

**PAGES
MISSING**

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EDITORIAL.

PREPARATIONS FOR BARN BUILDING.

The winter has fairly settled down upon us, the Christmas season is past, and we have become accustomed to the routine of work that is to be done at this time of the year. If a barn has to be built during the coming spring or summer, now is the time to get ready. There is always a rush and a crush when building operations have actually begun, no matter how carefully preparations have been made; but where there has been lack in this regard, the work and worry are increased out of all seeming proportion to the cause. Careful planning not only saves work and worry, but very materially lessens money expense also.

The question of where to build the barn is probably the first that will arise after building has been decided on. In many cases, of course, there is no room for choice. The present location, or one very near it, is really the best and the only one. But a better might be chosen in some other instances, and would be if thought were given to the question. Too frequently the lament is heard, "I wish I had built in another place. That is what I would have done if I had thought." A barn site should be dry. It ought to be possible, at least, to make it dry by draining, but it is better when the surface water will run away in all directions, and when the subsoil is naturally drained. Whoever has had the experience of having planks in the passageway behind cows floated by the inrush of snow water, as the writer has, will not wish it repeated. Dryness means warmth; to be damp, is to be chilly. In these days, when in almost every new barn the ground floor is reserved for stock, and grain and hay have to be stored in the upper floor, a side-hill location means much in lessening labor of making approach, and in ease of incline up which loads are to be hauled. The advantage of even a slight natural elevation, where such exists, should not be despised, but made use of. The practice of some years ago, of digging the barn site into a side-hill, so that one wall was really a cellar wall, is nowadays rightly condemned. Use can be made of a hill, however, without having the stable, as those were, close and dark. Distance from the house, water supply, convenience to the fields, shelter from winds, are other matters that should receive consideration. The latter point—that of shelter—is specially in our mind at present, because of lately visiting a farm stead so cozily set among hills that, as the owner said, no blizzard could strike them.

In the pioneer days, when the settler managed at last to build a 30 x 50-foot frame barn, he no doubt felt that he was well fixed for barn room; but, as years went by, another of like or greater size had to be added, then a granary, and a lean-to shed here and another there, followed, until, with needed pigpens and chicken houses, there seemed to be no end of building or buildings. Most Ontario farmers who contemplate putting up a barn next summer, have some such a conglomeration to tear down first. To change it all and get everything under one roof, is the ambition. It is possible that this idea of having but one building has been pushed a little too far. There are whispers to that effect. But, whatever form of building is decided upon, the lesson from the restricted room of former days should be remembered, and it should be of sufficient size to house the crop and the stock without overcrowding. The size required will vary, according to the number of acres farmed and the line of farming followed.

In this matter, each man should do his own thinking, and be governed by his own needs.

As most men erect but one set of buildings in their lifetime, they have little past experience to fall back upon, and it is the part of wisdom, therefore, in planning a barn, to get all the help possible from the experience of others. Back numbers of "The Farmer's Advocate" containing barn plans should be looked up, and a few days spent in driving around the country examining new barns and interviewing the owners would be most profitable. Internal arrangement has much to do with the saving of room and of labor. No pains should be spared to get the best in this respect that can be got. While planning to make the most of the room at our disposal, and to have everything so arranged as to lessen labor, the prime necessities of water and air for stock should be kept in mind, and means for their supply provided. The water problem is the least difficult. By means of a continuous trough in front, or individual water basins, stock may have enough always within reach. Some farmers are old-fashioned enough to prefer a water trough in a covered or sheltered yard, believing that the exercise cattle get when turned out for a drink is necessary for the best health, and with these "The Farmer's Advocate" agrees, at least in so far as breeding and growing stock is concerned. Many a man installs a watering system in his stable, and is delighted with the results for the first year or two, especially if from that or any other cause his stock happens to do unusually well that winter, but as years pass he generally concludes that his first impressions were oversanguine. The disadvantages of the plan impress themselves, and the lack of exercise that results from the temptation to keep his animals continuously indoors eventually tells upon the health and vigor of his stock. Of course, where it is a case of watering in the stable, or filling the cattle once a day with ice-cold water in a cold, drafty shed or at a creek, by all means water in the stable. The battle still rages over the best method of ventilation. Many schemes have been tried and abandoned. There is agreement on one point—ventilation is necessary. It is now well understood that the lack of it and of sunlight and exercise is the chief predisposing cause of tuberculosis in cattle. Health cannot be maintained in foul air, and some system of supplying fresh air should form part of every barn plan. The trouble with many ventilating appliances has, no doubt, been that they were not used. Warmth has been preferred to fresh air. Windows made to open, and opened, will ventilate, and all stable windows should be made so, even if some special system of ventilation is installed.

During the sleighing season is the time to get material hauled. The question of what material to use has reference chiefly to the lower story, the upper part being usually of frame and lumber, old timber and boards being made use of as much as possible. So far as the stable floor is concerned, opinions are agreed, cement is best. For durability, saving of liquid manure, comfort in working, and economy, it is unrivalled. Different materials are used for building the wall—stone, large hollow bricks, cement blocks, and solid cement-concrete—each of which has its advocates. There is no doubt that hollow bricks or cement blocks will make a dry, warm wall, and the better insulated and the warmer the wall, the greater the amount of ventilation that may be allowed without unduly lowering temperature. Of course, the freer the ventilation, the better is the air and the drier the internal atmosphere. Solid concrete has two advantages, viz., strength and cheapness. Some favor a low foundation wall,

with double-board wall above it, as being both cheaper and better than solid masonry or concrete, and insuring a drier stable atmosphere. Whatever material may be thought best to use, a good deal of teaming needs to be done; and now, while both men and horses are less busy than usual, is the time when it can be most easily done. Now, also, is the time to discuss the subject through "The Farmer's Advocate," and experience, especially as to the newer forms of building material, will be welcomed. The barn question is by no means exhausted.

RAISE THE STANDARD OF STOCK.

Present conditions of the pure-bred live-stock industry in Canada are peculiarly favorable to a general policy of improvement of the character of our stock in all lines. The financial stringency, which has so seriously affected business in the United States, our best market for most classes of breeding stock in recent years, has rendered breeders here more dependent upon the home market for the disposition of their surplus stock; and, fortunately, the financial flurry which is hampering commercial enterprises in this country to a considerable extent, is affecting the general farmer less than any other class of the community. Prices for most products of the farm are ruling high, and those who have for sale grain or hay, orchard, dairy or poultry products, receive profitable prices for such commodities, for the reason that these are necessities, and the rapid growth of our towns and cities has created an increasing home demand for them. But it should be constantly borne in mind that it is only the best quality of all the products named that bring the top prices. People are becoming more critical of the class of product they buy, and inferior offerings bring inferior prices. It is also true that inferior stock make poor returns for the food they consume, and which has a substantial cash value if it were sold instead of being fed. The temporary falling off of the foreign demand for our pure-bred stock naturally has the effect of lowering prices for the time being, and to that extent adversely affects breeders who have had prosperous conditions for the past decade, and have no serious cause for complaint now that there is a temporary lull in the market demand for their product. But this extremity of the breeders opens an opportunity for the general farmer to secure improved stock at a cost more nearly his idea of its value, and he will do well to take advantage of the occasion to improve the quality of his stock by the introduction of improved blood, at least to the extent of using only pure-bred sires, thus grading them up to greater usefulness, and he may do well by also securing a few females of a good class as the foundation for a pedigreed herd or flock.

The breeders of pure-bred stock, on the other hand, have an opportunity and a duty to themselves and the country at this juncture, and that is to use the knife more freely on inferior males, a course which will at once tend to raising the standard of the stock and to prevent an oversupply and a glutted market, which accentuates the depression of values, or, at least, of prices procurable.

When practically all the male increase is kept entire, and held for sale for breeding purposes, there must of necessity be a considerable proportion of inferior animals offered, and a breeder lowers his own reputation and damages the character of the breed he handles every time he sells an inferior bull or male animal of any class for breeding purposes. An inferior pure-bred will, as a rule, perpetuate its defects as surely as will

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a scrub, and it is at best a short-sighted, if not a sordid policy, to scatter such seed stock, especially when it can, by the use of the knife, be made nearly as valuable if sold on the butchers' market, which is its proper place. In the meantime, superior young stock can be procured at moderate prices, and the popular formula for the improvement of dairy herds, "breed, feed, weed," if adopted by breeders of other classes of stock as well, will be found to redound to their credit and profit. And, as before remarked, the present time is peculiarly favorable for the introduction of such a policy.

A TRIBUTE TO THE PIONEER.

The following well-deserved tribute to the pioneer, and mild rebuke to those who have forgotten his services, his character and his achievements, while lauding eminence to the skies, was quoted by T. McGillicuddy at the Eastern Ontario Dairymen's Convention, from Tom Watson's "Life of General Jackson":

"The historian, the orator, the painter, have been eager in the duty of blazoning the deeds of our pioneer missionaries, lawmakers and soldiers. The names of these heroes live, and deserve to live, in letters of light upon the records of our country. But to our pioneer farmers justice has never been done. Theirs was a combat calling for every soldierly trait of Capt. John Smith and Miles Standish. The patient courage which swung the axe in the depths of primeval woods was no less heroic than the bravery which made the musket conquer. The toil of the warrior's march was slight by comparison with the homely but exhausting work of preparing the soil for the sowing of seed. The arrows of the red men were not more deadly to the soldiers than the fevers which rose from the swamps and pulled down the settler as he struggled to open out his farm. The story of the pioneer plowman is one of dauntless courage, of quiet heroism. He found this new world a wilderness, and he has well-nigh made it a garden. His axe, his spade, his hoe, his muscle, his brain, his very heart and soul, have all been enlisted in the work. Never once has he

gone begging to the doors of legislation, asking for special favors. Never once has he lied to the Government and the people for the purpose of securing a selfish advantage at the expense of his fellow man."

CONSTITUTION OF SHORTHORN BREEDERS' ASSOCIATION.

At the annual meeting of the Dominion Shorthorn Breeders' Association, announced to be held in Toronto next month, a new constitution and by-laws for the government of the Association, a draft of which has been printed for circulation, will be presented to the members present for consideration, and for adoption in so far as approved. To facilitate the business of the meeting, it will be well for those contemplating attending to secure from the Secretary a copy of the draft of constitution, in order to study its provisions, and be prepared to discuss them intelligently. The limited time usually devoted to the business of the day of the annual meeting, it is well known, is insufficient for digesting such a document as the one in question, and unless sessions are extended beyond the usual bounds, it will scarcely be possible to give it the calm consideration its importance demands. Presumably, the Executive have devoted careful consideration to the interests of the Association in the preparation of the draft submitted, but, from a casual reading of its provisions, we incline to the opinion that, to the rank and file of the members, it will appear that a superabundance of official machinery has been incorporated, much of which might be eliminated and more simplified, to the profitable working of the Association, and with a very considerable saving of its funds, which might be used to much better advantage in the interests of the breed than by payment of the expenses of so many officials and large committees. For instance, the list of officers calls for the election of a president, a first and second vice-president, a secretary and treasurer, a registrar, a vice-president for each Province of Canada, a board of fifteen directors, delegates to exhibitions and fairs receiving grants from the Association, representatives to the National Record Board, an executive committee of five members, and an auditor—in round numbers, about forty, irrespective of office clerks, whose expenses, when on duty, must, we presume, be met by the Association. The plan outlined for the election of vice-presidents for Provinces, by means of a vote by mail, will require careful scrutiny and safeguarding, as the opportunities for abuse of the privileges available may lead to most undesirable complications. It would certainly appear a simpler and safer and less-cumbersome scheme should be found within the range of possibility, and one quite as practicable for representation of the Provinces. These are but a few of many points in the composition of the draft constitution which appear to call for criticism and improvement, if not for bodily deletion.

By way of omission, we note the absence of any provision for the publication of a Record of Dairy Performance of officially-tested cows. This might and should properly take the form of an appendix to the herdbook, and in it should be registered cows duly recorded in the regular volumes which have, in official test, under the supervision of Government officials, given yields of milk and butter-fat, within twelve-months' testing period, equal or exceeding a minimum standard, to be set by the breed association. Provision might also be made for the registration of male progeny of officially-tested dams and female ancestors. This Record-of-Performance scheme is of the utmost importance, for in this day of official testing of dairy cows, Shorthorn breeders will never develop much of a trade in dual-purpose stock till they are prepared to go in for the testing of their cows and publication of the records in black and white. Provision for such testing and recording should be instituted without delay.

Protect your forest while you have it, for when it is gone you will be utterly hopeless. Yours is the last great wild, and if you squander it your children's children will sit in the sun beside silent streams that are murmuring musically to-day.—(C. Warman, before the Canadian Club.

HORSES.

LAMENESS IN HORSES.

NAVICULAR DISEASE.

Navicular disease, often called coffin-joint lameness, is a very common disease, especially in the lighter classes of horses—those that are used for roadwork, either in saddle or harness. The navicular or coffin joint is situated within the hoof, hence the name "coffin joint." It is formed by the articulation of the lower end of the small pastern bone with the articular surface of the bone of the foot with the navicular bone (a somewhat shuttle-shaped bone), placed immediately behind the joint, with the long axis transversely placed. The flexor tendon of the foot passes over the posterior aspect of the joint, immediately over the navicular bone, before becoming attached to the os pedis (the bone of the foot). The disease under discussion consists in inflammation being set up in the joint. In well-established cases the inflammation causes an alteration in structure of both bone and tendon, the fibrous covering of the bone becomes destroyed, and a form of decay is established, and the bone and tendon become united, the normal condition being the playing of the tendon over the bone in somewhat the same manner as a rope plays over a pulley.

Causes.—In many cases there is doubtless an hereditary predisposition, not altogether due to conformation. Horses with short, upright pasterns are predisposed, on account of conformation. This is readily understood from the fact that concussion is greater than in horses with oblique pasterns. Ordinary concussion from travelling on hard roads is doubtless the most fertile exciting cause. Irregular exercise is also often noted as the cause. Horses that are used only occasionally, those that often stand in the stable (especially in dry, hot weather, when no means are taken to supply moisture to the feet) for several days without exercise, and, when taken out, are driven fast, then allowed to stand for a variable length of time, then given a fast drive again, etc., etc., frequently suffer from the trouble. The dry and somewhat hot condition of the feet predispose to the disease, and concussion acts as the cause.

It must be understood that horses are liable to a sprain of this joint. This does not often occur, and when it does the patient will show sudden lameness, when, if the trouble be diagnosed, the patient given rest, and moisture kept to the foot by poulticing or standing in a tub of cold water, he will recover, as from other sprains. The joint being surrounded by horn, local applications to the joint cannot, of course, be practiced. The symptoms of "navicular disease" are very insidious. The trouble may be developing in one or both feet. Lameness is usually irregular. The patient will be noticed slightly lame, probably the driver cannot readily decide whether or not he is going lame, or he may show suspicious symptoms when first brought out, but soon goes sound, and the driver may decide that he was mistaken in suspecting lameness. Then, he may go sound for a variable time, then show suspicious symptoms, or probably decided symptoms, then again go sound, etc., etc. The intensity of the lameness varies greatly without apparent cause. An examination of the foot and leg will not reveal any cause of lameness, and the horse stands sound. After a variable time the symptoms of lameness become more decided and constant, and the patient will be noticed pointing the foot when standing, but even now he will go practically sound after being driven. The symptoms increase, until he will show lameness all the time, will step short with the lame foot and stub the toe, wearing the toe cork off quickly. An examination at this stage will usually reveal the foot smaller and probably deeper in the heel than its fellow, and there will be more heat in the foot, but this is very hard to detect. The patient is supposed to show tenderness upon pressure exerted upon the hollow of the heel with the thumb, but I have never seen this symptom well marked. There being an absence of apparent cause of lameness in any other part of the limb, the symptoms having been more or less as described, and the foot having become smaller than its fellow, is usually considered sufficient reasons for diagnosing "navicular disease." We may say that we are forced to judge largely by negative symptoms. When both feet are diseased, the step will be short and groggy, the toes stub, and toe-calks wear off quickly, and, when standing, the patient will point one foot and then the other, and will often be noticed to be inclined to canter, rather than trot. Both feet being diseased, there will not be a difference in size, as they will both have become smaller than normal, but this will, in most cases, be hard to determine.

Treatment.—If treatment be adopted during early stages of the disease, a cure may be effected; but if the disease has advanced until there is alteration of the structure of bone and tendon, a cure cannot be expected. In such cases, the symptoms may be allayed, to considerable ex-

tent, and the horse rendered of some service for slow work, but he will never be valuable or serviceable for any considerable amount of work on hard roads. Treatment should be directed to allaying the inflammation and increasing the growth of hoof. The patient must be given a long rest, the shoes removed, and the heels lowered, and soles pared well down. Poultices, either hot or cold, should be applied to the feet, or the patient forced to stand in a tub of water several hours daily for a week or ten days. Then a blister should be applied to the coronet, all around the foot. Nothing is equal to a blister to encourage the growth of horn. The blister should be repeated every four weeks, and the patient given a long rest. When again put to work, rubber pads should be worn under the shoes, or bar shoes, to lessen concussion, worn; but the rubber pads give the best results. Even where there is alteration of structure, this treatment will usually alleviate the symptoms by increasing the growth of horn, and thereby relieving the pressure that is caused by contraction of the foot. In regard to contracted feet, we must always remember that this is not a disease of itself, but the result of disease. When a horse becomes so lame from navicular disease as to be practically useless, and treatment will not give relief, all that can be done is to get a veterinarian to perform neurotomy. This consists in removing the nerve supply to the feet, and, while it removes the lameness, it does not cure the disease. It is not advisable to operate unless, as stated, the horse is practically useless, as the freedom of action after operation often causes a fracture of the weakened navicular bone or a rupture of the weakened tendon, or both, which, of course, necessitates the destruction of the animal; but in some cases the animal lasts for years after the operation. The feet of horses that have been operated upon should be examined regularly, as, though sensation has been removed, the processes of repair and decay continue as in a healthy foot, hence the animal may pick up a nail, etc., and will not show lameness, but the ordinary results of such an accident, viz., the formation of puss and sloughing of the tissues, will occur, and may not be noticed until past treatment. "WHIP."

DRAFT HORSES IN AMERICA.

In a recent communication to the London (England) Times, a correspondent writes upon the above subject as follows:

The Percheron is the most widely-distributed draft horse in the United States of America, and Percheron grades, at various kinds of city and country work, are said to far outnumber all other horses. They were introduced from the Department of Perche, in Central France, beginning as far back as 1816, and they are distinct from the slower and generally heavier type of Norman horse in Northern France. The Percheron is believed to have been formed by blending the blood of the local representatives of the "old black" war-horse of Western Europe, including England, with that of the Arab. It is a black or gray breed, for, although in an important section of it the foals are born black or dark brown, they gradually become dappled gray, and, with age, ultimately white. In France, it is represented by animals of all sizes, varying from a stout pony to a heavy draft horse. The existence of small varieties has given origin to the mistaken belief that the breed, even the heavier types of it, is inferior in size and substance to the English Shire or Scotch Clydesdale. There is a skeleton in the American Museum of Natural History, New York, of a Percheron stallion which measured 19 hands at the withers, or 6 ft. 4 in. in height. Stud horses are to be seen at agricultural college farms which stand between 17 and 18 hands, and weigh up to 2,000 lbs. The tendency has been, during the last quarter of a century, to breed for greater size, but in the larger type the activity of the smaller horse is difficult to maintain.

In many respects the Clydesdale is a more perfect draft horse than the Percheron. He has better feet, flatter and harder bone, and tighter legs, freer action, greater activity, and altogether a gayer and more stylish appearance. The round bone and want of long, hairy feathering on the legs, characteristic of the Shire and Clydesdale, and the short, though strong, pasterns before and behind, are the most conspicuous differences between the Percheron and our two principal British breeds.

Many reasons have been adduced why the Percheron is generally preferred in America, while the Clydesdale, among pure-bred draft horses, is the favorite in Canada, there being only a few Percherons in Ontario and in the Northwest Provinces. So-called "Canadian horses" are light cobs of mixed breed, and widely distributed, as well as numerous represented. The Clydesdale and Shire are said to have too much long hair on their legs for American taste; but this is an objection which speedily disappears, for in America, as in Australia, the long hair behind on

all four limbs tends to fall out, and ceases to grow abundantly. For this, among other reasons, in such an important agricultural State as Iowa, the Belgian horse, although far behind the Percheron, takes precedence of the Clydesdale. It is said that the Shire is more liable to throw sidebones than the Percheron. This is not now the fact. The statement is only a reminiscence, like the memory of a bad dream. It is a penalty we are still paying for the evil practices of the past, which permitted unsound horses to gain prizes at our leading shows. White limbs and white feet—which are almost invariably in evidence among Clydesdales, and are accepted as a characteristic point in Shires—are sources of weakness, especially in a hot country, being more susceptible of injury in certain trying circumstances. It is also asserted that the Clydesdale is more nervous and more spirited, and therefore more liable to take fright and run away at city work than the Percheron; but this is merely a matter of training and attention, which presents no serious difficulty. Probably the best reason of all why the Percheron is in favor is that he is best known, for he is a good all-round horse, capable of giving a high degree of satisfaction to people who are acquainted with no other better breed. Introduced by the French, who many years ago possessed nearly the whole of the Central States, he has been long before the American public, and his presence and his qualities are constantly advertised in every agricultural journal. There is, however, no reason why the long-haired British work-horse—for it is now freely admitted by the leading authorities, and written in history, that the Shire and the Clydesdale are no more than strains of the same, the national breed of this country—should not become

and the remedy is simplicity itself. The Shire studbook and the Clydesdale studbook should be opened for the entry of all animals that are eligible for either. This would at once remove the only difficulty of the foreign purchaser, as he would not only get a horse with the necessary studbook record, but a horse that would breed true and throw better produce than one bred on the old plan, produce that could be sold by the breeder at remunerative prices to his neighbors. Shire breeders and Clydesdale breeders would both gain, and that enormously, by the new order of things. By adhering to the present plan, all would lose by retrogression or by the check given to progress—the Clydesdale breeders by comparison to a greater degree than the Shire breeders; for, while the Clydesdale is losing in favor for lack of size, the Shire section of the breed is improving in quality and retaining its size. Progress among Shires would be much slower along existing lines than by the use of the Clydesdale stallion.

Leading American breeders and teachers have grasped the situation, and already substantial progress has been made in a scheme to establish a "national American heavy-draft horse," by mating selected specimens of Shires and Clydesdales. It would be much better from every point of view for this country to take the lead in regenerating its own breed of draft horses than be forced, in the end, to follow a formidable rival in breeding after he has taken the field and obtained a substantial footing in the world's markets for a superior product of his own creation.

KILLING A HORSE.

Theoretically, the most effective way of shooting a horse is to aim so that the bullet will shoot

through the brain and enter the spinal cord. This condition, which is difficult to obtain, can be best fulfilled by standing directly in front of the horse, raising its head slightly with one hand on the halter, and shooting him with a pistol held in the other hand. The entrance of the bullet through the brain is almost certain death, even though the spinal cord is not touched. A good and easy way of killing a horse, with either pistol or gun, is to shoot him in the middle line of the forehead, about four or five inches above the level of the eyes. The weapon should be held close to the forehead, and the shooting can best be done while the animal is standing directly in front of you with its nose to the ground. If this be done, the animal will drop down without a struggle on the spot upon which he was standing. Knocking disabled or useless horses in the head, or some other of the rough-and-ready means employed for extinguishing life, cannot be too strongly condemned.

DR. M. HORACE HAYS.

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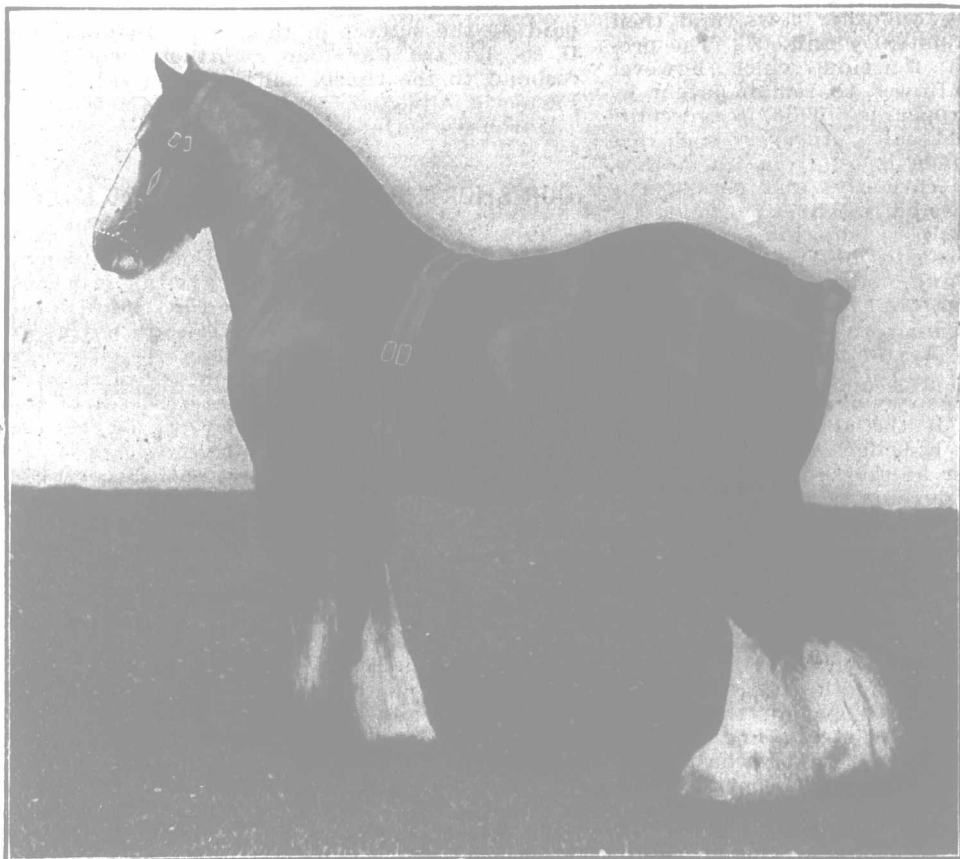
S. L. CRAWFORD.

Editor "The Farmer's Advocate":

Enclosed please find P. O. order for \$1.50, my renewal subscription for another year. Have now been a subscriber for four years, and do not see how any farmer can keep up to date without it. I have a farm of my own this year, and intend trying the split-log drag next summer.

ARTHUR T. WOODLEY.

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Tatton Dray King (23777).

Shire stallion. First and champion, Royal Show, Derby, 1906; first and reserve champion, London Shire Show, 1907. Foaled 1904. Sire Drayman.

a formidable competitor to the Percheron, if British breeders would realize the situation and bring themselves into line with foreign buyers generally. The Shire horse of to-day is, as a whole, lacking in quality, although there are prominent exceptions, but it possesses in a conspicuous degree the characteristic of size, which is everywhere growingly appreciated. The Clydesdale, on the other hand, is deficient in size, but abounds in quality, activity and gaiety. Neither section of the breed entirely suits the foreigner, nor does it many of the home buyers. The product of the union of the two strains, especially when the Clydesdale sire is mated with the Shire mare, is the finest draft horse in the world, possessing a combination of strength and quality of which no other breed can boast. The two strains are so closely related by frequent blending in the past that the produce of the suggested union, which has already been fully tested, breeds true to type. Foreign customers, however, require some authoritative evidence of the facts which have been stated, and they quite rightly demand that a pedigree record shall go with each purchase. While the studbook of the two strains of the breed remain apart, a perfectly pure-bred animal derived from a double origin is treated as a mongrel, no matter what his quality, and he is unsalable for breeding high-class and high-priced stock. The proper course is obvious,

LIVE STOCK.

A TIMELY WARNING.

Editor "The Farmer's Advocate":

Words fail to convey my high appreciation of your able editorial and timely warning to the Shorthorn breeders of Canada. It demands the attention of every man who has the true interests of the Shorthorn breed at heart. Not only so, but, as you so well outline, now that the dual-purpose characteristics of Canadian Shorthorns are almost obliterated, what is to take her place at the stanchions of the general farmer? It is certainly high time that the breeders of the red, white and roans had, in this respect, determined to retrace their steps, and more forcibly emphasize the utility characteristics of their breed.

As you say, almost every aged or middle-aged reader can recall the Shorthorn cows of years ago which filled our milk pails to overflowing, and in a remarkably short time fleshed up into excellent beef form when dry. These recollections are so vividly impressed that many a farmer longs to see those desirable features of the breed manifest themselves again.

Shorthorn breeders should begin at once to make apparent the reputation and strength which is still exhibited in some few herds in this country, and very largely in the pedigreed and unpedigreed Shorthorns throughout Great Britain, and which should no longer be a matter of guesswork, but a plain, well-recognized, profitable fact.

It involves, of course, a good deal of labor and a wide departure from the easy-going methods that have attended generally our handling of Shorthorn cattle in this country. We must milk and weigh and test throughout the period of lactation of our cows. Calves must either be raised by hand, or double up on other cows, and their dams steadily and persistently milked. The production of milk is a function which, however strong it may be, if allowed to remain latent by disuse, gradually disappears. This is especially true of the heifer's first calf. In every such case the calf should be taken away from its mother, and the young cow carefully and persistently milked as long as possible, so as to develop the udder and persistent milk production.

Go to the Birkley estates of Lord Fitzharding, near Bristol, in England, and what do we find? Milking Shorthorns galore! Let the manager, Mr. James Peter, tell his own tale, as he does to Mr. Joseph Wing: "A cow must have milk, or else she is not a cow; and it is very much in the way she is treated when young. Milk is secreted from the blood, and if the arteries are clogged with fat while she is a heifer, she can never become as good a milker as she should. If she is not milked, she will never develop as she should. Milk in a Shorthorn is essential, and is daily becoming more important in our land. Perhaps the Argentine trade does not care so much about it, but the cows that stay at home must have it to be profitable. We have many, very many, fine, registered cows that give a lot of milk. Nearly all our dairies are filled with Shorthorn cows, and there is no trouble in finding plenty of registered milking Shorthorns. Out of these same cows we get splendid feeding steers, and some excellent tops. So it is sure that, whatever is true of other lands, here the dual-purpose cow exists. In truth, she is almost the only cow that does exist?" And what does Mr. Joseph Wing say about those cows? "Before I came here, I feared that when I saw milking Shorthorns they

would not have beauty. I wish any reader could only see those cows. Great, splendid cows, all with good colors—reds, roans and whites—and with good horns, all carrying a lot of flesh—maybe too much. But they are every one in dairy use. I visited a neighbor, with forty cows, grand milkers all of them, and only one or two of them were to be criticised on the score of looks. Some of them were inexpressibly sweet and feminine. The fact is that a milking Shorthorn is a more beautiful cow than one that is too much on the beef order, for she has a sweeter head, neck and look."

Go to Lord Rothschild's estate, and there, on the rich pasture-lands, we see that, as a general-purpose cow, in company with the Red Polls and Jerseys, the Shorthorns shine again. Go, again, to the Mill Craig Shorthorns of Mr. John Ross, who very recently judged the Shorthorns at the International and our Winter Fair, situated near Cromarty, in Scotland, the birthplace of the great Hugh Miller, and we find Shorthorns giving six gallons of milk per day. Mr. Ross says, "We must have milk, and the Shorthorn is a milking beast."

It has been too often customary, in this country, to view the milking or dual-purpose Shorthorn as a species of myth—something shadowy and ill-defined, existing only beyond the seas, if anywhere. Proof enough can be presented that such Shorthorns do exist; that they are thoroughly practical cattle, and as such are held in high esteem in Britain.

Although, in this country, the Shorthorns lately have generally been looked upon as a purely beef breed, yet convincing demonstrations of their value for milk production have been made from time to time. And now, with the great merit of the dual-purpose Shorthorn in England, is it not time that more attention was being paid to the subject in this, our Canadian home? If so, let the Canadian Shorthorn world nobly respond to the timely and inspiring call of "The Farmer's Advocate." THOS. McMILLAN.
Huron Co., Ont.

OUR SHORTHORNS USED TO BE GOOD MILKERS.

Editor "The Farmer's Advocate":

The editorial, "Considerations for Shorthorn Breeders," touches some very vital problems in connection with the Dominion Shorthorn Breeders' Association. Our own experience in buying grade cows, some fifteen years ago, was that we could get good cows at reasonable prices, in the vicinity of Guelph, having one or more crosses of Shorthorn blood in them, and they proved very satisfactory in our dairy. In recent years we have found it impossible to buy satisfactory Shorthorn grade cows for dairy purposes, which indicates a falling off in this class of cattle among our Shorthorn breeders. We think this is a mistake, because there are many sections of Ontario where they wish to combine beef-raising and sending cream to the creamery, where the dairy Shorthorn would fill a very important place. If the dairy Shorthorn of England can be transplanted to Canada, and produce here the quantities of milk and butter which she produces in the motherland, it would certainly be a very wise move. I have, personally, seen some excellent herds of pure-bred Shorthorn cattle in England.

I remember, in connection with the Midland Dairy School and Agricultural College, they had a herd of red Shorthorn dairy cows that were exceedingly fine animals to look at, and the ma-

ture cows had records from 8,000 to 12,000 lbs. of milk per year. They had herds of yearling and two-year-old heifers coming on to take the places of the mature cows, which were equally promising.

The Head of the Institution, Prof. Blackshaw, informed me that they found the Shorthorn cows very suitable for their work in the Dairy School, and for the production of milk used in cheese and butter making. With such a herd as this as an ideal for breeders of dairy Shorthorn cattle in Canada, I see no reason why these animals should not prove a profitable investment for any breeder. They would also find a ready sale for both males and females among the dairymen to whom we have referred. H. H. DEAN.
O. A. C. Professor of Dairying.

PROFESSOR DAY REPLIES TO CRITICS.

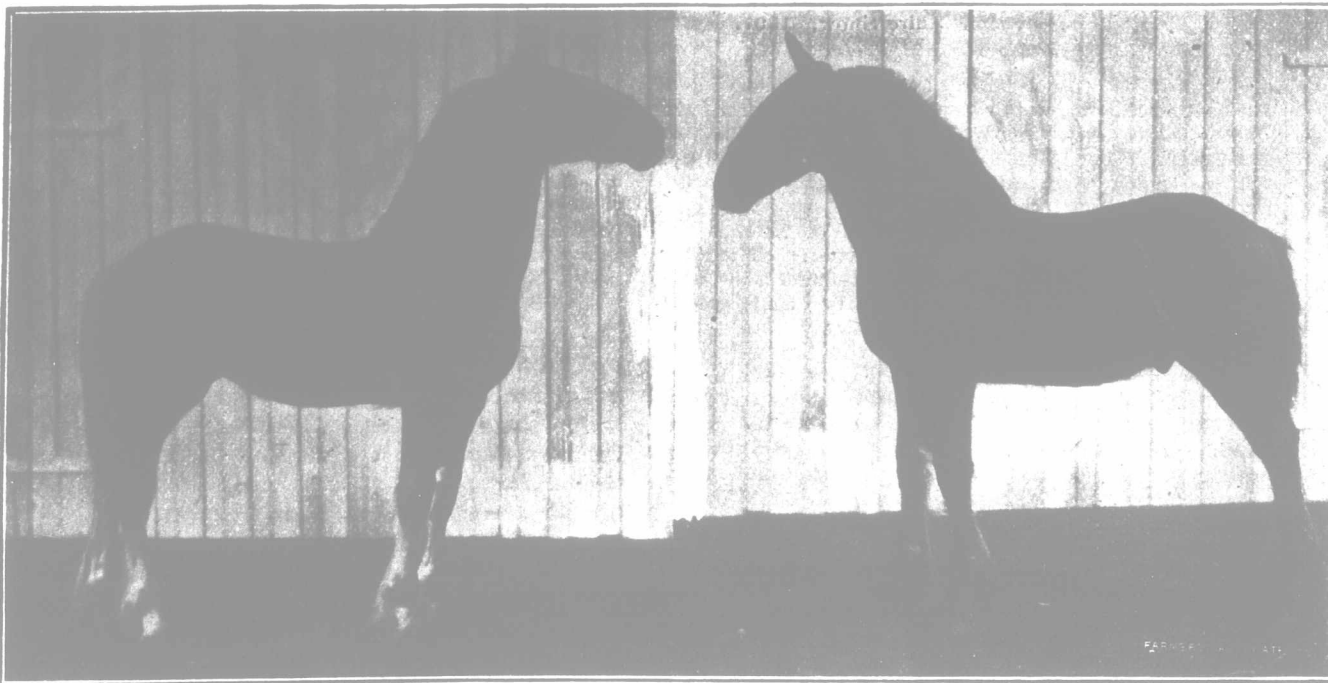
Editor "The Farmer's Advocate":

In "The Farmer's Advocate" of December 26th, J. C. T. took me to task on the hog question. His statements were so manifestly unfair that I did not think it worth while to reply, believing that any fair-minded person who read my article would be able to see the unfairness of J. C. T.'s letter. However, I see that another modest contributor, signing himself J. G., comes forward in "The Farmer's Advocate" of January 9th, endorses all that J. C. T. has said, and adds a few little jabs on his own account. I dislike to encroach upon your valuable space, but feel that I should at least make an attempt to clear up a few points which have apparently been misunderstood.

Both J. C. T. and J. G. apparently have little use for experimental work conducted here. I shall not go into a discussion of this phase of the matter, but would call their attention to a statement in my article which they have apparently overlooked. It reads as follows: "Part of the hogs were fed at the College, and part were fed by farmers in different parts of the Province." Had I known that our own experiments would be open to criticism, I should have made it clear that over two-thirds of the hogs from which the offending figures were obtained were fed by hard-headed, intelligent farmers in different parts of the Province, and I must further confess that the average results obtained by these farmers were a little more favorable to the hog as a money-maker than were our own experiments. I may add, further, that two experiments reported upon by farmers, and one of our own lots of pigs which showed what I thought were abnormally cheap gains, were not included in the general average, whereas several lots which I thought showed abnormally expensive gains were allowed to go into the average. The three cheap lots were the only ones omitted.

J. C. T. further accuses me of overestimating the amount of feed in farmers' granaries. I wish this gentleman would read my article again and point out to me where I made any claim that farmers' granaries were full. Among other things, I made the following statements: "Doubtless there are some farmers who are forced to sell their pigs through sheer necessity. . . . The farmer with feed in his bins has need to do some careful calculating before deciding to throw away his pigs." In another place I made the following statement: "Every farmer must be his own judge as to what is the best course for him to pursue, and the farmer who finds himself compelled to sacrifice his stock is deserving of sympathy; but let those with feed on hand take very careful counsel with themselves, and thoroughly consider all the features of the situation before deciding upon a line of action." To satisfy some slight curiosity, I should like Mr. T. to tell the readers of "The Farmer's Advocate" what satisfaction he derives from misrepresenting my statements, and construing them to mean that farmers had generally plenty of feed. Can he not see, if his spectacles are not too much clouded with prejudice, that the article in question was addressed especially to the man who HAD feed, NOT to the man who was short of feed. I admitted that there were men who might be forced to sacrifice their stock, and I was simply urging those who were more fortunately situated, and who were not compelled to sacrifice their stock, to give their less-fortunate brothers a chance by refraining from throwing their stock upon an already gutted market.

But Mr. G. goes a little further than Mr. T., and says, among other things, "There would be no gluts, and the packers and Prof. D. would not dictate." If Mr. G. will please point out where I have at any time attempted to dictate to the farmers, or where I have attempted to work in the interests of the packers, except where the interests of both farmers and packers were identical, then I shall most cheerfully resign my present posi-



Foals of 1907.

Sired by the imported Clydesdale stallion, Colston Leader (5188) (12532). Owned by Wm. Mossop, St. Mary's, Ont. (See "Gossip," page 137.)

tion. This is surely fair, so that if Mr. G. wishes to get rid of a particularly obnoxious official, his way is now clear. I have never at any time advised a farmer to go more extensively into hog-feeding. I am well aware that there are a great many farmers who should never attempt to feed hogs. It is a business in itself, and, like any other business, there are many men who would never make a success of it. Judging from the tone of these two letters, I should think that both these gentlemen would do well to get out of the hog business as soon as possible, and then stay out. If they have been unable to make any money out of hogs during the year that has closed, they are certainly not to be congratulated upon their skill as hog-feeders. All kinds of business have their ups and downs, and the only fair way to judge any kind of business is to take yearly averages. The year 1907 should certainly show a very favorable price average, and, from all indications, the year 1908 should make an even better showing. However, this is a side of the question which I do not intend to discuss, because this is a matter upon which every person must come to his own conclusions.

When a person occupying my position obtains any important information having a direct bearing upon the business of agriculture, it is his duty to make that information public. This is all I have aimed to do in this matter, so that I do not feel convicted of committing any serious crime.

Both these gentlemen make light of experiments, but if they would conduct a few experiments of their own, they would save themselves from making many rash statements which will not bear investigation. Apparently, they have never tested what their hogs actually cost, yet they come out and assail those who have tested the matter. They say that experiments conducted at the College are of little use, but they overlook the fact that a large majority of the hogs reported in these experiments were fed by farmers, and not fed at the College at all. I shall leave it with the public to judge whether the signed declarations made by reputable farmers who conducted the experiments, are not worth at least as much as a couple of screeds appearing in the public press, whose writers were ashamed to sign their names.

Apparently, both these men were anxious to make a little personal attack upon myself, and made this the excuse for doing so. As to the personal side of it, I have nothing to say, but I am willing to stand back of the figures as published, and for my own backing I have the signatures of the men who conducted the experiments, and who are men of unquestioned integrity.

If Messrs. T. and G. will but polish up their spectacles, and read my article once more, I feel sure that they will admit to themselves that they must have been extremely dense of understanding when they could attribute to me, from what appeared in that article, a desire to mislead and to dictate to the farmer.

G. E. DAY.
O. A. C., Guelph.

MILKING QUALITIES SHOULD BE IMPROVED.

Editor "The Farmer's Advocate":

I do not think the idea expressed in your editorial, as to desirability of improving milking qualities of the Shorthorn cows, will meet with any strong opposition or criticism from the breeders. I believe there is quite a general feeling in its favor. I fear that for a time the same difficulty in the way of the special prizes at leading exhibitions, namely, so few competitors, would prevail with a scheme for official testing. Two great difficulties are to be overcome: The disinclination of buyers to pay the value of a good combination cow, some seeming to really imagine they should get an animal for less money if a good milker or from good milk strain, even if first-class beef type; then, there is indifference to overcome.

A. W. SMITH.
Middlesex Co., Ont.

AFTER THE MILKING SHORTHORNS.

Editor "The Farmer's Advocate":

I am quite in accord with your views with regard to the necessity of a radical change in the formation of type of late-day Shorthorns. It was the Scotch cattle that wrought the change, and I think it was a great pity. Of late years I have been buying North-of-England cattle—females, I mean—and I am raising fine milkers. I am buying a few lately, and I am endeavoring to get milkers.

ARTHUR JOHNSON.
Ontario Co., Ont.

LOOKED FOR EACH WEEK.

We have taken "The Farmer's Advocate" for a number of years, and look forward each week for valuable information, which we receive from the different departments of your paper.

WM. J. PYM.
Perth Co., Ont.

APPROVES RECORD OF PERFORMANCE APPENDIX

Editor "The Farmer's Advocate":

While not in full agreement with all the statements made in the editorial re Shorthorn cattle, appearing in your issue of January 9th, I may be permitted to make a few observations bearing on the subject.

I am convinced that there is a difference, not only in conformation, but in hereditary tendencies and characteristics as well, between the beef animal and the dairy animal, as there is a difference in the same degree between the greyhound and the St. Bernard dog, and it will be a long time, I think, before the thoughtful breeder will find a field for himself in the production of what may be termed dual-purpose cattle. Many will continue to believe in beef cattle as such and dairy cattle as such, but the great virtue of Shorthorns is that the two types may be found within the breed, and, in my judgment, the breeding of dairy Shorthorn in Canada will work ultimately to the great benefit of Canadian agriculture. The recent importation for Macdonald College has been made in consideration of the interests of the ordinary farmer, that we may furnish him with an eminently profitable sort of cattle, and the dairy-bred bulls that we shall aim to produce may be used, we believe, successfully and to advantage on grade and common Shorthorn cows throughout the country. Our prime object is to produce a utility sort of cattle, and we are placing at present greatest emphasis upon the production of milk. We shall aim to get as much substance and constitution as must always be necessary to assure success, but we shall seek these simply to give support to our first consideration, the milking capacity of our cows.

We are in agreement, I think, that some mistakes have been made in the breeding of beef Shorthorns during the last few years. Before the special beef breeder can serve best the inter-

ing should be decided upon. If the milking qualifications of Shorthorns appeared in an appendix to the present volumes issued by the Society, those most interested could readily find out where to obtain such a class of cattle. In this way, I feel sure that the demand forthwith would very rapidly grow.

Further, if all cattle that are eligible for registration in Coates' Herdbook might be made eligible for registration here, I think a valuable step would have been taken towards the improvement of Shorthorn cattle in this country. The Canadian Society is at present sufficiently strong to free itself from any obligations to the Shorthorn Society in the United States, and I am of the opinion that such a step, if taken, would receive the endorsement of not only the farmer who breeds market cattle, but of many of the breeders now in the Shorthorn Association itself.

I cannot but wish you well in any undertaking to bring about such a recognition of the milking strain in Shorthorns in our Canadian Society, and, personally, I shall do my utmost to bring this matter to the attention of any members with whom I may have any influence.

Thanking you for the opportunity you have given me of thus expressing my views.

H. S. ARKELL,
Prof. of Animal Husbandry.
Macdonald College.

THE FARM.

EXPERIENCE WITH PLANK-FRAME BARNS WANTED.

"The Farmer's Advocate" wishes to publish at an early date a number of letters from readers who have erected plank-frame barns, and will allow usual contribution rates for concise answers to the following questions:

1. When built, foundation, size, how framed and erected.
2. Quantity, kind and cost of lumber used (a) in frame, (b) in enclosing, roofing and finishing.
3. Method of erecting, and time and help required to frame and complete.
4. Evidence of strength, durability, and serviceability.
5. Advantages of plank-frame barn over timber frame (a) in amount and cost of material, (b) in labor of construction. Give figures, if possible, to show difference in cost of plank and timber frames.

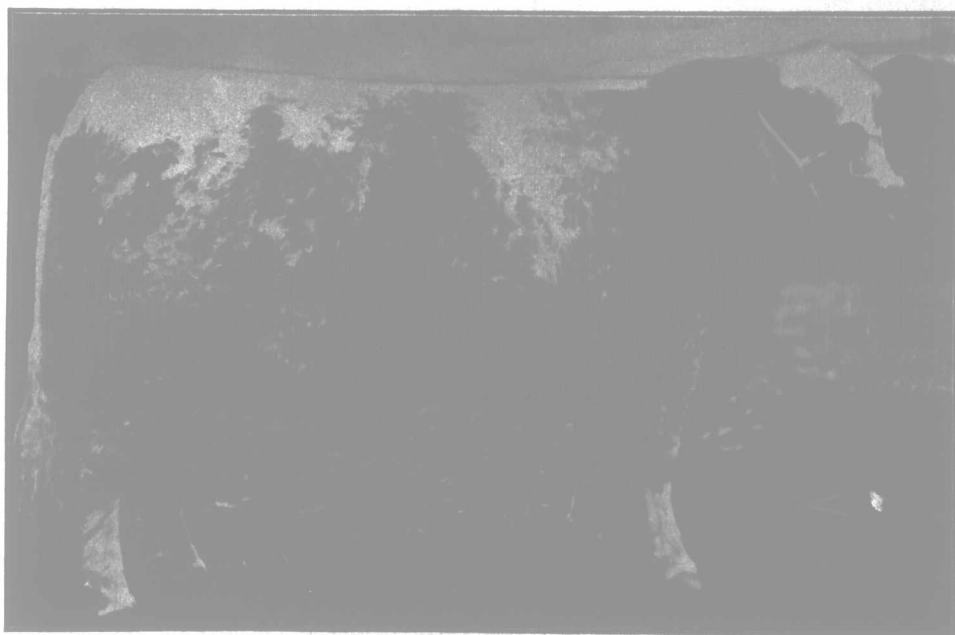
A limited number of clear photographs of plank-frame barns in the course of erection will be acceptable for purposes of reproduction.

Prompt answers requested.

WHAT'S THE USE?

Editor "The Farmer's Advocate":

What's the use of "The Farmer's Advocate" doing all it can to encourage the split-log drag competition? What's the use of men like Mr. D. Ward King lecturing to farmers on good roads? Our roads are of no use to us, for we can't use them in safety. The automobiles have possession from the time they are in good shape in the spring until the snow or mud makes it impossible for them to run their horse-scaring machines. Night and day, Sunday and week-day, they hold the fort against all other modes of travel. They know no law but their own sweet will, which is to go as fast as they like, without the least consideration for anything or anybody. Are the farmers going to give the roads they have built to these city aristocrats or not? If they are, why spend time and money in making the good roads (which every farmer is justly proud of), only to find out that the ditch is for the farmer and the good road for the motorist? If the farmers want the roads for themselves, now is the time to be up and doing. Get up a petition, asking the Ontario Government to pass a law prohibiting the use of automobiles on the highways of the Province of Ontario, outside of the corporation limits of cities, towns and villages. Get your petitions printed by your local paper. A few energetic men in each township will get every farmer's name in a day or two. Do it right away; let every



Waddesdon Silvio.
Cross-bred two-year-old heifer (Angus-Shorthorn). First in class and reserve champion, Birmingham Fat-stock Show, 1907. Weight, at 1,038 days, 1,690 lbs.; daily gain, 1.62 lbs.

ests of the farmer and raiser of market beef, there must of necessity be some change in his policy. I judge, however, that this change must be somewhat along the lines that I have stated in other places. He may well consider whether or not he ought, with advantage to himself, his stock and his patrons, to infuse some of this dairy blood into the breeding of his beef cattle. We hope to make some such experiment here.

In reference to the recognition of strains in Shorthorns in which the chief merit lies in the production of milk, I think that the time has come for this question to be considered. The cattle that we have recently imported, while all being registered in Coates' Herdbook, are not all eligible for registration in Canada. Judging them by the standard of utility, both in reference to their breeding and individuality, I take it that these cattle are as worthy of recognition in the herdbook as many that have come across the water. In the returns that come from them in the year, they must commend themselves to the man who expects a continuous and profitable revenue from his stock.

It seems that we are, in this country, at present, losing sight of qualifications in cattle which make them of most value to their owner, and I think the time will come soon when cattle such as we have been speaking of will receive due recognition in the herdbooks of our Shorthorn Society. For the present, I know of no better way by which they may be introduced to the public, and gain the attention that will advertise their value, than that some such scheme as you are advocat-

farmer sign them, and the Government cannot refuse. I am sure "The Farmer's Advocate" will do all it can to help us in keeping the roads we have built for our own use. If the city folks don't like to ride behind horses, let them use the railroads. I have twenty-four years of "The Farmer's Advocate" bound, and in all that time I don't think there has been a weed that needs eradicating as much as the automobile nuisance.

A BRUCE CO. FARMER.

LATE AUTUMN AND WINTER FILLING OF SILO.

Editor "The Farmer's Advocate":

When building my barn, ten years ago this coming summer, being somewhat ignorant regarding construction of silos, I made the mistake of building up in one corner a square silo the height of the basement wall (9 feet), and of the same material. Upon this wall was continued a wood structure of double inch lumber, with tarpaper between, nailed to two-by-eight-inch studs, which were well framed in by barn timbers every five feet. This silo was never very satisfactory, from the fact that the air could and would get in at the junction of wood and stone, no matter how I might try to plaster it up. Eventually an idea came to me to strip with inch pieces the upper part, running them down one foot over the joint, and lathing the whole thing. I then filled up the space behind with lime-mortar, and continued on stone wall to the bottom. When this dried, a coat of cement-mortar was put on one-half inch thick, and well trowelled down, so as to make a hard, smooth finish. Now I have a capital silo, with no joint for the air to come in and spoil the silage around the wall, and from there up. The corners of this silo were cut off about two feet, so there are no right angles. The cost of lathing and plastering was near \$50.00, exclusive of my own work.

It might be interesting to you and your readers to know my experience regarding late fall or winter filling of silos.

My line of farming is the fattening or stall-feeding of export and butchers' cattle; and, realizing the possibilities along this line of feeding a greater number by growing more corn, I increased the acreage in 1906 to ten acres, and the same in 1907. In the fall of 1906, on October 28th or 29th, we had a heavy snowfall, and I put my cattle in (38 head), and kept them in continually after. I started feeding from the silo at once, and the corn being well matured, fed a large quantity right along. My idea was to feed the silage up, and fill again, as we had nearly five acres out in the stook, and I considered it would be much less work to have the machine a day and refill them than be continually drawing in and cutting every day, which would be not so bad with a reliable power, but with a windmill (which is the only power I have), it is simply impossible to keep a supply on hand. We had the silage pretty well down, and refilled on December 10th. The corn that year was, as I said before, extra well matured, so there was very little sap in the stalks, and, thinking it might heat without sufficient moisture to cool it within itself, and consequently mould or fire-fang, we attached a long piece of hose to the tap, started the mill (the wind happened to blow on that day), and had a continuous stream of water to dampen it. This proved to be as good ensilage as we ever had, and a much more expeditious manner of handling the crop than the daily hauling-in I have mentioned. Again, this year we had a bumper crop of corn, but not so well matured as last year. We filled the silo when the cutter was going the round of neighbors, and had over half the crop to stook. As the cattle did not go in to feed so early this fall (November 27th, 40 head), and the corn was not as well matured as should be, we saw it would be impossible to feed enough out to refill until very late on in the winter. I therefore decided to put up another silo—a stave one—which we filled on November 23rd. This corn had been stooked about two months, and had cured somewhat, or, at least a great deal of the sap and acidity had dried up, but was still damp enough to do without the addition of water. I consider this almost first-class ensilage, not being sour and acid, as green, immature corn would make, if the silo were filled early, or when the regular filling time came. The cattle can eat a large quantity, without any scouring or bad results whatever; consequently, it has a greater feeding value. The point I wish to make is this: When the corn is not well matured, from any reason whatever, such as late season, late sowing, or late variety, it will pay, and pay well, to stook it for a month, at least, before filling the silo. I consider it a very grave mistake to put a lot of green, soft corn into the silo, and expect to have good feed. Hoping these suggestions may be of benefit to you, and wishing "The Farmer's Advocate" the success it deserves.

Oxford Co., Ont.

A. L. CURRAH.

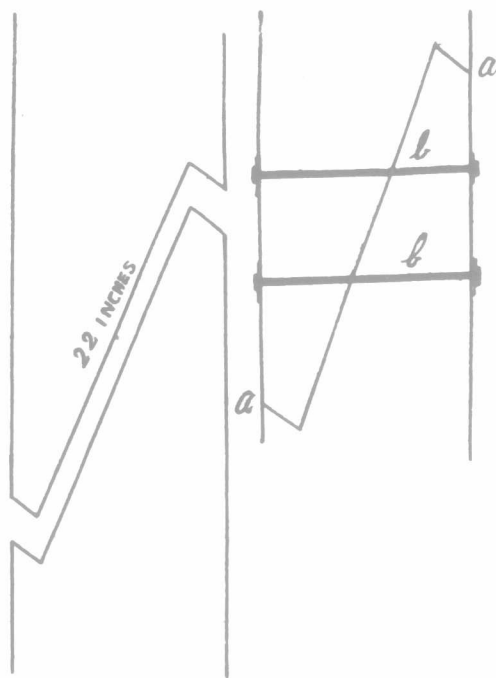
INCREASING THE SIZE OF THE BARN.

This problem confronts many farmers whose barn space is insufficient to store the products of their farms, and many dollars are annually lost to individuals and the country generally for lack of this accommodation.

I had the misfortune, two years ago, to have a barn 45 x 74 ft. burnt by a spark from a railway locomotive. Having another barn 50 x 60 ft., I decided to raise it higher, as the most efficient and economical plan to increase the barn space. The original of this barn was 36 x 60, with 18-foot posts, and to this had been added a lean or overshot for the stable doors, of 14 x 60, as is commonly seen throughout the country. These leans hold very little, as they are usually, by the slope of the roof, only about 10 feet high on the low side; and, being low, are a veritable catch-all for dust at threshing time.

I raised this barn, lean and all, 6 feet, which has added one-third to its capacity. Some are sanguine enough to believe that its capacity is doubled, on account of the increased pressure on the mows from the greater height.

It is not a difficult matter to raise a barn from its foundation, and anyone with a little ingenuity, 8 or 10 good jacks, and same number of



strong chains, can accomplish it. For blocking, I used railroad ties, which the section men had taken from the roadbed and helped us load on the wagons. The plan is to attach false sills to the foot of the posts, let in about two inches at the side, and well chained, the chain being made tight by wooden wedges. Now raise by placing jacks under the false sills. This leaves the old sills in their place on the foundation, and the new short posts are made to fit into the mortises vacated by the other posts. All the timber required will be 8-foot posts to come under the old posts of the barn, and a row of girts around building to nail to when boarding in. The short timber required will not be hard to find in any bush. I took mine to a sawmill, and it was all made in one hour and a half, at a cost of \$3.50 for sawing. The posts are spliced, as in cut. The building is raised slightly higher than the short posts. Then the posts and girts are placed in position, one by one, commencing at a corner. The jacks are then lowered to let the building settle onto the posts. The ends of the posts are then bolted together, and it is ready for boarding in. The cost of raising barn 50 x 60 in this way was less than \$100, and has many advantages over old methods of pulling down and building greater.

D. M. NAISMITH.

Grey County, Ont.

DEPENDING ON OUR FORESTS.

The Paper Mill and Wood Pulp News is quoted as saying, in a recent issue: "The wood situation to-day is a very serious matter. There is not a mill in the United States manufacturing paper and pulp that is not to a very large extent depending on Canada for its wood, and there is no basis to work upon, for the reason that there is no established price for wood either in this country or in Canada, and, owing to this fact, there is no basis for the paper manufacturer to work upon to establish a price for the finished product."

A recent deputation to Ottawa waited upon Sir Wilfred Laurier, to urge upon the Dominion Government the imposition of an export duty on pulp wood, and the taking of other steps to conserve the forests of the Dominion. This is sound policy. Canada should not require the example of the neighboring Republic to warn

against the policy of prodigality and neglect of her national heritage. Canadian resources for Canadian people, should be the motto henceforth. Export duties on raw material are the best means of securing the result without burdening the consumer for the advantage of the producer. This country is ready for an export duty on pulp-wood. Its advantages are that it will tend to the development of a valuable industry within our borders, meanwhile turning into the national treasury a considerable legitimate revenue on what pulp-wood may be exported.

PUT YOURSELF IN HIS PLACE.

Editor "The Farmer's Advocate":

In the January 9th issue of your interesting and instructive journal, is a letter on imported horses and boys, signed "Subscriber." But it is imported horses and men vs. Canadian horses and boys he really criticises. Now, I am an Englishman, and came across the big pond he mentions about eighteen months ago. I am now asking you to kindly grant me space to compare notes with "Subscriber." First, has he some animus against Englishmen and imported horses, or is it overdone loyalty to his own country and animals? Does he think that we come across here without an invitation? If immigrants are not welcome to this country, why does the press generally deplore the shortage of labor? Also, why does the Government send agents to our country to enlist all the men and women possible to come and assist in the opening up of this great country? Nothing can exceed the glowing and tempting picture placed before the English public by the different agencies for both shipping and Government, offering every inducement to come, promising a warm welcome here. If we are such a useless lot as "Subscriber" describes us, is it not time to stop all that sort of thing? Does he really mean that he would prefer one Canadian boy to six of us, or is it possible that less than two per cent. of that three hundred he seems personally acquainted with are worth their salt? They cannot come from amongst our rural population. I wish "Subscriber" would visit England, and travel through some of our agricultural counties, say just Suffolk, Norfolk and Essex, three adjoining counties, and note the class of work on the different farms, also the neat, pretty flower gardens round the cottages, and the well-kept and cultivated quarter or half-acre allotment plots, with the straight paths and edges, and every variety of vegetables and grain growing on them, done in overtime, after half-past 5 p. m.; also note the two-hundred-pound pigs in the sties in the autumn, chiefly fed on the garden refuse, with the wheat and barley grown on allotment to finish them. I think "Subscriber" would begin to think they were not such a helpless lot as he would have you believe. In our towns there are a class of people no use there or here, but it is difficult to believe that 300 of them could settle in one locality, and not six be any use. I should like to hear someone else's experience of the immigrants. It may be that this particular 300 are not Englishmen. If so, it would not be fair for me to say that accounts for it. I was not brought up exclusively to farming, but I should not be afraid to go side by side with "Subscriber" for a month at all-round work, or to put my boy of 14 beside his Canadian son, if he has one. The Canadian people generally have been very nice and kind to me and mine, but the snub "Subscriber" gives to all from the Old Country hurts a bit. Will he come out of his shell, and tell us who he is?

Again, as to horses. Coming over the big pond does not make an animal better, but if "Subscriber" could see a few bunches of our good-looking, clean-legged, chestnut Suffolk horses, or the fast-walking, alert Norfolk farm horses and their high-stepping cobs and Hackneys, and, again, the big, powerful Shires, used in the towns for heavy-draft purposes, and compare them with the motley throng I have seen standing outside Canadian cheese factories, I think he would conclude some imported blood might not be a bad thing, after all.

Your note, Mr. Editor, takes Subscriber's sting away a bit, but don't you think that, if matters were reversed, and the Canadian taken across the big pond and dumped down in the Old Country, amongst strange people, strange ways, strange hours, he would feel a mere nobody. The standard of manhood you mention would seem, for the time, to forsake him, and he would wonder why he thought he knew everything and everybody; but if the hand of friendship was extended, would not he be only too pleased to grasp it, and in a short time his energies and faculties would return, and he would soon become familiar with everything. Then, with his Canadian experiences behind him, and his newly-acquired experience put with it, would most likely make him a more useful man than the Englishman that had never left his home or country.

A. MOTHERSOLE.

Glengarry Co., Ont.

A SUCCESSFUL P. E. I. FARMER.

SKETCH OF JAMES O'BRIEN, GLENAHIRY.

"Certainly, you have the man." This emphatic confirmation, from one of his compeers, was spoken in reply to a query as to whether James O'Brien, of Glenahiry, were not Prince Edward Island's most successful farmer. It is no easy task to sit down, off-handedly, and write a sketch for a reliable publication of the most successful farmer in even this small Province. Like the condition precedent to making first-class hare soup—catch your hare—it is necessary, in this sketch-making, to get your man. Only the other day an agricultural author across straits asked us for the cut of the Islander who had done most for agriculture here, so that it might be included in a new work. We confess that the commission gave us any amount of concern. No doubt, a farmer's portrait was needed. After a deal of rumination, well as we know the Province and the people, we were obliged to hie ourself off to the Capital and consult with the officials there. But this did not help matters appreciably. From one end of the Island to the other, we could not pick out a farmer who had done anything special in his calling, one who could, with some show of fairness, be placed above his fellows in scientific merit. In the end, we were forced to say that we were unable to find the man, and consequently no farmer's figure will adorn the pages of the work in question.

Now, if we had to settle such a matter at this moment, we would not hesitate in placing the name at the head of this article before the inquirer, not that he has done anything wonderful for agriculture in the abstract, but because his great success as a farmer, with no advantages which anyone—even the poorest in the country—cannot boast, enabled him to build up a beautiful home for himself, provided with all the modern improvements; to secure in his farm operations all the machinery and conveniences known to science; to bring up a numerous family of intelligent, industrious and virtuous children—the country's best asset—and generously treat and establish them; and to set an example of thrift and integrity to the community, the value of which cannot be computed in dollars.

James O'Brien is the son of the late Dennis O'Brien, who came to this country from County Kilkenny, Ireland, and Margaret Doolan, his wife. He was born at New Haven, Lot 31, and removed to the western portion of this Province with his father in 1862. One of the numerous family of boys, James was obliged to go out early to work with strangers to earn a living for himself and help his struggling parents. He ultimately, at the age of 25 years, secured the fee simple from the Government of a hundred acres of woodland on the Dock Road, about five miles from Alberton, then called Cascumpec—a piece of land anyone could have had for the taking in these pioneer days. Here he decided to build him a home. Between this new holding and the town were situated the Dock farmers, the best-off and most-skilled agriculturists of these times, men who have all since passed away, leaving their fully-equipped homesteads to descendants who, alas, in many cases, knew little how to appreciate them, and who since have had either to relinquish them to others or make some arrangement with their creditors whereby the present occupants may retain them during their natural lives. O'Brien worked for their fathers as they now work for him.

As every wise settler should determine early, James O'Brien resolved to seek out a partner who would share the loneliness of backwoods life with him and aid him in making a home and rearing up a family of helpers. He was not determined in his choice by any sickly sentimentality, either painted cheeks, flippancy of speech or looseness of manner, but chose, in Hanora Christophar, one comely enough as the rural standard went, and trained up to do her part of all the woman's work of a farm, and give a helping hand occasionally at that which is more properly ascribed to men—the field operations, demanding the handling of horses and the putting in or taking up of crops. They plighted their troth to each other on a bright morning in August, and Father Dugald McDonald blessed their generous vows with the Church's blessing and bade them

to prosper in their life's work. The potency of that blessing the sequel amply authenticates.

Without any of the world's goods but an axe and a bag of flour, O'Brien had taken possession of his holding, and erected a log hut for himself at the start, near the rude road which ran by its southern boundary, and began to cut down the forest—not to destroy it, however, as many had done in their shameful improvidence, but to turn it to account for firewood or lumber, to be sold for necessities before the land it stood on bore them in crops, or to be turned into scantling, boards and shingles with which to erect the

in the end. His paper to-day would be welcomed at any of our banks for a sum of money which certainly constitutes a fortune in this land of moderate monetary aspiration. And all this prosperity out of husbandry, whilst the well-to-do settlement, on the fringe of which he, with no little trepidation, pitched his tent in the sixties, has dwindled and decayed. Others, it is true, have taken up the lands beyond him and about him, and have, according to the common estimate, succeeded; he alone can be said to have done wonders.

And what was the secret of this Titan's success? He has been blessed with health, unmistakably; he has had an ideal helpmate; he has been industrious ever, and frugal when frugality was becoming; he has indulged himself in none of the enervating luxuries, but even this will not answer the question of his extraordinary success. To what, then, can it be ascribed? Intelligent management. He strove to understand the work in hand, to comprehend its dignity, and to be something more than a mere clod-hopper of a farmer; to get into intimate touch with the earth he cultivated, and to take from it only what it could afford to lose without impoverishment. In a word, he farmed sanely, and disposed of what he raised, with keen business discernment and a judgment nearly infallible. Hence his success.

At a time when the credit system was, unfortunately, all but universal in the country, and although he was poor enough and struggling against a period of commercial depression, he took good care to keep well out of the meshes of debt. "To what do you ascribe your business success?" We once asked him; and quick and determinedly came the reply, "I never bought what I could not pay for." If only this had been the guiding star of many others, what a different appearance would not the country manifest to-day. The great folly of buying everything they see whilst their credit is good, soon brings down to ruin the best of people. The best of people, did we say? For, after all, there is something mentally as well as morally astray with the man who contracts debts freely for anything but the mere necessities of life. O'Brien's rule would have made all his neighbors equally prosperous with himself, were it lived up to by them.

Another straw in the direction of success is seen in his methods of field treatment. He resolved early to maintain the natural fertility of the soil and bring it to a condition of tith on which he might depend, in any sort of season, for crops. All about him the virgin soil was exploited—burnt up by ignorant manipulators in the clearing, and run out in what remained by incessant cropping to oats, one of the great mediums of commercial interchange in these days. He cleared his land carefully, conserving the organic matter it contained, and adding to it persistently barnyard manure or the common deposit of our rivers, rich in decaying matter and the stimulus which comes from the mineral in the shells of oysters and mussels, amply safeguarded against outwearing. We have seen him diligently applying stable manure and mussel-mud to virgin soil which all his neighbors would have hastened to seed to cereals at once, and have kept employed growing such crops until the heart was either taken completely out of it or its growing power greatly impaired. This, then, was the secret of agronomic success with him.

James O'Brien was always a lover of a good horse, and his stables count dozens of them at all times. But they are not there for the satisfaction of any sporting sentiment; they have to earn their keep, and are the better for it, too. He is a careful breeder, and has pocketed many big bunches of bank notes for speedy roaders. His cattle are also a large and fairly representative herd, although, if there is any weak spot in his system to which we might refer, it is here. True, he has been, and is, perhaps, yet, the biggest patron of the cheese factory we have; true, his dairy turns out much gilt-edged butter; true, he has always fine, fat steers to sell, and knows how to sell them; but there is a mixing up in the herd we don't like, a shiftiness in his ideals of cattle-breeding, which surely predicates weakness. As a result, instead of one good, pure, well-



Mr. and Mrs. O'Brien.

buildings designed to serve the steading in the coming years.

That was just thirty-nine years ago, and it seems incredible that, in this little Province, which offers so few opportunities for making money quickly, he has advanced from that rude condition of wood-settler long ago, to the proud position of ownership in that thoroughly-improved hundredth—one of the best in the whole country—and also of many more of the hundredths which his neighbors owned then, and which he bought on the market when they had failed to improve or maintain them. He has purchased farms for three sons, built magnificent houses and outbuildings for them, and started them in life in the way of comforts, at the same equipped stage as he finds himself, after life's effort, and still he has three or four times as much land himself as when he cut down his first tree. Besides, he has settled two married daughters handsomely, and paid a generous dot for two more, who, like Mary, have chosen the better part, in religious sisterhoods. He has settled a fortune, then, as was his duty, on his family, and is all the richer for



A Typical P. E. Island Country Scene.

Farm of Thos. Furniss, Vernon River Bridge.

selected strain of cattle, we discern in his pens a composite race, "a little of everything and not much of anything," as it is flippantly put on the corners. Charged with this, he laughingly assents, declaring, by way of banter, that he is not in the exhibition business, and has no time for dairy tests, but simply keeps cattle for the manure they make and the look of contentment they afford to the steading. In plain point of fact, the condition reproved is a common one here now, and it is chargeable, in a large extent, to the so-called teachers from the Government bureaus, who come to us every year with a new cow doctrine, until the public mind is altogether confused on the important matter of the breeding of cattle suitable to our circumstances. Mr. O'Brien keeps good sheep, however, and a good big flock of them. He has fowls of all sorts, and markets them and their products carefully. He is an expert hog man when pork can be fed profitably, and this he sees far in the distance. He prides himself especially on his fine seed grains and grasses, timothy and clover rolling up big surpluses for him every year. A general farmer in every sense of the word, he has something of everything to sell always, and either strikes a strong market when it is ready, or keeps it confidently till the market comes back to him to sell.

The stranger who visits "Glenahiry," called after the old O'Brien castle, near Tara, in the land of his ancestors, is sure to marvel at the picture of comfort and abundance it affords—great barns bursting with garnered grain; stables crowded with cattle and horses; cellars filled with roots and vegetables; machinery-houses containing everything that can lighten labor; and a house furnished from basement to attic with everything that money can purchase. He is sure that this is a homestead descended from a long line of ancestors, perfected and embellished by succeeding generations. He looks up at the tall, lithe, graceful form of the owner, whose every feature betokens intelligence, earnestness, and that energy of manner which always impresses, and refuses to believe the story we have just told, to wit, that he is only 39 years settled there; that the country was at that date a howling wilderness; and that he has made all about him, under God's blessing, with the labor of his own hands. People will talk of there being nothing in farming in Prince Edward Island. Long time will they be in any other country before they have James O'Brien's proofs of prosperity to offer. And what he has done, who may not do?

A. E. BURKE.

THE SPLIT-LOG DRAG ON PRINCE EDWARD ISLAND.

Editor "The Farmer's Advocate":

Seeing your descriptions of the split-log drag, and recommendation of the same, was sufficient guarantee for me to shoulder my axe and proceed to the wood-lot and select a nice beech tree, which was soon laid low, an 8-foot log cut off, brought home, and soon had the proud satisfaction of having the first split-log drag on Prince Edward Island, as far as I know. And then, when the time came, it was with confidence I hitched up a 2,400-pound team and struck for the highway. I expected much, and I can tell you my expectations were more than realized. The way it scraped off, pressed down, and drew the soft earth to the center of the road, was simply perfect. Several people happened along, and they pronounced it the best roadmaker they had ever seen. I went over the road (three-quarters of a mile) three different times during the summer, and each time it was like a driving park. It should have been gone over a time or two more later in the fall, but as I wasn't getting any remuneration for the job, and had plenty of other work to attend to, it was not done. However, enough was done to demonstrate its worth as a roadmaker, and that it should be used on every foot of clay road in the Province. There should be two in each district or precinct (ours are from 1½ to 2 miles), and have the men paid to go over the road when required. This would make an ideal road.

The split-log drag is the best implement I have ever seen used on the road, and you, Mr. Editor, deserve great credit for bringing it so prominently before the public.

Do you know whether anyone has tried giving the pieces a little cant under, so as not to scrape quite so heavily?

A. A. MOORE.

Queen's Co., P. E. I.

[Note.—One of our competitors, W. B. Rittenhouse, winner of the second prize in Western Ontario, made a second drag, with the face inclining forward, as suggested, and found that it did the work well, with less draft on the team. Some have reversed their drags on soft places, round side to the front. These are points which one gets onto with experience. Each piece of road and each drag should be studied and adapted by the operator.—Editor.]

RE IMPORTED HORSES AND BOYS.

Editor "The Farmer's Advocate":

Being a subscriber to your valuable paper, and one who reads with interest, I have been more than disgusted to see the manner in which the all-prosperous Canadian farmer is crowding the English farm hand to the wall, and I can only come to the conclusion that it is being done without one moment's thought, common sense or reason. It is a well-known fact that Englishmen have a bad name amongst the majority of Canadian farmers, and yet, some who have had English farm hands employed, prefer them to the native, which I will prove presently. I am not going to criticize the Canadian—far from it. All I ask for is more equalization, as the English farm hand is equal in merit to the Canadian, and in some cases superior. Now, as a standpoint, I take it that "Subscriber," as he calls himself, in your issue of January 9th, classes all men that cross the big pond as one, when he states he would not take six Englishmen for one Canadian; but I will endeavor to enlighten him on this subject, which is far from just and fair. The English farm hands are men who do nothing else but farm work from youth to manhood. They go to farm service when they are yet boys of ten or twelve years, and are brought up to manhood with this every-day life which fits them with that durability and practicability which we expect of them. These are the sort of men Canadian farmers must cater for if they intend to solve the farm-labor problem of this country, and not the city boy, who practically never saw a farm in his life, unless they have patience to train him, and not expect too much from him at the start. Go into the cities of Canada and take Canadians out on the farms, and how much difference would there be between them and some of these men "Subscriber" has been unfortunate enough to run against. But this leads us on to the point, Who is to blame? Here is a question that wants more consideration than has yet been given it. These men come out here with an idea that in farming in Canada "all is gold that glitters." The Canadian farmer, on the other hand, offers them wages which he dare not offer his neighbor, and yet he expects the same from them as from a practical man. What is the result? Nothing but disappointment on both sides.

Now for the merits of the English farm hand. Some seventeen months ago, the Rathbun Farm Company, of whose dairy department I am foreman, were wanting men. On came an Englishman, who, of course, was greeted with "Another Englishman!" But, being short of help at the time, they took him on. He was put in the dairy barn—and at that time there were six men working in the barn, tending to some 100 head of cattle, forty-five of which were milking. He was set to work to milk ten cows, which proved the hardest in the barn, but he managed them all right, and asked where to start next; the others had not yet finished, and before he got through with them he was milking two cows to their one. But he did not stop at this. One morning, in particular, he stepped into the barn at five o'clock, and at half-past seven had milked 29 cows, thus accomplishing the task in two hours and a half. Then there came a time when men were leaving, and more help was needed. He was asked if he knew of any more good men, and, knowing a particular friend, another Englishman, at once secured him. These two Englishmen, along with the assistance of an English boy, who only immigrated last June, and who practically never saw a farm, now do the work that it took six men to do. The boy milks his nine cows morning and night, and tends to the dairy work, including buttermaking. The other two men do the rest of the milking, which consists of some fifty head, and tend the cattle, along with 150 hogs. And, what is more, the second man has had letters from two different Canadian farmers, offering him handsome wages to manage their farms, and actually stating in their letters they preferred him to anyone else. Now, does not this lay claim to some credit to the English farm hand. Yet, these are only instances of many, if time and space would permit me to point out, and I conclude by saying, if "Subscriber" has no heart to help a "lame dog over a stile," don't kick at him, but pass him by quietly, and do not press too hard upon the feelings of the English farm hand, but give him a show, which is all he asks for.

A LOYAL ENGLISHMAN.

Hastings Co., Ont.

GOOSE 62 YEARS OLD.

I saw in one of your recent issues an item about a goose living to be about 40 years old. We can beat that. One of my neighbors, Mr. H. B. Hyman, had a goose for 62 years, and then a double wagon ran over it, or it might be still living.

JAS. McALLISTER.

Argenteuil, Que.

THE DAIRY.

ALFALFA AS A SUBSTITUTE FOR BRAN.

The people in Eastern Ontario don't do enough winter dairying, said Henry Glendinning, of Manilla, Ont., at the Eastern Dairymen's Convention, in Picton. Two objections are raised, viz., labor and feed. The former is not so serious as generally imagined. Winter dairying helps to afford employment all the year round, and enables us to hire much more reasonably than for the summer only. In his locality, many of the summer workers start every spring no further ahead than they commenced the year before. They pay out the summer's wages for winter living. When a man has yearly employment, he can afford to work for less money per month.

As for feed, he made the assertion that it is possible to produce milk more cheaply in winter than in summer. To do so, we require abundance of cheap, palatable, succulent food of the right kind to produce milk.

DIGESTIBLE NUTRIENTS OF FEEDSTUFFS PER 100 LBS.

	Per cent. Dry Matter.	Per cent. Ash.	Per cent. Protein.	Per cent. Carbohydrates.	Per cent. Fat.	Per cent. Nutritive Ratio.
June grass ...	34.9	2.8	3.0	19.8	.8	1: 7.2
Corn silage	20.9	1.4	.9	11.3	.7	1:14.4
Mangels	9.1	1.1	1.1	5.4	.1	1: 5.1
Timothy hay... ..	86.8	4.5	2.8	43.4	1.4	1:16.7
Red clover hay... ..	84.7	6.6	6.8	35.8	1.7	1: 5.8
White clover hay	90.3	8.3	11.5	42.2	1.5	1: 4
Alfalfa hay	91.6	7.4	11	39.6	1.2	1: 3.8
Wheat bran	88.1	5.8	12.2	39.2	2.7	1: 3.7
Oats	89	3	9.2	47.3	4.2	1: 6.2
Milk	12.8	.7	3.6	4.9	3.7	1: 3.8

Corn silage and roots are the two succulent winter foods. Silage will give succulence and bulk, and is palatable. It lacks only one essential; it is deficient in the important element, protein, as reference to the accompanying table shows. Its nutritive ratio is very wide, 1:14.4 (i. e., only one part of protein to 14.4 parts of carbohydrates and fat—the starches, sugars, vegetables, oils, etc.). A properly-balanced ration for a dairy cow is one with about 1 part protein to 6 of carbohydrates and fat. As protein is essential in the animal body, and enters largely into the composition of milk, a considerable proportion of it is necessary for good results. In certain parts of the Province, he believed, the silo had not come into such favor as it deserves, because some dairymen have fed silage without supplementing it with feeds rich in protein, and consequently have obtained indifferent results. Those who have fed bran liberally along with their silage have balanced it up, because, consulting the table again, bran is very rich in protein, having 12.2 per cent., or one part of protein for every 3.7 parts of carbohydrates and fat. But bran, at \$23 to \$28 per ton, is too high for economical feeding. It might still be used if there were no substitute, but the margin of profit would not be large at present prices. Now, 100 pounds of milk contains 13 pounds solid matter and 3.6 pounds of this protein. How are we going to furnish the protein?

Well-cured alfalfa hay contains nearly as much protein per ton as does bran, 11 per cent., in fact, whereas bran contains but little over 12 per cent. What does it cost to produce a ton of alfalfa hay? On his own farm he has done it for \$2.00 per ton, taking an average crop of three cuttings on an eight-acre field.

Q. Have you any to sell at the price?

A. I never sold but half a ton of hay in my life, and I waited years for the payment of that. Not to lengthen this article unduly, we leave Mr. Glendinning's points on growing and making alfalfa hay for separate treatment elsewhere. Suffice to say that a good average crop of alfalfa, in three cuttings, will yield 5 to 6 tons of hay per acre per annum, and 20 pounds of good alfalfa hay will contain as much protein as 18½ pounds of bran. In other words, taking his figure at \$2.00 per ton as the cost of production, a feed of alfalfa hay costing 2 cents to produce will practically take the place of 19.45 cents' worth of bran.

As for its effectiveness, he related the case of a Jersey cow in his herd that freshened the last of June. In July, on pasture, she gave 28 pounds of 4.4-per-cent. milk per day, and on New Year's Day she gave 25 pounds of milk, which, judging by her average test in December, contained 5.2 per cent. fat. Figuring it out, her average weekly butter yield in July was 9.9 pounds, and at New Year's it was 10.47 pounds. Her winter ration consisted of corn silage, mangels and alfalfa hay, with no grain but the corn in the silage. By suggestion from the audience, Mr.

Glendinning made a running estimate of the cost of feeding and profit on this cow for a month, pointing out, however, that it was a mere estimate, and that the cow might not come up to it:

COST OF MONTHLY RATION.		Per Month.
40 pounds silage per day, at \$2 per ton.....		\$1 20
15 pounds mangels per day, at 6c. per bushel.		45
20 pounds alfalfa hay per day, at \$2 per ton....		60
		\$2 25

In six months, at above estimate, the butter would be worth \$67.75, which, deducting \$13.50 for feed, would leave \$54.25. Even supposing she did a third less than the estimate, she would still show a profit over feed of \$31.66, a pretty good winter's work for an ordinary cow. Winter dairying certainly pays when carried on in the proper way.

THE DAIRY CALF.

When we take into consideration that it takes just as much time to milk and care for a poor cow as a good one, and nearly as much feed, therefore costing much more to produce milk by using poor cows, we see what an enormous waste of labor and profit is going on.

Whilst horsemen are exercised by the poor sires being used, and would have laws to license only such as find favor in the eyes of inspectors, there could be as much or more said in favor of eradicating the scrub bull. One of the reasons why there are so many poor milk cows is that there are so many scrub bulls; and it takes just as much to raise a scrub cow as an improved one. We say the scrub bull is one of the reasons there are so many poor cows. It is not the only reason; there are several. Therefore, education is more to be relied upon than legislation. Whilst the breeding is very important, it must be always remembered that improvement in breeds has been brought about by many years of culling and selection, with liberal and judicious feeding. There never has been a superior herd or flock built up or maintained by a poor feeder. An animal that is not in vigorous condition is low in vital force. Vigor, thriftiness, good constitution, ability to assimilate food and give large returns for it, are some of the points we must aim for. Therefore, in breeding for the dairy, it is necessary to use a sire whose ancestors have been noted for large production. His immediate female ancestors, dam, and sire's dam, are the most important, but the further back, the better. And if some of the sires in the pedigree have proven their worth by begetting daughters that had proven large producers, it shows well for those blood lines. With the system of Advanced Registry now in vogue by the Holstein breeders, we shall

soon have many certified records that we can rely upon, not only for the dams, but also be able to know what the sires have done in the way of producing good daughters.

Whilst it is not likely we shall ever be able to conduct breeding operations without some proving failures, yet, as the years go by, and pedigrees are made stronger and longer, failures will be less frequent. One reason for this will be that there has been continuous good care and feeding to produce these good records.

Observation and experience has shown that the condition in which cows are kept is, perhaps, the most essential feature in breeding up a dairy herd. Heifers from dams that have been in good condition before calving are invariably the best. The greatest drawback to progress in dairying is that so many people keep their cows so poorly. Not only are they in no shape to stand the drain of milk-giving, but a poor cow does not give as vigorous a calf, and is not likely to inherit the large producing propensity when the dam has not been kept in good vigor.

To illustrate this: Some years ago we had a cow which had three daughters from different sires; all of them were good. She had milk fever after this, and nearly died; she was never as vigorous afterwards, and her daughters after that were not nearly so good. But, taking a wider view, and showing the general effect of feeding dams well, in order that their daughters may be as good or better, I will mention something I have had under my observation. At a certain public institution a large number of cows were kept to supply milk. On first visiting this herd, a large number of grades were on hand, and I never saw a better lot. A number of pure-breds were added, which, by the way, impressed me as being nothing extra. They were well fed, and their daughters added to the herd, as the milk was needed for the inmates of the institution. The calves were only fed a limited quantity of milk, which had to be supplemented by other feed, and the calves were kept growing. In a few years this herd has come from obscurity to one of the best. The daughters of the first and second generation have been decidedly larger producers than their dams. The sire used on the herd received credit for the improvement, but I consider the way the cows were fed had a great influence upon their daughters also.

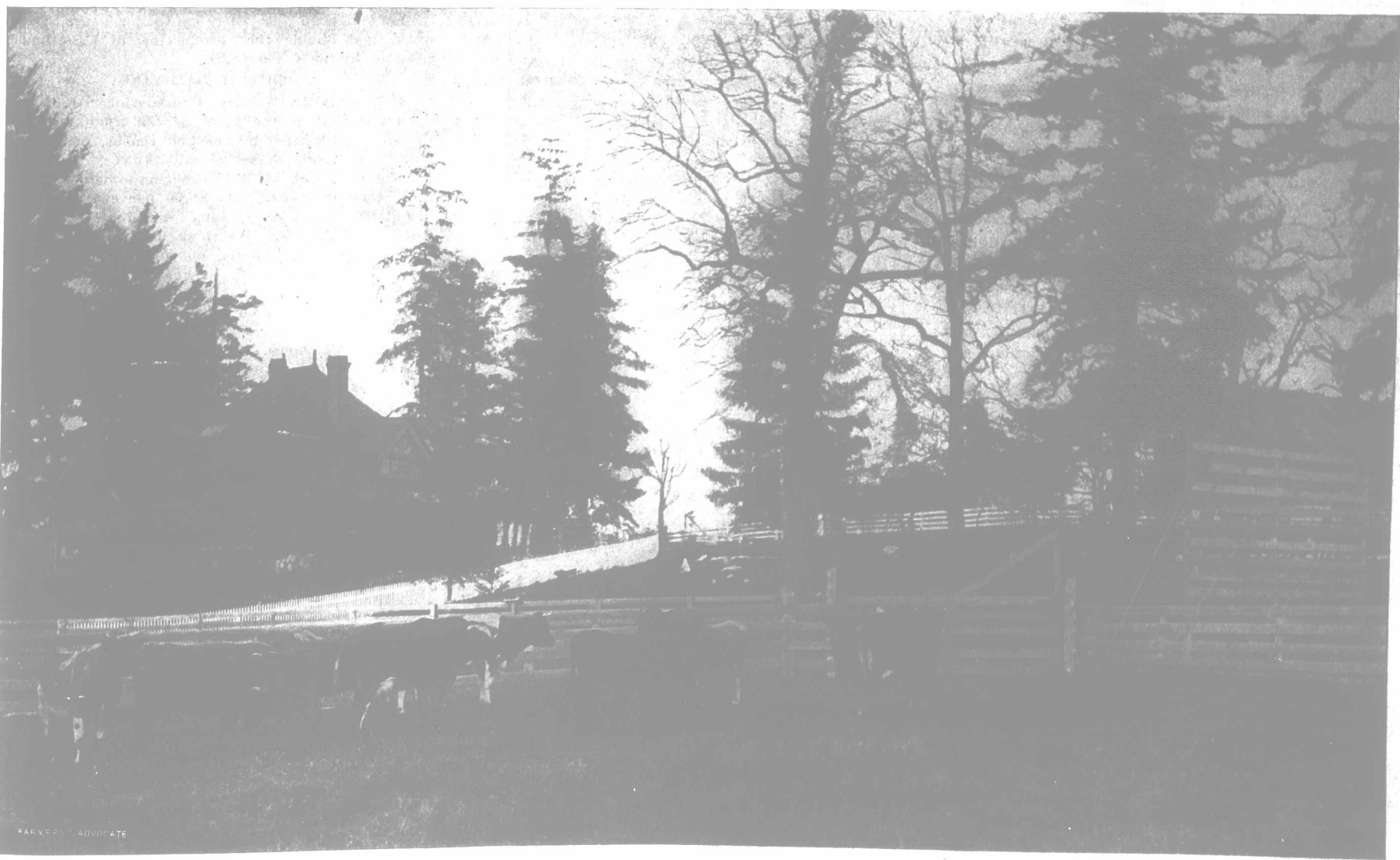
Another instance is the case in a locality where a very large number of cows were kept to supply milk to a condensary. As good prices were paid for the milk, everybody that had any sense wanted to get all they could from their cows, and fed well. Cows were in good condition before calving; milk was so high in price that not very much was fed to calves, but those from pure-bred dams were raised on a small quantity of whole milk, mixed with water, to make just enough drink for the calf to assimilate other

feeds. Nearly every man had a different way of feeding his calves. And, after all, the system of feeding is of less importance than that the calves are fed enough of something to keep them growing. I never was in a neighborhood where the general average of the milk cows was so good; and the young things continued to be good, many of which have, when given a chance, made large records. The cow Boutsje, at the O. A. C. (20,778 pounds milk in one year), is from a herd in that locality. Many others I could mention.

It was not the feeding of the calves that gave such very satisfactory results; in fact, the results would have been better still, in many cases, if the calves had been fed a little more, as several were rather undersized and not so well developed, being, as a rule, bred to have their first calf at two years old. Under this rather scant feeding, it would be better to have them calve at 28 or 30 months old.

One of the most important points in breeding up a dairy herd is to have both the sire and dam in a good, vigorous condition. The condition of the sire at mating has, no doubt, considerable influence upon his progeny, and the condition of the cow when carrying the calf has also an influence. The qualities are no doubt largely latent in the calf when born; being born with lots of vigor and constitution is the essential thing. And such a calf is easy to raise. It is possible to spoil such a calf by feeding too well, and giving it a propensity to turn its feed into fat. But a great many more are spoiled by underfeeding, which stunts the growth, and does not develop the digestive organs. As a rule, young calves are fed too much milk for the first month or two and not enough later. When whole milk has to be fed, 8 or 10 pounds a day is quite sufficient for the first three weeks, then add a little water as the calf gets older, and teach it early to nibble at hay, bran or silage. It will take only a handful of bran at the start, say from three to four weeks old, but will soon learn to eat more. Then give it a pinch of oil cake (ground), either with the bran or put in the feed pail, as soon as the calf has about taken all the milk out that will keep it sucking at the bottom of the pail, which makes saliva, which aids digestion.

When a calf is four or five weeks old, add a little hot water to the milk, only a cupful at first, and gradually increase the water. A calf needs a certain quantity of drink; the state of the excrements will show how much. If dry and hard, more drink should be given; if too loose, less drink. If the calf is doing well at three or four months, and is thrifty, a little less milk can be given, if it is valuable, as the calf should be eating considerable by that time, and, when eating bran, oat chop and oil cake, with some silage, as well as hay, it does not take much milk to keep it going. At four months old, one-third milk and two-thirds water does very well—enough of this



In the Sunset Glow.

to keep the bowels in a right state, as shown by the excrements. When skim milk is available, that is best after one month old, and raising calves is an easy matter; but just as good results can be obtained by giving whole milk, adding water as the calf gets older, and teaching it to take other feed. Too often, a calf, after five or six months old, has to hustle for itself, and, if it has had proper care so far, is allowed to go back. This should not be, as the young things should be kept growing steadily. I find nothing so good for young cattle and calves, after six months old, as rape. It is a fine thing to have some rape to turn them on in August, September and October, when other pasture is poor. Calves should not be turned on it under six months old, but, when born early in the year, say in February, they can be fed on rape pasture, which makes very cheap feed and saves labor of attending to the calves. And they are more healthy outside than in the barn, where, perhaps, they are

shut in some dark pen, away from flies, but also away from good air and sunshine. Flies do not hurt the young things outside if they have plenty of feed, and there is nothing as good as rape to make young cattle grow. But milk cows should never be fed on it, as it spoils the flavor of the milk. GEO. RICE.

MILK FEVER.

A short time ago, at a meeting of the Glasgow and West of Scotland Agricultural Discussion Society, Mr. Pollock, Springside, Howwood, expressed a wish that science would find a method of decreasing the losses of dairy farmers from milk fever. A writer in the Scottish Farmer takes ground, which "The Farmer's Advocate" has repeatedly claimed as its conviction on this question in the following paragraph: "I think this can be done by following nature a little more closely than is general, and without any aid from science. In a state of nature the young of any animal,

as soon as born, takes its mother's milk in small quantities at short intervals, 'little and often' being its practice. If a calf be left with its mother the same thing happens, nature being followed exactly. If, however, as is often the case, the calf be taken from its mother at birth, then nature should be copied, and a little milk taken from the cow by hand, at short intervals. Never empty the bag—that is, udder—of a newly-calved cow until the calf is at least three days old, and deaths from milk fever will practically cease. This was told me many years ago by a farmer who kept a very large herd of cows, on rich pasture, in Leicestershire, and he added, 'Since I was told of this plan years ago by an old cowleech—that is, unqualified cow doctor—I have not lost a cow from milk fever, whereas before I invariably lost several every year.' My own experience coincides with his. But, and here is the rub, see that the plan is carried out fully, and do not be satisfied with being told that it has been, because most men in charge of cows think that it makes no difference whether the cow is milked dry sooner or later."

Western Ontario Dairymen's Convention at Woodstock.

The forty-first annual convention of the Dairymen's Association of Western Ontario was held in Woodstock, January 15th and 16th. President John McQuaker, after a few opening remarks, presented the directors' report, which remarked that the past season's experience had been most encouraging to the patrons of cheese factories and creameries; high prices prevailing. Steady progress is being made in the quality and finish of our cheese, and improvement is also shown in the quality of creamery butter, the greater percentage of which has been consumed at home this year. A large amount of money is being spent in improvements of cheese factories and creameries, their equipment and surroundings, under the improved system of instruction and sanitary inspection. Every factory and creamery has been visited at least once, and almost all have had from four to six visits by the instructors. There has been spent the past year in Western Ontario in improvements \$35,882 on cheese factories, and \$16,954 on creameries. Appreciation was expressed of the interest of the Minister of Agriculture, Hon. Nelson Monteith, and the substantial financial assistance which the Government continues to give to the Association. Prospects for the future of the dairy business in Canada are bright.

The directors, recognizing the cheese and butter exhibit, held in connection with the convention as one of its prominent educative features, were gratified with the interest in the competition manifested by the makers. In connection with this exhibit this year, instead of having a scoring contest, it was thought that better educative results might be obtained if one or more cheese were purchased by the Association, and allowed to be examined by anyone who wished, and scored, if desired.

A special officer was appointed early last season to deal with cases of milk adulteration. This system has worked out very well, and bids fair to materially discourage the tendency to deliver adulterated milk at the cheese factories. A number of convictions have resulted, and they hoped to have this feature of the work continued, and the law so rigidly enforced that the dishonest man who tampers with his milk, thereby doing himself a wrong as well as his fellow patron, may find it the wiser policy to do the right thing. A committee was appointed by the directors to meet a committee of the Eastern Association to consider the advisability of revising the dairy laws, particularly that portion relating to fines for delivering deteriorated milk. These fines, it was recommended to have raised.

The financial report, presented by Secretary Frank Hens, showed balance carried forward of \$1,120.43, plus receipts of \$5,179.26, making up a total credit of \$6,299.69, and disbursements, \$4,881.97, leaving a balance on hand of \$1,417.72.

THE DAIRY-HERD COMPETITION.

Owing to the generosity of Ryrie Bros., of Toronto, the directors were again able to offer a silver and a bronze medal for a dairy-herd competition. The regulations were the same as last year, except that instead of the medals being offered for the most money per cow, they were offered to the patrons furnishing the most milk per cow to a cheese factory, and the most butter-fat per cow to a creamery, from April 1st to October 1st, 1907, there to be not less than eight cows in the herd, and the figures to be taken from the factory books and certified as correct by the secretary or maker. As no creamery patrons entered, the bronze medal was a second prize for the cheese-factory competition. The silver medal was won by W. E. Thompson, of Innerkip, with an average amount of milk of 8,020 pounds, and the bronze medal by Wm. Pearson, of Holbrock, with an average of 7,571 1/4 pounds milk per cow. Following is a tabulated statement of the results of the competition:

NAME.	ADDRESS.	GRADE OF COWS.	No. of Acres in Farm.	No. of Cows in Herd.	Total lbs. of Milk Sent to Factory.	Average lbs. of Milk per Cow.	Total Money Received.	Average amount of Money per Cow.
J. W. Cornish,	Harristown—8	grade Holsteins, 1 grade Ayrshire, 1 grade Durham and Holstein	50	10	64,321	6,432	\$806.73	\$80.67
Wm. Pearce,	Holbrock—grade	Holstein	50	8	60,572	7,571 1/4	585.02	73.12 1/2
S. Gubert,	Seward—grade	Holstein	75	15	102,101	6,810	907.14	64.47
Mason Bros.,	Tyrrell—grade	Holstein	280	21	76,986	7,475 1/4	1,375.93	65.52
M. Swaine,	Springford—Holstein	and Durham	125	12	79,380	6,615 1/2	730.63	60.89
W. E. Thompson,	Innerkip and Woodstock—Holstein	and Holstein grades	100	12	96,240	8,020	934.64	77.88 1/4
N. S. Ballantyne,	Atwood	Holstein	150	21	118,878	5,660 7/8	1,314.64	54.77
H. Gleason,	Medina Farmers Union—Holstein			24	133,408	5,558 3/4		

HOW THE WINNER'S HERD IS HANDLED.

The following description of how his herd was handled has been especially prepared for "The Farmer's Advocate" by Mr. Thomson: "My herd number in all twenty-eight head, ten pure-bred Holsteins, the balance Holstein grades. The largest number milked at any one time during the year was fourteen, including a two-year-old heifer, whose milk was used for family purposes. During the seven months of the contest, I sent, on an average, the milk from twelve cows, which gave a total of 96,240 pounds of milk testing 3.5 per cent. of fat, making an average per cow of 8,020 pounds. Two of these cows freshened in October, 1906, two in January, 1907, five in March, and the balance in April and May. The total pounds of milk given by the fourteen cows for the whole season was 142,418, making an average of 10,172 pounds milk per cow.

This is my method of feeding in winter: In the morning, the first thing we do is to milk the cows; then the roots and meal are fed, after which the straw or hay. The water is always before them. At noon we give a feed of cut corn. In the evening, say five or half-past, we again milk, and the roots and meal are fed again, followed by straw or chaff. This diet is continued until about first of March, when hay is fed in place of straw. The meal consists usually of a mixture of barley and oats. When necessary to supplement this, some bran is added, together with something stronger, such as low-grade flour or ground wheat, which brings the mixture to about the same weight as the barley and oats. The milking cows receive of this about a gallon each, twice a day. I find that even when my cows are not fed to their full capacity, as, when fed

a feed of meal at noon, give considerable increase in the quantity of milk. Cows give a greater return when freshening in the months of December, January and February, and, if well fed, will give nearly as much milk during the summer as those which freshen in April or May.

In the summer, the cows are tied in the stable for milking, and if the flies are on them, they are sprayed with a proprietary preparation. When the pasture is beginning to get dry and short, we give one quart of meal and two quarts of wheat bran twice daily until green feed, such as corn or roots, may be used.

We try, as far as possible, to study their comfort; if it is wet or cold, they are kept in all night, and given a feed of hay or corn. We have always to form some idea of what each cow has done for the season, but not until this past year have we done it intelligently. Have been working in connection with the Spring Creek Cow-testing Association for nearly a year, weighing the milk and taking samples, which have been tested by a man sent for that purpose. This enables one to find out intelligently the value of each individual cow.

THE OBJECT OF THE COW-TESTING.

C. F. Whitley, of the Dominion Dairy and Cold-storage Commissioner's staff, gave substantially the same address as at Picton, for report of which see "The Farmer's Advocate" of January 16th. A few points, however, may bear reiteration. The object of the cow-testing work is to induce a careful study of each individual cow in the herd, with a view to building up a race of cows that will produce a large quantity of good milk economically.

Put your money in the bank, and you draw bank interest; put it in Cobalt, and you lose it. Many of the dairymen in the cow-testing associations are deriving 30 per cent. interest on the money invested in good dairy cows.

Let us bend our energies to push the cow-testing work, and double the production of Canadian dairy cows in the next five years.

DUTCH DAIRYING.

Following Mr. Whitley, Commissioner J. A. Ruddick remarked that if the yield of the 2,000,000 cows in Canada, enumerated by the last census, which now give less than 4,000 pounds of milk apiece, could be raised to the standard of Mr. Thomson's herd, and if the milk were estimated at \$1.00 per cwt., the value of the dairy output of Canada would be increased by 80 millions of dollars. We think we are doing well at the dairy business in Canada, but other countries are away ahead of us. Holland, with an area of a little over 12,000 square miles, has less than a million cows, yet, after feeding their own population of five millions, they exported last year \$27,000,000 worth of butter and cheese. The Danes and the Dutch are beating us a long way in the production of milk. So far as the manufacture is concerned, our makers stand well at the top. A member of the audience suggested that the reason the Dutch exported so much dairy produce more than we was because they ate less, to which Mr. Ruddick objected, saying that they do eat very large quantities, but they produce so much more per cow. He submitted some figures from a creamery in Friesland, supplied by 1,150 cows, which averaged 8,460 pounds of milk per cow over the whole section. He also cited the case of one Holstein cow that gave 21,529 pounds of milk in 365 days. Of course, the pastures of Holland are probably not equalled anywhere else in the world. He had seen them grazing a cow to the acre. He cited the case of one Dutch dairy farm of 105 acres, on which were kept 35 cows, 8 heifers, 25 calves, 2 horses, and 25 milking ewes, and the farm raised all the feed except some meal for the cattle.

NOT HOLSTEIN, BUT DUTCH CATTLE.

By the way, he said, the Dutch people claim the cows we call Holsteins are not Holsteins, but Dutch cattle. Their name would imply that they came from one of the provinces of Holstein, in Germany. He himself was not prepared to pronounce upon the origin of the breed.

TERMS OF COW-TESTING WORK FOR 1908.

Regarding the cow-testing work, for which there is to be made this year a small charge of 20 cents per

cow, with a minimum of \$1.00 per herd, he explained that a few who had been in the co-operative associations were evidently under a misimpression. One man though it would be unnecessary to continue next year, as he would be having the same cows as last. Of course, he had missed the idea, as the object of the testing was to weed out the poor cows. He urged creamerymen and cheesemakers to take up the work for their own advantage, stating that where they were prepared to do the testing, the Department of Agriculture was prepared to allow 5 cents per test to any maker who proved competent to do the work, payment to be made on a basis of the reports sent in to Ottawa.

WEIGH THE MILK EVERY DAY.

A. Groh, of Waterloo County, rose to remark that he knew of one herd (which he modestly refrained from stating was his own) in which the milk of every cow had been weighed twice every day for the last nine years, and at the end of each year the totals were made up before the new year was twenty-four hours old, and not one member of the family ever thought of regarding the record-keeping as drudgery. Weighing three days a month is not enough. If you weigh every day you derive a double benefit, for the milk scales are a barometer of the feeding, and much better results are secured from the herd. J. H. Grisdale, Agriculturist of the Central Experimental Farm, strongly endorsed this idea. It is good, he said, to know, in a general way, what your cows are doing. It is of infinitely greater importance to know what they are doing every day. Weigh the milk twice every day.

FARM MANAGEMENT FROM THE DAIRYMAN'S STANDPOINT.

J. H. Grisdale, Agriculturist of the Central Experimental Farm, repeated his Picton address, ringing in some new matter which we synopsise, in part, as follows: The average farmer, with 100 acres, receives an annual revenue in the neighborhood of \$600 to \$700. The points he desired to impress were, first, that this is quite inadequate; second, the possibilities of farming, and, third, the fact that we are not living up to our possibilities. Two faults with our present agriculture are the disinclination to employ more help and do more work, and the disinclination to follow a systematic practice.

He urged the application of more labor to the land, citing some of the large farms in Lobo Township, Middlesex Co., where the land has been leased by cattlemen, and yields an average return of but \$3 or \$4 per acre. To the complaint that help could not be had, he said that in his district there is comparatively little trouble in securing men when they are employed by the year. We are fortunate enough to live in a country where it is not necessary, as in Europe, for the women to work in the fields. We have no cheap labor, but every farm will yield good wages if properly run. But we are not keeping enough cattle or enough men. We are not half utilizing the land we have. Many of us are land-poor. It isn't necessary to have a big farm to make a good revenue. He knew of a 120-acre farm in Dundas County whose owner, a few years ago, was putting away \$2,000 a year, after keeping a family and hiring some help.

ONE HEAD OF STOCK PER ACRE.

We ought to set before our minds an ideal of one head of stock per acre. He did not say everybody could reach it, but was satisfied it was a possibility. At the Experimental Farm some years ago, they set aside 40 acres of land, and gradually increased its stock-carrying capacity till it was able to keep 28 head of cattle the year round; supplying all bedding and feed. On the 200-acre farm, they now have 118 horses and cattle, 30 sheep and a large herd of swine.

It should be our aim to utilize every acre to the best possible advantage. To this end we must grow suitable crops, such as roots or, preferably, corn—corn preferably because it yields almost as many tons per acre, containing a larger amount of nutrients, and it requires much less labor of a less arduous kind. Roots, however, are excellent feed, and a combination of roots and corn silage will give the best results. Then, we want clover. It should be almost the only kind of hay grown. A little timothy may be raised for the driving horses, but there is nothing better than well-cured clover for working horses. Then in the way of grains, grow oats, peas and barley. He did not believe in growing much wheat. Even in Manitoba, in some of the older sections, he found them tired of growing all wheat; it was exhausting the land.

Having raised the crops, the handling and feeding is of utmost importance; caring for the cows ought to be a dairyman's first work, not the last. The man who calls the care of his cows a chore is not a real dairy farmer. Liberal summer feeding is important. For supplementing mid-summer pasture he strongly commended the silo. The dairyman without a silo is making a great mistake. He would not dairy a week without planning to build one. He had undertaken to run a dairy farm near Ottawa, and, after building a silo, it seemed to double the value of the corn crop. He saved a lot of bad language and dried-up cows. Chopping out cornstalks in winter is no joke. If you haven't a silo, begin now to save up a dollar a day, or week, or month, toward the first investment. The idea that corn cannot be grown on clay is nonsense. Plow it, get some humus in it, cultivate it, and it will grow corn all right. He cited the case of Mr. Ness,

in Quebec, and others, who grow fifteen to twenty tons of corn per acre on the stiffest clay. If you can't have summer silage, set aside twelve or fifteen acres near the building, and grow on it a three-year rotation of soil-crop—corn, mixed grain, seeded to clover, cropped one year and broken again for corn. For the rest of the farm he recommended a four-year rotation. The man who doesn't follow a rotation isn't giving his land a fair show. He is over-working some parts and over-cropping others. There is a besetting temptation to go on in this old way, putting the corn near the buildings and mixing the other crops up, just as it comes handy. Because a certain field has given a good crop of oats in a year, oats are put there again, and so on, and thus the haphazard system of cropping is continued. It is of the greatest importance to adopt a definite system of rotation and stick to it.



Frank Hearn,

Secretary Western Ontario Dairymen's Association, and Chief Dairy Instructor in Western Ontario.

A ton of green manure is worth as much as a ton of rotted, and it takes two tons of green manure to make one ton of rotted. His practice in manuring is to apply the manure direct to the fields in winter, spreading on the snow as long as this can be done without too much danger of overlapping, and, after that, putting the litter in small heaps to be spread early in spring. The latter practice is commonly adopted in manuring the hillsides. A member of the audience suggested that in winter spreading, a good plan is to mark the borders of the last course by piling up a few forkfuls of manure.

What about hauling out to the field in winter, and distributing with the spreader in spring? It is a question about that. The plan has some advantages, but he was inclined to favor the other way for the sake of earlier seeding.



A Pair of the Best Cows in Mr. Thompson's Herd.

The cow on the right gave 11,234 pounds of 3.2-per-cent milk in seven months. Cow on left gave 10,970 pounds of 3.2-per-cent milk in six months.

THE CHEAP PRODUCTION OF MILK.

The cow is the machine in the hands of the farmer for the production of milk. It is important to have good machines. Manufacturers scrap their old machinery as soon as they can find new that will accomplish their purpose a little more economically than the old. Having obtained good cows, feed them well. Bran, he agreed with the previous speakers, is one of the best feeds we have for the dairy cow, but at present prices there is not much profit in feeding it. He recalled the time when spouts from the grist mills were turning the bran into the river. Since then, press, college and Farmers' Institutes have preached up the value of bran, until now it is out of sight in price. But we need bran or some other feed rich in protein to feed with our corn silage. Silage is deficient in protein, and we can no more get milk from a ration without protein than we could get flour out of a mill by putting in sawdust. He then discussed the culture of alfalfa, bringing out much the same points as the previous week in Picton. In seeding, he recommended sowing with a nurse crop of about three pecks of barley per acre, which evoked from J. N. Paget, of Haldimand, the fact that in his county and the neighboring one of Brant they had had excellent success in seeding with peas, which, he believed, were usually a short-strawed variety.

NITRO-CULTURE.

The remaining points have been already covered, or will be covered, in our report of Mr. Glendinning's addresses on this subject. Suffice to note here that he strongly recommends the use of nitro-culture in treating alfalfa seed to be sown on ground that has never previously grown the crop, and in this connection strongly advises the sowing of the seed in front of the grain drills, afterwards harrowing, rolling, and scuffing with the weeder. The advantages claimed are more even distribution and even covering of the seed, and the protection of the seed from sunlight, which would destroy the bacteria with which it was inoculated, and nullify the effects of the treatment with nitro-culture.

SALTING OF HAY IS NOW CONDEMNED.

He disapproved the salting of any kind of hay in the mow, asking his hearers if any of them ever saw good bright, green hay come out of a mow in which salt had been used? When salted, it comes out brown, and the leaves drop off.

CAUSES OF FAILURE WITH ALFALFA.

Common failures with alfalfa he attributed to poor quality of seed, lack of inoculation, and, above all, to pasturing, especially in the fall. He repeated his estimate that he could grow and harvest alfalfa hay for \$2.00 per ton, and, on submitting his itemized statement, was not contradicted. For the past two winters he has fed his herd corn silage, straw, alfalfa hay and mangels, without bran or any grain, except the corn in the silage. He mentioned the case of the cow spoken of in our last week's report, and also another, a Jersey, some two weeks fresh, which, in seven days, yielded 290½ pounds of milk, or an average of 41½ pounds per day. Owing to the corn crop being short, last year, his supply of silage is more limited than usual, and the cows are therefore getting an unusually small allowance of it. The quantity and cost of her daily ration, not allowing anything for the straw, is as follows: Fifteen pounds silage, at \$2.00 per ton, 1½ cents per day; 60 pounds mangels, at \$2.00 per ton, 6 cents per day; 20 pounds alfalfa hay, at \$2.00 per ton, 2 cents per day; making up a daily ration at a cost of 9½ cents. It is all produced cheaply on the farm, and yields good returns and liberal profits in milk production.

THE POLITICIANS' INNINGS.

Wednesday evening was given over largely to the politicians. After Dairy Commissioner Ruddick had delivered his interesting stereopticon-illustrated lecture on "Some Phases of Dairying Abroad," Donald Sutherland, M. P. P., spoke briefly, but to the point, recalling the inspiring example of the late E. D. Tillson, who built up such a wonderful dairy herd. In 1898 his 55 cows averaged 10,242 pounds of milk, and the next year 10,933 pounds. In one year one cow gave 20,132 pounds of milk, and in four years 37 tons.

M. S. Schell, M. P., who followed, quoted statistics showing the wonderful growth of the export dairy trade in the past forty years. In 1868 the exports of cheese amounted to \$55,000; in 1907 to \$22,686,500. Adding to this the exports of butter and bacon, we find that, in some of the better years, the combined shipments totalled up to 48 or 49 millions a year, besides the large amount consumed at home. He urged better dairy practice, especially better feeding of the cows in summer. Corn silage will give as good results in summer as in winter feeding; perhaps they are even more appreciable. Every dairy farmer should grow a good crop of corn. It doesn't pay to allow the cows to come out in a weakened condition in the spring, and it pays even less to let the milk flow go down in the summer months. Feed succulent feed; feed ensilage, beets, alfalfa, clover, for 365 days in the year.

DAIRYING THE RIGHT ARM OF AGRICULTURE.

The dairy industry is the right arm of agriculture in Ontario, said Hon. Nelson Monteith, and he believed that the \$66,000 or so spent by his department last year in assisting it had been wisely expended—this by way of appreciation of the staff of instructors and those engaged in the industry. To-day, the consensus of information from Montreal is that, during the past year,

the product has been excellent, which fact, he believed, was a tribute to the instruction staff. What we must now strive for is the ability to produce cheaply an article of good quality. He felt justified in holding out to the farmers of this country the prospect of higher ruling prices for food products, notwithstanding the vast areas of new land being opened up. A higher range of prices will tend to send more people back to the land.

When in Europe, last summer, he was on the lookout for suggestions and ideas that might be of use to us here in Canada. He did find some conditions we might do well to copy, but, on the whole, he thought agriculture was on as high a plane in Canada as anywhere. It is true some countries of Europe are making their acres yield more than ours, but nowhere did he find implements to compete with those used by Ontario farmers. We may have overdone it a little in spreading out. There is room for improvement in the direction about that. The plan has some advantages, but employing more labor, but these changes will come. He hoped that before long our conditions will typify the best, and that our sons will soon be more ready to dwell in the homes of their fathers.

DAIRY CONDITIONS IMPROVING IN WESTERN ONTARIO.

Last season will be remembered as a successful one for the patrons, high prices prevailing, although the make was somewhat light in some sections owing to poor pastures, said Frank Hens, in presenting his first annual report as Chief Dairy Instructor and Sanitary Inspector in Western Ontario. It is to be hoped that milk producers will make preparation for summer silage or soiling crops for 1903. The makers have not all realized the profits they should, owing to short makes and too low prices for manufacturing.

The change in the system of dairy instruction, making all the instructors sanitary inspectors, and extending their services to all factories free of charge, has worked well, and the work was accomplished with one less instructor than last year.

SANITARY CONDITIONS IMPROVED.

More improvements have been brought about this year in the sanitary conditions of the factories, particularly in the matter of whey tanks, drains, floors, equipment, and inside and outside appearances. On the whole, the factories were never in better condition, though some are not up to what they should be, but improvements have been promised in these. The staff have tried to use judgment and common sense in dealing with sanitary conditions, believing that improvements could be brought about through time. They have tried not to abuse the position in which they were placed. He had written, and in a number of cases visited, several factories where the sanitary conditions were extremely bad, and in every case but one the necessary improvements were made, without further trouble. The instructors visited a number of patrons, giving instruction regarding the care of milk. Improvements were made where asked, especially in the matter of new cans to take the place of old and rusty ones.

DISCOURAGING ADULTERATION.

Early in the season, Mr. I. L. Farrington was appointed as a special officer to deal with cases of milk adulteration. Sixty patrons were prosecuted. All but one practically pleaded guilty to the charge, and were fined \$5 to \$35 by police magistrates. This is having a good effect. No settlements out of court were allowed. As one consequence of his appointment, the instructors were able to spend less time testing milk, and could pay more attention to visiting patrons and improving milk supply.

PASTEURIZING WHEY.

Once more he took the opportunity of strongly urging the heating of whey in the tanks to 165 degrees, for the reasons repeatedly set forth in these columns. The cost is only about 50 cents per ton of cheese, or 50 cents to \$1.00 for each patron—a mere trifle considering the benefits derived by the patrons in superior feeding value of the whey, saving of milk cans, superior quality of cheese, and otherwise.

IMPROVEMENTS ON FARMS AND IN FACTORIES.

Co-operation on the part of patrons was shown last season by the purchase of 1,688 new milk cans, and the repair of 298. One hundred and eighty-two factories in Western Ontario are using pasteurized culture, 189 factories are using the acidimeter, 19 factories only are paying by test, 12 factories have cool-curing rooms, 31 buildings were painted inside or out, 60 factories made general repairs, 16 put in new floors, 24 repaired the floors, 23 put in new whey tanks, 4 were built entirely new, 9 were entirely remodelled, 2 put in drains, 6 drilled wells, 7 put in cool-curing rooms, 23 put in new vats, 11 put in new curd mills, 12 put in new curd knives, 24 put in new hoops, 12 put in new presses, 12 put in new agitators, 15 put in new sinks and racks, 63 factories got new pumps, repaired boilers, got new scales, put in new engines and boilers, got new weigh cans, hot water barrels, etc. Total expenditure for improvements in factories in 1902, including new buildings, was \$37,882.00, or \$7,132.00 more than last year.

MANY SPEAKERS REQUESTED FOR ANNUAL MEETINGS.

A large number of applications for speakers to attend the annual factory meetings during January, February and March are coming in. At many of these meetings the patrons pass resolutions agreeing to pay the maker 50 cents per ton of cheese for pasteurizing the whey. At some of the meetings they also cheerfully raised the price for making cheese. District meetings were held during November and December in the different groups. Some of these were exceptionally well attended. Resolutions were passed at all these meetings against receiving milk rejected at neighboring factories.

WESTERN ONTARIO CHEESE STANDS HIGH.

Geo. H. Barr, formerly Chief Dairy Instructor in Western Ontario, now of the Dominion Dairy and Cold-storage Commission's staff, in which capacity he has been for the past season employed as official referee at Montreal, to decide disputes between buyers and sellers as to grade, warmly commended the quality of Western Ontario cheese, though pointing out that there was still room for improvement in reducing the number of seconds. In creamery butter, while comparing well with Townships butter in body, grain and color, the Western Ontario product was not equal to the Quebec makes in flavor, but the cream-gathered creamery butter in Western Ontario was equal to the cream-gathered creamery in Quebec. One good practice in the Quebec creameries was the designation of each churning. He agrees with Mr. Ruddick that our butter competitors in the Old Country markets will be Siberia and Ireland. He saw some Siberian butter in Montreal last summer, which, for color, body and grain, was equal to anything he had seen in Montreal last season. The flavor was not good, but allowance must be made for the distance it had come.

To keep up our position, we will require the very best skill and care in putting up our butter. He strongly appealed to the dairymen of Western Ontario not to build any more small factories. Most of the cheese he was called upon to examine in Montreal were from the small factories of Eastern Ontario. He took occasion to correct an erroneous impression of his Picton speech conveyed to the Montreal and Toronto press. For an exact report of what he did say there, see "The Farmer's Advocate" of January 16th, page 86.

LEEKY MILK.

He concluded with a recipe he had heard from a Quebec maker for leeky milk. This maker had occasion to reject a patron's milk several times for this cause, and afterwards noticed that his milk varied considerably in quantity from day to day. Meeting the patron, he inquired the cause. "Well," said the dairyman, "I concluded that some cows eat leeks and some don't. So, each time, before milking, I go around in front of each one and smell her breath. If it is all right, the milk is sent; if not, it is kept at home."

FACTORY-SEWAGE EXPERIMENTS.

In the absence of Dr. Hodgetts, who was billed to discuss the experiments he had been carrying on with factory sewage, Superintendent of Farmers' Institutes, G. A. Putnam, briefly reported that, at the request of the Department of Agriculture, Dr. Hodgetts, as Medical Health Officer, had undertaken to put in a couple of experimental plants for the disposal of factory sewage, one in the East, and one in the West. The one in the East was not installed according to contract, and was not tried. The one in the West was at Innerkip, and it worked to the Doctor's entire satisfaction. He wants to try it longer, however, before pronouncing.

MERE BUTTERMILKERS VS. CREAMERY SUPERINTENDENTS.

There are something like 10,000 buttermilkers and cheesemakers in the United States, said Ed. H. Webster, Chief of the Dairy Division, Washington. The demand that can be created for dairy products depends upon the quality. An evil of the butter business in the Republic is that the buyers will not discriminate as they should in paying for cream according to quality. Another evil is the large, centralized creamery. Where the cream requires more than 24 hours to reach the creamery, it is too long a shipment. One fruit of the centralizing system, as it has developed across the line, is that there are a large number of men buying cream over the counter in stores and shops of all kinds, even blacksmith shops; and if Smith won't take the cream, Brown will. The effects on quality of cream delivered and butter made can be imagined. The successful creameries are those in which the maker can come in touch with the patrons. His personality is an important factor. It is unfortunate that the term buttermilk has come into use to designate the creameryman's employment. The term is entirely inadequate to describe his work. While he must be an expert buttermilk maker, the creamery superintendent of the future will also require to be a business man, must be tactful, and must be given enough assistance to do his work right. By the expenditure of \$25 or \$30 a month for an extra apprentice, many a creamery could enable its creameryman in charge to save from \$300 to \$400 a month more. Would it not be a good investment?

Among the faults of some present-day American buttermilkers, he stated that many of them were wasting large quantities of butter-fat entrusted to their care. The man who purloined from the creamery's bank account hundreds of dollars a month would be immediately dismissed, yet some of them are losing the creamery hundreds of dollars a month in 25-cent pieces by wasting butter-fat. If an accurate daily account of their work were kept, they would be immediately discharged. He knew one case where a creamery was losing \$1,600 a month because the maker didn't know where his fat was going. Another fault was the loose system, or absence of any system, of keeping track of the output and other accounts. The buttermilkers need higher qualifications. The grade of work in the dairy schools must be raised, first, by better men coming in, and bringing better qualifications with them when they do come; and, secondly, by a broader training in the schools, with a view to fitting them for positions as creamery superintendents, instead of mere buttermilkers.

OTHER FEATURES.

Some excellent papers were read by Western Ontario dairymen and instructors, and a splendid address was delivered by Prof. Dean, of the O. A. C. Some of these will be quoted in full or extenso in subsequent issues. The final evening programme included a stereopticon address by Mr. Webster, together with addresses by Col. Munro, President G. C. Creelman, of the O. A. C.; G. A. Putnam, Superintendent of Farmers' Institutes and Director of Dairy Instruction; and Prof. R. Harcourt, of the Ontario Agricultural College.

A NEW TEST FOR CASEIN.

In the American dairy press there has recently been some prominence given to a new test for casein in milk, discovered by Prof. E. B. Hart, successor to Dr. Babcock, as Active Chemist, of the Wisconsin Experiment Station. At the Western Dairymen's Convention, a description of this test was given by J. H. Lund, an ex-student of the O. A. C., now studying in Wisconsin. Prof. Dean urged that Canadian dairymen give particular attention to this new test, which he hoped would prove serviceable in more accurately determining the value of milk for cheesemaking. Mr. Lund, in a few prefatory remarks, recalled the numerous tests of practical value to dairying which have been discovered in recent years. In 1890 came the Babcock test, and about the same time came the Harris rennet test. In 1895 we had the Wisconsin curd test. In 1903 the acidimeter came into use in Ontario cheese factories, while 1907 saw the introduction of three tests for moisture in butter and cheese.

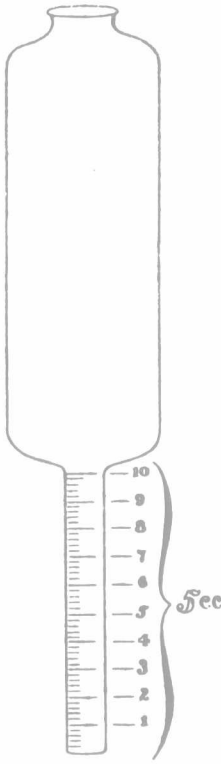
THE ADVANTAGES OF A TEST FOR CASEIN.

The advantages claimed for a practical casein test are that it will enable cheese factories to pay for milk more nearly according to its actual cheesemaking value. While the value of milk for buttermaking depends exclusively upon the percentage of butter-fat in the milk, analyses of cheese show that it contains not only 33 per cent. of butter-fat, but some 26 per cent. of casein compounds, along with 34 per cent. of water. While practically all of the albumen and sugar of milk are lost in the whey, 92 per cent. of the fat and 96 per cent. of the casein are retained in the cheese.

The subject of payment for milk at cheese factories is not by any means a new one. In 1891, Dr. Robertson advocated paying for milk on the basis of its percentage of butter-fat. While this method was not ideal, it was an improvement on the pooling system. Subsequent experiments at the O. A. C. led to the conclusion that a more equitable system was to pay for it on the basis of the percentage of fat plus 2, allowing two to represent the value of the casein in the milk, there being at that time no practicable test for the percentage of casein. Investigation shows, however, that the casein contained in the milk varies considerably, though not in proportion to the variation in fat content. Thus, in testing the product of 15,000 cows in New York State herds, it was found that the percentage of casein varied from 1.93 to 3 per cent., the average being 2.46 per cent. The fat in these cows' milk varied from 3.04 per cent., up to 4.6 per cent., the average being 3.75 per cent. Again, taking the results from a week's test of the milk of 12 patrons of the Wisconsin College creamery, they found that the relation of casein to fat varied from the proportions 60:100 up to 70:100. In one case, of two cows, whose milk each tested 4 per cent. fat, there was shown to be a difference in casein content of .4 per cent., and the relative cheesemaking values of these samples is apparent from the fact that 100 pounds of the sample of milk lower in casein content would make but 10.42 pounds of cheese, while 100 pounds of the milk higher in casein content would make 11.42 pounds of cheese. Comparing some individual cows, they found the relation of the casein to the fat varied from 46:100 up to 73:100, representing a great difference in cheesemaking values. It seems reasonable to suppose that, by breeding and selection, it would be possible, to get a strain of cows giving milk with a higher relation of casein to fat content, though, of course, the greater and more immediate benefit of the test, if generally adopted, would be the payment to each man of the precise amount which his milk was worth for cheesemaking purposes.

APPARATUS FOR MAKING THE TEST.

The casein test is comparatively simple—much simpler than the Babcock test for fat—and there are no dangerous or disagreeable acids to handle. The apparatus consists of a specially-prepared bottle, with a graduated neck, holding not less than 35 cubic centimeters up to the neck. The neck is graduated into 10 spaces, each of which represents 1 per cent. of casein when the test is completed, and, in order to obtain closer readings, each of these spaces is subdivided into 5 spaces representing two-tenths of a per cent. each. The capacity of the graduated neck of the bottle is 5 cubic centimeters, and, when the directions are followed, and the conditions of the test observed, the casein, in a sample of milk containing 2 per cent. casein, will occupy a volume of 1 c.c.—i. e., two spaces—and read 2 per cent. In addition to this bottle, is a centrifuge somewhat similar to that of the twentieth-century hand Babcock test, the essential condition being that it must be 15 inches in diameter. The speed of the centrifuge is regulated by a metronome (an automatic instrument used by music teachers for marking time).



DIRECTIONS FOR MAKING THE TEST.

To make the test, put 2 c.c.'s of chloroform in the test bottle, which will fill it up to the 4-per cent. mark; add 2 c.c.'s of dilute (.25 per cent.) acetic acid, heated to a temperature of 70 degrees F. To this is added 5 c.c.'s of the milk to be tested, which must also be heated to a temperature of 70 degrees F. Place the thumb over the top of the bottle, invert, and shake for 15 seconds. The bottle is then whirled for about 8 minutes by the centrifuge, at a speed of about 2,000 revolutions a minute. To regulate the speed of whirling, the metronome is set to give 56 beats per minute, and the crank of the centrifuge is turned once for every beat, giving the bottle a speed of 2,000 revolutions per minute. The test must not be read until ten minutes after whirling.

EXPLANATION OF THE TEST.

The theory of the test is based upon the fact that, of the two proteids in milk, casein and albumen, the casein will be coagulated with rennet, or with a small amount of dilute acid, while the albumen is not. The acid coagulates the casein, the chloroform dissolves the fat, the whirling masses the casein into a pellet. After whirling, the chloroform, with the fat in solution, occupies the space up to about the 3-per cent. mark, and the casein comes above it in a mass, the percentage of which may be easily read, much the same as the fat is read in the Babcock test bottle; that is, if the fat and chloroform come up to the 3-per cent. mark, and the top of the casein is up to the 5.5-per cent. mark, the percentage of casein is got by subtracting 3 per cent. from 5.5 per cent., leaving 2.5 per cent. Above this is the acetic-acid solution, containing the sugar and albumen. It is necessary to emphasize very strongly that the directions be followed implicitly, for any departure as to temperature, speed, and time of whirling, will alter the density of the curd and give a wrong reading. A comparison of the results of this test with those obtained by the official methods used in the Department of Agriculture at Washington, shows that the results correspond quite closely. Following is a comparison of the results of seven tests, not selected with a view to obtaining the closest results, but rather giving the widest range of inaccuracies that were found in a large number of tests. Even at this, the comparison shows that the new method does not, in any case, vary from the official one by more than two-tenths of one per cent., while in a large number of cases it tallies almost exactly. The advantage of the new method over the official one is that it is much simpler, and would appear adapted to ordinary factory practice:

New Method.	Official Test.
2.50 per cent. casein.	2.45 per cent. casein.
3.20 " " "	3.31 " " "
3.10 " " "	2.91 " " "
2.08 " " "	2.10 " " "
1.88 " " "	1.88 " " "
3.70 " " "	3.50 " " "
2.55 " " "	2.61 " " "

RESOLUTIONS AND OFFICERS.

Resolutions were passed expressing:
 Thanks to the speakers;
 Appreciation of the kindness of the city in furnishing the use of the Opera House and Market Hall, together with the excellent musical part of the programme, free of charge for the convention and dairy exhibition;
 The thanks of the convention to the Canadian Salt Co., of Windsor, Ont., through their general manager, Mr. Henderson, for the handsome medals and badges presented by the company to the members;
 That we, as dairymen, feel that we are under great

obligation to the Department of Agriculture for the assistance they have rendered the dairy industry through the system of instruction that has been given, and, also, in providing speakers to attend annual meetings of cheese factories and creameries free of all cost to the dairymen;

The satisfaction of the Association with the work of the special officer appointed to take charge of the work regarding the adulteration of milk, and we recommend to the Board of Directors for 1908 the continuance of his services;

Appreciation and thanks for the courtesy of the press.

OFFICERS.

The following Board of Directors were elected: John Brodie, Mapleton; J. J. Parsons, Jarvis; J. H. Scott, Exeter; William Waddell, Kerwood; Geo. Boyce, Putnam; J. N. Paget, Canboro; S. R. Wallace, Burgessville; D. A. Dempsey, Stratford; W. A. Stokes, Listowel; J. B. Smith, Alton. Representatives to the Canadian National Exhibition: Robt. Johnson, Woodstock; to the Western Fair—Geo. McKenzie, Ingersoll. Auditors: J. H. Nelles, London, and J. C. Hegler, Ingersoll. At a Directors' meeting immediately following, a president and vice-presidents were elected as follows: President, John Brodie; 1st Vice-President, J. J. Parsons; 2nd Vice-President, J. H. Scott; 3rd Vice-President, William Waddell.

THE DAIRY EXHIBITION.

The annual exhibition of butter and cheese, held in connection with the convention, was a decided success in every way. There were, in all, 156 entries in cheese, or 13 more than last year; while the entries of butter numbered 32. The cheese, in particular, was of a uniformly high quality, there being many ties for prize money, and many excellent cheeses that had to go minus distinction. Following is the list of awards:

September white cheese—1, Mary Morrison, Newry, 96; 2, Jas. Paton, Atwood, 95.08; 3, J. E. Stedelbauer, Fordwich, 95; 4, Alex. McCallum, Kintore, 94.91.

September colored cheese—1, C. Donnelly, Scottsville, 95.66; 2, W. A. Bell, Pine River, 94.50; 3, G. R. Stone, Curries' Crossing, 94.41; 4, M. Stevens, Carlholme, 94.33.

October white cheese—1, Mary Morrison, Newry, 95.16; tie for 2, W. S. Stocks, Britton, 95; tie for 2, J. E. Delmage, Trowbridge, 95; 4, J. T. Donnelly, Union, 94.83.

October colored cheese—1, E. Glntner, Winger, 94.83; 2, J. T. Donnelly, Union, 94.50; 3, J. E. Stedelbauer, Fordwich, 94.33; 4, F. McNeil, Listowel, 94.16.

Fifty-six-pound box creamery butter—1, Jno. Cuthbertson, Sebringville, 92.50; 2, R. A. Thompson, Atwood, 92.16; tie for 3, F. E. Brown, Petrolia, 92; tie for 3, R. C. Bothwell, Hickson, 92; tie for 3, E. M. Johnston, Innerkip, 92.

Twenty one-pound prints creamery butter—1, R. Johnston, Bright, 94.16; tie for 2, J. B. Doan, Birnam, 93.16; tie for 2, R. C. Bothwell, Hickson, 93.16; tie for 2, W. Waddell, Kerwood, 93.16.

Fifty-six-pound box October creamery butter—1, F. E. Brown, Petrolia, 93.58; 2, W. Waddell, Kerwood, 93.14; 3, J. E. Wilson, Keyser, 92.31; 4, J. R. Almont, Welland, 91.67.

SPECIAL PRIZES.

Cheese Buyers' Trophy, for highest-scoring cheese—Mary Morrison, Newry.

Special, September white, by the Ballantyne Dairy Supply Co.—J. E. Stedelbauer, Fordwich.

Special, September colored, by C. H. Slawson & Co.—C. Donnelly, Scottsville.

Special, October white, by C. H. Slawson & Co.—(Tie) W. S. Stocks, Britton, and J. E. Delmage, Trowbridge.

Special, October colored, by the Ballantyne Dairy Supply Co.—J. T. Donnelly, Union.

Special, by the Heller & Merz Co., to the butter-maker securing the highest score on butter in classes three and four, colored with Alderney butter color—1, R. Johnston, Bright; 2, F. E. Brown, Petrolia.

Special, for the best finished cheese, by the J. B. Ford Co.—J. E. Stedelbauer, Fordwich.

Special, for the neatest and most attractive exhibit of butter, by the J. B. Ford Co.—Jno Cuthbertson, Sebringville.

On Thursday practically all the cheese on exhibition was sold at auction, and realized the following prices:

September, white, 2,235 pounds at 12½c.	\$ 279 37
September, colored, 2,900 pounds at 12½c.	366 12
October, white, 2,536 pounds at 12½c.	317 00
October, colored, 2,963 pounds at 12½c.	374 07
Total.....	\$1,336 56

For the beautiful badges, donated to the Eastern and Western Association, acknowledgments are due the Canadian Salt Co., Windsor.

GARDEN & ORCHARD.

FILLERS IN APPLE ORCHARD.

I intend to set out a large orchard—12 to 15 acres—and would like all the information you can give me. I have decided to plant the permanent trees, McIntosh and Fameuse, and perhaps Alexander or St. Lawrence, every fourth row, to fertilize the McIntosh. I do not know how large the McIntosh tree grows, so do not know just how far the permanent trees should be apart. I want the permanent trees to be just as close as they can, and not be too close. I will, if I plant fillers, take them out just as soon as they ought to be taken out. Would thirty feet each way be too close for the permanent trees? R. T. W. Addington Co., Ont.

I approve of the plan of setting out a commercial orchard of Fameuse and McIntosh for your section. I cannot say, however, that I would recommend Alexander or St. Lawrence for fillers. Neither of these come into bearing any earlier than the other varieties, and make quite as large trees. The Alexander might, no doubt, prove profitable, but the fruit of St. Lawrence is too tender and bruises too readily to be a good commercial variety, nor is it as productive as it should be for first-class commercial variety. I would be inclined to recommend Duchess and Wealthy in preference to Alexander or St. Lawrence. Both of these come into bearing early, and bear heavily; in fact, often require thinning to give the best results. Some growers hesitate about planting Duchess largely on account of its season, but the experience of growers who are now handling it on a commercial scale proves that it is one of the most profitable varieties when picked in time and properly handled.

With regard to the distance apart for planting, this is a matter you can judge for your soil and neighborhood better than anyone at a distance. The largest trees I have seen of McIntosh are about the same size as Fameuse of the same age, so that I do not think it will much out-grow that variety. I would be inclined to plant at least thirty-three feet apart, rather than run the risk of being too close at thirty feet, and I would recommend planting on the hexagonal method rather than on the square, if you want to economize space. You will find this method described in bulletin on Apple Culture, by H. L. Hutt, of the Ontario Agricultural College, which may be had on application. O. A. C. H. L. HUTT.

HORTICULTURAL PROGRESS.

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

RENEWING OLD ORCHARDS.

"Renewal of Old Orchards," by F. H. Ballou, Ohio Agricultural Experiment Station, Bulletin 80.—There are many old orchards in Canada which need renewing, and this bulletin describes how this is done, and gives the results of experiments which show the benefit of the system advised.

At the Experiment Station at Wooster, there is an apple orchard over 40 years old, where the trees had become too tall to spray easily, and from which it was very difficult to pick the fruit, as, like many a similar orchard in Canada, most of the fruit was produced far up on the topmost branches. It was decided to cut back these branches severely, so as to induce the development of branches lower down on limbs which were more or less bare, and where fruit never developed properly, owing to lack of light. The work was begun in the latter part of March, 1905. The large branches were removed with a sloping cut, in order to shed rain, and some days later the wounds were painted with a heavy coat of thick paint made of pure white lead and boiled linseed oil. This painting should be done after the wounds have become dry, otherwise it will not adhere well.

The results of heading back were soon apparent, and there was a heavy crop of fruit on the lower branches where before it fell off prematurely. Spraying could be done very effectually, at comparatively little expense. Not only was there a heavy crop of fruit, but a vigorous growth of new wood from the stubs of branches, and, before the end of the first season, the loss of the upper branches could hardly be noticed, as, in addition to the vigorous growth, the trees had, to a large extent, regained a well-rounded head. Before the second season's growth was over, one-half the new shoots were cut out, and those which were left headed back with pruning shears from one-third to one-half their length. This thinning and cutting back was done to keep the trees of a low, compact habit, and to encourage the development of fruit buds. The cutting back of these trees not only did not result in a decreased crop for the time being, but "the total product was materially increased by the treatment," and the individual specimens showed

a marked increase as well. Satisfactory results were also obtained from the heading back of peaches and plums.

The following recommendations contain additional information. "Cut out the topmost branches the first season of renewal, leaving all healthy side branches. The next season these horizontal branches may have their extremities lopped back with the pruners in such a way as to promote a uniform, well-rounded, symmetrical head or top.

"It will be necessary to saw large branches first on the under side, then on the upper side, a few inches farther out or up on the branch in the direction of its growth. This allows the branch to break off without splitting the part remaining. A second cut at an angle can then be made without difficulty, leaving a smooth, clean-cut stub.

"Renewal of orchards may profitably be accompanied by the addition of stable manure, either worked into the soil beneath the extremities of the branches, or allowed to remain upon the surface, to be covered later with straw or other coarse material applied as a mulch. The combination of renewal and fertilization will work wonders in the rejuvenation of many old orchards, long considered unprofitable and valueless."

Dead limbs are sawn off; weak branches braced with bolt and bit; holes are cleaned out, sprayed inside with Bordeaux mixture, and filled with Portland cement; rough trunks and branches are scraped, and the surface washed and sprayed with Bordeaux mixture. Thorough spraying with Bordeaux mixture and insecticides will also be necessary.

THE FARM BULLETIN.

THE WOODSTOCK SHORTHORN SALE.

The joint sale, at Woodstock, Ont., on Jan. 16th, of Shorthorn cattle from the herds of Messrs. H. J. Davis and J. W. Innis, Woodstock, and John T. Gibson, Denfield, Ont., brought together a moderate attendance of farmers and breeders. The cattle were a very useful offering, in good condition; but, owing largely to the scarcity of feed in the country, bidding was not very brisk, and good bargains were secured by buyers, though the average of within a few cents of \$100 is not particularly discouraging in the case of a draft sale. We give below a list of those selling for \$75 and upwards:

Mount Royal (imp.) (bull); born 1906; G. D. Fletcher, Binkham.....	\$250
Cinderella 10th (imp.); 1904; C. Kirk, Maplewood. 205	
Deaside Roan Lady 2nd (imp.); 1904; G. D. Fletcher	175
Broadhooks Champion (bull); 1907; Robinson Bros., St. Mary's	160
Clipper of the Manor 6th; 1906; F. R. Shore; White Oak	115
Tilbouries Duchess 3rd (imp.); 1898; R. D. Cuthbert, Sweaburg	140
Broadhooks Hero (bull); 1907; McDonald Bros., Woodstock	125
Claret Chief (bull); 1906; Thos. Cole, South Zorra	100
Merry Lass 11th; 1906; C. Kirk	90
Proud Ramsden; 1906; C. W. Carroll	85
Rosedale 20th; 1897; H. Usher, Queenston.....	80
Roan Ramsden; 1907; G. Glover, Hickson.....	80
Proud Primrose; 1906; C. Kirk	75
Kilblean Archer; 1907; A. Clarkson, Woodstock..	75

ANNUAL CONVENTION OF CANADIAN SEED-GROWERS' ASSOCIATION.

The fourth convention of the Canadian Seed-growers' Association will meet at the Canadian Building, Ottawa, on February 3rd and 4th, 1908, when addresses on topics of vital interest to Canadian agriculturists will be delivered by prominent men. The above association is growing steadily in membership, and is gradually coming to have a more potent influence on the general agriculture of the country. The total number of members and applicants on the list at the time the work was inspected was 577. Since that time there has been a substantial increase in numbers, as will be shown in the Secretary's report, which will be presented before the above meeting.

The scope of work which this organization has in hand is broad, clear, and definite. At the present time in Canada practically every industry, whether it be the live-stock industry or the manufacturing industry, depends largely upon our ability to grow suitable and adequate grain and fodder crops. To grow these crops successfully, proper cultivation must be given the soil and suitable seed must be used. To get the best seed certain well-established laws must be observed, and it is in the encouraging of this observance, and in systematizing the work so that this may be made practicable, that the association is proving itself useful. The need of a basis of supply of home-grown seed in every locality is gradually becoming more urgent as the superiority of such seed becomes known. Apart from the educational side of the work, the association has, therefore, a very practical work in hand.

The report of the above meeting, giving the addresses

and discussions, together with the Secretary's report, will be printed in due time, a copy of which report may be had by applying to the Secretary, Canadian Seed-growers' Association, Canadian Building, Ottawa, Ont.

INSPECTION OF FOREST RESERVES.

The staff of the Forestry Branch of the Interior Department, Ottawa, has been greatly strengthened by the appointment to the position of Inspector of Forest Reserves of Mr. A. Knechtel, lately the Forester employed by the New York State Forest, Fish and Game Commission. This is but one step in the direction of enlarging and strengthening the staff of the Forestry Branch, which is being done as rapidly as trained men become available. It is also a good example of the fact that the tide is turning in the direction of Canada, and that Canadians who have gone over to the United States are finding that Canada is now offering greater opportunities.

Mr. Knechtel is a native of Huron County, Ontario, where he helped to clear his father's farm. He taught school for a number of years in Canada and afterward in the United States. He completed the three years' agricultural course in the Michigan Agricultural College, and graduated with the degree of Bachelor of Science. His forestry course was taken at Cornell University, where he received the degree of Forest Engineer from the New York State College of Forestry. While teaching school and attending college, he spent his vacations looking after the work in a sawmill owned by him in Muskoka.

After completing his course he was first employed by the United States Bureau of Forestry in making a study of the natural regeneration of the commercial trees of the Adirondacks. Since that time he has been the Forester for the Forest, Fish and Game Commission for New York State, under direction of which he made a classification of the forest lands of the state, established forest nurseries, superintended the planting of 500,000 trees in the Adirondacks, organized the work of collecting forest-tree seeds, and took charge of the fire-protective service.

In 1904 he made a four months' tour of Europe, visiting France, Germany, Austria, Switzerland and Italy, studying and photographing the forests.

Mr. Knechtel has published a number of bulletins and articles on forestry subjects. Some of the more important are: "The Cultivated Forests of Europe," "Methods of Estimating and Measuring Standing Timber," and "Making a Wood-lot from Seed."

FORTHCOMING EVENTS.

Jan. 28th to 30th—Nova Scotia Farmers' Convention at Antigonish.	
Feb. 3rd.—Dominion Cattle-breeders' Association, Toronto.	
Feb. 4th.—Dominion Sheep-breeders' Association, Toronto.	
Feb. 4th.—Dominion Swine-breeders' Association, Toronto.	
Feb. 3rd and 4th.—Canadian Seed-growers' annual convention, at Ottawa.	
Feb. 4th.—Annual meeting Dominion Shorthorn Association, in Toronto.	
Feb. 5th to 7th.—National Live-stock Convention, at Ottawa.	
Feb. 12th.—Canadian Holstein-Friesian Association, annual meeting, Toronto.	
Feb. 12th.—Canadian Ayrshire Breeders' Association, annual meeting, Toronto.	
Feb. 12th to 14th.—Ontario Horse-breeders' Show, at Toronto.	
Feb. 20th.—Prince Edward Island Dairymen's Convention, Charlottetown.	
May 4th to 9th.—Canadian National Horse Show, Toronto.	

AN EXHIBITION FOR MONTREAL.

The Montreal Business Men's League and other organizations have been holding meetings and distributing literature looking to the establishment of annual live-stock and industrial exhibitions in that city, somewhat on the lines of the Toronto Exhibition. In 1903 the Montreal Industrial Exhibition Association was incorporated, and a series of by-laws adopted for its government, and a grant was tentatively voted by the city council, and another by the Provincial Government; but, owing to the inability of the committees representing the city and other interests to agree upon a site, no further action has been taken, other than the holding of a meeting on the 16th for discussion of the situation and the adoption of a resolution requesting the committees to make another effort to bring the project into effect. It would appear possible, if personal interest is discarded, with united action by the city and the various organizations interested to establish a very successful exhibition in Montreal, such as would well repay the city, and prove a strong influence in improving the live-stock and general agricultural conditions in the Province of Quebec. It requires earnest, unselfish and persistent effort to make a success of such a project, but it is well worth to a city and Province all it costs, financially and otherwise.

'WHERE THE POOREST LIVES IN ABUNDANCE.'

Editor "The Farmer's Advocate":

We have now entered upon another year, and, looking back over the past, the Prince Edward Island farmer may say, like the Psalmist of old: "The lines are fallen unto me in pleasant places; yea, I have a goodly heritage." True he may not make as much money as his brother in the "Golden West," but he generally has enough and to spare. The poet Longfellow's description of the Acadian farmers, in his *Evangeline*,—

"There the richest was poor,
And the poorest lived in abundance;"—

applies to the Prince Edward Islander in a very marked manner. There are doubtless a few people not so well fed and clothed as one could wish, due, generally, to laziness and shiftlessness; but the heartrending scenes of poverty and misery so prevalent in the Old Land are entirely unknown here. We have had both a green Christmas and New Year. Very few farmers have their supply of wood out yet, as there have only been a few weeks of sleighing this winter. We have had a very mild winter here so far, which has helped out the feed greatly. Personally, we have a good supply of straw, but are short of hay for our milk cows, as the clover was all winter-killed last year; and after seeing the fields all stripped of snow so often this winter, the prospects are that this year it will be the same. With the New Year, a new time-table, or, rather, the one which gave such dissatisfaction last winter on the railroad, has again come into force. Some idea of the wretched train service this gives may be gathered from the fact that on three days a week nobody living west of Charlottetown can go to the city by rail and return the same day, as the last outward-bound train leaves Charlottetown about two hours before the first train arrives. Pork has dropped in price since last writing. Beef is dull. Hides have gone down almost to nothing; but butter is higher than before. Eggs are also a good price. If more farmers would go in for winter dairying and pork-raising, instead of selling off their produce, they would improve their farms and better themselves financially as well, as, without a doubt, this is the best paying branch of farm husbandry.

There are fourteen Prince Edward Island students taking the short course at the Agricultural College, Truro, and Island exhibitors did well at the Amherst Winter Fair, especially in the sheep and swine classes. Queen's County, P. E. I. E. R. Y.

A BRAVE YOUNG IMMIGRANT.

Editor "The Farmer's Advocate":

In reply to "Subscriber's" letter in January 9th issue, I think he is a bit too hard on the immigrants coming to this country. He apparently judges all by those around him—there are good and bad in all classes; but I could find half a dozen immigrants to match any half-dozen Canadians. There are lots around here that are preferred to lots of Canadians; are earning good money, and their employers are glad enough to get them another year. Let "Subscriber" go to England or Scotland, and see how he would get on at strange work in a strange land, as a lot of immigrants have to out here. Seeing that a lot come from the cities straight to a farm, many of them do remarkably well. I think many Canadians impose on them too much by what I have seen and heard. I hope "Subscriber" will look to both sides of the matter in the future. Wishing "The Farmer's Advocate" every success.
SIXTEEN-YEAR-OLD IMMIGRANT.
Bruce Co., Ont.

AMERICAN BREEDERS' CONVENTION.

The annual meeting of the American Animal- and Plant-breeders' Association will be held in Washington, D. C., January 28 to 30. A railroad rate of 1-1-3 for the round trip on the certificate plan has been granted to those attending this convention from points east of the Mississippi and south of the Ohio River; east of Pittsburg, Oil City and Buffalo, and in Canada, east of Port Arthur. The Programme, which may be had on application to the Secretary, Hon. W. M. Hays, Washington, D. C., covers a very wide field and a brilliant array of speakers is listed.

During the recent period of financial disturbance and unrest, which has been reflected to some extent in Canada, it is assuring to note how readily and safely crises are met by our admirably-conceived, soundly-organized, and conservatively-managed banking system. The latest example is the absorption of the embarrassed Sovereign Bank by twelve other banks, which assumed its obligations and took over its business. When all arrangements were completed, it was announced that the various branches of the Sovereign Bank would open one morning as branches of other banks. Depositors were guaranteed their money, no serious loss was sustained by anyone, shock was avoided, and financial credit scarcely impaired. How different from the result of the failure of American banks!

The Large Assets

\$38,000,000

OF THE

Bank of Toronto

Afford to the depositor the feeling of confidence and safety one should have who entrusts his savings to the keeping of another.

The excess of these assets over what the bank owes the public is more than \$8,800,000, which represents the surplus security for depositors and others.

Capital, Reserve and Undivided Profits \$4,000,000 4,650,000

Interest paid on Savings Deposits at the 73 Branches of the

Bank of Toronto

MARKETS.

TORONTO.

LIVE STOCK.

The receipts of live stock at the City and Junction markets last week were fairly liberal. Trade was brisk and prices firmer all round, with the exception of hogs. There were 264 cars, composed of 4,277 cattle, 3,509 hogs, 3,388 sheep, with 195 calves, and 152 horses.

Receipts of cattle at the Junction on Monday, 20th, numbered 1,205 head; prices easy; quality fair. Export steers, \$4.75 to \$5.25; picked butchers', \$4.75 to \$5; good, \$4.50 to \$4.70; medium, \$4.15 to \$4.40; common, \$3.75 to \$4; cows, \$3 to \$4; export bulls, \$3.75 to \$4.25; milk cows, \$35 to \$45; calves, \$4.70 to \$7 per cwt. Sheep, \$4 to \$4.50; lambs, \$6 to \$6.50 per cwt. Hogs, \$5.50 for selects, fed and watered, or \$5.25, f. o. b., cars at country points.

Exporters.—Prices last week ranged from \$4.75 to \$5 for steers, and \$3.75 to \$4 per cwt. for export bulls. Butchers'.—Prices ranged from \$4.75 to \$5.15 for choice picked cattle, which were scarce; loads of good, \$4 to \$4.60; medium, \$4.15 to \$4.35; common, \$3.50 to \$4; cows, \$3 to \$4 per cwt.; canners, \$1 to \$2 per cwt.

Stockers and Feeders.—Not many feeders or stockers were offered. There is a demand for good-weight steers, say 1,100 to 1,150 lbs. each, which would be worth from \$3.75 to \$4 per cwt. There were five steers, 1,100 lbs. each, bought by a farmer at \$4.25 per cwt., but they were classed by the dealers as short-keep feeders.

Milkers and Springers.—There was a quiet trade of milkers and forward springers, at prices ranging from \$25 to \$55 each, the bulk selling at \$35 to \$45 each.

Veal Calves.—The market for veal calves was strong, at prices ranging from \$3.50 to \$7 per cwt., the latter price being for choice, new-milk-fed calves.

Sheep and Lambs.—Receipts were moderate, with prices higher. Export ewes sold at \$4 to \$4.30 per cwt.; rams and culls, \$3.25 to \$3.75; lambs, \$5.50 to \$6.50 per cwt.

Hogs.—Receipts were none too large, but prices weakened at the latter end of the week. Selects were quoted at \$5.70, and light fats at \$5.45 per cwt.

Horses.—Since the opening of the Horse Exchange, on January 6th, at the Union Stock-yards, at Toronto Junction, 275 horses have been sold, up to the 15th, which is certainly phenomenal for a new business just starting. The new stables are very popular with the dealers and drivers from all over the country. Herbert Smith, the manager, reports a good demand for general-purpose horses and heavy drafters of good quality; but drivers are hard to sell, unless they are of choice quality and well broken. Messrs. Conn, of Ottawa, La Rose and

Bell, of Edmonton, bought a carload each. Drafters sold at \$150 to \$200 each; general-purpose horses at \$130 to \$185; drivers at \$100 to \$165; serviceably-sound horses at \$30 to \$100 each.

BREADSTUFFS.

Wheat.—No. 2 white, 98c. to 98½c.; No. 2 mixed, 97½c.; Manitoba, No. 1 Northern, \$1.17; feed wheat, 70c.; No. 2 feed, 66c.

Rye.—No. 2, 80c. to 81c. Peas.—82c. to 85c., outside points. Buckwheat.—66c.

Barley.—No. 2, 85c. asked. Oats.—No. 2 white, 52c., track, Toronto; No. 2, mixed, 47c. to 48c.

Bran.—Wholesale dealers report car lots, offered in bags, on track at Toronto, at \$23, and shorts at \$25, also in bags.

Corn.—No. 2 American yellow, 64c. to 65c., Toronto freights; No. 3 yellow, kiln dried, 66½c. Quotations on Canadian corn, nominal, at 57c.

Flour.—Ontario patents, \$3.75; Manitoba patents, special brands, \$5.80 to \$6; seconds, \$5.20 to \$5.40; strong bakers', \$5.10 to \$5.30.

COUNTRY PRODUCE.

Butter.—Market about steady. Prices unchanged. Creamery, pound rolls, 29c. to 30c.; creamery, boxes, 29c. to 30c.; dairy, pound rolls, 27c. to 28c.; tubs, 25c. to 26c.

Eggs.—New-laid, 30c.; cold-storage, 22c. New-laid eggs, by the basket, from farmers' wagons, at 35c. to 40c. per dozen.

Poultry.—Turkeys, dressed, 17c. to 19c.; geese, 10c. to 12c.; ducks, 10c. to 12c.; chickens, 10c. to 12c.; old fowl, 8c. to 9c.

Cheese.—Market steady. Large, 13½c.; twins, 13½c.

Honey.—Prices firm, but unchanged. Extracted, 13c.; combs, in dozen sections, \$2.75 to \$3 per dozen.

Potatoes.—Car lots of Ontarios firmer at 80c. per bag, in car lots, at Toronto. Beans.—\$1.70 to \$1.75 for primes, and \$1.80 to \$1.85 for hand-picked.

Hay.—Baled, in car lots, on track, at Toronto, at \$16 to \$17.

Straw.—Baled, in car lots, on track at Toronto, \$9.50 to \$10.

TORONTO FRUIT.

Apples.—Deliveries on the Toronto farmers' market have been large, with prices easy at \$2.50 to \$3 per barrel for second-class Spies, and \$3.50 to \$3.75 for No. 1 Spies. Dealers hold No. 1 Spies at \$4 per bbl.

SEEDS.

The William Rennie Seed Co. report the market a little more active, with prices firmer, as follows: Alsike, fancy, bushel, \$8.25 to \$8.60; No. 1 alsike, \$8 to \$8.25; No. 2, \$6.75 to \$7.25; red clover seed firmer at \$10 to \$10.25.

HIDES AND WOOL.

E. T. Carter & Co., 85 East Front Street, wholesale dealers in wool and hides, report prices as follows: Inspected hides, No. 1, cows and steers, 5c.; inspected, No. 2, cows and steers, 4c.; country hides, cured, 4c.; calf skins, 7c. to 8c.; kips, 6c.; horse hides, No. 1, each, \$2; horse hides, No. 2, each, \$1; horse hair, per lb., 26c.; tallow, per lb., 5c. to 6c.; wool, unwashed, 10c.; wool, washed, 19c. to 20c.; rejects, 14c.; lamb skins, 75c. to 85c.

CHICAGO.

Cattle.—Beeves, \$3.65 to \$6.25; cows and heifers, \$1.40 to \$4.50; stockers and feeders, \$2.50 to \$4.70.

Hogs.—Receipts light, \$4.15 to \$4.45; mixed, \$4.20 to \$4.55; heavy, \$4.20 to \$4.55; rough, \$4.20; bulk of sales, \$4.35 to \$4.45.

Sheep and Lambs.—Native, \$3.50 to \$5.70; Western, \$3.50 to \$5.70; yearlings, \$5 to \$6; lambs, \$5.50 to \$7.30; Western, \$5 to \$7.30.

BUFFALO.

Cattle.—Prime steers, \$5.50 to \$5.85. Hogs.—Heavy and mixed, \$4.55; Yorkers, \$4.55 to \$4.60; pigs, \$4.60; dairies, \$4.50 to \$4.60.

Sheep and Lambs.—Lambs, \$5 to \$7.50.

BRITISH CATTLE MARKET.

London.—London cables, 11c. to 13c. per lb., dressed weight; refrigerator beef, 92c. to 94c. per lb.

MONTREAL.

Live Stock.—The general tone of the local live-stock market is firm, this being particularly the case with cattle. The supply of these was fairly large all week, but the proportion of choice stock was very small, and will probably continue so. It is stated that it is almost impossible to obtain choice cattle in the country, owing, possibly, to the high prices which prevailed for feed all this season. In many cases as much as 5c. per lb. is being paid in the country. This stock naturally cannot be sold here at less than 5½c.; fine cattle being around 4½c. to 5c.; good, 4½c. to 4¾c.; medium, 3¾c. to 4¾c.; common, 3c. to 3¾c. and inferior, 2½c. to 3c. The market for sheep, also, was firmer, and about 1c. up, owing to scarcity, at 4c. to 4½c. per lb. for good sheep for export, and 3½c. to 3¾c. for good butchers', and 3c. to 3½c. for culls. Lambs are in good demand, at 6c. for choice and down to 5c. for common. Hogs are much more freely offered at the moment, and, as a result, prices are lower. The best bid obtainable seems to be about 6½c., but holders are reluctant to accept that figure.

Horses.—Dealers continue to report a dull demand for horses of all grades, the only sales heard of being a few for out-of-town points. Prices are steady, as follows: Heavy-draft horses, weighing 1,500 to 1,700 lbs., each, \$250 to \$300; light-draft, 1,400 to 1,500 lbs., \$225 to \$275 each; good blocks, 1,300 to 1,400 lbs., \$200 to \$225; express horses, \$150 to \$225; common plugs, \$50 to \$75 each, and choice saddle and carriage horses, \$300 to \$500.

Dressed Hogs and Provisions.—The market for dressed hogs resisted the decline in live to a considerable extent, but purchases were made here and there at lower figures. Generally speaking, fresh-killed, abattoir-dressed stock was quoted at 8½c. to 9c., and country-dressed at 8c. to 8½c., but purchases were probably made at 1c. under these figures. Demand was good for hogs, as also for bacon, hams and all lines of provisions, the weather being cold and favorable. Hams weighing 25 lbs. and more, are still selling at 12½c. per lb.; weighing 18 to 25 lbs., 13c.; down to 8 lbs., 13½c. Bacon, steady, at 10½c. to 12c. for green, and up to 15c. for choice smoked. Lard holds steady at 12c. to 12½c. for pure, and 9c. to 9½c. for compound. Barrelled pork is steady at \$20 to \$21 per bbl.

Potatoes.—The market for potatoes is exceedingly dull, one dealer reporting that he never saw it so dull before. There are a great many poor potatoes in the market, and this has a bad effect on trade. Prices continue about the same as a week ago. Dealers are paying 80c. per 90 lbs. for choice Green Mountain stock, carloads, on track, and selling in smaller lots, same position, at 90c., or bagged and delivered into stores at 95c. to \$1, according to quantity. Best Quebec stock is quoted at about 5c. less than these figures. Inferior potatoes may be had at 30c. less than figures quoted for choice.

Poultry.—The market was reported firm again this week. Turkeys are evidently in good demand at from 14c. to 16c., according to quality and quantity; while chickens have been sold as high as 13c. for very choice, and 11c. for good, geese being 10c. to 11c., and fowl, 7c. to 9c. per lb. There are very few ducks in the market, and there is practically no enquiry for them. There is no great quantity of any kind of poultry offering, and prices are firm.

Eggs.—No. 1 cold-storage stock is selling at around 22c. per dozen, limes being around the same figure. Select cold-storage are 25c. and even 26c.; while fresh-laid, so called, bring 35c., some say 40c., and others much less. Apparently it is a matter of quality.

Butter.—There have been a number of attempts to boom the market, but these have fallen flat, as there is sufficient stock here to satisfy demand. Current receipts may be had at 26½c. to 27c. per lb., the former figure being probably on the low side now, and 27½c. being more frequent. Grass butter may be quoted all the way from 28c. to 29c. per lb. The outlook is fairly firm, and an advance in the near future is among the probabilities.

Cheese.—There has been a fairly good demand from the other side for cheese; but, so far, prices have shown practically no change. A few holders are de-

manding higher prices, but purchases of Octobers may still be made at 12½c. per lb. for white, and 13c. for colored, and of Septembers at 13c. for white, and 13½c. for colored. The feeling is that prices will advance somewhat, shortly, though it is hardly likely that the advance will be very great.

Grain.—The local demand for oats continues fair, and the market is firm. Sales of Manitoba rejected are being made at 49½c. to 50c. per bushel, carloads, in store, Ontario or Quebec No. 2 white being 53c.; No. 3, 51c.; No. 4, 49c., and rejected, 48c. Peas are in demand for export at equal to 83c. to 84c., west.

Flour and Feed.—The market for both flour and feed shows a striking change during the past few weeks, being now quite active once more. Prices are again quite strong, but purchases of Manitoba spring wheat patents may still be made at \$6.10 per bbl., in bags, and of seconds at \$5.50; while bran is \$22 per ton, in bags, and shorts, \$23.

Hay.—The market for baled hay holds steady under a fair demand and sufficient supply. Prices are \$15 to \$16 for No. 1, track, \$14 to \$15.50 for No. 2, and \$12.50 to \$13 for mixed, clover being \$12 to \$12.50.

Hides.—The market for hides continues steady at last week's figures, but demand shows an improvement. Supplies are also more liberal and the outlook generally is better.

GOSSIP.

The annual meetings of the following associations, for the election of officers and the transaction of regular business, will be held at the Palmer House, Toronto, as follows: Dominion Cattle-breeders' Association, Monday, February 3rd, at 2 p. m.; Dominion Sheep-breeders' Association, Tuesday, February 4th, at 9.30 a. m.; Dominion Swine-breeders' Association, Tuesday, February 4th, at 2 p. m. Ask for Standard Railway Certificate at your station to attend Live-stock Convention before leaving, to entitle you to reduced fare home.—A. P. Westervelt, Secretary.

Messrs. John A. Boag & Son, the well-known importers and breeders of Clydesdales, formerly of Ravenshoe, Ont., write: 'We have moved to our Bay View farm, at Queensville, Ont., and our railway station is now Newmarket (G. T. R.). The Metropolitan Electric Railway, from Toronto, crosses our farm every hour in the day, about thirty-five miles north of Toronto. There is telegraph and telephone office at Queensville, half a mile from the farm. We shall be pleased to have old friends, and all interested in good Clydesdales, come and see us in our new home. See change in our advertisement next week.'

The twenty-fifth annual meeting of the Holstein-Friesian Association of Canada will be held at the Iroquois Hotel, Toronto, on Wednesday, February 12th, 1908, at 10 o'clock a. m. The Executive Committee will meet on Tuesday, February 11th, at 2.30 p. m.

Mr. A. C. Hallman, Breslau, gives notice that he will move that the annual meeting of the Executive Committee be held on the day previous to the date of the general meeting.

To secure reduced rates a single ticket to Toronto should be purchased and a standard certificate procured from the agent. The annual fee for 1908 is due on February 1st.—G. W. Clemons, Secretary; A. C. Hallman, President.

THE BRANTFORD SHROPSHIRE SALE.

We beg to remind our readers of the great sale of imported and Canadian-bred Shropshire sheep from the noted Belmont flock of Mr. J. G. Hanmer, Brantford, Ont., when over 100 pure-bred Shropshires will be sold by auction, including 100 choice imported shearling ewes, bred to high-class sires in England; also a number of imported and home-bred ewes and rams. The sheep market, which had a temporary setback, owing to the financial stringency in the United States, has made a remarkable recovery in the last month, and the prospect for the industry is bright with promise. This sale affords a rare chance to found a flock, or to add fresh blood. And no country is better suited for sheep-raising than Canada.



Life, Literature and Education.

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

A QUESTION FOR RURAL - SCHOOL TRUSTEES AND TEACHERS.

The seed catalogues are being distributed from the seed-houses. What are you doing in regard to establishing a school garden this spring?

THE COMING OF THE SCHOOL GARDEN IN ONTARIO.

"The attempt to give instruction in the elements of agriculture in the rural district schools has been made at different times in this country and in other countries. . . . France, Ireland and Canada have all abandoned the experiment because of its failure to meet expectations. It is now being undertaken again in Canada, under somewhat unusual conditions, not through Governmental control, but through the philanthropy and public spirit of Sir William Macdonald, who is personally paying the expenses of an experiment which is now being made, but which has not been continued long enough to warrant a definite conclusion as to its success."

This is an extract from the report of the Committee on Industrial Education in Rural Schools, appointed by the National Council of Education of the United States. The experiment referred to is more or less widely known as "The Macdonald Nature Study and School Garden Movement," the work in Ontario being confined to the Macdonald Consolidated School at Guelph, and five schools in Carleton Co., viz., Bowesville, Carp, Richmond, North Gower and Galetta. Mr. E. A. Howes, now principal of the Consolidated School at Guelph, had full charge of the work at Bowesville, and the writer conducted the work at each of the other four schools, visiting them in order once every week. The work in Carleton Co. was begun in September, 1903, was supported for three years by Sir William, and is now being continued by the Provincial Government and by the ratepayers in the five school sections concerned.

Before proceeding to discuss the nature and merits of the Macdonald school-garden movement, it would be well to look for a moment at these "attempts" at the teaching of agriculture in rural schools which are referred to in the above extract.

Fortunate it is for the welfare of our country that, ever since our system of public schools was first established, a few men have been found who did not fear to leave the beaten path of educational traditions, who were alive to the real needs of the people, and especially of our rural population, which constitutes the majority of our citizens. And to the question has been in the minds of these men, and is becoming more and more consistent, as the

years go by, "What kind of training should boys and girls receive in our public schools who are to spend their lives in the country?"

In an agricultural Province like Ontario there seems to be but one answer, and in these latter days we hear it variously stated, but perhaps few will deny that an intelligent interest in things agricultural, with some practical knowledge of at least a few of the fundamental principles underlying the science and art of agriculture, should receive a fair share of attention. The majority of people who take the trouble to think about these matters will agree that something should be done; but the question of how best to do it is not so easy to answer. Some person has told the members of the American Educational Committee that we tried to teach agriculture in our public schools in Ontario, but gave it up because "it failed to meet our expectations." And what did we expect? What could we expect? First of all, in 1896 the Department of Education intimated to the teachers of Ontario that they might give their pupils a little agriculture if they wished to do so; and if they needed to convince the ratepayers on what authority they indulged in these new ideas and practices, were there not the new regulations, with the one tremendous word, "agriculture," amongst the list of optional

subjects for rural public schools? Four years later the Department arrived at the conclusion that more heroic measures should be adopted if we were to lead in or even keep up with the onward march of civilization. Forthwith, a circular was issued, and copies sent to the poor, unsuspecting teachers throughout the Province, conveying the then startling information that the teaching of agriculture in rural communities had been made "compulsory"! Now for the "attempts"! A text-book was authorized, and was, and is yet, one of the best of its kind (prepared by the present Deputy Minister of Agriculture). The Department's instructions to teachers were certainly brief enough, but hardly to the point, unless, as in most cases, it

became "the point of despair." The whole momentous question of HOW was disposed of in one short sentence, which stated that certain chapters in the text-book should be taken up, the more advanced classes being allowed to use the text-book, while, with the lower forms, "instruction was to be by conversation only." Can anyone imagine what kind of an "attempt" the teaching of agriculture "by conversation only" would be? Surely it would not need an educational commission to announce its "failure to meet expectations." And, after all this, men believed that something could and should be done, but how? The Normal Schools rallied for a time, and their teachers did as well as any such overworked men could be expected to do. A few teachers went out from our Normal Schools and made small beginnings in what was approaching to a rational method of teaching agriculture. Following the guidance of the prescribed text, they began a series of experimental studies at home and in the school-room, occasionally taking their classes into that greatest of all agricultural laboratories, the out-of-doors, "where even a clover-patch becomes a theatre." Still it would not "go," and, after a year or so spent in "attempts" that received no encouragement, official or otherwise, a dead silence followed, and "compul-

sory agriculture" was "down and out." But dissatisfaction with the system did not end. Our more observant and thoughtful educators began to protest more and more against a system of education, the value of which was coming to be measured in terms by the number of pupils who passed the entrance examination admitting to High Schools and Collegiates. Men saw and read of what was being done in other countries. The dawn of a twentieth-century renaissance was at hand. The spirit of the new education was abroad in other lands, and its influence had already been felt in our own. It was at this point that the Macdonald rural-schools movement was



Scene in the Flower Section of the School Garden, Carp, Ontario.

launched in five Provinces in Canada. Many who heard of it were at once convinced of its value, many doubted, and the rest looked wise and said nothing. The press of our Province has already done much to acquaint the reading public with the main facts regarding the school-garden movement, and "The Farmer's Advocate" is deserving of great credit for its recent series of admirable editorials on matters pertaining to educational reform and the rural-school problem. Simultaneously with the inauguration of the Macdonald school-garden movement, new regulations were issued by the Ontario Education Department, containing many valuable suggestions, covering a very wide field. These regulations have been needlessly abused by many of our teachers, who seem to have missed their meaning altogether. The regulations referred to are a long way in advance of anything in that line which has ever before appeared in this Province, showing, as they do, that the new light of modern rationalism in education has at last dawned, and that the era of book-cramming is drawing to its close. For the first time in the history of the Province, official recognition is given to nature study. Henceforth, agriculture is to be taught, not from the authorized text-book, nor "by conversation only," but BY MEANS OF THE SCHOOL GARDEN.

These regulations of 1904 also made provision for the establishing of school gardens throughout the Province, but only a very few school boards took advantage of the offer made by the Government or, rather, few felt that they could meet the conditions required by it. The impossibility of getting teachers with special training in agricultural subjects has been the greatest drawback. In Carleton Co. we have been fairly fortunate, as a previous article in this magazine, by one of our principals, amply shows. The teachers who have been actively engaged in the work, most of whom have never had the advantage of a special course in school-gardening, are to-day its strongest advocates. They have proved conclusively that the doubts and fears which were at first expressed on every hand were ill-founded. The educational ideals of people in rural communities are rapidly being elevated. It has been said that the time is not ripe for the introduction of school gardens, and that the people have not felt their need of them. Surely it is time to press into service every possible means of training the boys and girls of the country into greater efficiency, if our greatest industry is to count for anything in years to come. Surely their education should have some relation to the lives which they are to lead when school days are over. The people are very much ready indeed, and all they ask is to be shown by practical illustration what can be done to improve the conditions of life in the country for themselves and for their children, to gain their approval and co-operation. The Macdonald school gardens have afforded just such an illustration, and certainly the experiment has not "failed to meet our expect-

tations." Mr. Moore has referred in his article to certain details of the work, and to manifest influences in the community in which he lives. The details of the work, as carried on, are pretty much alike in the five schools, and are in harmony with the recommendations and suggestions as found in circular 13, recently published by the Education Department in Toronto. This circular also contains the new regulations regarding the establishing of school gardens under Government support, and the payment of teachers who make special preparation for carrying on the work. Given a body of capable teachers who have the improvement of our rural schools at heart, and reasonable facilities for thorough preparation for the work, and we will see, ere long, "a new heaven and a new earth," and both will be found out in the open country.

In conclusion, we again quote from the report of the Educational Commission a paragraph which expresses most admirably our position and our contentions, which we believe we have verified during the last four years of active work in school-gardening:

"The Committee does not hesitate to say that, in its judgment, the rural schools, which train nearly one-half the school population of this country (in Canada it is considerably more than one-half), so far as school training goes, should definitely recognize the fact that the major portion of those being trained will continue to live upon the farm, and that there should be specific, definite, technical training, fitting them for the activities of farm life. Such schools will not make farmers nor housekeepers, but will interest boys and girls in farming and housekeeping, and the problems connected with these two important vocations. It will give such training of the hand as will enable both boys and girls to do more easily and effectively the things demanded to be done by these vocations, because it will offer them definite training in DOING along related lines of activity."

The Committee believes that the training afforded by the mastery of a course of study which includes the industrial phase of education, will broaden the outlook of pupils, and, because of this wider view, will open up and make attractive lines of work upon the farm which otherwise would not appeal to them; that it will develop self-dependence and moral stamina, through sustained effort for worthy ends; and that, for the boy or girl who does not remain on the farm, it is superior to the training afforded through the medium of the present course of study in the rural schools.

J. W. GIBSON.
Queen's University, Kingston.

INDEPENDENCE FOR THE DAUGHTERS.

A WORD FROM ONE OF THE FARM GIRLS.

There is no subject which should appeal to farmers as much as providing their daughters with a means of earning a livelihood. I think I may safely say that the majority never give it a thought. Their whole aim and object is to make money and provide farms for their sons. Of course, the girls come in very useful to help gain that end, and they certainly value their daughters. But, what does a girl need with an education or business training? If she knows how to cook and keep house, that is all that is necessary. She is never supposed to look any further than making home comfortable for father and brothers; and then, after a time, for her husband, for, of course, all girls will marry. The Shorter Catechism gives the chief end of man, and the average farmer gives, as woman's chief end, to get married and be a dutiful wife and mother.

Now, there is another side to that story; take the woman's version. A girl is brought up on a farm,

given a good public-school education, and lives at home for the first few years of her life. Her father provides her with clothes and all the necessaries of existence. She has never had to go out and rough it with other girls, and make her own way, for, of course, some day she will marry, and have a home of her own. The father is proud of his daughter, but, of course, the farm goes to the boy. Then, fate disarranges matters somewhat. The father dies suddenly, the son gets the farm, and what of the girl? She is left wholly defenceless, with, perhaps, two or three hundred dollars between her and starvation. She has no way of earning her living. She has a smattering of several things, but nowadays one must have something practical to point to before one can secure a situation. She must either marry or go to a factory or domestic service. All girls do not care to marry, although the men profess to doubt the assertion. Think of the shame and disgrace of being forced into a marriage for the sake of a home. Can anyone imagine a worse fate? The only other alternative is domestic service, where one is treated as a menial, and looked down upon as a being of a lower order than the family she is serving. Then, when sickness comes, who is to pay the bills? In a few weeks the saving of months may be swallowed up, and then it is charity.

I know of one case where a daughter came home and tended her father for years, giving him every loving attention, and when he died he left his daughter one hundred dollars, and the son a farm and stock worth thousands.

make a home for herself and sister. Now she lives in misery and unhappiness, wishing death would bring her release from the hated bondage.

Now, if the farmers would only use a little judgment. If they cannot leave their daughters enough to keep them, they should at least take a little and provide them with the means of learning some life-work. It means so much to a girl. A whole lifetime of misery may be saved by the expenditure of a little money in giving her a start now. If you cannot give the daughter money, at least let her go when she is young, so that she may work herself up in some trade. Do not keep her at home working and earning a farm for the boys. It seems rather hard that the girls, who have the weaker frame, and are so much less able to battle with the world, should have to do it, while the son remains at home in comparative luxury.

If the father could only be brought to see that the truest kindness to his daughter would be to advance her a little money when she is young, and let her go and learn a trade or study for some profession, I am sure a great many tragedies would be averted, and the daughter would in time come to be a credit to her parents, instead of, as is often the case, being a stranded wreck on the shores of time.

A FARMER'S DAUGHTER.

CHINESE COWS.

We are indebted to Dr. D. Robertson, Milton, Ont., for the accompanying picture of Chinese cows. In regard to it, he writes as follows:



Neglected Cemeteries in China Also.

Cows grazing among the graves in a Hengchow cemetery. All the little elevations are graves, some of which have stones on them.

I know of other cases where farmers' daughters have been forced to go to the city to earn their living, without being prepared for it, and having no business training. Of course, they had to live, and how could they live on the wages of unskilled employees? In a large city there are always those who are ready to lead young girls astray, and when absolute want stares them in the face, they have sometimes gone from bad to worse, until they landed in a suicide's grave. I heard a medical man once say that the ruin and downfall of more girls could be traced to the want of a training in an occupation than to any other cause.

One more case only: A father died and left his property to his sons, and a few hundred dollars to each of the girls. One girl was a semi-invalid, and neither of them was disposed to marry. The brother married, and the girls felt that they were intruding, and a burden on his wife. The outcome was that one girl married a man she had not the least affection for, merely to

"The above picture was sent to us by Dr. W. Edgar Robertson, a native of Milton, Ontario, now a missionary in China. It is characteristic of the part of China where he lives, Hengchow, in Honan Province. The horse is small and shaggy. It is not used to draw or carry burdens, but is used by the officials as a saddle horse. It is more stylish, he says, to ride a mule. The cows are small, and give a small quantity of inferior milk. The cow is used in plowing the rice field. The ones that have been broken-in to the plow have a hump at the root of the neck, caused by the pressure of the yoke at that point. In Honan Province there are two kinds of cows, the "water cow" and the "yellow cow." Both are used for plowing. The water cow is also called the water buffalo. It is large and strong and has large horns, which lie back along the neck. It loves to roll around in the water."

The way to rise above the disappointment is to fix our eyes, not on others or our own failures, but on the mark, and press toward that.

OUR LITERARY SOCIETY.

The best essay on Topic No. II. (d), as announced in our issue of November 14th, was sent by M. E. W., Lanark Co., Ont.; the best on No. II. (f) by "Apto," Halton Co., Ont., and "Ralph Erskine," P. E. I. J. L. Inglis, Grenville Co., Ont., sent a most excellent essay on the first part of No. II. (f), but as he omitted touching upon the second part, it was necessary to rule him out of the competition. Creditable work was also submitted by S. S. L., Waterloo Co., Ont., and M. Jose, Prince Edward Co., Ont.

The essays for which we have space to-day are as follows:

Subject.—"What constitutes (a) a well-educated man; (b) a well-educated woman."

Essay I.

We take the position that a man should be educated, first, morally, for that is a good foundation to build on, and will have an important bearing on any other acquisition in his after life.

When should he begin this moral education? Our answer would be, as soon as he is able to discriminate between right and wrong. The Scriptural injunction, "Remember now thy Creator in the days of thy youth," etc., should be indelibly stamped on his mind by those who are over him at this period of his life. The inculcation of truthfulness at so early a period will be a gem that will outshine all others in his future life.

Second.—We think a physical education should be next in order. A sound body and a sound mind are two very essential elements in the make-up of any individual. How many boys and girls we see going around with high shoulders and contracted chests, caused by sitting at low desks in badly-constructed schoolhouses. A good drilling in physical culture would be a good thing, and would develop the boy physically and add years to his life, besides giving him a prepossessing appearance.

And now, having a moral and physical education, may be considered (3) a secular education. To be successful along this line, and to stand near the top, the young man must have an aptness for whatever line he wishes to pursue, which should always be congenial to his taste. His education should be practical as well as theoretical.

In the mechanical and the professional world, men of such acquirement invariably forge to the front, and are sought after in every avenue of life. The writer of these words graduated in the school of tribulation, not having seen the inside of a college, and knows by experience the disadvantage that men labor under who are not completely equipped.

What constitutes a well-educated woman? We do not wish to reiterate what we have stated above, but we think the same education we intimated the man should have for a foundation, we would recommend for women, with a few additions, one of which should be a thorough knowledge of housekeeping, and especially the culinary department, as that has a great deal to do with the health and comfort of those who happen to be members of the household. Secondly, she should have a good musical education, if her talents run in that direction; vocal as well as instrumental music should be included in this accomplishment, which has charms that cannot be estimated in dollars and cents. Thirdly, she should cultivate the social element, for, to be a good conversationalist is a valuable acquisition, and is a cure for many of the ills that flesh is heir to.

"APTO."

Essay II.

The first great essential of a well-educated man is strength. By this, I do not mean that he must have more than ordinary muscular development; in fact, he may be physically weak; but he must be able to control himself, be able to

grasp the situation, and to act promptly whenever an occasion arises. He must also be a gentleman. True, he cannot do all this of himself, but he may obtain the necessary help for the asking, help without which no man or woman should endeavor to go through life. It is by no means necessary for him to be a college graduate, for every hard-working farmer or tradesman of any sort, with a common-school education, which has been supplemented by the reading of good books, and who can see beauty in and learn lessons from nature and the common everyday things of life, has more genuine education than the college graduate who considers himself above such things and people. I do not for a moment wish to be considered as opposed to a college education, which is a grand thing in its place, and doubly valuable when the student has to pay his own expenses; but, in too many cases, when the raising of the funds has cost him no effort, the student leaves college as ignorant in all practical affairs of life as when he entered it. To put my idea of a well-educated man in a nutshell, he must be strong, a gentleman, a close observer, must understand his own business, and endeavor to improve it by all fair means.

(2). A Well-educated Woman.

Women are nowadays occupying positions formerly held only by men, and, while giving equal and in some cases better satisfaction than their male predecessors, the fact still remains that the place where their talents reach their highest development is the home. There it is that purity, that crowning glory of womanhood, can do the most good. There is nothing under Heaven more worthy, and which commands more love and admiration, than a pure, sensible, well-educated, Christian woman. If she be a reader and student of good books and periodicals, kindly and gentle in heart and manners, content and happy with her lot, though ever striving to improve the situation of herself and loved ones, she will be well educated, in the fullest sense of the word, whether she has had the advantages of a college education, or only a common-school training.

RALPH ERSKINE.

Will you not modify your assertion that a good physical development is not necessary to the well-educated man? Education, in its broadest sense, means development of the whole man, morally, mentally, physically.

A FEW SUGGESTIONS.

Before disposing of this set of papers, we should like to call the attention of our students to a few of the characteristics which are essential to all "best" essays.

In the first place, clearness is necessary. Circumlocutions, obscurity, cumbrousness, dullness, are enough to kill any thesis, no matter how good the subject matter may be. First get possession of clear, well-defined ideas on the subject in hand, then express them directly, brightly, strongly—if you have the ability.

In the second place, do not go on and on forever. Keep to the text. The man who runs off into a dozen by-paths will be a long time in reaching his destination.

Last of all, take pains to have your work neat, your writing legible, your punctuation and paragraphing perfect, as far as you know how to have it so. It pays to be particular about most of the minor things of life, even about so small a matter as writing an essay.

SOME NEW TOPICS.

In addition to the topic suggested last week, "What Constitutes Success in Life," we now present for your consideration the following: Write upon one only, and send your essay so that it may be received at this office not later than Feb. 22nd:

1. Write a short essay on what you consider to be the leading question of the day, as regards Canada's welfare.

2. Tell me with whom thou art

found, and I will tell thee who thou art."—[Goethe.

3. "Wealth, after all, is a relative thing, since he that has little and wants less, is richer than he that has much, and wants more."—[Colton.

4. "A man must be both stupid and uncharitable who believes there is no virtue or truth but on his own side."—[Addison.

5. Write a short essay on your favorite book.

6. "The true test of civilization is not in the census, nor the size of the cities, nor the crops, but in the kind of men the country turns out."—[Emerson.

BEFORE, AND AFTER AN EPOCH-MAKING PERIOD.

Somewhat over three years ago, on the occasion of the annual meeting of the National Council of Women of Canada, being held at Winnipeg, it was my privilege to respond to the address of welcome extended to it by the president of the local branch. I believe that the honor was accorded to me mainly because I was the only member present who could recall the early days of that great city of the West, when it was known to very few outside the ranks of the Hudson's Bay Company, who virtually owned it, and to the handful of missionaries who labored amongst the settlers and the scattered bands of Indians, as "The Red River Settlement." On the day before I had steamed into Winnipeg in a luxurious Pullman car of the C. P. R., along a road, itself a monument of engineering skill, which had forced a pathway through what had once been considered an impenetrable barrier, shutting out from all civilization the handful of people who lived along the banks of the Red River, and I had hardly shaken off the Rip Van Winkleish feeling of bewilderment at my first sight of the marvellous changes which, as if by a magician's wand, had come over the dear, straggling old settlement of my girlhood's memories. I just had to confess that I positively longed to see even one or two of the figures once so familiar, clothed in blue capote, red sash, and fringed leggings; just one bark canoe, or even an old wooden bateau, on the river's bank; one brown-skinned Indian mother, with her black-eyed baby nodding its comical little head out of its moss-lined cradle. Nay, more, I should have enjoyed hearing (for once, anyway) the croaking chorus of the bullfrogs in the swamps, if, indeed, any swamps remained. But, as far as I could judge, at that early stage of my revisiting the old place, all the old sights and sounds had departed, never to return; and, indeed, why should they? On the occasion to which I have alluded, one amongst those who have helped to build up the new Winnipeg, paid publicly a graceful tribute to the memory of the pioneers of its past. "To their educational and religious aspirations we owe much. We are building upon the firm and solid foundations laid by those almost forgotten hands." And now, within the last week, an old friend, one of the very few remaining from those early days, whom I can recall as a merry little lad playing upon the banks of the Red River, sends some notes by way of a reply to the question, "Are any still remaining of the people whose names were familiar as household words over half a century ago?" His answer deals chiefly with those of native origin, and as it may not be without interest for the readers of the Home Magazine, I pass it on to them just as it came to me, and under the title he chose for it.

A FORGOTTEN COLONY.

Our early missionaries induced a number of Swampy Crees, who had become converts to Christianity, to leave their dreary country in the neighborhood of York Factory, to settle in what was then called the Red River Settlement. Some of these people were placed at what was commonly known as the Indian Settlement, their descendants now form-

ing the large parish of St. Peter's, which is so ably administered by the Rev. Mr. Anderson. Others were brought to St. John's, and located on the east side of the river, the tract of land they occupied extending from opposite the site of old St. John's College to Elmwood Cemetery.

"I will not trouble you with the almost-to the English tongue—unpronounceable Indian names—but will give the literal English translation of the names of the heads of several of the families, the chief of whom were The Walking Chief, Take-him-home, The Elder Brother, The Crooked One, He Plays, He Thought; two widows named the Day Woman, and the Ugly Head, the latter so called because she had curly hair. Then, there was a spinster who rejoiced in the very appropriate name of Catch-a-Piece.

"The children of these people all attended St. John's parochial school, and in every respect were equal to their fair brothers and sisters. The Walking Chiefs were particularly quick in learning, and when they grew up to be men and women, were very industrious and intelligent; and in those days, when wheat was threshed out by the flail, hay mowed with a scythe, and lumber sawn with a whip-saw, these men were very much sought after. The women, also, were useful. Besides doing ordinary household work, they assisted the farmers' wives in carding and spinning the wool, which was afterwards woven into cloth, and very generally used for blankets and clothing. The baptismal name of The Walking Chief was Smith. A good many articles were scarce and difficult to obtain in those early days, and among these articles were names. The result was that in the Smith family there were two called Nancy, two Mary, and two John. These people had, among their other talents, splendid voices, and there were four of them who sang in the choir, besides two or three of some of the other families. There are four of the Smiths still living: Thomas, of St. Peter's; John senior, at Prince Albert; John junior, at Brandon, and Mrs. Cook, who is living on a portion of their old homestead, opposite St. John's Park. Thomas is one of the survivors of those who built old Bishop's Court, the other being John McDonald, of St. Andrew's.

"Apropos 'Smith,' I will digress, and will give you a coincidence. When Bishop Anderson came out, he brought with him a valet named Smith. Bishop Machray brought out his man 'Smith' (ex-M. P. P. of Springfield); his next man was 'Smith,' and his third man was 'Smith.' And still a further digression re Smith: When Bishop Anderson's Smith left Bishop's Court, he got married, and settled down as a farmer. There were two other Smiths in the settlement; one was a brickmaker, and one was employed at a water mill in Sturgeon Creek. These three were referred to as Bishop-Smith, Brick-Smith, and Dam-Smith. Note that Dam is spelt D-a-m.

"But to come back to my story of The Forgotten Colony, one of the descendants is John Sinclair, Catechist at Black River, Lake Winnipeg.

"But this narrative would be very incomplete were I not to refer to The Crooked One, whose aboriginal name was Wak-kee, which name was closely adhered to by the officiating clergyman when he was christened Waggie. He was well known to three or four generations of the St. John's boys. In his younger days, Waggie was a great walker, and a trusted servant of the Hudson's Bay Company. After he arrived here, he was employed as a farm servant by Mr. Macallum, and later by Bishop Anderson, when he was too old to do hard work as a chore man. Besides his wages, he received their discarded clothing. When his countrymen put on their capotes and moccasins to go to church, Waggie donned his long black coat and Eng-

lish shoes. Boots in those days were called English shoes, moccasins were called shoes. In fact, the word "moccasin" was not in use then. Waggie was very careful of his English shoes, only wearing them to church in dry weather. In wet weather he went barefoot to church, carried his boots, and put them on at the church door, being afraid that if he got them wet they would lose their squeak, which he prized so highly. Even in his old age he was very nimble, and was always the first to cross the river on the ice in the fall, and the last to cross on the departing ice in the spring, jumping from piece to piece with a light pole in his hand. The manner of his death was peculiar. It occurred some time after Bishop Machray's arrival. He was walking over the newly-formed ice in front of the old college, and, in view of the boys, he walked towards an open hole. On reaching it, he laid down, as the boys thought, to drink, but, remaining there longer than was necessary to quench his thirst, some of the boys ventured to go to him. They found him lying with his face in the water, dead. Whether or not this was a deliberate suicide, or whether he laid down, and for some reason or cause could not rise again, will always remain a mystery.

"On looking back on these simple people, who were brought here comparatively heathen, one cannot but be struck with the change that came over their children in the first generation, through education and environment. The latter had become to all intents civilized, intelligent and useful members of the community. Although the older people understood the English language very imperfectly, yet they were very regular attendants at the Church services, believing, no doubt, although they did not understand all that was said, that they would get some benefit by being present at the service, and in this respect are an example to their white brothers of the present day."

H. A. B.

Current Events.

The Legislature of Ontario will assemble on February 5th.

Several severe earthquake shocks were felt in Hayti last week.

The Chairman of the Isthmian Canal Commission estimates the cost of the Panama Canal at \$300,000,000.

One hundred and seventy bodies have been recovered from the ruins of the theatre, Boyertown, Pa. The great majority of the victims were women.

Earl Grey's proposal to save the Plains of Abraham as a national park has been enthusiastically received by the delegates to the Canadian Club assembly at Ottawa.

The idea of a "City Beautiful" is to be exemplified at one point at least on the Pacific Coast. The G. T. P. has employed two landscape experts to lay out Prince Rupert.

A cable message has been sent to Japan from Ottawa, expressing satisfaction with the promise of the Japanese Government to restrict the emigration to less than 1,000 a year.

The agitation for a direct universal suffrage has resulted in serious riots, led by the Socialist element, in Prussia. As manipulated at present, the system of representation gives no representative in Parliament to the working men.

By an Order-in-Council it has been provided that in future all immigrants to Canada must come direct to Canadian ports of entry from their native land. The new regulation has been especially designed to prevent the influx of Japanese from Honolulu and Hindus from Hong Kong.

Carmichael.

BY ANISON NORTH.

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CHAPTER XI.—Continued.

[The following, which was accidentally omitted last week, should be read at the end of Chapter XI. See page 96, January 16th issue.]

Again and again, with the consciousness of doing wrong by even permitting myself to think, and that so pleasantly, of that quiet walk with Dick, I beat away the memory of it, and forced my thoughts upon something else. And at every struggle old Chris's maxims would ring in my ears: "It's what's behind the actions 'n' the words that counts most—fer yerself. If ye think what's wrong, 'n' keep on thinkin' it, it's jist the same to yerself as if ye acted on it. The only difference is that others doesn't suffer from it."

But strive as I would, the sweet, alluring pictures would creep back again before I was well aware of their coming, just as though I were in possession of some evil spirit that kept thrusting them upon me. Whenever my mother came near I averted my eyes, and once, when she laid her hand on my shoulder, for she seemed unusually affectionate that day, I shrank from her touch mentally, as though it burned.

Once, too, I remember, I cried to myself fiercely, "Am I responsible for this?" Yet, my conscience could but answer "Aye," and I was not comforted.

So the afternoon passed, and I was glad enough, shortly after Miss Tring came home from school, to be diverted by the sight of old Yorkie Dodd, redder and fatter than ever, waddling up the path to the house.

He had taken to coming of late, and the peculiarity of his actions had been such as to yield us all some amusement. So long as it was warm enough to stay out of doors, and he could sit with Chris on the bench, he was voluble enough, and could pour out his woes in plenty about how hard it was for his old sister (who had long since come to keep house for him) to get about on time; and how little comfort there was for any man who had lost "the missus." But whenever he crossed the threshold a great change came over him. Then, for the most part, he would sit, without a word, staring at the floor. At the table, too, for Yorkie always came before meal-time, he seemed to be seized by an unaccountable bashfulness that even affected his appetite, for now he ate no longer than Chris, and more than once, indeed, he declined a second helping with a fortitude worthy of a better cause.

"Poor man," my mother would say when he had gone, "I suppose he doesn't git much good to eat at home, 'n' it's a comfort to him to hev' a meal that's cooked proper. Not that we ever hev' sich great dainties, but, if I do say it myself, unless it's Amanda Might's, there's no vittles cooked better in Oroway—sich as we hev'."

This evening, however, there was a variation in the programme. Although it was still warm, almost, as June, and Chris, in spite of his "rheumatics," was still out of doors, Yorkie came in directly, and put his hat under his chair with an unusual air of business.

"Good evenin', mems," he said, in return to the polite salutation which we—my mother, Miss Tring, and I—gave him.

"And how's yer sister?" asked my mother, following the routine of questions which had come to be a matter of course on Yorkie's visits.

"Indeed, mem, she's not very well," he drawled, more briskly than usual, "an old wumman finds it hard to do what 'ud be only play to a younger one. It's the old story about the grasshopper bein' a burden. Sairy, ye know, 's a sister 'n me. She's me oldest soter."

"But she's able to be about?"
"Yes mem, oh yes, it's not that. But ye see things has been prosperin', 'n' there's a good deal to attend to. I've six cows, 'n' one comin' in next spring. Fine handlin' that makes fer a wumman, mem, if she's spry 'n' able to attend to 't, 'n' butter the price it is. . . 'N' I've eight little pigs, besides four big ones ready fer the market, with sich meat on them! Lord! ye never saw sich slabs o' bacon! . . . Then there's the young cattle, mem, as fine a bunch as ye ever saw! Not as a wumman 'ud be expected to see to them, but it shows ye how things has been prosperin'. . . 'N' sheep, fourteen, mem, as'll double themselves come March in ord'nary calkulation. Mem, ye ought to see my sheep!"

Having delivered himself of this unusual peroration, Yorkie reverted to his customary silence and staring at the floor.

At the tea-table, too, he seemed more than ordinarily preoccupied, and hurried through with such despatch that he had finished before any of us.

Immediately afterward he got up with an air of much business and addressed himself to the teacher.

"Mem, will ye come down the path fer a minute?"

Miss Tring looked up in a puzzled way; then, with her sweet smile, she said, readily:

"Certainly. Do you want to talk to me about something?" and followed him out through the doorway.



"Now I lay me down to sleep."

"Everybody comes to Miss Tring fer advice," said my mother, as they passed down toward the corn stooks, "but whod' ha' thought old Yorkie 'ud take his turn! It's a good thing fer you, Peggie, as I've said many a time, to hev' sich a woman in the house. . . Not as I'd keep every teacher that 'ud come along—but a woman like Miss Tring that everybody looks up to, 'n' as neat 'n' tidy as a new pin about her room."

We had cleared away the dishes and set about the evening work before Miss Tring came back. Then she came alone, and, slipping quietly in at the front door, went immediately up to her room.

When I went to mine to wash my hands and brush my hair after the milking, she called me. She was sitting on the edge of the bed, and, although her eyes were dancing with smiles, I could see that she had been crying.

"Tell me, Peggie," she said, "have I got to be dreadfully old and—and—ugly?"

I stared in astonishment.

"Why no," I said, "I think you are lovely! Why?"

She went to the mirror, and, taking out the pins, let the rich masses of her hair fall. Then she took up strand after strand, in which the silver threads were beginning to show.

"Yes, yes," she said, coming back to the bed, "I must be getting very old, and people are so sorry for old maids, and—and—think they are ready to be satisfied with anything . . . Peggie," beginning to laugh until tears, not all of merriment, ran down her cheeks, "Old Yorkie Dodd proposed to me to-night!"

"Proposed to you?"

"Yes, actually proposed to me to go up and take care of his six cows, and his eight little pigs, and the dear knows what not, and take him to boot."

"The audacity!" I exclaimed, all of my contempt in my face. "If he knew anything—"

But Miss Tring held up a warning finger.

"Poor old man," she said, "after all it was the highest compliment he knew how to pay me. I would be very wrong in being angry with him. But—"

"It's the way they all do!" I interrupted, jealous for Miss Tring's prestige. "The widowers, I mean! They run around after all the girls, as Yorkie's been doing for the past ten years, then wind up by marrying some old post—like that old Jennings, who proposed to half the girls in Oroway, and finished by marrying old Widow Smith, who is deaf and squints!"

"I didn't mind, dear," she said, with a sad little smile, "only that—oh, it all seemed such a caricature after—"

She stopped to wipe the tears away silently from her cheeks, and then I noticed, on her pillow, a little



"Good Morning."

morocco case, with clasps and ornaments of filigree silver.

"You may look at it," she said, and, opening it, I found two miniatures, one of herself, a girl in the first blush of maiden beauty, radiant, smiling; the other of a man with a broad, intellectual brow, and keen, deep eyes.

"I thought I should never show it to anyone," she said, leaning her head on me, while I put my arm about her, "but you have become very dear to me, Peggie."

"And it was he—" I began.

"Whom I should have married if he had lived," she said, softly.

[Resume the following from page 98, January 16th issue.]

CHAPTER XIII.

In Quiet Paths.

Quietly the years slipped away, with so few changes that those which came struck our little community as events of great importance, and afforded talk for a six-month. It is surely this comparative immutability that gives the country its atmosphere of permanence, an atmosphere that sinks into the soul and lives of the people, and is born in the children, so that it is not uncommon that from that country, or directly descended from those who have belonged to it, we receive the most stable of our men.

(To be continued.)

Children's Corner.

[All letters intended for the Children's Corner must be addressed to Cousin Dorothy, 52 Victor Ave., Toronto.]

THE STORY OF PETER PAN.

(Continued.)

In the forest of Never-Never Land there was a hollow tree, with a winding stairway inside, which was the way to Peter's house. Down you went, under the dark ground, till you came to a little gate, and when you opened it, you were in a room, with a very big bed at one side and two wooden stools. There was a little fire, too, with a pot hanging over it. Peter and Wenda were playing at keeping house, with all the boys for children, and Michael for baby. Michael didn't like it very much, as he had to stay in a sort of hanging cradle most of the time. Wenda was mending stockings, and she told all the boys to go to bed. They all felt safe from the Pirates, because the Indians were on guard above ground. The Indians were covered with red paint and feathers, and looked pretty fierce; but they were friendly to Peter. But after awhile along came the Pirates, led by the King, who had made up his mind to kill Peter. The Indians shot with their bows and arrows, and there was a great fight, but the Pirates were too strong, and they drove the friendly Indians from round the hollow tree. But Peter did not know what danger he was in, nor that the Pirate King had his ear to the chimney, which stuck up a little way above the ground. So he was talking away to Wenda and the boys, who were kicking their heels and romping over the big bed.

"You must never go home again, Wenda," said Peter. "You must always be a mother to us lost boys."

"Peter," said Wenda, "you are forgetting that I'm the mother, and you're the father. I'm not being a mother to you."

"But I'd rather be one of the boys," said Peter. "Never mind, though, as long as you stay with us."

"Oh, we must go home some time," said Wenda. "Mother will be looking for us."

"I don't think she'll keep the window open for you," said Peter. "My mother didn't."

This frightened Wenda, who thought all the time she could always get through the window again. She said she must go home at once, and she wanted all the boys to go home with her. But Peter was afraid of being sent to school, so he stayed all alone in the little house, and he was so lonely when they all went up the stairway that he lay down on the bed and went to sleep.

Now, as soon as the boys and Wenda came out of the hollow tree, they were seized by the Pirates, and marched off as prisoners to the Pirate-ship. But the King stayed behind to kill Peter. He was afraid to fight him again, so he stole softly down the stairs, and while Peter was asleep, he put poison into his medicine, which Wenda had left on the shelf and told him to take. Then the old rascal stole up to the forest, and went off to his ship. After awhile Peter got up, and remembered the medicine. He didn't want to take it, but as Wenda had told him to, the last thing before she left, he made up his mind to swallow it before he went out. Just then there was a great tinkling of little bells. It was the fairy Tinka telling him it was poisoned.

"Nonsense," said Peter. "You're jealous again. I will drink it." But Tinka was too quick. As Peter took hold of the glass, she drank all the medicine herself. She pretty nearly died, and poor Peter was in a great fright; but because she was a fairy, she got better again. And then she told him all about the sad fate of Wenda and the boys.

The Pirates had a very big ship. It was in a river, and before they sailed off to capture another treasure ship, they decided to make the prisoners walk the plank. So they brought them out of the hold, and tied Wenda to the mast so she couldn't get away, for they thought they would keep her to do their mending. They balanced the plank over the side of the ship, and marched the first boy up, when all at once a clock began to tick. The Pirates at once forgot what they

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were about, thinking the awful Crocodile was upon them (though really it was only Peter, with a clock in his hand). They all rushed off the deck, and Peter slipped out and cut the boys loose. So when the frightened Pirates came back, the boys attacked them, and beat them, and shut them up in the hold, all except the King, who had been hiding. Peter and all the other children were thinking of leaving the ship, when over the side crawled the Crocodile himself. Out rushed the Pirate King, and jumped overboard. There was a splash, and I suppose he was drowned, for he has never been seen since. The Crocodile was very much disappointed, and he went overboard too.

Now, Peter could not bear to think of being left all alone again, so he thought he would fly quickly to Wenda's home, and shut the window. He found it open, and went into the nursery. He could hear the mother playing very softly on the piano, and when he peeped through the door she was crying. He didn't know what to do then. If he opened the window, he would lose Wenda, and if he kept it shut, the poor mother's heart would break. Just as Wenda was near the house, he made up his mind, and lunged the window wide open. When the three children came in, he told them all to get into their beds, and he hid behind the curtain. At first, when the mother saw them all in bed, she thought it was a dream; but when they jumped up and hugged her, she knew she had her dear children back again, and I can't tell you how happy she was. She was talking to them when Peter flew out of the window into the dark. But the other lost boys came and lived with Wenda and Michael and John. And one day Peter came back to try and get Wenda to run away again. But her mother wanted to keep her, and as Peter wouldn't stay and be like other boys, Wenda's mother promised to let her go and clean house for him every spring.

So Peter and Tinka lived together in Fairyland, in a little red house in the tree-tops, and every night the fairies came out and danced for them. They looked like little white and blue lights—the white are the boy fairies, and the blue are girls. And every spring Wenda came for two weeks, and she and Peter were as happy as could be, till she flew home again, and Peter was left to his clean house and the fairies. And that is all I can tell you about Peter Pan.

C. D.

THE LETTER BOX.

Dear Cousin Dorothy,—We have taken "The Farmer's Advocate" but one year. Father always spoke very highly of it, as his father, now deceased, took it; I asked him to let me take it, and now we all enjoy it as well as profit by it. Father has been on the farm for fifteen years, having come from the United States, where he was in school work; but I am Canadian born, and love my country and church home, which is on our farm. We have twenty head of Holstein cattle, some pure-bred. We keep a pure-bred sire always. I wish some of our little folks could see our new barns, just completed; no more mud for us; no lugging milk or water to cool same. Some time I will give you a description of our new buildings and cost.

SHIRLEY DAVIS (age 14).
Pittserry, Ont.

Dear Cousin Dorothy,—I am a little girl, nine years old, and live in the country. I have no brothers or sisters, and sometimes I feel very lonely. It is then I take so much pleasure in turning to the Children's Corner and reading letters from little girls and boys, who live in other parts of our great Dominion. I go to school every day that the weather will permit, and often, when the snow is deep, my father drives me. The school is a mile and a quarter from my home. When I have vacation, I amuse myself with my pets, which consist of chickens, turkeys and three of the cutest little kittens you ever saw. They are black and white, and nobody but myself can tell them apart. I have named them Buster, Mary Jane, and Tige, and it is very funny to see them going up and down the ladder in my father's barn. We had a children's entertainment at our church, at which I gave a recitation; and our minister, Mr. Redmond, said it was the best he ever heard from a little girl.

My father and my Uncle John have taken "The Farmer's Advocate" for years, and think it is the greatest paper in Canada.

ERIC COULTER.
St. Thomas, Ont.

Dear Cousin Dorothy,—This is my first letter to the Children's Corner. I live on a farm of one hundred and twenty acres. My father has taken "The Farmer's Advocate" for twenty-eight years. I go to school every day, and I am in the Fifth Grade. I am eight years old. We have six horses, nine milch cows, and ten young cattle. Here is a riddle: What is the greatest surgical operation on record? Ans.—Lansing, Michigan.

HERSEY, Mich. BRUCE MCKAY.

Dear Cousin Dorothy,—Perhaps you will think me selfish in wishing to take up so much space in the Corner, when I tell you that this is my third letter. However, I wish to write this time to tell you what an interesting correspondent I gained through the "Corner." I also received some pretty postals from some of the Cousins. I think I returned one for each that I received. I live beside a small river, which overflows its banks every spring, covering the road and part of our farm. It is over just at present, and the only means of getting to the other side of the river is by boat, as the water is too deep for fording.

ESTELLA McCUTCHEON.
Croton P. O., Ont.

We are always glad to get a letter from you, Estella.
C. D.

Dear Cousin Dorothy,—I wrote to the "Corner" once before; but, as it was not printed, I thought I would try again. I am going to write about twins; they were two boys, whose names were Jack and Jim. They looked so much alike their own mother could not tell them apart. Both of them went to school every day. Jack was a very bad boy during these hours. He used to play and talk, when he should have been at his lessons. One day, as the boys were at their work in school, and Jack was at some of his pranks, the teacher came down to Jim's seat, and, as he thought it was Jack's, he punished Jim instead of Jack, not knowing but what it was Jack. In the course of life these things often happened. When Jack died, they buried Jim instead. Wishing you every success in this New Year.

LILLIAN DAY (aged 10).
Langford, Ont.

Dear Cousin Dorothy,—As my papa takes "The Farmer's Advocate," I read the letters every week. I go to school, and I am in the Junior Second Class. We had an entertainment this Christmas, and my piece was entitled "Christmas and the Old Year." We have a dog; his name is Collie. I will close with a few riddles.

1. What comes in the window on the stove and doesn't burn itself? Ans.—The sunshine.
2. Chip, chip, cherry, all a man derry, couldn't climb chip, chip, cherry. Ans.—Smoke.

3. A man rode up a hill and yet walked. Ans.—His dog's name was Yet.

VERLIE E. COOK (age 8).
Amulree, Ont.

Dear Cousin Dorothy,—I live on a farm, and my brother takes "The Farmer's Advocate," which we all enjoy reading very much. We live on a large hill, and can go fishing in the brook that runs through our farm. I passed the Entrance in June, and intend going ahead to school. We keep about thirty head of cattle, forty sheep and two team of horses. I have about half a mile to go to school, and attend regularly. We live one mile from the village. I think I will close, as this is my first letter, and hope it will not get acquainted with the waste-paper basket. I was thirteen on the twenty-second of June. I wonder if any other girl's birthday is on the same day as mine. I would like to correspond with some of the girls of my own age. Wishing your paper every success.

BERTHA SMILEY.
Leonard, Ont.

A RIDDLE.

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CALLED OF GOD.

No man taketh this honor unto himself, but he that is called of God, as was Aaron.—Heb. V.: 4.
As the Lord hath called every one, so let him walk.—1 Cor. vii.: 17.

"Thank God for the willing hands That are honest, and brave, and true, That lie not folded, but labor hard To do what there is to do. Rich gems of the world are they, Where fancy is drowned in fact, Where time is a thing in reality, And to live is to think and act.

"Thank God for the willing hands That pull at the load of care; That lend themselves to a weaker friend, And are eager everywhere; Whose touch is a touch of gold, That kindles not one regret, Whose duty it is to toil along And never a thing regret."

I have received the following letter from one of our readers:

Dear Hope,—I have just been reading one of your sermons, and it is a pleasure to write to you how much I enjoy and appreciate it. Please don't ever give up your good work, for you have done far more than you knew. For myself, it has made life seem more worth while living, or, in other words, it has made me more worthy of life. But I am anxious for help about matters that have perplexed me for some time, and, if it were not an imposition, would like to ask you to sermonize on a couple of topics. One is about idle words: "Every idle word that a man shall speak he shall give account thereof in the day of judgment," in connection with, "A merry heart doeth good, like a medicine." What are these idle words? Secondly, whether it is, or is not, honorable for a girl to work out. The Bible says, "If a man will not work, neither shall he eat." By this I infer if work is honest, it is honorable.

Do you not think that if we work at any kind of honest work, and do our best, that we are as much honored of God, even if we do it in someone else's kitchen? Hoping to see an answer soon, I remain, A sincere friend,
Crosby, Ont. **LUCY LEGGETT.**

Thank you very much for your letter, my dear "sincere friend," I am always glad to know something of the difficulties of our readers. I don't want to waste the opportunity given me each week of talking about "live" subjects—the matters which will really affect their lives. I shall not say much to-day about the "idle word," except that the second text quoted helps to explain the first. An "idle" word must surely be a word that does not serve any useful purpose. The bright joke or clever repartee—if it does not wound or sting—has a very useful purpose indeed. Anything that adds to the gladness of life is far from being "idle." I fear we are all guilty, only too often, of the sin of "idle" words—words which would never be spoken if we had engraved on our hearts and memories the thought: "Christ is the silent Listener to every conversation."

As for the second question, there can only be one answer: "Whoever will be great among you, let him be your minister; and whosoever will be chief among you, let him be your servant; even as the Son of man came not to be ministered unto, but to minister." How often, do you suppose, did the young village Carpenter work in the kitchens of other men? Is there any story in the whole Bible more tender and beautiful than that one of the Lord and Master washing the tired feet of His wondering disciples? And think of that other scene, when the Great Conqueror of Death stooped to make a fire on the beach and prepare breakfast for seven hungry fishermen.

One who is called of God to the high position of a servant, may well rejoice in the glorious opportunity given him of making the lives of the whole household more happy. If he throws himself with glad enthusiasm into his service—remembering that his real Master is the Lord Christ—a Master who never overlooks

any faithful act of service, and never fails to pay royal wages of joy and peace—then he may well glory in his high vocation. The great and important thing for each of us is to feel quite sure that we are "called of God, as was Aaron." Then the position of the High Priest will be no more a position to be coveted than the lowliest office in a home. Christ was "called of God" to become a village Carpenter—could any calling be grander than the vocation of the Saviour of the world?

The child of a village doctor was once asked the question: "Where is your father?" "I don't know," was the ready answer, "but he's helping somewhere." What a revelation of character is contained in that short statement. If you are earning such a reputation as that for yourself, then you must surely be following in the steps of One who went about doing good. We are given our parts to play, as though we were actors on a stage. One is dressed in crown and royal robes, and expected to play the part of a king; another is dressed in common clothes and set to sweep a room or wait on table. The thing which will win praise from employer and spectators is not the part that is played, but the way it is played. The "king" may stammer through his part, showing that he has given scanty attention to its preparation, while the "servant" may win renown for himself as a splendid actor; though he may go on taking the part of a servant to the end of his days. Possibly, if he insisted on taking the part of a king, he might make a dead failure of his part. The wise stage-manager places each performer according to his natural ability.

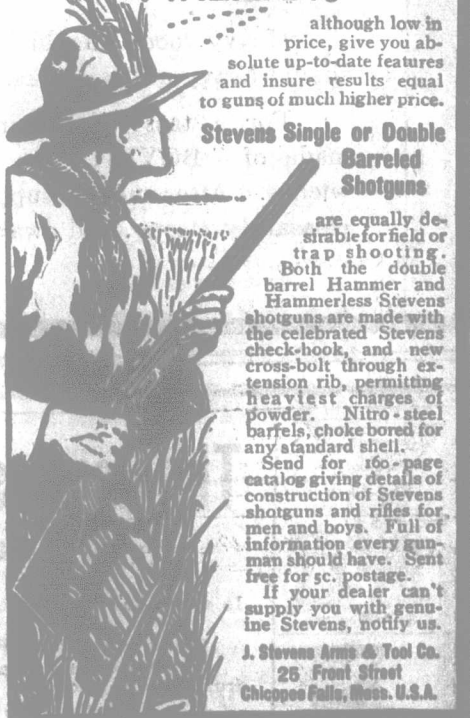
"Despise not thou small things;
The soul that longs for wings
To soar to some great height of sacrifice,
Too oft
Forgets the daily round,
Where the little cares abound,—
And shakes off little duties while she looks aloft."

But there is another calling, another vocation, which is—even in our eyes—a grand and glorious thing. We are all called to come "to the help of the Lord, to the help of the Lord against the mighty." God does not need our help, He can win the battle without us, but He allows us to help Him; and it is, or should be, a joyful privilege to be "laborers together with God."

People are very apt to shirk this duty of active Christian work. They think—or try to think—that only those who are set apart by Holy Orders are called to be missionaries. But we are all set apart by the holy orders of our King, set apart to do some special work that no other person on earth can do as well. Is not that an inspiring thought? We are all called to witness to the wondrous fact of an ever-present God, revealing Himself through the lives and in the faces of men, women and children. We are all bound to pray "Thy kingdom come!" and to lend a hand to our own prayers in the place and manner which is, in a peculiar fashion, our own. We can't escape responsibility in this matter, for everyone who hears Christ's call himself is not a loyal disciple unless, like St. Andrew, he tries to bring at least one other hungry soul to the satisfying Master he has found. "Let him that heareth say, 'Come.'"

You may not be able to preach sermons, or write books, but even showing one's color boldly, when occasion demands it, is sure to help somebody. The old woman who once started out to attack the enemy, armed only with a poker, did not expect to be of much assistance; but, as she said, "I can show them which side I am on." One such daring recruit might easily inspire a great many more capable people, and so give far more valuable help than she dreamed of. On the other hand, one who is ashamed to own his faith, afraid to confess his Master before men, does far more deadly harm than he knows. It was not without good reason that the Israelites were told to prepare for battle by issuing this command to the army: "What man is there that is fearful and faint-hearted?—let him go and return to his house, lest his brethren's heart faint as well as his heart." If we are not "helping the Lord against the mighty," then let us be very sure that we are

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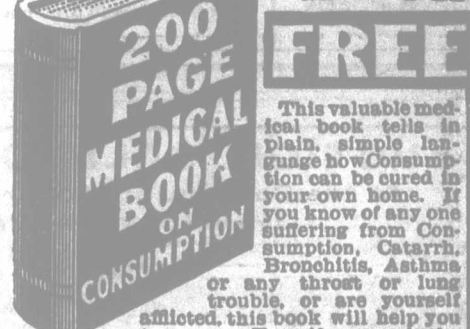


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Rev. Wm. McLaren, D.D., Principal Knox College, Toronto.
Dr. McTaggart's vegetable remedies for the liquor and tobacco habits are healthful, safe, inexpensive home treatments. No hypodermic injections, no publicity, no loss of time from business, and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

WE will mail 5 Cloth Remnants suitable for boys' knee-pants for \$1. Give age and we will cut out pants free. Add 20c. for postage. **N. Southcott & Co., Room 8, Coote Block, London, Can.**

Dainty Theatre Suppers

Heavy foods should be banished altogether, so should heavy milky drinks.

For a tasty and dainty supper try a bouillon made of "BOVRIL," or some "BOVRIL" sandwiches. After such a supper you will retire feeling pleasantly sleepy, and awake next morning refreshed.



The Largest Line of Grinders IN CANADA.

In sizes to suit any power. These cuts show three classes.

549. For use on the Farm. Three sizes.
550. Farm use or custom work (stationary or for moving from place to place).
551. Attrition Mills, for elevators, custom mills, etc. Finest work and greatest capacity.

We have just what YOU need in these "Rapid-Easy" Grinders, which do more work with same power than others. Information, circulars, etc., upon request.

J. Fleury's Sons, Aurora, Ont.

Medals and diplomas: World's Fairs, Chicago and Paris.

AUCTION SALE OF SHROPSHIRE

At the Belmont Stock Farm, Brantford, Ont., Can.,
THURSDAY, JANUARY 30th, 1908.



Will sell by public auction at 1 o'clock p. m. on above date 100 very choice yearling Shropshire ewes, recently imported from the most noted flocks of England, to lamb imp. lambs, having been bred before leaving England to celebrated English sires. Will also sell a few excellent yearling rams and ram lambs bred from the flock of Thos. Buttar, of Scotland. Will sell a few homebreds of the different ages. Every sheep man should be interested, this being one of the most noted flocks in America, having won all flock prizes and championships at Canadian National (Toronto), Dominion Fair (Sherbrooke), and Central Canada Fair (Ottawa), 1907. Carriages will leave the Belmont Hotel and American Hotel, Brantford, at 10.30 a. m. and 12.30 p. m. for the farm. Eight months' credits will be given on approved paper.

**J. G. HANMER, Prop.,
BRANTFORD, ONT., CAN.**

Welby Almas, Auct.

London Fence

STRETCHES UP EASIEST, NEATEST, BEST

A wonderful improvement in woven fencing—that's the verdict of all who have examined the new London Woven Fence. With our improved Factory Looms we produce all even length strands—which means a far neater fence—one more easily erected—with a total strength unequalled by any other fence.



When up,
the London Woven
Fence presents an appearance that for neatness and symmetry is not approached by any fence in your neighborhood. Every lateral, stay and lock of heavily galvanized No. 9 steel wire, of the same temper, elasticity and strength that have earned for London Fence such a high reputation. Stays are remarkably stiff and straight—will not warp or curl. The lock is beautifully simple. Requires no weakening of wires by indenting or bruising. And you never saw a lock with a grip so marvelously tight. By long odds the biggest fence value on the market.

AGENTS WANTED in unrepresented districts.
LONDON FENCE MACHINE CO., Ltd., London, Ont.

SUBSCRIBE FOR "THE FARMER'S ADVOCATE AND HOME MAGAZINE."

helping the mighty against the Lord. Our influence is certainly being used either for God or for His foes. And it is always unconscious influence—the power of the invisible character within—that does most to help or hinder the coming of God's Kingdom.

Let us take up our daily work with glad hearts, remembering that we are called of God, even as Aaron was, for a high and holy office. Our service may be glorious, or it may be paltry, it all depends on the spirit we put into it, and the way we try to do it.

"Days for deeds are few, my brother;
Then to-day fulfil thy vow.
If you mean to help another,
Do not dream it; do it now."

HOPE.

Dear Editor,—I have for some time had the privilege of reading "The Farmer's Advocate." I have enjoyed the writings of Hope very much, and I wish to express my appreciation to her. I have found comfort and joy in her inspired thought put forth in those writings, and have also had others express themselves in the same manner to me. Wives and mothers find that they are helped in their daily tasks by taking spiritual food, and while they perhaps would not think of reading the Bible, they love to read the Word of God and the teachings of our dear Saviour brought forth to them in such writings, hence they are a great power for good: for in this world, under present conditions, as we are still suffering from the curse wrought about by the fall of our first parents, we must pass through troubles and trials, sickness and death, therefore we need to have some bright hope of the future; we need to have faith in a being that is all-powerful and just and all-wise, that is full of mercy and love. And, although as gold, we shall be cleansed seven times in the furnace that our faith may still be unwavering, and we shall be nearer unto our Father, and be worthy of His smiles and blessings. This helps us to be cheerful under all circumstances, and a knowledge that every sacrifice brings a blessing, and every unselfish thought and action is being noted, and every kind act will be rewarded unto us tenfold, gives us a desire to do good, and makes us happy in so doing. Let us keep oil in our lamps, and have them trimmed, and await the Bridegroom, for He cometh soon to claim his own. Then we shall realize the good wrought about by the birth of our Jesus and his suffering and death. When He comes to reign as King of kings upon this earth, and sin and death shall be no more, we shall meet our dear ones now bereft us, and as the angels sang to the shepherds on that eventful night when Christ was born: "Peace on earth, good-will to man," shall again be realized, let us be among those to share the same.

E. J. C.

As a sister of Christ, I wish to speak a few words of appreciation to you, dear Hope, for the help and inspiration you have given us all through the beautiful lines of the Quiet Hour. Your words I can only compare to the heaven-sent rain drops upon the parched earth beneath, so refreshing are they to the soul thirsting for more of God. Never think, my friend, that your labor has been in vain, but ever keep before you these words of cheer: "Let us not be weary in well doing, for in due time we shall reap, if we faint not."

Eternity alone will reveal to you all the fruit of the Precious Seed sown in this way.

I know you are not one who will take any praise unto yourself, but will give it all unto God, Who makes us co-workers with Himself in winning others to lives of purity and truth. I feel drawn here to add a few more words for the Master, so will venture to do so with a prayer that they may touch the heart of someone to his eternal good. We all, as children of God, have reason each day we live to say, with the Psalmist, "Bless the Lord, oh my soul, and all that is within me bless His Holy Name."

"It is in Him we live and move and have our being." His care over us is so great "that even the very hairs of our head are numbered," and we know that "all things work out to the good of them that love God, to them who are called according to His purpose."

Yes, we are constantly receiving good things from the loving Father's hand, for which we should thank Him; and I think that especially at Christmas time should our hearts be filled with praise and thanksgiving to God, for His great love shown toward us in the gift of "His only begotten Son that whosoever believeth on Him should not perish but have everlasting life." Oh, the wondrous love of God! in giving to man the best He had—"His only begotten Son."

"Was ever gift like the Saviour given?
No, not one; no, not one."

Have we who have accepted Jesus (God's best gift) given Him our best in return? Or, is there something yet unsundered in our lives that we may bring as a gift to God's Altar this Christmas time? Then go forth into the world stronger, happier, and more courageous, because of living in closer touch with our blessed Master.

Let us be out-and-out for Christ, the lukewarm Christian neither has the approval of God or man; while the truly Godly person is a bright star in this world of sin, bringing honor and glory to the name of Jesus, the Captain of their salvation.

It is the whole-hearted service God wants, let us be obedient to the call, and say from the heart these words:

"I'll go where you want me to go, dear Lord.

Over mountain, or plain, or sea,
I'll say what you want me to say,
dear Lord,

I'll be what you want me to be."

A CHRISTIAN.

"THE FARMER'S ADVOCATE" FASHIONS.



6999.—Ladies' Waist, 6 sizes, 32 to 42 inches bust measure.

6998.—Ladies' Circular Skirt, 7 sizes, 20 to 32 inches waist measure.



4248.—Girls' Dress, 8 sizes, 5 to 12 years.

The above patterns will be sent to any subscriber at the very low price of ten cents per pattern. Order by number, and be sure to give waist and bust measurement. Allow from one to two weeks in which to fill order.

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

[Note: Where two numbers appear, ten cents must be sent for each number.]

FEW HERE KNOW THIS.

When an eminent authority announced in the *Scranton* (Pa.) *Times* that he had found a new way to treat that dread American disease, Rheumatism, with just common, every-day drugs found in any drug store, the physicians were slow indeed to attach much importance to his claims. This was only a few months ago. To-day nearly every newspaper in the country, even the metropolitan dailies, is announcing it and the splendid results achieved. It is so simple that anyone can prepare it at home at small cost. It is made up as follows: Get from any good prescription pharmacy Fluid Extract Dandelion, one-half ounce; Compound Kargon, one ounce; Compound Syrup Sarsaparilla, three ounces. Mix by shaking in a bottle, and take in teaspoonful doses after each meal and at bedtime. These are all simple ingredients, making an absolutely harmless home remedy at little cost.

Rheumatism, as everyone knows, is a symptom of deranged kidneys. It is a condition produced by the failure of the kidneys to properly filter or strain from the blood the uric acid and other matter which, if not eradicated, either in the urine or through the skin pores, remains in the blood, decomposes, and forms about the joints and muscles, causing the untold suffering and deformity of rheumatism.

This prescription is said to be a splendid healing, cleansing and invigorating tonic to the kidneys, and gives almost immediate relief in all forms of bladder and urinary troubles and backache. He also warns people in a leading New York paper against the indiscriminate use of many patent medicines.

"Smile once in a while,
Twill make your heart seem lighter;
Smile once in a while,
Twill make your pathway brighter.

"Life's a mirror—as we smile,
Smiles come back to greet us;
If we're frowning all the while,
Frowns forever meet us."



Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted, and Pet Stock. TERMS—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

FOR SALE—5 h-p. boiler and engine. J. Wells, 516 Nelson St., London.

SITUATION wanted by man and wife (one child) on farm. Prefer to engage with bachelor, as wife could act as housekeeper. Man generally handy. State wages given. M., box 581, London, Ont.

WANTED—Situation by married man as herdsman. Experienced breeder and feeder of hogs and cattle. Reliable and temperate. Or would work farm on shares. Ira L. Howlett, Keldon, Ont.

WANTED—A working housekeeper or general servant for family of three—no children. Also a plain cook to take full charge of kitchen. Also a general housemaid for family of four. References required. Address: Mrs. J. C. Dietrich, Galt, Ontario.

WANTED—A few good subscription agents for *The Farmer's Advocate* and *Home Magazine*. Liberal terms. The William Weld Co., Ltd., London, Ont.

Wanted! I want to tan your hides, skins and furs soft and pliable; never get hard. Also to make and line your robes, or make your fur coats. Try me for best of satisfaction. I aim to please you. Address: B. F. BELL, Delhi, Ont.

FOR SALE!
A Carload Heavy Horses

from our work. Some large mares. To be sold reasonable. Apply:

WM. WILKIE (HENDRIE & CO., LIMITED),
Toronto Ont.

\$12 Women's Fall Suits \$6.50

Tailored to order. Also suits to \$15. Send today for free cloth samples and style book. Southcott Sul' Co., London, Ontario.

Mother—You and Willie have been at it cherries again. I found the stones in the nursery.
Johnny—It wasn't my mother, wasn't I followed all the stones of mine.

About the House.

SELECTED RECIPES.

Mother's Apple Pie—Make the usual pie pastry, using two cups of flour, half a cup of shortening, half a teaspoonful of salt, and a little cold water. Spread a layer of paste over a large pie plate, then fill the dish with sliced apples, rounding the apples up high; dredge lightly with salt, add about three tablespoonfuls of cold water, and fit on an upper crust in which a few slits have been made. Let bake about twenty-five minutes. Run a knife between the two crusts, at the edge, to separate the crusts, and lift off the upper crust. To the apple add about a cup of sugar, half a teaspoonful of salt, two or three tablespoonfuls of butter, and a generous grating of nutmeg. Mix the apple and seasonings thoroughly, but without disturbing the under crust. Spread the apple evenly over the crust. Set the upper crust in place, and serve at once with sugar and cream.—*Cooking-School Magazine*.

An Economical Egg Omelet—Put a cup of finely-crumbed bread into a bowl, and pour over it 2-3 cup of sweet milk. When the bread is thoroughly moistened, stir it until smooth and free from lumps. Add yolks of two eggs, beating them in one at a time; then fold in the stiffly-beaten whites, and pour into a well-buttered baking dish. Bake in a moderate oven until set. If you choose, sprinkle with grated cheese a few minutes before taking from the oven.

Fruit and Nut Cake—Beat half cup butter to a cream, then beat in one cup sugar. Next, add three eggs, one at a time, beating well. Have ready one cup nut-meats and half cup raisins; put through a chopper. Sift two level teaspoons baking powder with two cups sifted flour. Mix the chopped fruit and nuts with this, then beat into the egg mixture, alternately with three-quarters cup milk. Add the grated rind of a lemon, one-quarter teaspoon cinnamon, and a dash of nutmeg.

Sponge Jelly Roll—Sift together three times one cup flour, scant half teaspoon salt, two level teaspoons baking powder. Beat two eggs until light; gradually beat in one cup sugar, and then the flour mixture. Lastly, add a grating of lemon rind and one-third cup hot milk. Bake in a pan about eight by twelve inches, about fifteen minutes. Turn on to cheese-cloth; trim off the crisp edges; spread with jelly, and carefully roll, keeping the cloth between the cake and the fingers.

Graham Gems—One pint sweet milk, three cups Graham flour, half teaspoon salt, two teaspoons baking powder, one tablespoon melted butter, two eggs. Beat the eggs, and add milk, salt and butter. Sift the baking powder into the Graham flour, and stir into the batter. Bake in buttered gem tins or patty-pans, which should be hot when the batter is poured in.

Southern Muffins—Sift together one pint each of corn meal and flour, one tablespoon sugar, one teaspoon salt, and three of baking powder. Rub in one tablespoon lard or butter; add two beaten eggs, and one pint milk. Mix to a batter. Pour into cold, well-greased muffin rings, and bake in a hot oven fifteen minutes.

HOUSEHOLD HINTS.

When pouring cake batter into the pans, always spread it with a spoon, so that it is thin in the center and thick at the sides of the pan. This will secure an even baking.

To use up left-over porridge, either beat it into pancake batter, or press it into a mould, and, when cold, slice it; fry the slices, and serve with syrup.

Left-over mashed potatoes can be made into dainty griddle cakes. "Rice" the potatoes, mix with the beaten yolks of two eggs for every three pints of potato; then add the stiffly-beaten whites, enough sifted flour to make the batter firm enough, and a pinch of sugar. Serve with jam or maple syrup.

Small holes in table linen should be darned with ravellings of the linen itself, and for this purpose the ravellings should be carefully preserved whenever new linen is purchased.

For insomnia, try eating a raw onion salad for supper.

Beds should be aired as early as possible

after rising, and windows opened to admit the fresh morning air.

Hold the knife perpendicularly when cutting warm bread or cake. It should be quite sharp.

Damp salt will remove tea stains from china.

Ammonia will remove white stains from furniture.

Hot milk added to potatoes when mashing them is an improvement.

Salt in the oven under baking tins will prevent pastry scorching on the bottom.

OUR SUMMER HOUSE.

[The following has been kindly contributed by one of our subscribers.]

In the winter season there is often a little spare time on the farm which can be utilized to good advantage in various ways. "The Farmer's Advocate" is a good medium through which we can convey hints to one another. I am sending a view of our summer house, which we built in odd moments of leisure. It is octagonal in shape, six feet in diameter, and six feet high, built of 2 x 4 pine scantling, lined outside with cedar, with the bark on. We got small poles from two to three inches in diameter, and ripped them in two with our circular saw driven by the windmill. The floor is laid with 1 1/2-inch maple flooring, put together with paint on the tongues, and



A Homemade Summer House.

then painted all over. The roof is sheeted, and then covered with Pedlar's galvanized shingles, a few that we had over from the pippen roof. There is a turned cherry finial on the top. One-eighth of the building is left open for a doorway, and around the other seven sides is built a seat, made of the same material as the outside lining. There is room for a small table to be used when one is writing. This summer house makes an ideal place to sit and read on a hot Sabbath afternoon; is a fine place for visitors to rest in the shade; by putting short boards across the seat and spreading some rugs, a very comfortable sleeping place can be made for very hot weather. There is room for six or seven people to sit in this summer house. We have trained some creeping vines up to it, and there is a narrow flower-bed around the base, and it is a nice thing to have on the lawn near the house. D. L.

THE TORONTO HORSE SHOW.

Entries for the Ontario Horse-breeders' Exhibition, to be held in Toronto, Feb. 12th to 14th, close February 1st. Applications for entry forms and prize lists may be procured by writing the Secretary, Mr. A. P. Westervelt, Parliament Buildings, Toronto. Very liberal prizes are offered for imported and Canadian-bred Clydesdale and Shire stallions and mares, Hackney stallions and mares, Standard-bred and Thoroughbred stallions, and heavy-draft horses, single and in teams. It is the opinion of prominent horsemen that this will be the greatest show of the kind ever held in Toronto. Single-fare, round-trip tickets from all points in Ontario where the regular single fare is \$2.50 or less. All tickets good to return up to Feb. 15.



Robber Hens

Over fat and lazy fowls—always ready to eat, never ready to lay—take the profits out of your hen business. Put such by themselves, reduce the feed a few days, and then begin the use of Dr. Hess Poultry Pan-a-ce-a once a day. This course will soon turn robber hens into profit-paying fowls.

DR. HESS Poultry PAN-A-CE-A

is the prescription of Dr. Hess (M.D., D.V.S.) himself an expert poultryman, and was formulated with the express purpose of providing something to strengthen the fowls' digestion and compel the largest possible assimilation of nutriment. That it does this is the testimony of poultry men in all the United States and Canada. It holds bitter tonics, iron for the blood and cleansing nitrate to purify the system. Makes laying a habit and helps young chicks grow fast. It is also a great preventive of disease. Costs but a penny a day for 30 fowls.

Sold on a written guarantee,
1 1/2 lbs. 35c; 5 lbs. 85c;
12 lbs. \$1.75; 25 lb. pack \$3.50

Send for Dr. Hess 48-page Poultry Book, free.

DR. HESS & CLARK,
Ashland, Ohio, U.S.A.
Instant Louse
Killer Kills
Lice.



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 50 cents.

A FEW large Toulouse geese and one Pekin drake. A. Gilmore, Mountain View Farm, Atholstan Que.

BARRED Rock cockerels, related to 287-egg hen. J. E. Henry, Waterdown.

BRONZE turkeys for sale. Extra fine birds. Good weight. Brilliant plumage. Francis Docker, Dunnville, Ontario.

FOR SALE—Ten first-class Rose-comb Brown Leghorn cockerels, two dollars each. Remit with order. Frank Stonhouse, Hampton, Ont.

FOR SALE—One pen of Light Brahmas (U.S. Imp.)—8 hens and 2 cockerels—for \$10.00; 1 S. L. Wyandotte cock, \$2. A. Migh, Derry West, Ont.

INGLE NOOK POULTRY FARM offers special bargains in a few choice White Leghorn cockerels. Order quick and get first choice. Only \$1 each. W. H. Smith, 41 Spruce St., Toronto.

MAMMOTH B. turkeys for sale, bred from imported stock. Young birds took 1st and 2nd at London, 1907. Pairs and trios mated not skn. R. G. Rose, Glanworth Ont.

MAMMOTH Bronze turkeys. Stock from the first-prize tom, Western Fair, 1907. G. E. Nixon, Arva.

MAMMOTH Bronze turkeys for sale. Bred from a heavy prize-winning tom and high-class hens. T. Hardy Shore & Sons, Glanworth, Ont.

PURE-BRED Barred Rocks, White Wyandotte and White Leghorn cockerels, \$1 each. John B. Morgan, Wales, Ont.

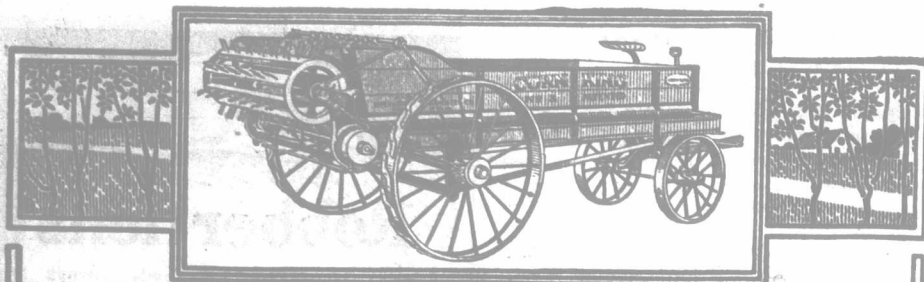
ROUEN ducks for sale. Won first prizes at fall and winter fairs. Write J. Imrie, Romney.

Hatch Chickens by Steam with the EXCELSIOR INCUBATOR OR WOODEN KEN

Simple, perfect, self-regulating. Hatch every fertile egg. Lowest priced first-class hatching made. GEO. H. STANLEY, Galt, Ont.

Send for free Catalogue.

Attention is called to the notice to horse-breeders in the advertisement of Wilhelm & Moore, Shakespeare, Ont., in which their specific for the prevention of trouble in the case of brood mares and young foals is set forth.



*Make the manure bring you
\$ 4 a ton*

Thousands of Successful Farmers Are Doing It

There is no charm or secret about it. You simply spread it with a machine, and thus make it go twice as far, get twice as much good from it on the first crop, do your land more permanent good, and save half the time and labor of handling.

Manure is generally estimated to be worth \$2.00 a ton handled the old way. There is no doubt that it is worth twice as much to the farmer who spreads with a machine.

Two of the most practical and valuable machines manufactured for farm use today are the *Corn King* and *Cloverleaf* manure spreaders. They are each made in a number of sizes.

These machines differ somewhat in construction and operation, but both are right working and of great durability.

They are proven machines. They embody the best mechanical ideas, the materials used in construction are the best for the purpose, they are made as simple

The nearest branch house will supply you with any further information desired.
CANADIAN BRANCHES: Calgary, London, Montreal, Ottawa, Regina, St. John, Hamilton, Winnipeg
INTERNATIONAL HARVESTER COMPANY OF AMERICA
(Incorporated)
Chicago, U. S. A.

as possible, and they handle manure in all conditions to the perfect satisfaction of users. Proof of all this is to be found in the record each machine has made in the field.

Is it not to your interest to own and use one of these spreaders on your farm?

Figure out for yourself and you must agree that it will be a paying investment, even if you do not have over twenty-five loads of manure to spread in a year.

You can't help but be pleased with the work, the easy handling, the light draft and the substantial making which saves you the annoyance of breakage and repairs.

Call and see these spreaders with the local International agent. He will gladly point out to you the superior features of these machines, as well as supply you with catalogue, colored hanger or other information.

HAMILTON INCUBATORS



WHY does the Hamilton Incubator hatch every fertile egg?

WHY does the Hamilton Incubator hatch such big, healthy, fluffy, robust chicks?

WHY does every chick hatched by the Hamilton live, thrive and grow so rapidly?

BECAUSE our Ventilating System, our Heating System and our Regulating System is perfect.

BECAUSE our directions for operating the Hamilton are correct.

BECAUSE our Brooder is of the newest and most novel design of anything on the market for rearing young chicks.

Send us your address to-day and we will mail you **FREE** one of our big catalogues telling you all about the Hamilton Incubators and Brooders, and how to become a successful poultry raiser. *Agents Wanted.*

THE HAMILTON INCUBATOR CO., LTD., HAMILTON, - ONTARIO

TRADE TOPICS.

GOOD THINGS FROM LIVERPOOL.—Among the most attractive souvenirs of the New-Year season coming from the Old Land were the 1908 diary and four-panel calendar (the seasons represented by four bright British maids) from the Bootle Cold-storage and Ice Co., Ltd., Liverpool, Eng., a firm whose scientific and businesslike system of handling foreign foods has given them wide sepute.

THE VINDICATION OF THE STOCK-FOOD BUSINESS.—The stock-food or tonic business rests upon two factors, viz., the more or less unnatural conditions under which our live stock is kept, a good part of the time, and the lack of knowledge or effort on the part of the average feeder, who could, if sufficiently informed, use condiments of his own, such as salt, ashes, and, in case of swine, charcoal and earth. In special cases, where other substances were indicated, he might use bitter tonics to stimulate the flow of digestive juices and strengthen digestion; iron to enrich the blood or certain nitrates to cleanse the system of accumulating materials that clog the vital organs. But not being sufficiently versed in the properties of these drugs, he seldom makes use of them, unless put up for him in prepared form, with prescriptions as to use. It is here that the manufacturer of stock foods comes into his legitimate field with proprietary preparations, which may not only serve to put an ailing animal on its feet, but which, especially in the case of animals intended for the block, may stimulate the digestive and vital processes to a greater activity, and enable the animal to yield economically larger gains from the food consumed.

Forty-two years in the farm and garden-seed business is the record of Mr. George Keith, Toronto, Ont., the history of whose seed house is coincident with that of "The Farmer's Advocate," in whose columns it has been advertised continuously in the years intervening between 1866 and the present. A beautifully-designed and liberally-illustrated catalogue for 1908 has been issued, and will be mailed free to applicants mentioning "The Farmer's Advocate." The supplying of up-to-date varieties of high class seed for farm and garden and honorable dealing has been the unvarying policy of this old and reliable house.

GOSSIP.

SALE DATES CLAIMED.

Jan. 30th.—Mr. J. G. Hanmer, Brantford, Ont., 100 Shropshire sheep.
Feb. 12th.—John E. Disney & Son, Greenwood, Ont., Shorthorns and Clydesdale mares (imported and home-bred).
Feb. 14th.—R. H. Reid & Sons, Pine River, Ont., Shorthorns.
Feb. 26th.—Stephen Nicholson, Sylvan, Ont., Shorthorns.
March 3rd.—S. J. Pearson & Son, Meadowvale, and F. A. Gardner, Britannia, Ont., joint sale of Shorthorns.
March 4th.—Provincial sale of pure-bred cattle, at Guelph.

Hendrie & Co., Hamilton, Ont., advertise for sale a cartload of heavy horses and mares, which have been used on their city dray service, and will be sold at very moderate prices. These should be very useful for farm purposes and heavy teaming.

GOSSIP.

T. J. Berry, of Hensall, Ont., has recently purchased from Mr. J. Kerr, Red Hall, Wigton, Cumberland, one yearling Clydesdale colt and three fillies, a yearling and two two-year-olds. The two yearlings are by the well-bred horse, King Thomas, which Mr. Berry purchased from Mr. Kerr last year and imported to Canada, and which is doing so well with him that he wanted a yearling of each sex by him to show his customers a sample of what he is breeding. The two-year-old filly, Lady Hill, is by the great horse, Gartley Gold, which Mr. Kerr sold Mr. Berry three years ago. The other filly was by Lord Londonderry (10585), bred by the Marquis of Londonderry.

THE GREENWOOD SALE OF SHORTHORNS AND CLYDESDALES.

Messrs. J. E. Disney & Son, Greenwood, Ont., write: "At our dispersion sale of Shorthorns and Clydesdales, to be held on February 12th, we will offer twenty cows and heifers; nine bulls, from eight to seventeen months old; our present stock bull, Royal Scott (imp.) =60866=; also five imported and Canadian-bred Clydesdale mares and fillies, and the Thoroughbred trotting road two-year-old stallion, Hillview Wilkes [1245], C. H. R. Our stock are all doing well, and will be not over-fat, but just in prime breeding condition. Trains will be met on morning of sale at Claremont (C. P. R.), Pickering (G. T. R.), and Brooklin (G. T. R.), at 12 o'clock. In case of stormy weather, the sale will be held under cover."

Official records of 114 Holstein-Friesian cows were accepted by the American Holstein-Friesian Association from December 18th, 1907, to January 8th, 1908. This herd of 114 animals of all ages produced in seven consecutive days 45,186.3 lbs. of milk, containing 1,573,466 lbs. of butter-fat; thus showing an average of 3.48 per cent. fat. The average yield for each animal was 396.4 lbs. of milk, containing 13,802 lbs. of butter-fat; equivalent to 56.6 lbs., or 27 quarts milk per day, and 16.1 lbs. of the best commercial butter per week. The points of especial interest in this issue of the official reports are the breaking of the milk record by Pieterje DeHaan 2nd's Queen in the senior two-year-old class of the thirty-day division, and the breaking of all records in the eight-months division, as well as all semi-official yearly records, by Colantha 4th's Johanna. This great cow has now made a clean sweep of butter-fat records in all of the prize divisions; and for both milk and fat, in semi-official yearly work she stands far ahead of any cow of any breed, now wearing the laurels that were for some time past worn by the Guernsey cow, Yeksa Sunbeam.

Mr. Robert Miller, Stouffville, Ont., writes: "We have recently made an important sale of three young Shorthorns to Mr. J. F. Graham, Manager for Mr. W. H. Dunwoody, Minneapolis, Minn. The bull is named Blythe Baron, a dark roan, a year old last month, a Marr Blythesome or Butterfly, sired by the grand old Golden Drop bull, Royal Prince (imp.) (71490). The dam was Blythesome Girl 6th, by Imp. Blue Ribbon (74077), and the grandam was Blythesome Girl 2nd, by Imp. Royal Member (64741). The next sire was the renowned Pride of Morning (60546), the next Gravesend (46461), and the next William of Orange (50694). One of the heifers sold is a Butterfly, white, eight months old, sired by Mistletoe Eclipse =63987=, dam Butterfly 30th, by Imp. Royal Prince, grandam Imp. Butterfly Queen, the choice of Mr. Murr's yearlings the year she was imported, and also the dam of the junior champion female at Toronto in 1906. Mistletoe Eclipse was by the Lavender bull, Longford Eclipse (83848), sold at the Thistle Ha' dispersion for \$1,425, and from Mistletoe 21st, for which we paid \$1,700 to her importer, Mr. Platt. The third calf is descended from Crucifix, by Prowler (22662), one of the best imported by that noted judge, J. S. Thompson, late of Whitby, Ont. This, too, is a show winner of undoubted merit."

SUFFERING WOMEN

who find life a burden, can have health and strength restored by the use of

Milburn's Heart and Nerve Pills.

The present generation of women and girls have more than their share of misery. With some it is nervousness and palpitation, with others weak, dizzy and fainting spells, while with others there is a general collapse of the system. Milburn's Heart and Nerve Pills tone up the nerves, strengthen the heart and make it beat strong and regular, create new red blood corpuscles, and impart that sense of buoyancy to the spirits that is the result of renewed mental and physical vigor.

Mrs. D. O. Donoghue, Orillia, Ont., writes: "For over a year I was troubled with nervousness and heart trouble. I decided to give Milburn's Heart and Nerve Pills a trial, and after using five boxes I found I was completely cured. I always recommend them to my friends."

Price 50 cents per box or three boxes for \$1.25, all dealers or The T. Milburn Co., Limited Toronto, Ont.

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.

2nd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied

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.

MEASURING HAY IN MOW.

Kindly tell me, through "The Farmer's Advocate," how to measure timothy hay, clover hay and timothy and clover mixed, in the barn. W. J.

Ans.—Regarding method of determining weight of hay by measurement, I may say that there is no thoroughly reliable method. It all depends upon how firmly the hay is placed in the mow, and the depth of the mow will have a great deal to do with this. It seems to be a problem that has never been very thoroughly worked out. A method commonly recommended is to ascertain the number of cubic feet and divide by 300, which is supposed to give the quantity in tons. So far as I know, this matter has never been worked out for different kinds of hay, and at best it is only a mere approximation. G. E. DAY.

BOILED FLAX FOR PIGS.

I intend raising a few pigs next summer, but will have no skim milk.

1. Would you advise the use of boiled flaxseed at 5c. per lb., to take the place of skim milk for a few weeks after being weaned, or can you recommend a cheaper food? Will, also, have ground oats and shorts for grain food.

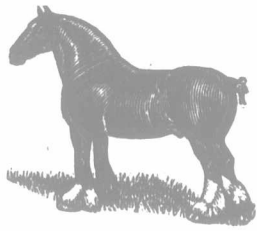
2. Have had good satisfaction with pigs, five or six months old, from feeding grain dry. Would you advise doing this from time pigs are weaned, or would I get better results from making a slop, the pigs to have the run of a clover or rape patch? C. P.

Ans.—1. If boiled flaxseed is used at all for young pigs, it should be used in very limited quantity. It is difficult to get a thoroughly satisfactory substitute for skim milk. If the young pigs are not weaned until they are about eight weeks old, and are taught to eat soaked middlings before they are weaned, I scarcely think it would pay to use flaxseed, as the pigs would likely go on and do very well without either the skim milk or flaxseed. A very few ground oats mixed with the middlings, with the coarser hulls sifted out, will be found to add value to the mixture.

2. Personally, I would prefer feeding the meal ration in the form of slop to young pigs, gradually changing to dry food, if deemed advisable, when the pigs were ten or five months old. I may say that some people, however, have very good success in feeding dry feed to pigs from the time they are weaned. G. E. DAY.

JOHN CHAMBERS & SONS

Holdenby, Northampton, England,



Have at their American branch, at St. Thomas, Ont., under the management of C. K. Geary, a number of good big stallions, also several very fine fillies coming three years old, and safe in foal to some of England's leading sires. Address all communications to:

C. K. Geary, St. Thomas, Ont.

Imp. Clydesdale Stallions



My latest importations are the sons of Baron's Pride, Up-to-Time, Baron Hood, Fickle Fashion and Sir Christopher; are up to a ton in weight; with strong, flat bone, the best of feet and ankles, and big, smooth, flashy tops. A choice lot. My past 47 importations and straight way of dealing are my guarantee.

Wm. Co'quhoun, Mitchell P. O and Station. 'Phone.

Largest Importation of Clydesdales, Hackneys and Percherons of the Year.



My latest importation has just arrived home. I have now on hand for sale: 20 Clydesdale stallions from 1 to 5 years of age; 26 Clydesdale fillies from 1 to 4 years of age; 19 Hackney stallions from 2 to 8 years of age; 12 Hackney fillies, all young; and 4 Percheron stallions 3 and 4 years of age. A total of 73 head with size, quality and action, and bred in the purple. Largest selection in Canada. Will be sold right, and on terms to suit.

T. H. HASSARD, MILLBROOK, ONT.

CLYDESDALE STALLIONS



Our new importation has just landed. An exceedingly good lot. Some extra big fellows. They may be seen at our stables, Fraser House, London. Call and see them, or write

MESSRS. DALGETY BROS., GLENCOE, ONT.

**Graham - Renfrew Co.'s
CLYDESDALES and HACKNEYS.**



Our Clydes now on hand are all prizewinners. Their breeding is gilt-edged. Our Hackneys, both stallions and mares, are an exceedingly high-class lot. We also have a few high-steppers and carriage horses. Yonge street cars pass the door every hour. 'Phone North 4483.

GRAHAM-RENFREW CO., LTD., Bedford Park, Ont.

CLYDESDALES



At Columbus, Ont., the home of the winners, this year's importation just arrived. The pick of Scotland's best. For size, style, conformation, quality and royal breeding, they eclipse any former importation we've made. Look them up in our barn on Exhibition Grounds. Over 30 head to select from.

SMITH & RICHARDSON, COLUMBUS, ONTARIO.

25 Imported Clydesdale Stallions and Fillies 25



Two Clyde stallions, 1 Hackney stallion, over 20 Clyde mares and fillies, from 1 to 5 years of age. Many high class show animals among this lot. Many winners in Scotland among them. They have size, quality, style, action and breeding. Come and see them. **Geo. A. Brodie, Bethesda P. O., Stouffville and Gormley Stations**

Oak Park Stock Farm

BRANTFORD, ONT.

shires—imp. and from imp. stock; singly or in car lots. About 30 choice young Berkshires, imp. sire and dam. Everything strictly high class. **T. A. COX, Manager, Brantford, Ont.**

Imp. Clydesdales (Stallions and Fillies), Hackneys, Welsh Ponies.



I have now on hand Clydesdale stallions and fillies—Scotland prizewinners and champions; Hackney fillies and Hackney pony; also Welsh ponies. There are no better animals, nor no better bred ones, than I can show. Will be sold cheap and on favorable terms. **A. AITCHISON, GUELPH P. O. AND STATION.**

SIMCOE LODGE CLYDESDALES



Our stable of imported and Canadian-bred Clydesdale stallions and fillies was never so strong in show stuff as now, although we have had some very strong lots. Call and see what we have before buying elsewhere. **HOGKINSON & TISDALE, BEAVERTON, ONT., G. T. & C. N. R. Long-distance 'phone.**

IMPORTED CLYDESDALES!



9 stallions, 1 to 6 years of age; 10 fillies, 1 to 3 years of age, several of them in foal; 1 two-year-old Hackney stallion; 1 two-year-old Shire stallion; 3 Percheron stallions, 3 years old. All are selected animals, bred in the purple. Will be sold cheap and on terms to suit. **T. D. ELLIOTT, BOLTON, ONT. 'Phone.**

Imp. Clydesdale Stallions and Fillies.



Our new importation of stallions and fillies are the best we could select in Scotland, particularly well bred, with the size, smoothness and quality that Canadians admire. Show-ring stuff. Come and see them. Will sell on terms to suit.

JOHN A. BOAG & SON, RAYENSHOE P. O., BROWNHILL STA.

DUNROBIN Clydesdales, Shorthorns, Yorkshires STOCK FARM.

Now is the time to invest in a good Clydesdale Mare or Filly. Two good stallions for sale. Price right. Large selection. **DONALD GUNN & SON, BEAVERTON P. O. and STN.**

**QUESTIONS AND ANSWERS.
Veterinary.**

MISCELLANEOUS.

1. Horse has been stiff in fore legs for some time. He is apparently all right, except for the stiffness which is shown especially when he turns around. Our veterinarian said last winter that he had navicular disease, and he treated him for it, but this winter he is just as bad. Give a cure for it.
2. Which is, sugar beets or turnips, the better as a laxative for horses?
3. Pregnant mare has lymphangitis.

J. H. B.

Ans.—1. No doubt your veterinarian is correct in his diagnosis, and if a man were able to give a cure he could make a fortune in a short time. A well-established case, as yours apparently is, is incurable. Keeping the feet moist by poulticing, or repeatedly blistering the coronet, will probably give some relief, but this is all that can be done. If he is so bad as to be practically useless, an operation which consists in removing the nerve supply may be performed. This will cure the lameness, but he will be liable to break down entirely at any time, and we do not advise the operation, except in extreme cases.

2. There is little difference, when horses become accustomed to sugar beets they like them better than turnips.

3. Bathe the leg well with hot water three times daily; rub until dry, and then apply weak camphorated liniment. Give four drams nitrate of potash once daily for four days, and give regular exercise. Feed lightly on laxative food.

HORSE KICKS IN STALL — WORMS.

1. Advise me of some device to prevent my horse kicking in the stall; also give cause.
2. My horse is fed five pounds hay and four quarts oats each feed and is not doing well. I think he has worms. Give treatment for worms.

F. P.

Ans.—1. This is a vice, not a disease, and there is no definite cause. It is simply a habit, and is very hard to check. A device that is often successful is to fill a bag with straw, and suspend it to the ceiling by a rope so that he will kick it. During the rebound it will strike the horse's hips. It may excite him at first, but he will soon come to associate the stroke or strokes as a result of the kick and probably stop the habit. Another plan is to attach about a foot of chain to a strap, and buckle the strap around the pastern of the leg he kicks with. This is more liable to bruise, and is more dangerous than the first.

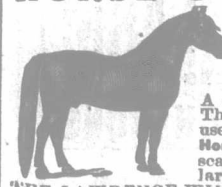
2. If in addition to this feeding, or as a change, you would give a feed of boiled oats and bran two or three times weekly, and a carrot or turnip or two daily, you would likely see an improvement. You may be correct in thinking he has worms. Take three ounces each of sulphate of iron, sulphate of copper, calomel and tartar emetic. Mix, and make into twenty-four powders. Give a powder every night and morning in damp food, and after the last has been taken, give a purgative of eight drams aloes and two drams ginger, and rest for four days.

GOSSIP.

The volumes of Coates' Herdbook, issued by the Shorthorn Society of Great Britain and Ireland, are now issued in two parts, one for pedigrees of bulls and one for cows and produce. Part 2 of Vol. 53, cows with produce, to Dec. 31st, 1906, has been received at this office, and our thanks are due and tendered the Secretary for same.

The two spring foals whose pictures appear on another page in this issue were sired by the good breeding Clydesdale stallion, Colston Leader (imp.) (owned by Mr. Wm. Mossop, St. Mary's, Ont.), a son of Royal Signet (8967), by the renowned Prince of Wales (673). These two foals were first in their respective classes at Exeter, Mitchell, St. Mary's and Kirkton last fall. The one on the left-hand side, owned by Silas Shier, Kirkton, was first in the heavy-draft class at the Western Fair, London, 1907; and the other, owned by Wm. Mossop, St. Mary's, was second in the agricultural class at the same show.

HORSE OWNERS! USE



GOUBAULT'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 blemish. Send for circulars. Special advice free.

THE LAWRENCE-WILLIAMS CO., Toronto, Canada

Boo Spavin

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

Fleming's Spavin Cure (Liquid) is a special remedy for soft and semi-solid blemishes—Bog Spavin, Thoroughpin, Splint, Curb, Capped Hock, etc. It is neither a liniment nor a simple blister, but a remedy unlike any other—doesn't irritate and can't be 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 blemishes, and gives you the information you ought to have before ordering or buying any kind of a remedy. Mailed free if you write.

FLEMING BROS., Chemists, 75 Church Street, Toronto, Ontario

Kendall's Spavin Cure

Here is just one case out of thousands—**HAMMOTA, MAN.,** March 13, '06.

"This is to testify to the value of Kendall's Spavin Cure as a Spavin Remedy and Liniment for general use. I used it for Spavins on a colt two years ago, and found it a complete cure."

Wm. J. Ferguson.

Save your horse with Kendall's—the sure cure for all Bony Growths, Swellings and Lameness. \$1 a bottle—6 for \$5. Our great book—"Treatise on the Horse"—free from dealers or

Dr. B. J. Kendall Co., Enosburg Falls, Vermont, U.S.A.

Notice to Horsebreeders

All those that had mares lose their foals last year should use Wilhelm's Brood Mare Special; it guarantees a good, strong, healthy foal, prevents running navel and big joints. Has been used by breeders for seven years successfully. Send for testimonials. \$1.50 per package.

Impotent and indifferent sires treated successfully. Terms on application.

WILHELM & MOORE, SHAKESPEARE, ONT.
J. WILHELM, V. S., Specialist on Generation. G. A. MOORE.

High-class Driving Ponies AND DORSET SHEEP.

For sale: Pair matched bay and white ponies 2 years old; piebald gelding, 2 years old; black Shetland mare (imp.), 5 years old (bred); and others of various ages. Also a few young Dorset ewes in lamb. Apply to

E. DYMENT, COPETOWN, ONT.
Glend's Spring Farm, Westworth Co., Ont.

Imported Clydesdales



Just arrived, a choice shipment of stallions and fillies; dark colors; all first-class breeding. Inspection invited. Terms to suit. Long-distance 'phone.

Geo. G. Stewart, Howick, Que.

Clydesdales, Shorthorns and Cotswolds—For individuals of above breeds, write me. My new Cotswold and Clydesdale importation will arrive early in the season.
J. C. ROSS, Jarvis P. O. & Sta.

CLYDESDALES AND SHORTHORNS—Canadian-bred, registered. One stallion, rising 3, by Imp. Macqueen. Two stallions, rising two, by Imp. Primrose. Also my stock bull, Gilbert Logan 8494. W. D. BUGH, Clarendon P. O. and Station.

Attention is called to a new advertisement of the far-famed firm of Dunham & Fletcher, importers and breeders of high-class Percheron and Belgian draft horses and French Coachers. A new importation is due first week in February. An exceptional experience of over forty years in the importation and breeding of these classes of horses, and an honorable business record, should entitle this firm to a fair share of patronage.

OAKLAWN FARM
HEADQUARTERS FOR
PERCHERONS
BELGIANS
FRENCH COACHES

POINTERS FOR BUYERS

Our sales last six months nearly twice those of any similar period in our history. Animals purchased here and shown by their then owners won more championships and first prizes than all purchased elsewhere and similarly shown. Constant importations. Next one due February 5, 1908. Best animals, lowest prices, safest guarantee. 42 years of honorable business methods. Write immediately to

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RAINE DU PAGE COUNTY, ILLINOIS

Free Veterinary Book

Be your own horse doctor. Book enables you to cure all the common ailments, curb, splint, spavin, lameness, etc. Prepared by the makers of

Tuttle's Elixir

The world's greatest horse remedy. \$100 reward for failure to cure above diseases where cure is possible. Write for the book. Postage 2c. TUTTLE'S ELIXIR CO., 66 Beverly St., Boston, Mass. Montreal: H. A. Tuttle, Mgr., 22 St. Gabriel St. Beware of all imitations; only temporary relief, if any. C. H. R. Crocker, South Farmington, Nova Scotia.

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 40 free.

ABSORBINE, JR., for man and horse. Cures Varicose Veins, Varicocoele, 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: LEMAR BROS. & CO., Montreal.

MONEY IN CANARIES

More profitable than poultry. Experience unnecessary. We give advice free. Our new 32c book, "Money in Canaries," tells all about it. With book we send free, if you name this paper, a 3c packet BIRD BREAD. Also, "How to Raise Birds of Lice," and "Bird Magazine." Send 3c to-day; stamps or coins. Refunded if you buy birds from us. Birds shipped anywhere any time. Write us before buying. Address:

COTTAM BIRD SEED

28 Bathurst St., London, Ont.

NOTHING BUT THE BEST

New importation of Clydesdales and Hackney Stallions. For sale more Old Country premium and H. and A. Society winners than any other importer. Such horses as Acme, Monoclef Marquis, Rozelle, Ardethan Goldsmith, King's Seal, Baron's Charm, Baron's Carrick, Abbey Fashion, Medallion, and many others equally good. Thirty six in all. Prices reasonable.

OSWALD SORBY, GUELPH P. O., ONT.

CATTLE FATTEN QUICKER

Take on weight faster—make better beef—when dehorned. Cows give more milk—and half the danger in shipping by rail or boat is eliminated.

KEYSTONE DEHORNER

does the work in 2 minutes. Cuts from 4 sides at once. Write for free booklet. R. H. McKenna, 219 Robert St., Toronto, Ont. Late of Picton, Ont.

Brown Swiss Cattle

FRENCH-CANADIAN HORSES.

We are offering for sale cattle of both sexes and almost any age; the greatest dual-purpose breed alive. Horses of all ages. Stallions, mares and fillies. The best stud in Quebec. Write us for prices. We represent exactly as the animal is.

C. E. STANDISH, Ayer's Cliff P. O.,

Trebarthe Farm, Quebec.

W. R. Bowman

MT. FOREST, ONT.,

Is offering Durham bulls and heifers 6 mos. to 15 mos.—reds and roans—sired by Newton Prince (Imp.) and Cronie (Imp.), for \$50 to \$75. Also heifers in calf, \$75 each. Shropshire ewes, choice ones, at \$25 to \$30 per pair, bred to our Chicago winner, Prolific (Imp.). Ram and ewe lambs, \$20 per pair.

ABERDEEN - ANGUS

For sale, 50 head to pick from, males or females by imported sire. Drumbo station.

WALTER HALL, Washington, Ontario.

QUESTIONS AND ANSWERS.

Miscellaneous.

PERMIT TO TAKE BIRDS AND BIRDS' EGGS.

To whom should I apply to secure a permit to take birds and birds' eggs, I being a student of the feathered friends?
E. H. H.

Ans.—Apply to Edwin Tinsley, Supt. Game and Fisheries, Parliament Buildings, Toronto, Ont.

SMOKING HAMS.

F. D., N. B., asks how to smoke hams and bacon by the hogshead method: First boil together for half an hour 6 quarts water, 1 lb. brown sugar, 1 ounce saltpetre, and 2 lbs. salt. Skim well, and set aside until cold, then pour over the fresh meat. Let stand two weeks in a cool place, then drain and wash well. Without wiping, roll in bran until thickly coated, then smoke. A large ham should be smoked from ten days to two weeks. To smoke the meat, select a place where the ground rises slightly, and build a small archway of brick, etc., with a passage or flue running for some distance underground. At the lower end build the fire; at the other, place the barrel in which the meat is suspended. The lower end is closed after the fire is well started to prevent a too rapid burning of the corncocks or other material used in smoking the meat, and also to direct the smoke to the barrel for escape.

BEEF SCRAP FOR POULTRY -- DRY FARMING.

1. Is there any profit in feeding hens beef scrap at four cents a pound?
2. Could you suggest a cheaper substitute?

3. What is meant by "dry farming?"
W. S. McI.

Ans.—1. Beef scraps at 4c. a lb. is not dear, providing there is no other animal food on the farm to take its place.

2. Table scrap and milk are the best substitutes, and if I had plenty of these, would never think of buying beef scraps.
F. C. E.

3. "Dry farming" is a term applied to agriculture as practiced in the semi-arid regions. The main feature is conservation of all possible moisture by keeping the land covered with a mulch or blanket of loose dry earth. Summer-fallowing is a prominent feature of the practice of many farmers in the dry districts, the precipitation of two years being retained, so far as possible, for the production of one crop.

COMPLETING PEDIGREE FORMS

A buys a pure-bred sow from C; C to furnish pedigree; sow to be in pig to pure-bred hog. Can A compel C to fill up forms so he can get the little pigs of said sow registered?
SUBSCRIBER, Ontario.

Ans.—Judging from the foregoing statement alone we would be inclined to say that A is not in a position to do so. But it may be that there is a well-established custom with reference to which the parties may be legally taken to have made their contract, and that calls for the vendor in such a case doing for the purchaser what is proposed. Such a custom would govern the matter.

We suppose that when A says that C furnishes pedigree, he means a certificate of registration. C would not have to sign the pedigrees of the young pigs, but he must supply to A, signed by himself, a transfer made on a blank supplied by the National Live-stock Records, Ottawa, setting forth change of ownership, date of service and name and number of service boar. If C does not own the service boar, signature of owner of boar is also required as to service; a space on transfer application provides for this. The above transfer accompanies the application for the registration of the litter; A signs the forms; the pigs are bred by C, and farrowed the property of A.

The constitution of the Dominion Swine-breeders' Association provides as follows:

"If it is proved that a member has falsified pedigrees, or otherwise dealt unjustly with the public, said member shall be expelled from this Association, and animals bred by him, or in which he is interested, shall not be recorded in records controlled by this Association."

The Association may also deal with a person who is not a member by refusing to permit him to make subsequent registrations in their record.

Come and see the most select lot of

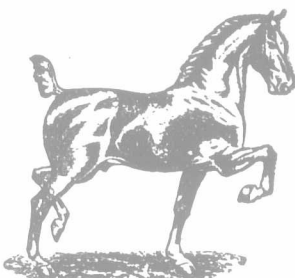
Clydesdale and Hackney

STALLIONS AND MARES

Two to Six Years Old

These horses combine size, weight and quality. All of which are for sale at reasonable prices. Send for illustrated catalogue.

Graham Bros.,
CLAREMONT, ONTARIO.



Union Stock Yards Co., Ltd.

Paid-up Capital Stock, \$500,000.00.
TORONTO JUNCTION, ONTARIO.

Auction sales of Horses, Carriages and Harness every Monday and Wednesday throughout the year. Private sales every day. This new market is being opened as a strictly commission market for the auction sale of horses and registered stock of all kinds, giving breeders a central place, with the very best accommodation for taking care of all kinds of stock until day of sale. Horse dealers and stock breeders will do well to send for our terms and conditions of sale.

HERBERT SMITH, Manager.
(Late Grand's Repository.)

Dispersion Sale of

SHORTHORNS & CLYDESDALES

At the Farm, Hillview, on Wednesday, February 12th, 1908,

WILL BE SOLD WITHOUT RESERVE

30 head of Scotch and Scotch-topped Shorthorns of the Bruce Mayflower, Miss Ramsden, Margaret, Crimson Flower, Duchess, Louisa, Daisy and Princess strains, including the stock bull, Imp. Royal Scott 60866.



Also 4 registered Clydesdale mares and fillies, Imp. and Canadian-bred, and the Clydesdale stallion, Imp. Holstane Chief, and the Thoroughbred stallion, Hillview Wilkes 1245.

TERMS OF SALE: 7 months' on bankable paper; 5 per cent. per annum off for cash. Conveyances will meet morning trains at Pickering, Claremont and Brooklin stations. Lunch at noon. Sale held under cover if weather proves unfavorable. For catalogues apply to the proprietors.

J. E. Disney & Son, Greenwood P. O.

Geo. Jackson, Auctioneer.

SCOTCH SHORTHORN BULLS

Woodfield Prince, sire ported, =50038 = (89064), dam Trout Creek Missie 20th = 65067 =; red, little white; calved July 6th, 1906; a show bull. Also four extra bull calves, 8 to 10 months, by the Lavender bull, Trout Creek Wonder = 56167 = (247831), out of Scotch cows; imported by W. D. Flatt; eligible for American Herdbook. Write for pedigrees. Gibbs' Woodfield Stock Farm, St. Catharines, Ontario.

We Cure Eyes We Cure Ears

(FREE BOOK—FREE ADVICE)

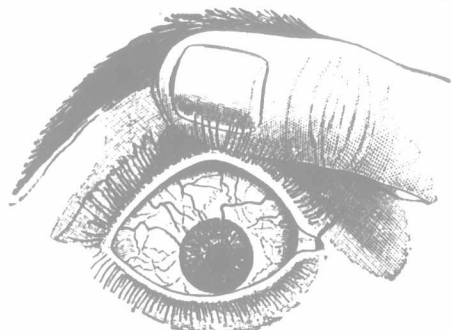
We Show You in Set of Illustrated Eye and Ear Books, How to Cure Any Eye or Ear Trouble at Home.

Costs You Nothing for Free Cure Book—Tells You How—Send for it To-day.

We tell you in our Eye and Ear Books what doctors rarely tell their patients, but what they ought to know. We tell you how to cure any eye or ear trouble to stay cured, without the knife, right in your own home, without having to go to any doctor and at small expense.

And think of it! These Eye and Ear Books, worth \$1.00, are free to you—absolutely free.

These books may be worth to you the price of your precious sight or hearing.



No matter how long you have been afflicted, or how serious your case, whether cataract, falling eyesight, optic-nerve disease, sore or watery eyes, scums, or deafness, discharging ears, buzzing, ringing, head noises, or any other eye or ear trouble, you are welcome to our books and advice free of charge.

We cured Dr. W. A. White, of Phelps, N. Y., of optic-nerve disease in one month. We cured the daughter of Mr. H. K. Miles, of Rockwell, Texas, in two months, of hemorrhage of the retina. Both pronounced incurable.

And we have cured hundreds of other men, women and children. We want to send you these books free. We want to save your sight or hearing.

If you can appreciate a real, genuine cure, simply send us your name and address. That's all. We will send our books to you by return mail, free of all charges. They are finely illustrated, and of high quality. Knowledge is power. We will tell you what others have not, which is most likely the reason why you have not been cured before.

Cut out the coupon below, for free Eye and Ear Books, and mail to-day. Send no money.

FREE BOOK COUPON.

The North American Eye and Ear Specialists.—
1649 North American Bldg.,
Chicago, Ill.

Send me at once, absolutely free of all charges, your complete treatment plan, illustrated Eye and Ear Books, proofs of cures, etc.

Name.....
Address.....
State name of trouble, if you know.

Sunnyside Herefords

Present offering: Twenty good breeding cows, yearling heifers, some sappy heifer calves; also some very promising bull calves, the get of Onward and Protector 2nd. In car lots or singly. Come and see them, or write and state what you want. Satisfaction guaranteed. **ARTHUR F. O'NEIL**, Maple Grove, Ont., Middlesex Co.

We have some choice females for sale—all ages—of the right sort; also a few young bulls fit for service. Correspond with us. We can please you. **J. A. LOYERING**, Coldwater P. O. and Station.

ELM PARK POLLED ANGUS—8 years won the herd prizes at Toronto, the male and female championships, and prizes worth winning at leading exhibitions. For sale are females and bulls all ages—nearly all winners. Also Suffolk Down sheep. **JAMES BOWMAN**, Guelph, Ont.

CEDARDALE SHORTHORNS

Owing to scarcity of feed, am offering at specially low figures for quick sale: 17 heifers, one to three years old. 4 young bulls from six months to one year old. 16 cows, in calf or with calf at foot. Both beef and deep-milking strains. **T. S. SPROULE, M.P.**, Markdale, Ont.

QUESTIONS AND ANSWERS.

Veterinary.

LAME MARE.

After driving on hard roads my mare goes lame. Her hoofs and frog are hard and dry, and hoofs feel warm. I have been using tanners' oil without results.

J. E. D.

Ans.—Hard driving on hard roads has caused inflammation of the feet, and it is quite probable the navicular joint is involved. It is possible a cure may be effected if you give a long rest and treatment; otherwise, you will probably have a permanent cripple. Make a blister of two drams each of biniodide of mercury and cantharides, mixed with two ounces vaseline. Remove the shoes, and pare heels well down. Clip the hair off for two inches high all around the hoofs. Tie head so that she cannot bite the parts. Rub well with the blister once daily for two days, and on the third day wash off and apply sweet oil. Turn loose in a box stall now, and oil every day. As soon as the scale comes off, tie up and blister again, and, after this, once every four weeks for several months. As soon as grass comes, turn on moist pasture between the blisterings. V.

Miscellaneous.

PERCENTAGE OF FAT IN CREAM.

Could you supply me with a book giving the price a farmer receives for his cream in Toronto at different percentages? If so, let me know as soon as possible.

J. Y.

Ans.—I know of no book giving the price a farmer receives for his cream in Toronto at different percentages of fat. This price is governed by the law of supply and demand, the same as for any other article. I would advise writing the City Dairy Co., Toronto, or any other firm who buys cream, and get their prices for cream at different grades, or percentages of fat. It is possible you mean what is the value of cream testing different percentages of fat? If so, I would illustrate this point as follows: Cream testing 20 per cent. fat is worth, say 80 cents per gallon; then cream testing 30 per cent. fat is worth \$1.20 per gallon, and cream testing 40 per cent. fat is worth \$1.60, and so forth. Each increase of one per cent. fat in the cream should be worth an increase of about four cents per gallon in the price received for the cream. H. H. DEAN.

PLANTING AN APPLE ORCHARD

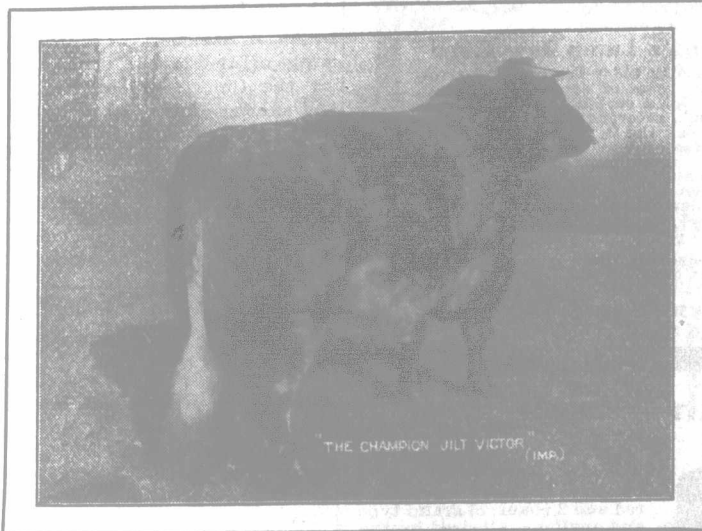
What is the most approved way of planting young apple trees as delivered by the nursery; also the best way of transplanting apple trees of four-inch diameter and fifteen feet high next spring?

W. D. B.

Ans.—It is not advisable to attempt to transplant apple trees as large as those you mention. Such trees would be so seriously checked in growth that unless the transplanting was done with much more care than usual the trees would soon succumb to attacks of fungous diseases and borers. It is much better to begin with thrifty young trees and give them time to grow than attempt transplanting old trees of this kind. If you desire to make the attempt, however, the best plan would be to dig a trench all around the tree about four or five feet from the trunk, deep enough to cut off all of the main roots, then fill in the trench again with good surface soil, and allow the tree to remain in position for another year to send out fresh roots. Another trench, a couple of feet farther out, could then be dug the following autumn, and should be filled in with straw. When the ground is frozen hard, the tree could be taken up and removed to a hole which had been prepared for it the previous autumn. At the time of first root-pruning, the tops should also be cut back very heavily to restore as much as possible balance between top and roots. The method of transplanting young trees and laying out young orchards is too large a subject to deal with here, but is fully described in College Bulletin 144, a copy of which is sent you by this mail. H. L. HUTT.

O. A. C., Guelph.

Salem Herd of Shorthorns



THE CHAMPION JILT VICTOR (IMP.)

The number of important premiums won by this herd is excelled by no other. It has placed herd headers that have earned distinction for their buyers in many leading herds of the United States and Canada. At present there are a number of this kind for sale; also some high-class heifers. They are bred, fed and priced to the advantage of buyers.

J. A. WATT, SALEM P. O.

Elora Stns., G.T. and C.P.R., 13 miles north of Guelph. Long-distance 'phone.

1854 Maple Lodge Stock Farm 1907

An exceptionally choice lot of heifers and young bulls for sale now. Best milking strains.

A. W. Smith, Maple Lodge P.O., Ont.

Valley Home Shorthorns AND BERKSHIRES.

Our herd numbers sixty-five head. We are prepared to give bargains to suit all who wish to buy from one animal up to a carload of females, and 13 bulls from 9 to 15 months old. Also 55 Berkshires of prolific strains.

S. J. PEARSON, SON & CO., Meadovale, Ont.
Stations: Meadovale, C.P.R.; Brampton, G.T.R.

10 IMPORTED 10 BULLS

Recently arrived from Scotland in good condition. They are a superior lot. Selected for herd-headers. We also have a number of Canadian-bred bulls of excellent quality, and representing the choicest breeding. Females suitable for show or breeding purposes.

W. G. PETTIT & SONS, FREEMAN, ONTARIO.

Burlington Jct. Sta., G. T. R. Bell telephone at each farm.

MAITLAND BANK SCOTCH SHORTHORNS!

7 bulls, superior breeding, 11 to 15 months; 5 high-class bull calves 5 to 8 months; and a number of cows and heifers and heifer calves; at half prices formerly asked. **DAVID MILNE, Ethel, Ont.**

MAPLE GROVE SHORTHORNS

Scotch and dairy bred; up-to-date in type; prize-winners at the local shows. A number of 1 and 2 year old heifers, 1 year old bull, and one 8 mos. old—the last will make a show bull. **FLORA BROWN** will be sold easy. **L. B. POWELL**, Walkenstein P. O. and Stn. C. P. R.

Six Thick, Thrifty Shorthorn Bull Calves JUST HOME FROM SCOTLAND.

They are ready to use, and I am going to sell them. Will change for your old imported bulls if good. Will also sell imported cows and heifers and home-bred bulls; also some good Shropshire and Cotswold ewes, bred to great imported sires.

ROBERT MILLER, STOUFFVILLE, ONTARIO, CANADA.

PLEASANT VALLEY SHORTHORNS

For sale: 3 young bulls by Old Lancaster Imp., from Imp. dams, including Lancaster Victor, first prize sr. bull calf at Dom at Sherbrooke, second at C. N. E., Toronto. Correspondence solicited. Inspection invited. **Geo. Amos & Son, Moffat Stn. & P.O.** C. P. R. Farm 11 miles east of City of Guelph.

Queenston Heights SHORTHORNS

All Scotch. The thick-fleshed, early-maturing sort. Special prices on young stock, either sex. Ask for catalogue with sample pedigrees.

Hudson Usher, Queenston, Ont.
Farm three miles north of Niagara Falls.

MAPLE SHADE

Winners at the leading shows have been bred by bulls bred here. We can sell you a good bull to head your herd of SHORTHORNS, or for use on your good grade cows. The bull catalogue explains the breeding. Write for it.

John Dryden & Son, Brooklin, Ont.
Stations: Brooklin, G. T. R.; Myrtle, C. P. R. Long-distance telephone.

GREENGILL HERD OF HIGH-CLASS SHORTHORNS.

We offer for sale choice young bulls from 6 to 19 months old, sired by Imp. Lord Roseberry, also cows and heifers, with calf at foot or bred, either Imp. or Canadian-bred.


R. MITCHELL & SONS,
Nelson P. O., Ont., Burlington Jct. Sta.

Brown Lee Shorthorns!

Nonpareil Victor—6207— at head of herd. Young stock for sale at all times. Prices very reasonable. **Ayr, C. P. R.; Drumbo, G. T. R.**

BOUGLAS BROWN, Ayr, Ont.
PLEASE MENTION THIS PAPER

Lump Jaw



The first remedy to cure Lump Jaw was Fleming's Lump Jaw Cure and it remains today the standard treatment with years of success back of it, known to be a cure and guaranteed to cure. Don't experiment with substitutes or imitations. Use it, no matter how old or bad the case or what else you may have tried—your money back if Fleming's Lump Jaw Cure ever fails. Our fair plan of selling, together with exhaustive information on Lump Jaw and its treatment, is given in Fleming's Vest-Pocket Veterinary Adviser. Most complete veterinary book ever printed to be given away. Durably bound, indexed and illustrated. Write us for a free copy.

FLEMING BROS., Chemists,
75 Church Street, Toronto, Ontario

Shorthorns

Sweepstakes held at London, Ayrmer, Wallacetown, Rodney, Ridgetown and Highgate, 1907. We have for sale at reasonable prices 3 choice young bulls, 1 red and 3 roans, of grand type and quality. All sired by the good breeding bull, Ridgewood Marquis—48995—, a son of the old champion, Spicy Marquis. Also a few young cows and heifers. JNO.

LEE & SONS, Highgate, Ont.

T. DOUGLAS & SONS

STRATHROY, ONT.

Brooders of Short horns and Clydesdales. 15 bulls, 60 cows and heifers. 1 imp. stallion, imp. and home-bred fillies. Write us what you want or come and see our stock. Farm 1 mile north of town.

SHORTHORNS

One roan Shorthorn bull highly bred—will sell at a great bargain. One pure white, two months old, cheap for quick sale. Cows and heifers all ages. Also a number of Chester White pigs that I will sell cheap if sold at once, as I have not the room to winter them.

D. ALLAN BLACK, Kingston, Ont.

Maple Grove Shorthorns

Herd headed by the grand show bull, Starry Morning. Present offering: Imported and home-bred cows and heifers, also a few young bulls. Terms and prices to suit the times. C. D. WAGAR, Enterprise Stn. and P.O. Addington Co.

SHORTHORNS

For want of stable room will sell cheap 10 heifer calves, 13 yearling heifers, 4 two-year-old heifers in calf, and 3 red bulls about 14 months old. Right good ones. OLYDESDALES.—Two-year-old mare in foal, and a good pair 4 and 5 years old. Write, or come and see them.

JAMES McARTHUR, GOBLES, ONTARIO.

SPRING VALLEY SHORTHORNS

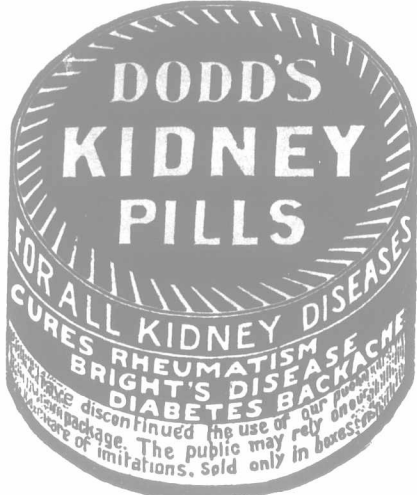
Two young imported bulls of the very best quality and breeding. Six Canadian-bred bulls, mostly the get of Bapton Chancellor (imp.). Prices right.

KYLE BROS., AYR, ONTARIO.

SCOTCH SHORTHORNS!

We now offer four heifer calves 10 and 11 months old. All reds. Bred from imp. sire and dams. Will be sold right. C. RANKIN & SONS, Wyebridge P.O., Wyevale Sta.

"An ounce of butter, madam?"
The grocer said, and then,
"Two dollars, please," as he wrapped it up—
For this was 1910.



DODD'S KIDNEY PILLS

CURES RHEUMATISM BRIGHT'S DISEASE DIABETES BACKACHE

Do not discontinue the use of our pills until you are cured. The public may be misled by cheap imitations. Sold only in the original package.

QUESTIONS AND ANSWERS—Miscellaneous.

CANADIAN CHAMPIONS AT CHICAGO.

I enclose a clipping from a U. S. paper in which it is stated that the winning of the grand champion steer award at the Chicago International in 1907 is "Canada's first victory." If I am not very much mistaken there was, some years ago, a white steer from Canada that won the honor twice at Chicago.

F. M.

Ans.—In 1883 the white pure-bred Shorthorn steer, Clarence Kirklevington, bred and shown by Bow Park Farm, Brantford, Ont., won first at Chicago as a yearling, his weight being 1,620 lbs.; and in 1884, at Chicago, the same steer won the grand championship over all breeds, his weight being then 2,400 lbs., as a two-year-old, while his smoothness and quality was ideal. He was fed and fitted by James Smith, now farm and herd manager for Senator Edwards, at Rockland, Ont.

A HOMEMADE LAND ROLLER.

Would you, or a brother farmer, describe the building of a homemade land-roller in "The Farmer's Advocate, or if "Farm Appliances" describes fully the building of a roller and other articles used on a farm? I wish you would let me know. I would like to have you describe a roller built either from a log or old mower wheels, giving sketch of frame and bearings; the best width, if in one section; if in two sections, how is inside ends of section made; the best kind of plank to use to cover wheels, and width of same; how fitted and fastened to wheels? Through a description of a butter-worker in "The Farmer's Advocate" last spring, I built one myself, fully as good as a factory-made one, and would like to see more of such articles used on the farm described.

F. D.

Ans.—The simplest and cheapest form of land roller is the single roller, made of a log of wood. After the log, say eighteen inches in diameter, has been hewed and smoothed until it is perfectly round and true, iron gudgeons (an inch and a quarter in diameter and sixteen inches long, the outer four inches of length round, and the inner twelve inches square, and brought to a point) are driven into three-quarter or inch holes in the center of each end until only the rounded part projects. An oblong frame of hardwood 4 x 4 scantling surrounds the roller at its greatest diameter, the gudgeons turning in holes bored in frame, or in blocks bolted to it. In order to give a bearing for tongue to be bolted on, there have to be in the part of the frame in front of the roller two scantlings, one close to the roller, and the other a foot or more in front and parallel to it. This kind of roller we can recommend, if a length of not more than five feet is desired. A very fine double roller can be made of two pairs of mower wheels, covered with two-inch hardwood planks. These planks should be not more than four inches wide—three would be better—with properly bevelled edges, and fastened to the wheels by bolts through holes drilled in them. Some chisel off the projections on outer face of wheels, others believe they are better left on and the planks fitted to them. For a roller of this kind, an iron axle of sufficient diameter and the full length of roller and extending a few inches outward at either end for attachment to frame has to be procured. The frame for a double roller should be above the roller, and, underneath the frame, three V-shaped iron braces, which may be made of old wagon tires, are fastened, one at either end, and one in the center, the lower ends of which are fastened to the axle. The center one does not need to be fastened, however, a hole through which the axle runs being sufficient. To keep the rollers in place, washers on the axle, either of wood or iron, at both ends, and at either side of center brace are necessary. The tongue goes across the frame, and is fastened, front and back, with bolts. Whiffletrees should not be attached to tongue, as the draw in such case in a frame of this description is downwards, causing weight on the horses' necks, but should be attached low down by clevis to center brace, the brace being shaped so that this can be done.

T.

LOOK \$200.00 IN CASH AND 500 VALUABLE PREMIUMS

In order to introduce our goods into homes where they are not already known, we have decided to give away the above-named sum and 500 handsome premiums. The cash and premiums will be given in order of merit to persons sending in the best ending to the Limerick Verse that is written in part below.

1st prize.....	\$50.00 in cash
2nd prize.....	\$40.00 in cash
3rd prize.....	\$35.00 in cash
4th prize.....	\$25.00 in cash
5th to 9th prizes, five prizes of \$10.00 each.....	\$50.00 in cash
10th to 14th ".....	Five Ladies' or Gents' Gold Filled Hunting Case Watches.
15th to 19th ".....	Five Family Dinner Sets, (57 pieces).
20th to 24th ".....	Five Ladies' or Gents' 14k Gold Plated Watches.
25th to 29th ".....	Five sets of half a dozen Silver Plated Knives and Forks. (Regers)
30th to 34th ".....	Five Ladies' or Gents' Solid Silver Watches.
35th to 39th ".....	Five Handsome Violins and Bows.
40th to 44th ".....	Five Hardwood Accordions.
45th to 49th ".....	Five Magnificent Fur Ruffs.
50th to 54th ".....	Ten Ladies' Toilet Sets.
55th to 59th ".....	One Hundred Ladies' or Gents' 14k Gold Filled Rings.
60th to 64th ".....	One Hundred Waterton Fountain Pens.
65th to 69th ".....	One Hundred Sets of 6 Silver Plated Tea Spoons (Regers).
70th to 74th ".....	Forty Ladies' Hand Bags.
75th to 79th ".....	110 Sets of Silver Plated Sugar Spoons and Butter Knives (Regers)

Below will be found the Limerick Verse WITH A MISSING LINE, which line we expect our competitors to supply:

In giving good prizes we take pride,
They make known our goods both far and wide:

Why delay,
Call or write to-day,

(Fill in the line above.)

Please note that the last line should rhyme with the first two lines. As a last WORD for the missing line, we would suggest the use of any of the following words: "divide," "applied," "lied," "simplified," "provide," "confide," "supplied," "denied," "beside," "sighed," "tried," "decide," "betide," "cried," "dried," "bride," "side," "compiled," "died," "implied," "spied," "inside," "died," "tried," "ride," "tied," "abide," "aside," "deride," "astride," "belied." These words all rhyme with the endings of the first two lines in the verse.

CONDITIONS

There is another simple condition attached to this contest about which we will write you as soon as we receive your answer to the above. This condition does not involve the spending of one cent of your money. The judging of the Limericks will be in the hands of a committee of three gentlemen of undoubted integrity who have no connection with this office. No employee of ours or any of their relations will be allowed to compete, and the committee's judgment must be accepted as final.

I agree to abide by the decision of the committee of three appointed by the Bovet Manufacturing Co., and enter this competition on that distinct understanding.

Signature.....

Address.....

(State whether we are to address you as Mr., Mrs. or Miss.....)

Please write very plainly. Cut out this advt. and send it to us after filling in the blank line. The filling in of the missing line may take a little thought and time, but it should be time and energy well spent. There are over five hundred prizes, any one of which is well worth the time and energy that we ask you to expend. Surely this is enough for everyone! Write to-day. Do not send any money. We will answer your letter immediately, and tell you of the simple condition that must be adhered to. Address very plainly

BOVEL MANUFACTURING CO., Dept. 10, MONTREAL

LIVINGSTON'S OIL CAKE MEAL.

OLD PROCESS

Nothing is better for fattening steers quickly and putting them on the market in prime condition than Oil Cake Meal. Thousands of Canadian and English stockmen use Livingston's, and would have no other. It is equally good for milk cows. They give more and better milk when fed Livingston's Oil Cake Meal. Also used for horses, sheep and hogs. Write for information regarding prices, etc., etc., to

DOMINION LINSEED OIL CO., LIMITED
Montreal, Que. Baden, Ont.

SHORTHORNS AND LINCOLN SHEEP.

Two bulls, 11 and 12 months old—a Miss Ramsden and a Bessie, both by the good breeding bull, Proud Gift =50077= (imp.), also cows and heifers in calf by him. Inspection solicited. Always have some choice Lincoln sheep for sale at reasonable prices.

J. T. GIBSON, DENFIELD, ONTARIO.

A. EDWARD MEYER, BOX 378, GUELPH, ONT., BREEDS Scotch Shorthorns

exclusively. Herd bulls: Scottish Hero (imp.) =55042= (90065), a Shethin Rosemary; Gloster King =68703= 283804, A. H. B., a Cruickshank Duchoef of Gloster. Young stock for sale. Long distance 'phone in house.

Shorthorns! BELMAR PARC.

John Douglas, Peter White, Manager, Pembroke, Ont.

Calves for sale by our grand quartette of breeding and show bulls:

Nonpareil Archer, imp. Proud Gift, imp. Marigold Sailer. Nonpareil Eclipse.

Females. Imported and from imported stock in calf to these bulls.

An unsurpassed lot of yearling heifers.

R. H. REID, Glover Lea Stook Farm, PINE RIVER, ONT., BREEDER OF SHORTHORN CATTLE

Golden Cross (imp.) at head of herd.

FLETCHER'S SHORTHORNS & YORKSHIRES

Present offering: Young bulls, red or roan, 10 to 12 months old, sired by my noted stock bull (imp.) Joy of Morning; also heifers and cows in calf. In Yorkshires: Choice sows bred, and boars fit for service, from imp. sire and dam.

GEO. D. FLETCHER, Binkham P.O., Ont.
Erin Stn., C. P. R.

LISTEN!

We are offering **Special Bargains in Shorthorns** just now. The **Reason** is that we have a **Large Stock** and **Feed is Scarce**. Most of you know the **Kind of Cattle** we have, so that it is useless repeating the usual formula. In order to **Reduce Our Stock**, so that we may be able to pull through the winter, we **Will Sell at Prices** which will **Well Repay the Purchaser** who has feed to keep them until spring. We have pretty nearly anything **You** want. If you can not come to see, write and tell us as nearly as possible what it is, and we will frankly tell you whether or not we can supply.

John Clancy, Manager. **H. Cargill & Son, Cargill, Ont.**

MILK CANS ROB YOU

Look through a microscope at milk set to cream in pans or cans and you'll see how they rob you. You'll see the caseine—the cheese part—forming a spider web all through the milk. You'll see this web growing thicker and thicker until it forms solid curd. How can you expect all the cream to rise through that? It can't. This



caseine web catches a third to half the cream. You stand that loss just as long as you use pans or cans for they haven't enough skimming force to take out all the cream. But, just the minute you commence using Sharples Dairy Tubular Cream Separator, you stop that loss.

Sharples Dairy Tubular Cream Separators have 10,000 times more skimming force than pans or cans, and twice as much as any other separator. They get all the cream—get it quick—get it free from dirt and in the best condition for making Gilt Edge Butter. Caseine don't bother the Tubular. The Tubular is positively certain to greatly increase your dairy profits, so write at once for catalog 1-188 and our valuable free book, "Business Dairying."

The Sharples Separator Co.
West Chester, Pa.
Toronto, Can. Chicago, Ill.

QUESTIONS AND ANSWERS.

Miscellaneous.

TRAINING A COLLIE.

I have a collie pup, three months old. Is it best to keep him tied up or let him run loose? He has the appearance of being a good heeler. How could I train him to go and come off when told?

J. C.

Ans.—No puppy should be kept tied up continuously, it is liable to go wrong on its legs, and to develop intelligence must associate with his master. During the day a young dog should be constantly with his owner about the farm, and at night shut up in the stable. Before a dog is allowed to work he must first be taught to "come to heel" when called.

R. M. E.

OPERATING AN INCUBATOR.

We appreciated very highly the timely information furnished by Prof. W. H. Day, of the O. A. C., in your Jan. 2nd issue, re "The Principles of Artificial Incubation," and would like to ask if the tray of sand was left in the incubator until the chicks were ready to be taken out of the incubator, or was the tray of sand taken out while the chicks came out of the shells at hatching time, and about how thick was the sand in the tray, and should the sand be kept about the same moisture as sand in a sand-pit as near as possible, say, to dampen it each day or so?

W. H. S.

Ans.—The sand tray is removed before the chicks begin to come out of the shell, say on the 19th day. The sand should be kept pretty nearly saturated with water, much wetter than the sand in an ordinary sand-pit.

W. H. DAY.

PROVINCIAL ASSISTANCE FOR COUNTY ROAD-MAKING.

I am an advocate of a covered market in the city of Ottawa, our best produce market, by way of five rows of sheds of 405 feet long, which will mean 2,005 feet of covering for the purchasing public, and over 4,000 feet for the vehicles containing the produce for sale. The cover over the people is to be 18 feet wide, and, over the vehicles, 12 feet wide. The city wants us to give free tolls on all roads for free markets in the city. The Ottawa Citizen says that the Government will pay one-third the cost of all macadamized roads, if the county will pay one-third and the township one-third of the cost in their respective townships. Our county councillors say that the Government will not give any county more than thirty thousand dollars, no matter how much road they build. We would require about three hundred and sixty thousand dollars to make sufficient roads for a by-law to carry in each of our nine townships. Does the Ontario Provincial Government contribute, if the township and county would buy up the toll roads surrounding the city, and, if so, to what extent?

T. J. G.

Ans.—Under the Highway Improvement Act, the Provincial Government pays one-third of the cost of constructing a system of county roads. The county council pays the remaining two-thirds, and must assume charge of the work. Township councils have no obligation in the matter. Where a county council purchases and takes over toll roads as a part of the county system, freeing them from toll, one-third of the cost is paid by the Government. Thus, if in the county of Carleton, a system of county roads were estimated to cost \$360,000, including the purchase of toll roads, the Province would contribute \$120,000, the cost to the county being \$240,000. That the grant to any single county is not restricted to \$30,000 is evidenced by the counties of Simcoe and Wentworth, each of which have received to date about \$100,000. At present there are fifteen counties operating under the Act, and others have the matter under active consideration.

Ontario Department of Agriculture.

Provincial Auction Sales

OF PURE-BRED CATTLE

(Registered).

150 Head, Males and Females, of Beef Breeds

will be held at the following points:

OTTAWA, JANUARY 24; QUELPH, MARCH 4;
PORT PERRY, MARCH 11, 1908.

All stock inspected before being accepted. Only good representatives of the various breeds will be offered.

Special Inducement to Purchasers in Ontario:

Freight Paid: The freight on any animals purchased at these sales by residents of Ontario shipped to purchaser's station in Ontario, will be paid by the Ontario Department of Agriculture. The original receipted freight bill containing the point of shipment and destination, name and registration number of the animal purchased and shipped, the estimated weight for billing, and the rate charged per cwt., should be sent immediately to the Live-stock Branch, Ontario Department of Agriculture, Toronto.

For catalogues and particulars regarding any of the sales, address the Secretary at the point of sale, or make application to:

Live-stock Branch, Ontario Department of Agriculture, Toronto.

Athelstane Shorthorns!

Three choice bulls from 9 to 12 months and heifers from 1 to 3 years; low-down, thick fleshed sort, of families: Rosewood, Butterfly, Rosalind, and Countess, and mostly sired by the Bruce Mayflower bull, Star Prince = 58900. Prices very reasonable. **WM. WALDIE,** Box 324, Stratford, Ont.

SHORTHORN BULLS

FOR SALE.

I have for sale two young bull calves: 1 red, 14 months, reg. in U. S. Herdbook, and one dark roan about the same age—a good one. Also a few females.

Hugh Thomson, Box 556, St. Mary's, Ont.

STONECROFT STOCK FARM, St. Anne de Bellevue, Quebec.

(Adjoining the new Macdonald College.)

Breeders and Importers of High-class

Ayrshire Cattle, Clydesdale Horses, Yorkshire Swine and Collie Dogs

Anything for sale. We offer especially a few select young bulls to clear cheap. Orders booked for spring pigs.

HAROLD M. MORGAN, Prop. **E. BJORKELAND, Manager.**
Bell Phone connection.

AYRSHIRES

Young bulls from producing dams and same sire, from 7 months up to 3 years. Rare good ones and will speak for themselves. **H. DYMONT, Hickory Hill Stock Farm, Clappison, Ont. Dundas Station and Telegraph**

Neidpath Ayrshires A choice lot of bulls ranging in age from 2, 4, 8 and 15 months. Sired by the world's champion, Imp. Dougla dale. **W. W. SALANTYNE, Stratford, Ontario. "Neidpath Farm," Long-distance Phone.**

STONEHOUSE AYRSHIRES

On hand for sale: A number of imp. cows and heifers, winners of high honors in Scotland & Canada. 4 young bulls bred from champions and winners themselves. Extra choice offering.

HECTOR GORDON, Howick P. O. & Sta., Quebec

Burnside's Champion Ayrshires



My 1907 importation of 75 head being about all disposed of, I am preparing to import again. Mr. And. Mitchell, the world's most extensive dealer and breeder of Ayrshires, is at present securing for me the best young bulls from the best herds in Scotland. Send in your order now for a choice bull and a female or two. Bulls will be out of quarantine in time for spring service. Correspondence solicited. Long-distance phone in house.

R. R. NESS, Howick, Que.

Wardend Ayrshires

We have only four spring bull calves on hand for sale. Will sell them at reasonable prices. Sired by White Prince of Meie No 21825, bred by A. Hume, Menie. **F. W. TAYLOR, Wellman's Corners, Hoard's Sta., G. T. R.**

KELSO S. F. AYRSHIRES

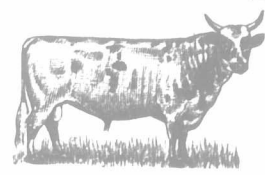
My winnings at Ottawa this year were: Aged cow in milk, 1st and ch.; dry cow, 1st; Canadian bred cow, 4th; Canadian-bred 3-year-old, 3rd. For sale, anything in herd, both sexes. Extra choice stuff. **D. A. McFARLANE, Kelso, Que., Athelstane Sta., G. T. R.**

Glenthurst Ayrshires

Oldest-established herd in Ontario, Imp. and Canadian-bred. Average B. F. test for the whole herd, 4.2; milk yield, 40 to 60 lbs. a day. For sale: females of all ages, and several young bulls; all by Imp. sire and some out of Imp. dams. **James Benning, Williamstown P. O., Lancaster Sta. SPRING BROOK AYRSHIRES.**

Produced nearly 7,000 lbs. of milk each, testing 4.9 per cent. butter-fat, during the past three years. 30 head for sale before spring. All ages. Write for prices. **W. F. STEPHEN, Box 163, Huntingdon, Que.**

SPRINGHILL AYRSHIRES



If you want something really good, we have cows and heifers, all ages, imported and home bred. Winners in any company. Out of dams with H. A. S. official milk records. Imported bulls, two- and one-year-old "winners." Three extra good Sept. bull calves (imp. in dam). Prices very reasonable, within reach of all.

ROBERT HUNTER & SONS, Maxville, Ont.

Long distance phone, Maxville 33.

Hawthorn Herd of Deep-milking SHORTHORNS

6 YOUNG BULLS.



by Aberdeen Hero, Imp. = 28840. Also females all ages.

Wm. Grainger & Son, LONDESBORO P. O.

EAST BANK HERDS

Shorthorn Cattle, Yorkshire and Berkshire Swine.

As I must leave farm in March, I am offering 40 sows of choice breeding and quality. Prize-winners and the get of prizewinners. Also cows and calves bred, fed and sold right.

IRA L. HOWLETT, KELDON.

HERD BULL FOR SALE.

Lord Lieutenant (imported) No. = 50050 =, five-year-old. At stock bull, quiet and sure. 2 bulls just over 1 year. 2 bulls just under 1 year. Half dozen choice 1 and 2 year old heifers. All from imported sires, and some from imported dams. All are rom good milking dams. Visitors always welcome.

SCOTT BR. S., Highgate P. O. and Station. M. C. Ry. and P. M. Ry.

SUNNYSIDE STOCK FARM





Bulls in service: Queenston Archer = 48898 =, Trout Creek Stamp = 67660 =. A number of first-class young bulls, red and roan, and a few cows and heifers, for sale. Prices right.

JAMES GIBB, Brookdale, Ont.

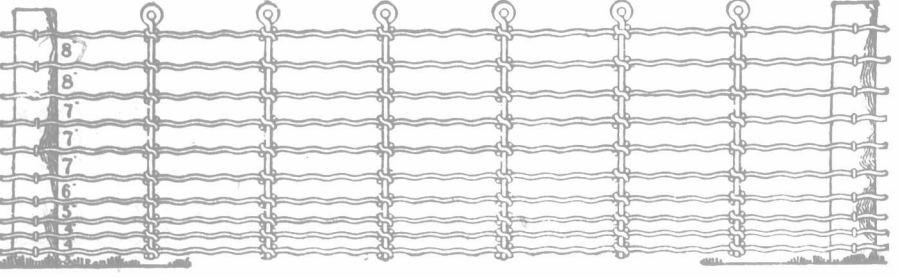
YOUNG SHORTHORN BULLS!

Am now offering 2 grand ones from Scottish Peer (imp.). Will make show animals. Also Leicester sheep. A number of young breeding ewes to sell. **JAS. SNELL, Clinton, Ont.**

PROVE IT! Don't take our word for it.

Ask us to prove to you that the SELKIRK STIFF STAY FENCE is Heavier, Stronger, Stiffer, More Secure and Serviceable than any fence you have seen. It is the BEST and Most Economical Fence to USE, to BUY, and consequently to SELL. Fill out the blank below and mail it to us.





SELKIRK FENCE COMPANY, HAMILTON, CAN.

Gentlemen—I want to examine for myself the merits of the S. S. S. Fencing. Send me a free sample piece with descriptive matter and Agent's Terms.

Name

Post Office Province

MAPLE GLEN HOLSTEINS
Herd of 35 head with A. E. O. breeding, backed up by butter tests of over 16 lbs. as a two-year-old to over 26 lbs. as a cow. A good herd to select from. Two spring bull calves on hand. A E. O. test of one is over 26 lbs. for dam and g. dam. Come and inspect the herd. Any animal will be offered for sale.
G. A. GILROY, GLEN SUELL, ONT.

Lyndale Holsteins

Bull calves for sale out of cows with records of from 18 to 20 lbs., and sired by a grandson of Pieterje Hengerveld's Count De Kol.

BROWN BROS, LYN, ONTARIO.

"THE MAPLES" HOLSTEIN HERD

Young bulls fit for service. Bull calves. Also a few choice heifer calves.

Walburn Rivers, FOLDEN'S, ONT.

MAPLE GROVE HOLSTEINS.—Every female in the herd is in the Record of Merit. My stock bulls are backed up by heavy record dams. For sale: A few choice young bulls bred from Record sires and dams.
H. Bollert, Cassel P.O., Tavistock Sta.

Glenwood Stock Farm—Holsteins and Yorkshires. Holsteins all sold out. Have a few young Yorkshire cows, about 3 months old, for sale cheap. True to type and first-class. Bred from imported stock. **THOS. B. CARLAW & SON, Warkworth P.O., Campbellford Sta.**

Ridgedale Farm Holsteins—1 yearling bull, 6 bull calves, 6 heifer calves, from one to four mos., by Prince Pauline De Kol 6th, and from rich, heavy-milking dams. Come and see them or write: **R. W. WALKER, Utica P.O., Ont. Port Perry, G. T. R., or Myrtle, C.P.R., Ontario Co.**

TRADE TOPIC.

"The Ambitious City of Hamilton, perhaps, possesses no more active industry than the Canadian Steel & Wire Co., Limited, whose advertisement appears in this paper. Some six years ago this firm commenced the manufacture of woven wire fencing, and from that time on have enjoyed a rapidly-increasing trade. No fence is better known from Atlantic to Pacific than the 'American' and 'Ellwood' fabrics woven by this company, and used extensively alike by both the farmers and railroads. Apace with the times and studying always the needs of their customers, they manufacture not only a light fence for gardens and lawns, but a heavy woven fence of No. 9 gauge wire, constructed on scientific principles, and giving results that no similar commodity has been able to meet or eclipse." Write them for information, or their fencing, mentioning "The Farmer's Advocate."

HOLSTEINS

We must sell at least 25 cows and heifers at once in order to make room for the increase of our herd. This is a chance of a lifetime to buy good cattle at bargain prices. The best way to arrange to come and look the herd over. If you cannot, we will do our best for you by correspondence. Also a few young bulls. 100 head to select from. Imported **Pontiac Hermes**, son of Hengerveld De Kol, world's greatest sire, head of herd. All leading breeds represented. **H. E. GEORGE, Crampton, Ont.** Putnam station, near Ingersoll.



RECORD OF MERIT HOLSTEINS

Herd 110 strong. Over 40 head now in the Record of Merit. Two of the richest-bred bulls in Canada at head of the herd. For sale: 18 bulls, from 3 months to 1 year of age, all out of Record of Merit cows and sired by the stock bulls.

P. D. EDM, Oxford Centre P.O., Woodstock Station.

RIVERSIDE HOLSTEINS

For sale: Eight young bulls from 3 to 8 months old, out of Record of Merit cows, sired by Johanna Rue 4th's Lad and Sir Pieterje Posch DeBoer, whose dam and sire's dam average in official test 35.57 lbs. butter in 7 days, and 37.6 lbs. milk 1 day.

J. W. RICHARDSON,

Caledonia, Ont.

FAIRVIEW HERD is the place to buy your next bull. I can furnish you with a bull sired by our great herd bull, **PONTIAC KORNDYKE**, who has 19 daughters in the last year's report that made official records from 12 pounds at less than two years old to over 31½ pounds at four years, and the whole number averaged over 4½% fat. No other bull in the world has ever made such a showing in one year. I have just tested another of his daughters that made 26.40 pounds butter in seven days with second calf. I have over 60 cows and heifers in calf to him. Come and look my herd over before making your selections elsewhere. **E. H. DOLLAR, Heuvelton, St. Law. Co., N. Y., near Prescott.**

Maple Hill Holstein-Friesians

Bull calves from No. 1 dams, sired by bulls with great official backing. Write for prices.

G. W. Clemons, St. George, Ont.

Annandale Great Dairy Herd

Holsteins and Ayrshires

ONLY BULLS, 4 to 10 months old, for sale at present. Bred from great producing ancestors. Bred right. Fed right.

GEO. RICE, Tillsonburg, Ont.

EVERGREEN FARM HOLSTEINS are headed by the richly-bred bull, **Sir Mercena's Favorit**. Dam, **Faforit 7th**, and sire's dam, **Meroena 3rd**, have records averaging 23½ lbs. butter in 7 days—85% fat. Young bulls out of Advanced Registry cows; also young females.
F. C. PETTIT, Burgessville, Ont.

HILTON STOCK FARM—Holsteins, Cotswolds and Tamworths—Present offering: Some young cows; a nice lot of young pigs; few boars six months old, and sows in pig. **R. O. MORROW & SON, Hilton P.O., Brighton Tel. and Stn.**

FOR QUICK SALE.—Choice registered Holstein bull calves at \$25.00 each, sired by Prince Gretqui De Kol, whose dam has an official record of over 18 pounds at three years old. Express paid anywhere in Ontario.
W. A. BRYANT, Cairnmore, Ont.

LOOK HERE

Have on hand bull calves from choice dams, and sired by son of greatest cow in Canada, **Boutsje Q. Pieterje De Kol**, 643 lbs. 7 days; 26 lbs. 1 day. His sire's dam and grandam have records averaging over 26 lbs. butter week. Also choice bulls fit for service. Prices right. **FRED ABBOTT, Fairview Stock Farm, Harrietsville, Ont.**

QUEEN CITY HOLSTEINS. Over 40 head high-class Holsteins. 10 or 15 could be spared. Almost any animal in the herd for sale. High-class stock bulls used. Farm situated 7 miles north of Toronto, near Metropolitan Street Ry. Write: **R. F. Hicks, Newton Brook P. O.**

RAW

CONSIGNMENTS SOLICITED.
Write for LATEST PRICE LIST.
WE PAY ALL Express Charges.

E. T. CARTER & CO.,
TORONTO, ONT.

The Largest WOOL, HIDE & FUR HOUSE In Canada

FURS

QUESTIONS AND ANSWERS. Miscellaneous.

WHEN TO SEPARATE BREEDS OF FOWLS TO INSURE AGAINST CROSSING.

I have several breeds of fowls which, for the want of better quarters, have been allowed to run together this winter. This spring I shall put them into a new house. How long must they be separated in order to make eggs safe from cross-breeds for hatching?

P. W. L.

Ans.—I would prefer to have the birds separated for three weeks. Generally, we consider that ten days is long enough, but to be sure I would like to have them separated from three weeks to one month. We generally get no fertile eggs ten days after the male is removed from the pen.
W. R. GRAHAM.

ANNUAL SCHOOL REPORTS.

1. What part of annual report of the section should the trustees leave for auditors to send as their report?

2. Are the auditors supposed to make out an itemized report for the ratepayers, other than what is in the report? Ontario.
RATEPAYER.

Ans.—1. It is the duty of the secretary, or secretary-treasurer, to cause to be prepared for the annual meeting of the ratepayers, a report for the year then ending, containing, among other things, a summary of the proceedings of the trustees during the year, together with a detailed account of all school moneys received and expended on behalf of the section, for any purpose whatsoever, during such year. Such report must be signed by the trustees, and by either or both of the school auditors of the section. It is the duty of the auditors to examine the accounts, and decide upon their accuracy and whether the trustees have duly expended for school purposes the moneys received by them, and also to submit such accounts, with a full report thereon, at the annual meeting.

2. No. What is intended is a report to accompany that of the secretary-treasurer and his detailed account.

DESTROYING SOW THISTLE.

As I have a field badly overrun by sow thistle, I would like to ask a few questions concerning it. How many kinds of sow thistle are there? The field is in a good fertile state, having grown a good crop of oats last season, but the thistle has smothered out large spots, about half an acre in size. Would it be wise to cultivate till, say, about the tenth of June, and sow buckwheat, the field having been plowed this last fall; or would it be better to plant in corn, as I could manure half of it, and sow the other half in buckwheat? What I want to know is if sow thistle can be killed by a crop of buckwheat smothering it, as I would like to get a crop from this field next season.
M. V. M.

Ans.—There are three species of the sow thistle: the annual or common, the spring, and the perennial. The annual and spring varieties are propagated from seeds carried by the wind; while the perennial, as its name implies, is carried on from year to year by its running root-stocks, although it is also propagated from seeds. The annual or spring sow thistles may be known from their lesser size and fibrous roots, while the perennial can be distinguished by its creeping root-stocks. The annual and spring varieties may be eradicated by shallow plowing directly after harvest, followed by thorough cultivation throughout the fall. Then the following spring, plant the ground to hoed crops, and after harvesting the crop plow very shallow, and cultivate throughout the fall. Sow grain, seeded to clover, the next spring. The same method could be followed in treating the perennial variety, only greater care must be taken in cultivating; and, if the land is badly infested, summer-fallowing might be practiced with advantage. As regards the correspondent's method of using corn or buckwheat as a cleaning crop, if shallow, thorough cultivation is followed up to the time of seeding, either method should prove successful. The best system to keep weeds down is short rotations and persistent cultivation.
R. W. WADE.
O. A. C., Guelph.

Burdock BLOOD BITTERS

Turns Bad Blood into Rich Red Blood.

No other remedy possesses such perfect cleansing, healing and purifying properties.

Externally, heals Sores, Ulcers, Abscesses, and all Eruptions.

Internally, restores the Stomach, Liver, Bowels and Blood to healthy action. If your appetite is poor, your energy gone, your ambition lost, B.B.B. will restore you to the full enjoyment of happy vigorous life.

Brampton Jerseys!

Select your stock bull or family cow from Canada's most famous and largest Jersey herd.

B. H. BULL & SON, BRAMPTON, CANADA.

Pine Ridge Jerseys! Having more bull calves this fall than usual, we will sell them cheap, considering quality. They are bred from our stock bull, Earl Denton, gr. son of the famous Flying Fox. Wm. Willis & Son, Newmarket P. O. & Sta.

Jerseys Extra Choice Young Suits For Sale, 8 and 9 months old, grandsons of the great Financial King, out of large, heavy-milking dams. Inquiries solicited. **ARTHUR H. TUFTS, Box 111, Tweed, Ont.**

Southdowns

FOR SALE: 2 imported prizewinning rams, and 60 home-bred and imported ewes. **COLLIES.**—Puppies by champion sire, and out of prizewinning dam.

Robt. McEwen, Byron, Ont. Farnham Farm Oxford Downs

We are now offering a number of select yearling rams and ram lambs, sired by imported ram, for flock headers; also yearling ewes and ewe lambs. Price reasonable.

Henry Arkell & Son, Arkell, Ontario. Arkell, C. P. R.; Guelph, G. T. R.

Shropshires and Cotswolds

I am now offering 35 shearing rams and 50 shearing ewes, also an extra good lot of ram and ewe lambs from imported Minton ewes and Butta ram.

JOHN MILLER,

Brougham P.O. Clarendon Stn., C.P.R. FAIRVIEW SHROPSHIRE

We wish our customers a prosperous New Year. Allow us to heartily thank you for your many kind words of appreciation of sheep sent in 1907. We congratulate ourselves in not having a single complaint of sheep sent out all the year. We still have a few good ewes and ewe lambs, bred to or sired by our famous champion rams. **J. & D. J. CAMPBELL, Fairview Farm, Woodville, Ont.**

SHROPSHIRE

Choice breeding ewes for sale at reasonable prices. White Wyandottes at all times.

V. D. MONKMAN, BONDHEAD, ONT. Oxford Down Sheep, Shorthorn Cattle Yorkshire Hogs.

Present offering: Lambs of either sex. For prices, etc. write to **John Cousins & Sons Buena Vista Farm, Harriston, Ont.**

Cattle and Sheep Labels.

Now is the time to get posted. Send your name and address for circular and sample. Write to-day. **F. G. James, Bowmanville, Ont.**

Shropshires!

Choice shearing ewes bred to good ram, also ram and ewe lambs. **LLOYD-JONES BROS., Burford, Ont.**

Duroc-Jerseys Boars fit for service. Sows ready to breed. Several sows in pig, also younger ones. Imported Canadian Boy 1907 leads our herd. **MAC CAMPBELL & SONS, Harwich, Ont.**

QUESTIONS AND ANSWERS. Miscellaneous.

FATHER AND SON.

A son works with his father till he is twenty-four years of age, and never gets anything except barely his clothes. Then at the age of twenty-four, with the full consent of his father, he went West, and stayed away for about thirty months, and sent some money home to the father. After that he came home, with the understanding that the farm was to be made over to him. But the father then wants to back out. The son then stayed home for about two years more; they having no written agreement, only a verbal one, that the son was to have the farm with stock and implements for a certain amount. Then, in about ten months' time after the agreement, the father says he meant no such thing, but that he meant in two years from date of agreement that he would give over the place to his son.

1. Can son collect wages for any of the time before he was twenty-four years of age (when he went away), and, also, can he claim wages for the two years since he came back, nothing having been said about wages?

2. Can son hold father to first agreement, no papers having been signed, except about four months from date of agreement the father signed a receipt reading thus: "Received of — the sum of \$151.78 (one hundred and fifty-one dollars and seventy-eight cents) as part payment of farm," with date and signature of both parties. Would such a paper have any importance in law? Quebec.

SUBSCRIBER.

Ans.—1 and 2. We do not think that the son is in a position to legally enforce a claim for wages, as such; but we do consider him entitled to compensation at the hands of his father, and think that if the matter be attended to judiciously, reasonable compensation may be recovered. He ought to consult personally with a lawyer, and instruct him to do whatever may be necessary, but actual litigation is, of course, to be avoided if at all possible—on general principles, but especially considering the relationship of the parties. The receipt mentioned is certainly useful, and may prove to be of considerable importance.

RYE AND WHEAT BRAN FOR COWS — OIL MEAL FOR CALVES.

Please let me know through "The Farmer's Advocate": (1) The difference in the feeding value for cows of rye and wheat bran. (2) Which is the better way to feed oil meal, raw or cooked, for small calves? **A. H. B.**

Ans.—Comparatively little is known regarding rye bran as a stock food. Rye is grown to such a small extent that both the grain itself and its by-products are not very well known. Generally speaking, wheat bran may be regarded as more valuable for dairy cows than rye bran, though the exact difference is hard to state. The grain of rye is similar in composition to wheat, and should not vary from it very materially in food value. Owing to the fact, however, that bran is more bulky and perhaps a little safer, I would recommend using bran in preference to even the grain of rye for dairy cattle. Possibly, a better plan would be to mix the two. The rye should certainly have a higher food value, pound for pound, than the bran; but I would not regard it as so safe a food. The combination of the two, however, should be perfectly safe. In Denmark, rye has been condemned by some concerns which make a business of bottling milk, on the ground that it gives the milk a peculiar flavor. It might be well, therefore, to be a little careful in the feeding of this grain, though the chances are that any effect upon the flavor of the milk would be so slight that it would scarcely be noticed by the average person.

2. You do not state whether the calves are receiving whole milk or skim milk. If they are being fed skim milk, I would prefer to use a little flaxseed, which could be fed in the form of a jelly to very young calves, but could be mixed with oats and bran and fed dry as soon as the calves have learned to eat. I do not think there would be any advantage in cooking feed for young calves as soon as they have learned to eat satisfactorily. **G. E. DAY.**

Elmhurst Berkshires

We have a number of choice young boars ready for service. Some imported, others imported in dam—also from imp. sire and dam—which we will price right for quick sale. Write us for what you want.

H. M. VANDERLIP,

Importer and Breeder, CAINSVILLE P. O., BRANT CO.

YORKSHIRES of Choicest Type and Breeding.



I have on hand 75 brood sows of Princess Fame, Cinderella, Clara, Minnie, Lady Frost and Queen Bess strains. My stock boars are true to type and richest breeding. For sale are a large number of sows bred and ready to breed, boars fit for service, and younger ones of both sexes. Pairs and trios not akin. **J. W. BOYLE, P. O. Box 563, Woodstock, Ont.**



Large English Berkshires

for sale from imported stock. Sows with pig and pigs for sale. All ages. At reasonable prices. Guarantee satisfaction. Boars and sows delivered at Woodstock station, C. P. R. or G. T. R.

JOSHUA LAWRENCE, Oxford Center, Ont.

Cedar Lodge Yorkshires

100 head brood sows (imp.) and the product of imp. stock, weighing from 500 to 800 lbs. each. Stock hogs by imp. sires and dams, very large and full of quality. Young stock of both sexes constantly on hand for sale. Pairs not akin. Satisfaction guaranteed.

P. O. COLLINS, Bowesville P.O., Ont. Manotick Sta., C.P.R.

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; post-cure and safe delivery guaranteed. Address: **H. D. GEORGE, Putnam, Ont.**

Yorkshires—Boars ready for service; sows pigs just weaned and ready to wean. Cotswold and Shropshire rams, yearlings and lambs, registered. **GEO. M. SMITH, Haysville, Ont.**

MONKLAND YORKSHIRES

are the easily fed, quick maturing kind. The sort the farmers want. All ages for sale. 100 sows bred now.

JAMES WILSON & SONS, FERGUS, ONTARIO.

Large White Yorkshires!

Am offering at the present time a choice lot of boars ready for service, from imported stock; also young pigs of both sexes, not akin. Prices right, and quality of breeding unexcelled. Write or call on

H. J. DAVIS, WOODSTOCK, ONT.

NEWCASTLE TAMWORTHS.

Oldest established herd in Canada. For sale: 12 young sows sired by Colwell's Choice and Newcastle Warrior, both Toronto champions, and bred to Imp. Cholderton Golden Secret; also younger ones, both sexes, by him, and out of dams by above Cha. sires. Several boars fit for service. Will sell right for quick sales. **A. A. COLWILL, NEWCASTLE, ONT.**

MOUNT PLEASANT HERD OF Tamworths and Holsteins.—For sale: Pigs of either sex, from 6 weeks to 7 months; pairs not akin; also bull and heifer calves under 6 months. Phone in residence. **BERTRAM HOSKIN, The Gully P. O.**

OAKDALE BERKSHIRES

Largest Berkshire herd in Ontario. Stock boars and several brood sows imported. For sale: Sows bred and ready to breed, boars ready for service, and younger ones, all ages, richly bred on prizewinning lines and true to type. Everything guaranteed as represented. Long distance phone. **L. E. MORGAN, Milliken P.O., Co. of York.**

Meadowbrook Yorkshires.

Young stock of both sexes. A number of sows old enough to breed, all sired by Imp. Dalmeny Topman. Everything guaranteed as represented. **J. H. SNELL, Hagersville P.O. & Station.**

CHESTER WHITE HOGS

The largest herd of bacon-type Chester White hogs in Canada. Strictly high-class have won highest awards. Young stock of both sexes always on hand. Satisfaction guaranteed.

ROBERT CLARKE, 41 Cooper Street, Ottawa, Ont

Glenburn Herd of Yorkshires

Winner of gold medal three years in succession. 6 young boars from 6 to 9 months; also 75 young sows, from 6 to 12 weeks old.

David Barr, Jr., Box 3, Renfrew, Ont.

LARGE ENGLISH YORKSHIRES.—We have a limited number of choice young pigs for sale, bred from our choicest sows and got by the imported boars, Dalmeny Joe 18577 and Broomhouse Beau 14514. Pigs from the latter won all the first prizes at the Ottawa Fat Stock Show last March for the best dressed carcasses, and sweepstakes over all breeds or grades. We guarantee satisfaction in all mail orders. **JOSEPH FEATHERSTON & SON, STREETSVILLE, ONT.**

Willowdale Berkshires

are unsurpassed for quality and breeding. Young stock, all ages, for sale reasonable. Satisfaction guaranteed. Long distance telephone in residence. **J. J. WILSON, Importer and Breeder, Milton P.O. and Station, G. T. R. and C. P. R.**

SUNNYMOUNT BERKSHIRES!

Boars fit for service. Sows bred and safely in pig. Sows fit to be bred. Young pigs just weaned. **JOHN McLEOD, Milton P. O. and Sta., C. P. R. & G. T. R.**

FAIRVIEW BERKSHIRES

Bred from imported and Canadian-bred sires and dams, and bred on prizewinning lines. My brood sows are large, choice animals. Young stock of both sexes. Some sows bred to imp. boars. **HENRY MASON, SCARBORO P. O. Street cars pass the door.**

Subscribe for the Farmer's Advocate.



"NEVER SAY DIE."

The World Hates a Quitter.

Don't "quit" whatever you start. If you go into a fight, stay with it, no matter how poor your chances look. The other fellow probably wants to quit, and if you hold your head up he will quit first.

The victory is to the brave.

It takes nerve and energy to win nowadays.

You don't want to be a failure. You were made for better things, but you can't win without courage and energy.

That's the idea behind my Electric Belt, the body battery that pours electric vim into a man's body.

Give me a man with pains in his back, dull pains over the eyes, lack of nerve, a disposition to give up hard tasks; in fact, the fellow who feels "all in" at times, and with my Belt I can make him feel like a two-year-old in a few weeks.

"Say," said one of my patients a few days ago, "I feel so good that if I felt any better I think I would hurt somebody." That's the way you ought to feel, just choke-full of youthful energy. My Belt will make you feel like that.

It builds up broken-down men, restores youth and vigor, and makes you look and feel strong. It will cure every case of Rheumatism, Nervous Debility, Weak Stomach, Kidney and Liver Troubles, Lamé Back, Sciatica, and every evidence of weakness in men and women. It will not fail; it cannot fail, as it infuses into the weakened parts the force of life and strength.

MR. THOS. JOHNSTON, Box No. 236, Deseronto, Ont., says: "It is some five or six years since I got your Belt. I am well satisfied with it. It cured me, and I have not been bothered since, and have not used it since then."

MRS. HUGH KERR, Paris Station, Ont., says: "Your Belt cured me when doctors failed. What more can I say?"

USE MY BELT AND BE STRONG.

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.

Dr. McLaughlin:

Dear Sir,—Your Belt has done wonders for me. I very seldom get the pains now, and wish I had tried it before, as I can do my work twice as well. I have told several about what the Belt has done. I cannot thank you enough for what you have done for me, and I am sure I would have given twice as much if I only thought it would have done so much good. I have been treated for years by all sorts of doctors, but I have received more benefit from your Belt than all of them, so I tell you I am perfectly satisfied with my investment, and will recommend it to all I can. Again thanking you for your kindness, and all you have done for me, I remain,
Yours truly,

Bolton, Ont.

W. ATWELL.

To those who are tired of paying without results, and to those who doubt if anything will help them, I make this offer: If you will secure me my

Pay When You Are Cured

I will let you have my Belt without paying me one cent in advance.

My Electric Belt furnishes a continuous current of Galvanic Electricity; is always ready for use. I want to tell you more about this Belt. Can't you find time to call at my office? If not, send for my 80-page book, which is beautifully illustrated and is FREE for the asking, and you will learn more about my great invention and what it does. Send Coupon to-day for FREE BOOK. Consultation free.

DR. M. S. McLAUGHLIN,
112 Yonge St., Toronto, Can.

Please send me your Book for (men—women), sealed, free.

Name

Address

Office Hours—9 a. m. to 6 p. m. Wed. and Sat. until 8.30 p. m.

GOSSIP.

DUNROBIN STOCK FARM.

Messrs. Donald Gunn & Son, Beaverton, Ont., breeders of Clydesdales, Short-horns and Yorkshires, write: "We might say that we have some ten Clydesdale mares in foal, together with a number of fillies, rising two and three years old. Our stock we consider will compare favorably with any in Ontario, and our prices and terms are made to suit buyers. Our record shows that in breeding classes we have some choice specimens, capable of winning at Toronto and Ottawa. At Toronto we won in breeding classes, reserve championship on mares, three firsts and three seconds. At Ottawa we won championship on mares, five firsts, three seconds, and two thirds. This gives an idea of the quality of our horses. In numbers, they give ample scope to exercise powers of selection.

"Our Short-horns have done splendidly, and we have nine cows with fine bull calves at foot, all reds, from our Redmond bull, Prime Sailor, who has been a prizewinner in his day. We have eight cows, due to calve early in the spring, besides many fine young things, both male and female. We have one white

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bull, by a son of Langford Eclipse (imp.), out of a Lord Banff cow, which a competent judge said was one of the best things he had seen for some time—a bull of true show type. Another bull that might be mentioned is out of an imported Marr Rose Girl cow, by Inkerman, sired by Nonpareil Eclipse, who, in turn, was by the famous Langford Eclipse. This bull is a light roan of outstanding quality; a youngster that will make a bull of grand scale.

"In Yorkshire we have thirty-one sows, the pick of our breeding herd, all in pig, or to be bred to the reserve champion boar at Toronto last autumn. These

few notes will give an idea of the quantity of good stuff we have at Dunrobin. Having such a selection on one farm gives a man a chance to purchase any of the various kinds of stock mentioned with a minimum of trouble. Beaverton is conveniently located on the shores of Lake Simcoe, easily accessible by both Grand Trunk and Canadian Northern Railways. We have a phone in the house (Bell system) and anyone can have us meet them at either station by simply telephoning the farm after their arrival in town, or a note will ensure one being met if addressed to the manager, R. F. Gunn, Beaverton P. O."

THE ELMHURST BERKSHIRE SALE.

The auction sale of registered Berkshire swine from the Elmhurst herd of Mr. H. M. Vanderlip, Cainsville, Ont., was quite a success. It was a delightful day and over 600 people were in attendance, from all over Ontario. The large sale tent, seating 600, was taxed to its utmost, and many had to stand. While not so many were sold as was expected, yet a goodly number were disposed of, 51 head in all, realizing over \$2,100, which is a very fair result, when considering that the majority of the stuff was under seven months. A number of the good things went to the Ontario Agricultural College, at Guelph, also to Mr. Mason, of Scarborough, and many other prominent breeders. Welby Almas, of Brantford, handled the sale-ring alone, and did excellent service, keeping the crowd in excellent spirits with his ever-ready wit. Mr. Vanderlip writes: "I want to thank 'The Farmer's Advocate' for contributing so much to the success of my sale, bringing more direct results than all other advertising combined. The outlook for Berkshires is bright, despite the fact that pork is at a low price."