others hold A for their wages? SUBSCRIBER, Ontario.

Ans.—They can register and enforce a claim of lien on the parcel of land, belonging to A, upon which the barn has been built.

CATTLE DOING DAMAGE.

1. A is a drover. In driving cattle along the main road, the cattle enter B's gate, which is open, and do considerable damage to B's garden. Can B collect damages of A, as A and his help tried to prevent the cattle from going in at the gate?

2. Is A responsible if cattle jump a fence, and do damage to crops, also along main road? Quebec.

Ans.—1. We think so.

2. Yes.

DOMESTIC SCIENCE COURSE.

1. How long is it necessary to attend a domestic science school, provided you are successful in the exams, to become qualified to teach?

2. About what wages would a science teacher expect, and are there schools in Toronto as good as in Guelph? ASPHODEL.

Ans.—1. The course is usually one of two years; but for teachers of experience with a normal-school certificate, one year suffices.

2. A domestic science teacher, who is already recognized as a successful teacher in other lines, should get at least \$600 a year, and in large schools at least \$800.

3. We cannot say where the best school is located. The Lillian Massey School, Toronto; The Macdonald Institute, Guelph; Alma College, St. Thomas; Ladies' College, Whitby; Albert College, Belleville, are all qualified to train teachers. The fees vary. You should send for their calendars. It should be remembered that there are about two hundred certificated teachers now in Ontario who have not obtained schools. The organization of domestic science classes is slow.

ROOT-HOUSE UNDER BARN APPROACH.

A good many are building their root-houses under the driveway. I am going to build a basement under barn this summer, and am going to build the root-house there; but the one difficulty that appears is how to keep it dry. What is the best way to roof it? I have been thinking of cement, but how to go about it is what puzzles me. The cement would have to be covered with earth, or it would be too slippery for a team to draw a load up, also what would you lay the cement on? It would have to be covered in some way first. What is the best material to use, and how should one go about it? ENQUIRER.

Ans.—This subject has been dealt with repeatedly in "The Farmer's Advocate," different ideas being described. The root-house may be built of timber, and the approach be closed in and covered over with a roof, high enough to drive under. Many have built a concrete arch extending across the approach, and some with a brick arch covered with earth. In one barn we visited lately, the arch extended a considerable distance on each side the approach, being about 10 feet longer than the approach was wide. This style of root-house has given excellent satisfaction. Another plan is to construct a level concrete roof reinforced by steel rails or other metal, and supported by posts resting on the floor of the root-house. As there is plenty of time yet for our inquirer to make his decision, we will leave the question open, and will be glad to hear from anybody who has built a root-house under his approach, giving dimensions, cost, kind and amount of material and method of construction.

OBSTINATE COUGHS AND COLDS.

The Kind That Stick.
The Kind That Turn To BRONCHITIS.
The Kind That End In CONSUMPTION.

Do not give a cold the chance to settle in your lungs, but on the first sign of it go to your druggist and get a bottle of

Dr. Wood's Norway Pine Syrup.

It cures Coughs, Colds, Bronchitis, Sore Throat, Pain in the Chest, Hoarseness, or any affection of the Throat or Lungs. Mrs. Goushaw, 49 Clarence Street, Toronto, writes: "I wish to thank you for the wonderful good Dr. Wood's Norway Pine Syrup has done for my husband and two children. It is a wonderful medicine, it is so healing and soothing to a distressing cough. We are never without a bottle of it in the house."

Don't accept a substitute for Dr. Wood's Norway Pine Syrup. It is put up in a yellow wrapper, three pine trees the trade mark, and price 25 cents at all dealers.

Shropshire & Cotswold Sheep

SCOTCH SHORTHORNS and

CLYDESDALES



Choice ram and ewe lambs. Also 50 shearing ewes for sale. Apply to

JOHN BRIGHT,

Myrtle Station, Ontario.

W. W. CHAPMAN,

Secretary of the National Sheep Breeders' Association.

Secretary of the Kent or Romney Marsh Sheep Breeders' Association, and late Secretary of the Southdown Sheep Society.

Patented Live Stock Agent, Exporter and Shipper. All kinds of registered stock personally selected and exported on commission; quotations given, and all enquiries answered.

Address: NOWBAY HOUSE, Norfolk St. LONDON, W. C. ENGLAND. Cables—Sheepcote, London.

Lincolns are Booming

We have only a few more ewe and ram lambs and breeding ewes for sale. We have seven choice young bulls, Scotch-topped, and a grand lot of heifers and young cows for sale at reasonable prices. Write or come and see us.

F. H. NEIL & SONS, Telegraph & R.R. station, LUCAN, ONT.

Sheep and Cattle Labels. If you are putting stock out this spring you will need them. Sample and circular free. F. G. JAMES, Bowmanville, Ont.

NEWCASTLE HERD OF Tamworth Swine and Shorthorn Cattle

Still have a lot of beauties to offer in Tamworths of both sexes, from 2 months to 2 years old; a half-dozen March sows also will be bred in October and November. All for sale at moderate prices. Also four young Shorthorn bulls ready for service, and a half-dozen beautiful heifers.

GOLWILL BROS., Newcastle, Ontario.

Mount Pleasant Herd of Tamworths and Holsteins.

A large herd of choice pigs of all ages on hand. Mount Pleasant type of hogs are profitable breeders and ideal bacon hogs. Pairs not akin. Herd headed by Colwill's Choice No. 1343. Won sweepstakes and silver medal at Toronto, 1901-2-3. Also a few bulls. Bertram Hoskin, The Gully.

Simfield Yorkshire

Young stock, both sexes, by imp. sire and dam, and the get of imp. sire and dam, up-to-date type with plenty of bone; also one 18-month-old Shorthorn bull, dual-purpose bred. A good one. G. B. MUMA, Ayr P.O., Ayr and Paris stations.

YORKSHIRES

My offering is: young stock of both sexes and all ages; bred from imp. stock and the get of imp. stock, they are true to type and first-class in every particular. Write me for what you want. L. HOVEY, Poulis Corners P.O. Fenelon Falls Station.

I GIVE MY ELECTRIC BELT FREE



Until You Are Cured.

Take my Electric Belt for what it will do for you. Wear it while you sleep at night or while you are resting after your work. You will find it a vitalizer, a tonic to your nerves, a rejuvenator of waning vitality. Use it for any ailment which drugs have failed to cure, and you will never cease praising it.

I claim that I can cure weak men; that I can pump new life into worn-out bodies; that I can cure your pains and aches, limber up your joints, and make you feel as frisky and vigorous as you ever did in your life. That's claiming a good deal, but I have got a good remedy, and know it well enough to take all the risk if you will pay me when you are cured.

No man can lose on this. If the cure is worth the price, you don't have to pay for it until you get it. When you are ready to say you are a big, husky and frisky specimen of vigorous manhood; that you haven't got an ache or pain in your whole body, and that you feel better than you ever did in your life, I get paid. If you can't say it after using my belt for three months, then give me back my old belt and I won't ask a cent. All I ask is security while you use it.

A short time ago I took a case that I couldn't cure, and I didn't see why, as I had cured hundreds like it. Anyway, my patient returned the Belt and said I hadn't done him any good. He said he thought I had treated him honestly and wanted to pay me the cost of the Belt because it couldn't be used again. I refused and told him that I had made a contract to cure him or get nothing, and I wouldn't take a dollar I hadn't earned.

Dr. McLaughlin:—
Dear Sir,—I wore your Belt for a few days, and must say I could not have believed what it would do. I haven't any cold now, no backache, headache, no pain in my legs, nor tired feeling. I have not felt the same for months, and when I got up this morning I thought I was in another world. I must say that Dr. McLaughlin's Electric Belt is the best thing that I have ever known, and can't help telling my friends what it has already done for me. Yours very truly, Bissell Norton, Box 54, Aurora, Ont.

"I have used your Belt for three months. I am now free of Rheumatism. It has done its work well. I am satisfied it is the only cure for that disease."—J. H. SAGER, Okotoks, Alta.
"I have been cured of back trouble, Varicocele and Vital Weakness, thanks to your Electric Belt."—T. J. SWENNEY, care of Seamen's Institute, St. John, N.B.

"All drains have ceased, my back is improved and my nerves are stronger. Your Belt has done what you said it would."—DAVID SHIELDS, Cranbrook, Ont.

MR. JEROME SCANLON, Ancaster, Ont., writes: "I have been wearing your Belt a month, and I am very much improved in health. I have gained over 7 lbs. in weight. Those pains have never returned since wearing the Belt. I have developed quite a bit in muscle and strength. I do not desire to urinate so often, and I have had only one headache since. My bowels keep regular. Wishing you every success in your grand undertaking."

I have cured thousands of men who have squandered the savings of years in useless doctoring. My belt is easy to use; put it on when you go to bed; you feel the glowing heat from it (no sting or burn, as in old style belts), and you feel the nerves tingle with the new life flowing into them. You get up in the morning feeling like a two-year-old.

Wherever you are, I think I can give you the name of a man in your town that I have cured. Just send me your address and let me try. This is my twenty-fourth year in the business of pumping new vim into worn-out humanity, and I've got cures in nearly every town on the map.

If you will come and see me I'll explain it to you. If you can't call, let me send you my book, full of the things a man finds inspiring to strength and courage. Free if you send this ad.
Office Hours—9 a.m. to 6 p.m. Wednesday and Saturday to 9 p.m.
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Please send me your book, free.

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Address

Large White Yorkshires

A choice lot of young boars ready for service, young sows ready to breed, and young pigs all ages; all direct from imported stock of choice quality.

H. J. DAVIS,
Importer & Breeder of Shorthorns & Yorkshires
C.P.R. and G.T.R. Woodstock, Ont.

LARGE ENGLISH YORKSHIRES

A grand lot of young sows ready for mating, others bred; also young pigs, all from imp. sires and dams. Prices reasonable.

ALFRED E. SHORE, White Oak, Ont.

YORKSHIRES

Young boars fit for service. Sows bred or ready to breed from choice imported stock. Also young pigs for sale—reasonable.

For particulars apply to
GLENHODSON CO., Myrtle Station, Ont.
C.P.R. G.T.R. LORNE FOSTER, Mgr.

FOR SALE: IMPROVED CHESTER WHITES

Of the long, deep, heavy sort. Breeding stock selected from the most noted families, with a view to size and quality. Booking orders for choice spring pigs; also a few fall pigs for sale. Pairs furnished not akin. Express charges prepaid. Pedigrees and safe arrival guaranteed.

H. E. GEORGE, Crampton, Ont.

Rosebank Herd of LARGE ENGLISH BERKSHIRES

Present offering: (Choice stock from 6 weeks to 5 months old, sired by Concord Professor and Willow Lodge Crown 8th. Can supply pairs and trios not akin. Satisfaction guaranteed. Express prepaid.)
JOHN BOYES, Jr., Churchill, Ont.

BERKSHIRES

Imported and Canadian-bred
H. M. VANDERLIP, Gainsville,
on T. H. & B. and B. & G. division of Grand Trunk. Telephone and telegraph, Gainsville, Ont.

HILLCREST HERD OF ENGLISH BERKSHIRES

For Sale: A lot of very choice young things of various ages. We prepay express charges and guarantee satisfaction. Enquiries promptly answered.
Vine Sta., G. T. R., near Barrie. JOHN LAHMER, Vine P.O., Ont.

LARGE ENGLISH YORKSHIRES

Pigs of the most approved 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 Bacon prizes at Toronto and London, and at St. Louis we furnished all the first-prize hogs in the breeding classes except two; also supplied both champion and grand champions. Prices reasonable.

D. C. FLATT & SON, Millgrove, Ont.

MONKLAND YORKSHIRES

Imported and Canadian-bred. We keep 35 brood sows, and have constantly on hand between 100 and 200 to choose from. Can supply pairs and trios not akin. Quality and type unsurpassed. Prices right.

JAS. WILSON & SONS, FERGUS, ONT.
G. T. R. and C. P. R. Long distance Phone

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

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CHESTER WHITE SWINE

Shropshire Sheep and Mammoth Bronze Turkeys. Write for prices.
W. E. WRIGHT, Glanworth, Ont.

WOODSTOCK HERD OF BERKSHIRES

A few fall pigs left, sired by Imp. Polgate Doctor. Also an book order for spring pigs, for which I can supply pairs not akin at reasonable prices.
Imp. Polgate Doctor.
DOUGLAS THOMSON, Woodstock, Ont.

ORCHARD HOME HERD OF LARGE ENGLISH YORKSHIRES

Now on hand, Feb. 5th: A choice lot of boars and sows, 3 to 4 months old. We furnish stock of most approved type and high quality. Our record for 1905: Every customer pleased and satisfied. Place orders now for spring pigs. Address:
S. D. CRANDALL & SONS, Cherry Valley, Ont.

Glenburn Herd of YORKSHIRES

Now on hand, a number of sows, 5 and 8 months old, for spring farrow; also a large number of September sows and boars. Booking orders for spring pigs.
DAVID BARR, JR., Box 3, Renfrew, Ont.

Oakdale Berkshires

Of the largest strains imported fresh from England. The product of these and other noted winners for sale reasonable. Let me book your order for a pair or trio not akin.
L. E. MORGAN, Milliken Stn. and P. O.

QUESTIONS AND ANSWERS. Miscellaneous.

SALE OF UNSOUND HORSE.

A sells a horse to B for a certain sum of money. B pays cash for horse. Horse has a kidney stone, but at time of sale B never asked A if the horse was that way, and A didn't tell him.

1. Can B return the horse and collect his money?

2. Is it against the law to sell such a horse without telling the purchaser?
Ontario. J. S.

Ans.—1. No.
2. Generally speaking, no.

FEEDING COWS.

1. What is the best to feed new-milch cows, with bran, \$1 per cwt.; middlings, \$1.20; shorts, \$1.20; whole oats, 40c. per bushel, to be fed with hay?

2. Would it pay me to feed meal to two cows that are not coming in, that I am milking once a day, and on hay alone, they only giving 5 lbs. of milk each day?

3. Is it advisable to begin to feed meal to a cow before she comes in, and is it better wet or dry?
W. H. B.

Ans.—1. The kind of hay—clover or timothy—should be specified, for there is a wide difference in the composition of the two. Assuming it is mixed hay, we would suggest meal ration of 4 lbs. bran, 2 lbs. middlings, 1 lb. shorts, 2 lbs. oats; the oats crushed or soaked. If good oil cake can be got for \$30 to \$35 a ton, would advise using 1 to 1½ lbs. of it per cow per day in lieu of 2 or 3 lbs. of the meal mixture. Cottonseed meal would also be excellent, and pea meal is a first-rate milk-producing food.

2. Presumably these cows are intended for the butcher. It certainly will pay to feed them 5 or 6 lbs. meal per day; part of it will come back in the milk, and the balance will go on their backs, making them ready to dispose of just that much sooner.

3. The best dairymen build up their cows by feeding a light meal ration of 2 to 4 lbs. per day while dry, thus having them in good heart for a season's work. We used to be afraid of milk fever, if the cows were in good condition at calving, but partial milking the first four days after calving and the air treatment in any case of the ailment has disarmed this fear. We would not feed any meal, but a little bran, though, for a week or so before the cow comes in. Feed it dry to save trouble.

STALLS—MANGERS—VENTILATION—SILO RINGS.

1. Is three feet wide enough for an average-sized cow to stand in?

2. Which is preferable, single or double stalls?

3. Is a concrete manger advisable, all things considered?

4. In a small stable (ten or twelve cows) would the ten windows, with a trapdoor in ceiling, provide enough ventilation?

5. Would you give the address of some who have silo-rings, and build silos, or let their rings?
A. W. W.

Ans.—1 and 2. A cow may be kept in a three-foot stall, but not with comfort. We would make the stall not less than 3½ feet wide, preferably 4 feet. Double stalls may be made 7 feet wide, but we are inclined to favor single stalls for dairy cows.

3. No; a concrete floor for the manger may do all right, but it is cheaper and better to make the rest of wood. On the whole, we rather prefer a plank bottom also, for cattle are not overly fond of licking out a cement manger, consequently it tends to become sour.

4. The chances are the cubic space of air per cow will not be much greater with a small than with a large stable, and the need for ventilation is nearly as great. Sufficient change of air may be secured by means of windows and trapdoor, but this is liable to cause drafts and extremes of temperature, while at times the ventilation is liable to be ignored altogether. We strongly recommend a modification of the ventilation system installed in D. & M. MacVicar's barn, described in "The Farmer's Advocate" of February 15th.

5. We receive numerous enquiries for these rings. Those having them to sell or lease could do a fine business by advertising in our columns.