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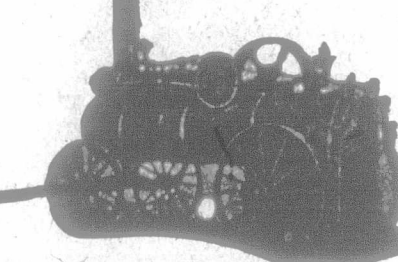
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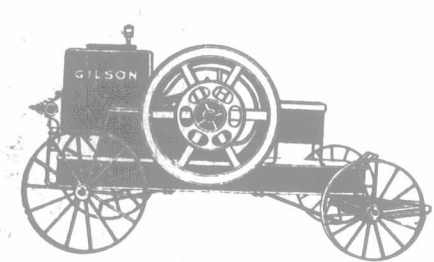
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The Farmer's Advocate and Home Magazine

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1866

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LONDON, ONTARIO, JANUARY 4, 1917.

1267

EDITORIAL.

It pays to be kind to the milk cow.

Give the colt plenty of exercise and get him used to having his feet handled.

The regular use of the currycomb keeps the stock bristlier during the winter.

Regular hours for feeding all classes of stock are essential for maximum profits.

Secure the supply of seed grain early. It may be difficult to get good, clean seed in the spring.

Some clover or alfalfa hay, and roots are excellent for the sheep at this time. A few oats would be relished also.

Don't forget the New Year resolutions. Sometimes they amount to something, but often the good ones die young; however, raise them if you can.

By the way, did you ever stop to consider that if the wife helps with the milking, it is only fair that you should wash the dishes and pails occasionally?

President Wilson's last note has them all thinking. He wants to know what we are fighting for. Next he will enquire if there really is a war going on in Europe.

Your presence and influence will aid in making a Short Course in your County a success. It is just possible you might derive some benefit by attending.

Conventions and meetings are now the order of the day. When the opportunity offers don't neglect to attend some of them. There is good in all things.

Don't neglect to have a supply of split wood on hand and place some of it in the wood box before going at the morning chores. Carrying in wood is not women's work.

Is the manure piling up in the barnyard or is it being hauled to the field? Think over the pros and cons of the different methods of handling manure and apply your ideas.

Make the boy a present of a calf or a pig and let him see what profit he can make. Charge the feed to his account, but allow him to have the surplus when the animal is sold.

Fighting for the Empire, making munitions, and producing foodstuffs are the three branches of the foremost business of the present time. There are many, not over busy, who might be doing one of these.

Neglect to store a supply of ice may result in loss of milk, meat and fruit, besides causing a lot of inconvenience during July and August. January is the season for harvesting the ice crop.

Give the boy an idea of the value of money. One way to do it is to make him responsible for certain branches of the farm work. The farm on a partnership basis relieves father of certain work and encourages the boy to do his best.

The Result of a Consistent Live-Stock Theory.

While farmers quite generally this past fall were lamenting the shortage of feed for live stock and in many cases showing such extreme sympathy for others as to sell their hay and coarse grains, as well as their cattle, we happened on to a certain farmer's holding who had threshed over 1,200 bushels of grain when the average throughout his county was between 300 and 600 bushels. This particular farmer is widely known as a steer feeder of considerable skill, and the practice for many years of building up his farm with manure from the stable and feed lot seemed to exonerate itself when the test came. Other farming policies might have contributed somewhat to the success of this man in a very bad season. However, it was encouraging to talk with one who apparently was prepared to do business as usual and who was doing business as usual by purchasing his feeder cattle for this winter's operations. Had he been so minded, he might have sold those 1,200 bushels of grain, or a part thereof, a large quantity of hay and considerable straw and settled down to a quiet winter beside the stove with a good bank account and some change in his pocket. But that would not be farming. The owner of 100 acres or more must look to the future just as a business concern will invest its dividends in equipment or improvement of the plant. A run-down farm makes a poor home and a very bad business proposition. We must give value for value, and anyone who continues to sell the product of the land without returning something in exchange is inviting liquidation.

There is a limit, of course, to the number of live stock that can be maintained per acre, but the difficulties that arise from under-stocking are more serious than those which result from overstocking. In the latter case the condition is easily remedied without any great loss, but when the fields are starved a man's children, and his children's children may suffer in consequence. There seems to be something in humor and fertility that will ward off "worm and beetle, blight and tempest" to a very considerable extent, just as a strong constitution in man will resist attacks of disease. These are the times when such should be remembered, for the temptations are great to deplete the live stock and sell grain and fodder. Years ago it used to be a common saying that "any fool can farm", but that farming consisted in depleting fertile soil procured at practically no cost. Building up and maintaining the strength and fertility of our land is no fool's job.

Learn to Express Your Ideas.

To be able to express ideas in a clear, concise manner is a valuable asset to any man. To-day many good men are prevented from serving their communities in a public way because they cannot express themselves. Our country needs men with ideas and sound principles in municipal work and parliamentary affairs. Young men of to-day will be the leaders of to-morrow, and it is their duty to fit themselves to manage the affairs of the country. The debating club and literary society are a training school for quick thinking and expression of thought. In every rural community the young men and women have a golden opportunity if they will but grasp it. True, it may be hard work to organize a debating club and harder work still to stand before a crowd and express your views, but nothing really worth while was ever accomplished without a supreme effort. Practice is essential in order to become proficient as a platform speaker. Recently our attention was drawn to several young men who, two years ago were afraid of their own voices, but by accepting every opportunity to take part in debates and to give addresses they are to-day able to give expression to their thoughts

in a clear, forceful manner, and are destined to become leaders in their communities. What some young men have done, others can do. If there is no debating society in your locality, why not get the young people together and organize one? This is the young man's age, and he must prepare himself to meet the responsibilities which will be thrust upon his shoulders.

The Need of the Hour.

The time and opportunity has come for all true Canadians to throw their efforts and their wealth into the balance in behalf of the Empire. All cannot go overseas, and the country could not spare them if they would, but there are munitions and still more munitions needed to blast the Huns from their fastnesses in Belgium, Northern France, and the long battle-fronts of Europe. Food, too, is almost as important as munitions, and Canada, not any too soon, is beginning to realize that some organization is necessary to provide these three great essentials to the success of our armies namely, men, munitions and food. The representatives from this Dominion have done nobly at the front and more like them are required, but it is felt that while those who have left their homes to undergo the hardships of the fiercest war in history, the man-power of their country is not practicing team work, or lending them the support that it could and should. There is human energy all around us either being thrown away or expended on some line of endeavor that has no direct bearing on the war, or the financial stability of this country. When nations engaged in this struggle have seen fit to conscript life, we should at least be willing, in the same cause, to co-operate one with another, to leave in suspension for a time those pursuits which from the viewpoint of victory are unimportant, or can be carried on quite as well by women, and, with permanent peace as our objective, to direct our energies in those channels that will feed the millions of soldiers fighting under the banners of our Allies and furnish them with the accoutrements of war that will hasten the day when Germany will be obliged to earnestly sue for peace.

The supreme effort in behalf of home and country is to don the khaki and meet the obligations which it incurs. The next loyal act is to volunteer our service to the Empire and exert ourselves in the fields or factories of the nation where the food and munitions, that will feed and equip the men who are doing the actual fighting, are produced. How far the "National Service Scheme" will go towards this end will depend upon those who have undertaken the work, and the response of the Canadian people. As it is now some have left home, business and binding duties and risked all, while others are doing no more for the cause and are no more concerned than if a bolt of lightning had destroyed some farmer's barn in Europe and perhaps killed one of his cattle. Women are doing wonderful work, and real work, in the munition factories, while some men are selling neckties. A more logical system, directing human effort, would take the able-bodied men into the factories or on to the farms and place the women, girls and boys behind the counters. Business is business, of course, and those trained in a certain pursuit are more valuable to a concern than an amateur, but there is a big business now on hand and that is to bring this war to a successful conclusion for the Entente Allies at the earliest possible date. Women, the country over, have made wonderful sacrifices, and so have a great majority of the men, but the need now is for more men, munitions and food, and Canada will not do her best until we get things working on an efficiency basis.

Agricultural production will not be up to par next season if more labor is not available. When a man cannot go overseas, he might, perhaps, be able to do

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Agents for "The Farmer's Advocate and Home Journal," Winnipeg, Man.

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something for the cause in the munition factory or on the farm. There are great opportunities through the latter channel to expend some energy for the benefit of mankind during this period of a world-wide food shortage. Men, munitions and food are needed; all should keep this in mind for 1917. Those who have amassed and are still accumulating wealth must contribute to the funds; human effort must be so directed that our factories may yield the greatest possible production, and the fertile soil of Canada must be so tilled as to bring forth an abundance of food to nourish the soldiers in the trenches and the people of the United Kingdom, who are now working hard in the humming mills of Britain.

Attend Agricultural Meetings.

Winter is about the only season that farmers have time to meet together to discuss problems of interest. In many localities the annual Farmers' Institute or Board of Agriculture meetings are the only events which draw the members of the rural community together for educational purposes during the entire year. Sometimes this is varied by a two-days stock judging course, a seed or a fruit meeting. The speaker provided by the Department, sometimes has things his own way, but there are localities in which the farmers and their sons cause a lively discussion; this is the way it should be. It is one of the best means of securing information. Every man has an idea, and in many instances it assists the neighbor in his work when he knows about it, and it does the other fellow no harm in telling him. It has been claimed that farmers, as a class, carefully guard any new method they evolve for fear the neighbors might excel them. Jealousies of this kind are bad for a neighborhood; it is a very selfish spirit, and we know that it does not exist in all localities. One meeting a year is not sufficient. There are problems enough confronting the average farmer to furnish topics for discussion for many evenings during the winter. It is not essential that farm subjects be constantly adhered to; economic topics might profitably be introduced. At many such meetings which we have attended there was a noticeable absence of young men, and, on making enquiries, it was found

that the young men did not consider the meetings of sufficient interest to warrant them attending. Is it not possible to have a program that will attract the young people? A two-days stock judging course was recently held in a community and one father stated that he had difficulty in persuading his two sons to attend. However, they had not been in the building very long when it was noticed that they were taking a keen interest in what the speaker was saying. There was no difficulty in getting these two young men to attend the following day, and their interest in solving some of the farm problems was aroused to such an extent that they have since become ardent students of agriculture.

The young men and boys should be encouraged to attend and take part in such meetings. In one locality the directors of the local Farmers' Institute made special arrangements for part of the afternoon meeting to be specially for the boys. One year they had a competition in judging oats and giving reasons for the placings; another year the speaker gave a talk on weeds and then had the boys present identify a number of specimens which he had with him. Needless to say, the adults were also interested and there was always a crowd in attendance at the Institute Meetings. The Farmers' Club and Literary Society in which the members meet regularly once or twice a month, are training schools for future leaders, and many of the prominent business men to-day owe part at least of their success to the training they received at their local debating club. If there is a literary or agricultural meeting held in the community, everyone should plan to attend, and, if need be, take part in the program. We may not agree with all that the speaker has to say, but we can at least agree to disagree, and no doubt there will be some remark or hint dropped during the meeting that can be put to good use at some time during the season. All who have not been in the habit of attending these meetings in the past, should plan to do so this year and take the boys along.

Nature's Diary.

A. B. KLUGH, M.A.

If in the wood-lot there are comparatively large, open spaces in which grass and other herbs have obtained a hold, these places should be disk harrowed just before the seed is about to fall from such species of trees as it is desired to stock with. If there are no large seed trees of desirable species at the margins of the openings, seed should be gathered and sown. It is important to see that trees of undesirable species do not start in such openings.

When logging operations are under way in the wood-lot it is very important to see that such operations make for the betterment and not the marring of the future

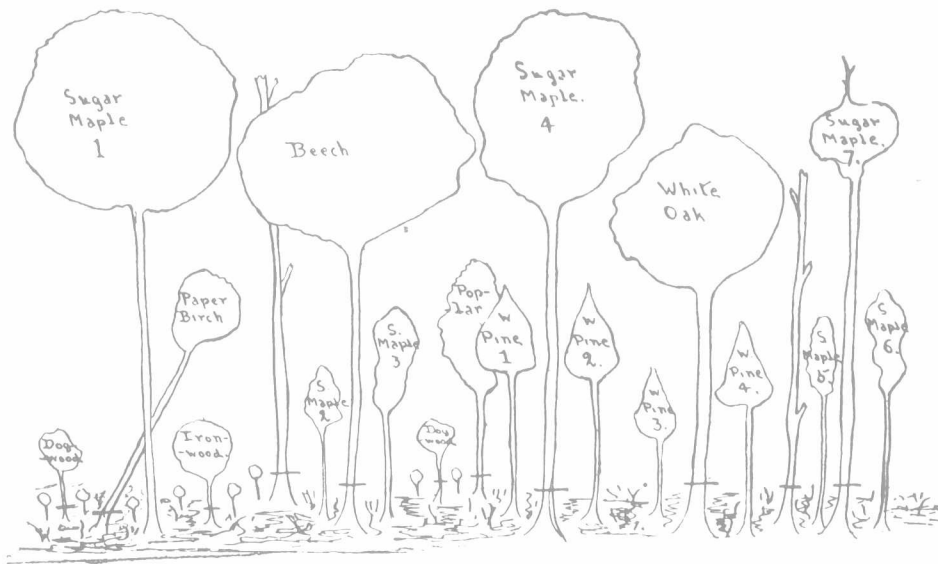


Diagram of Uneven-aged, Mixed Stand of Trees.

stand. If the timber is not cut by the owner himself, all trees which are to be cut should be marked, and a careful supervision exercised to see that only marked trees are cut. It is unwise to allow only the good, sound trees of desirable species to be cut; the diseased and dying trees should be taken and also trees of inferior species. To induce the purchaser to take inferior trees it will probably be necessary to make some concessions in regard to price, but the loss from such concessions will be more than repaid by the improvement of the remaining stand. In felling trees, care should be taken not to throw them into the midst of a group of promising young trees which are likely to be seriously broken. Care should also be exercised in dragging logs out of the bush, so that all unnecessary breakage and trampling may be avoided. Many choppers clear the so-called "brush" from a far larger area round the tree they are about to fell than is really necessary, thus destroying many young trees of desirable species, young trees which have already made several years' growth, and which would, in a comparatively short time, take the place of the one which is felled.

In all logging operations the proper disposal of brush is important. All tops and branches should be piled and burned in the winter. They should be burned in small piles, and these should be located in the largest openings, which are sufficiently close at hand, so that the flames may not damage the surrounding trees. Proper brush disposal not only reduces danger from fire to a minimum, but provides good condition for the growth of young trees.

There are, on many farms, areas which would eventually yield far greater returns if under timber than from attempts to grow other crops on them. Such areas are pieces of rocky land, wet land, steep hillsides, and sandy knolls. Not only do such areas when reforested represent a valuable future asset but they act as wind-breaks, and it has been conclusively shown that the protection afforded by a wind-break increases the yield in farm crops to the extent of the value of the crop which could be grown on a strip three times as wide as the height of the trees.

We have now dealt briefly with the main things which have to be considered in the general management of the farm wood-lot. Every wood-lot presents particular problems of its own, and no general statements can be made which will cover all cases. I shall be glad, however, to give such advice as I can in regard to the management of any wood-lot if the owner will send a detailed statement of the condition of the lot to the Farmer's Advocate. Such a statement should include the following data: the part of the country in which the wood-lot is situated; kind of soil, whether wet or dry; kind of stand—uneven-aged, or even-aged—open or thickly stocked; and should be accompanied by a cross-section diagram of a typical section of the lot, made as shown in diagram. Such diagram can be prepared better in winter than in summer, and only the outline made by joining the tips of the branches should be drawn.

In the illustration I have indicated the trees which should be removed by a line across their base. In it the Dogwoods should be cut as they are interfering with Maple Seedlings beneath them, and the same is true of the Ironwood. The Paper Birch is dying and should be removed. The Beech is suppressing Sugar Maples 2 and 3. Sugar Maple 4 is suppressing White Pines 1 and 2, and the Poplar is suppressing White Pine 1. The White Oak has reached about its full growth and is suppressing White Pines 3 and 4. Sugar Maple 7 is dead at the top and is hindering Maples 5 and 6. The two dead trees should be cut.

THE HORSE.

The Horse's Coat.

The general appearance and comfort of a horse is greatly influenced by his coat. A well-groomed horse, like a well-groomed man or woman, is "pleasant to look upon." The coat of a horse, to a great extent, gives evidence of care or neglect, as the case may be. While a nice, fine, silky, glossy coat adds much to the horse's general appearance, it requires a great deal of attention to keep it thus, especially during the late fall and winter months. Some horses have, naturally, much finer and shorter coats than others, and, while breeding has some influence in this respect, we frequently notice a vast

difference in animals of the same breeding. Why this is we cannot determine, and are simply compelled to accept it as a fact. The age of the animal has an influence; we notice that it is not usually possible to keep the coat of a quite young or very old horse in as fine a condition as that of an animal between adulthood and old age. Horses under five or over twenty do not usually give the same returns for care and attention, as regards coat, as do those between these ages. In the former cases it may be that the more or less general fevered state of the system, consequent upon dentition, has an influence

upon the coat, and in the latter case we probably are justified in assuming that the general vitality of the animal is more or less impaired, and the coat, as well as other parts of the body, evidence this decrease in vitality. We frequently hear people say that they "do not like grey or white horses, as they are so hard to keep clean." A grey horse is no harder to "keep clean" than a dark colored one, but dirt or stains show more readily, and it requires more attention to keep him "looking clean." We often notice, when a team consists of a grey and a dark-colored horse, and when care is taken to keep them looking well, that on close examination the grey has a finer, shorter and cleaner coat than his mate from the fact that stains, etc., show so plainly on him that he receives more grooming. During the summer months there is little trouble experienced in keeping a horse's coat looking nice, but as the weather becomes cold in the fall nature demands that the horse be clothed accordingly, and there is a strong tendency to growth of hair, and we may say that "the coat loses its gloss in proportion to the length of hair." In order, then, that

we may retain the required gloss, we must take what measures we can to prevent this growth. In order to do this we must, in addition to regular grooming, avoid unnecessary exposure, and when exposure is necessary provide artificial protection when the animal is not in motion. As regards grooming, a horse should be thoroughly groomed twice daily; not merely the external surface of the coat brushed and rubbed, but the hair thoroughly agitated to the roots by working the comb or brush both with and against the grain of the hair, in order to remove dust, dandruff, etc., and thereby prevent any occlusion of the openings of the sweat glands and keep the coat free from dust. Whenever a horse has been ridden or driven or worked hard enough to cause perspiration, it would be well to rub him until dry. This is the manner in which race horses are treated, and a well-cared-for race horse certainly presents a fine coat. This practice, however, is not practicable in the average stable. It would require more help than the average horse owner could afford, or is willing to keep. The next best thing to do is to clothe him warmly, place him in a comfortable stall, excluded from drafts, and, when his blanket has become moist with perspiration, remove it and supply a dry one. When he has become thoroughly dry, a good grooming will remove the dried perspiration, free the matted hair, and remove all dirt and dust. Of course, horses must not be left out in the fields or paddocks at night, when the weather is liable to become cold, if we wish to preserve short coats. The advisability of wearing clothing in the stable is open to discussion, but if the stable be not quite comfortable we think that blankets should be worn, and even in warm stables light clothing should be worn as it tends to prevent dust entering the coat. In all cases in cold weather, when the animal is not in action, whether standing in the stable or standing outside in harness his body should be clothed sufficiently to protect him from cold and wind, and when it is necessary to work or drive a horse in a rain or snow storm, it is well to have him covered with a waterproof covering, in order to keep the skin dry and warm. Cold and dampness stimulate the growth of hair, in order to protect the skin, hence, when we are particular about the coat we must endeavor to avoid this stimulation. When horses are being used for slow work, not demanding sufficient exercise to cause perspiration, in very cold but dry weather, it is wise to wear blankets under the harness to protect the skin. In most cases, where reasonable care is exercised on the lines above mentioned, we will succeed in maintaining short, sleek coats on our horses, but there are exceptions. As stated "age has an influence," and there are certain individuals that from some unaccountable reason or predisposition, will grow long coats, notwithstanding the most careful attention. In such cases the only method of preventing long coats is to clip.

WHIP.

LIVE STOCK.

England's Smithfield Show.

The 117th annual show of the Smithfield Club was quite as good as many of its predecessors, although the classification was cut down. Even if the entries were fewer the quality was fully maintained, for it was obvious that exhibitors had, for the most part, sent of their best. The value of the prizes, etc., amounted to £2,509, comprising £1,141 for cattle, £637 for sheep, £303 for pigs, £191 for the carcass competition, £150 for feeders of first-prize animals, and £87 for table poultry. A comparative list of entries since 1913 is as follows:

	1916	1915	1914	1913
Cattle.....	196	241	283	307
Sheep.....	128	130	157	180
Pigs.....	108	93	121	138

The King was again a successful exhibitor, taking the breed medals for Shorthorns and Herefords with as fine bullocks of their respective types as have been exhibited for many years. His Majesty also won two first prizes, a second and a third for Herefords, a first and a second for Shorthorns, and a second for Devon from Windsor. The Sandringham exhibits also did well, winning two firsts, a third, and the breed medal in the Highland classes, two firsts and a breed medal in the Dexter classes, a third in the Red Poll, and second in the small cross-bred classes. The King won second prize for Southdown wethers and a first, second and third for Berkshire pigs.

For the third time in his career J. J. Cridlan won the cattle championship with an Aberdeen-Angus, a steer he bought at Alford in Banffshire.

The Prince of Wales' Cup was awarded to a prime pen of Southdown wethers, shown by the Duke of Richmond and Gordon. In good classes of pigs J. Fricker took the champion plate with Berkshires, and the best single pig was a Large White belonging to E. Wherry. A full return of the championships is set out below:

Cattle.

Champion Plate of 100 guineas for best beast in the Show: J. J. Cridlan, Maisemore Park, Gloucester, on Neraska, an Aberdeen-Angus two-year-old steer; reserve, H. M. the King, on Gay Boy, a Hereford two-year-old steer.

Best Steer in the Show, not exceeding two years old: a Shorthorn yearling shown by J. & G. Young; reserve, Lord Fitzhardinge, Berkeley Castle, Gloucestershire, on Tom, a yearling cross-bred.

Best heifer in the Show, not exceeding two years old, J. F. Cummings, Aberlour, Banffshire, on Enamour 2nd, a Shorthorn yearling; reserve, Edward A. Wigan,

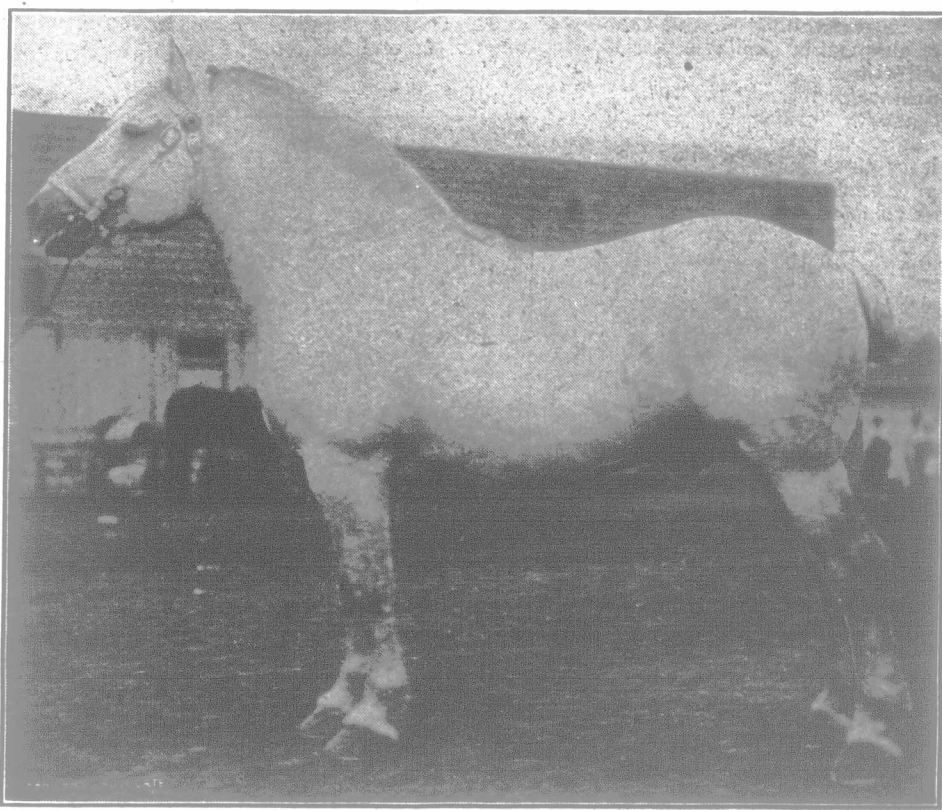
Andover, on Syringa Conholt, an Aberdeen-Angus yearling.

Best Steer or Ox in the classes: J. J. Cridlan Maisemore Park, Gloucester, on Neraska; reserve, H. M. the King, on Gay Boy.

The King's Challenge Cup, presented by the late King Edward, for the best beast in the Show, bred by the exhibitor: the King, on Gay Boy; reserve, the King, on Carol, a Shorthorn two-year-old steer.

Sheep.

Gold Medal to the exhibitor of the best pen of three long-wooled sheep or lambs in the Show: R. F. Jordan, Driffield (Leicesters); reserve, W. M. Curzon-Herrick, Loughborough (Leicesters).

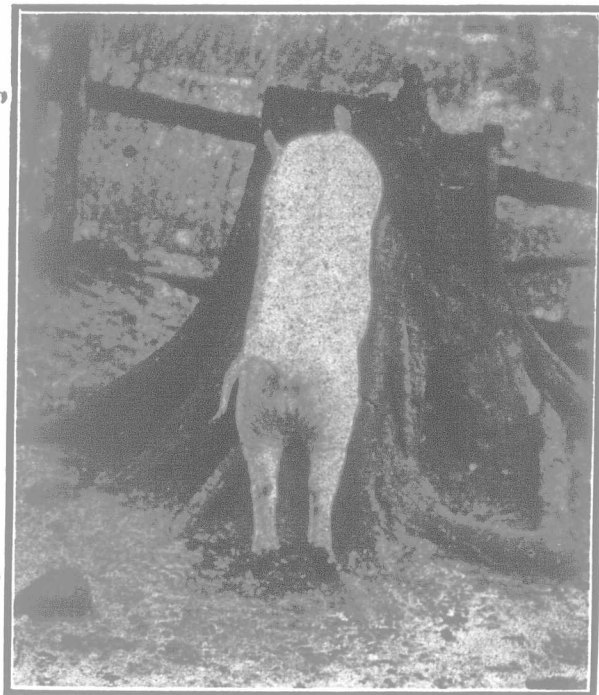


Grade.

Champion Percheron Stallion at Guelph Winter Fair. Exhibited by T. D. Elliott, Bolton, Ont.

Gold Medal to the exhibitor of the best pen of three short-wooled sheep or lambs: the Duke of Richmond and Gordon, Chichester (Southdowns); reserve, James H. Ismay, Blandford (Hampshire Downs).

The Prince of Wales' Perpetual Challenge Cup for the best pen of three sheep or lambs in the Show, bred by the exhibitor: the Duke of Richmond and Gordon (Southdowns); reserve, James H. Ismay (Hampshire Downs).



Getting a Feed of Charcoal.

Pigs.

Champion plate to the exhibitor of the best pen of two pigs in the Show: Julius Fricker, Wincanton, Somerset (Berkshires); reserve, F. A. Perkins, Hitchin (Large Black).

Silver Medallion to the exhibitor of the best single pig in the single-pig classes: Edmund Wherry, Bourne, Lincolnshire (Large White); reserve, H. M. the King (Berkshire).

Quality Throughout.

Quality was written largely over the Aberdeen-Angus classes: The medal for the best of the breed

fell to J. F. Cumming, Aberlour, Scotland, for his yearling heifer, Enamour 2nd, which secured the corresponding distinction at the Scottish National Show in Edinburgh.

Two-year-old steers were led by Mr. Cridlan's Neraska, scaling 17 cwt. 2 qr. 11 lb. at two years and eleven months; and he was placed reserve of the breed prize to Enamour 2nd. Ultimately before a different panel of judges he was awarded the supreme championship of the Show, a thing which puzzled the quakers round the fence rail.

The King was the chief exhibitor in Highlanders. His Majesty secured two firsts and a third. The winning steer above three years old scaled 18 cwt. 2 qr. 24 lbs. at three years and seven months old, and took the breed prize.

The King won the Hereford breed medal championship with a steer called Gay Boy. This was a splendid sort, turning the scales at 17 cwt. 1 qr. 23 lbs. at just under two years and nine months—a massive beast and full of quality. Sir J. R. Cotterell and Frank Bibby were other winners in Herefords.

The premier Shorthorn was the King's two-year-old, white steer, Carol, true, very big, but in spite of his 18 cwt. 1 qr. 8 lbs. a neat sort and shapely in build, with a good, lengthy back, deep body, and splendid quarters. He not only won in his class, but was voted generally as good for the supreme championship, but the judges for that honor lost sight of him. Twelve months ago he carried off the cup for the best yearling in the

Show. The heaviest in his class was Yorkshireman, exhibited by Capt. Clive Behrens, of Malton; Swinton Satire, at a couple of weeks under three years old, turning the scale at 19 cwt. 1 qr. 20 lbs., and well covered with flesh. Best of the yearling steers was a roan from north of the Tweed—Messrs. J. & G. Young's Angus Champion, an animal of substance, weighing 14 cwt. 3 qr. 24 lbs. at a week below the age limit. He was first in his class at Edinburgh.

Yearling heifers were led by Col. Archibald Stirling's Keir Dora, the youngest animal in her class, beautifully turned, and carrying a considerable weight of flesh for her age. A Yorkshire exhibit—sent by J. M. Strickland, Easingwold—was second. Brandsby's Jinny 19th was a capital butcher's beast, weighing 11 cwt. 3 qr. 7 lbs. at a year and nine months. In two-year-old heifers, that great expert, J. Deane Willis, Bapton Manor, won and was reserve for breed prize with a very fine red and white, not only massive in appearance, scaling 15 cwt. 2 qr. 12 lbs. at two years and eleven months, but well endowed with choice quality of beef. She was greatly liked by not a few for actual championship, but Cridlan with Neraska gained that honor, and so in 48 tries the Angus won 17 times; Shorthorn 20; Hereford 3; Devon 3; and cross-bred 5.

I am told, J. H. Truman, of Whittlesea, England, and head of the Bushnell firm, has bought Cridlan's steer, Neraska, and will present the mounted headpiece of the animal to adorn the walls of the Saddle and Sirlion Club, Chicago. ALBION.

Pigs Require Charcoal or Similar Material.

When pigs are on free range, it is frequently noticed that they search around for bits of charcoal, rottenwood, etc. The accompanying illustration shows a small porker industriously gnawing the charred material from a burned stump. What a pig likes is usually good for him, and to withhold this material usually increases the cost of production of pork. When pigs are kept in confinement they often show a strong craving for what some term unnatural substances. However, in order to develop the body, these substances are necessary or else the pig would not want them. Charcoal, ashes, rotten wood, etc., are greedily devoured by pigs constantly confined to the pen. Charcoal can be made on the farm, or it can be purchased at small cost and may be profitably fed to young pigs in particular. It may be powdered and mixed with the feed, or, better still, fed in a separate compartment or self-feeder, so that the pig can feed at will. At the Maryland Experiment Station, tests were made to determine the value of various materials of the nature mentioned. Four groups of pigs eleven weeks old were used in the test, and all were fed a meal mixture composed of cornmeal, wheat middlings, wheat bran and linseed meal. The results

given in Productive Swine Husbandry, are to the effect that lot one, which had free access to soft coal, made 100 pounds gain in weight, at a total cost of \$6.15. Lot two had free access to charcoal and 100 pounds gain was made at a cost of \$5.56, \$5.42 of which was for meal and 14c. for charcoal. These pigs made an average daily gain of .738 pound, while the lot fed soft coal gained .695 pound. Lot three was fed one ounce of tonic, made up of wood charcoal 1 pound; sulphur 1 pound; common salt 2 pounds; soda 2 pounds; sodium hyposulphite 2 pounds; sodium sulphate 1 pound; black antimony 1 pound, to every ten pounds of meal. These pigs made the largest gain it being .958 of a pound per day, at a total cost of \$4.85. The fourth lot received nothing but meal and their average daily gain was .614 and the cost for meal alone was \$5.84, for each 100 pounds of gain. The lot fed soft coal made a higher average gain than the pen receiving meal only, but it cost more to produce the meat. The results of this experiment show that correctives may be profitably fed, and that it pays to keep a supply of charcoal or similar material before growing pigs at all times.

Some of the grains which are commonly fed to hogs do not contain sufficient ash to furnish the mineral matter required in the building of bone. This is particularly the case with winter pigs. They are not able to secure ashes, mortar or limestone from the earth, so naturally they do not develop as rapidly as summer pigs which have access to a yard. This can be partially overcome by feeding the materials mentioned in the pen. Some feeders lay in a supply of sod in the fall, to feed the young pigs during the winter; others carry the loose dirt, which is brought in the root house on the roots, to the pigs. Anyone who has watched a bunch work in this dirt or sod, would readily be convinced that material of that nature is required by the hogs. Too many fail to supply these necessities which cost very little, and are therefore forced to feed a larger quantity of high-priced feeds and yet their porkers do not thrive as they would like to see them. Get a little charcoal for the pigs and see what effect it will have upon them.

Some Winners in the Hog-Feeding Competitions.

The Ontario Department of Agriculture, through its District Representatives conducted twenty-six feeding-hogs-for-profit competitions, during 1916. These are open to young men who have taken the four-weeks courses in agriculture, conducted by the District Representatives. The prize is the Short Course in live stock and seed judging at the Ontario Agricultural College, Guelph, January 9 to 20. Transportation, board and lodging are included. Thirty-two young men will take the Short Course at Guelph this month at the expense of the Department.

The hogs were selected when six weeks old and a value of \$4.00 each was placed on them at that age. Contestants were allowed to feed four and select the best three at the end of the competition. They were fed until twenty-two weeks of age and a record was kept of the amount of feed used each week. The feed was valued per ton as follows: ground oats, \$25; ground barley, \$25; ground peas, \$35; ground rye, \$28; ground wheat, \$35; bran \$23; low-grade flour or red dog, \$32; shorts or middlings, \$25; tankage, \$46; green feed, \$2; skim-milk, \$5; buttermilk, \$6; and whey, \$3. Where pasture was a part of the ration, seventy-five cents was charged to each hog. In estimating the profit the value of the hogs, live weight, fed and watered, was taken at 11½ cents per pound. The prize was awarded by taking into consideration both the profit and the type, fifty per cent. being allowed for each.

The hogs showing the greatest profit were Yorkshire and Tamworth, fed by Clarence G. Taylor, of Lennox and Addington. The average cost of production was \$11.11; their average value was \$27.48, and the average profit, \$16.37. Herman F. Hoocy, of Durham County, fed a Berkshire-and-Tamworth cross and realized an average profit of \$16.23. The average value amounted to \$25.51, and the production cost \$9.28. The next highest results came from Lanark County, where Sedley Steen fed Chester White pigs and realized an average profit of \$15.52; \$28.44 was the average value, and \$12.92 the average cost of production. Five winners showed a profit above \$15, and the lowest profit reported was \$9.63.

THE FARM.

Flour From the Lower Grades of Wheat.

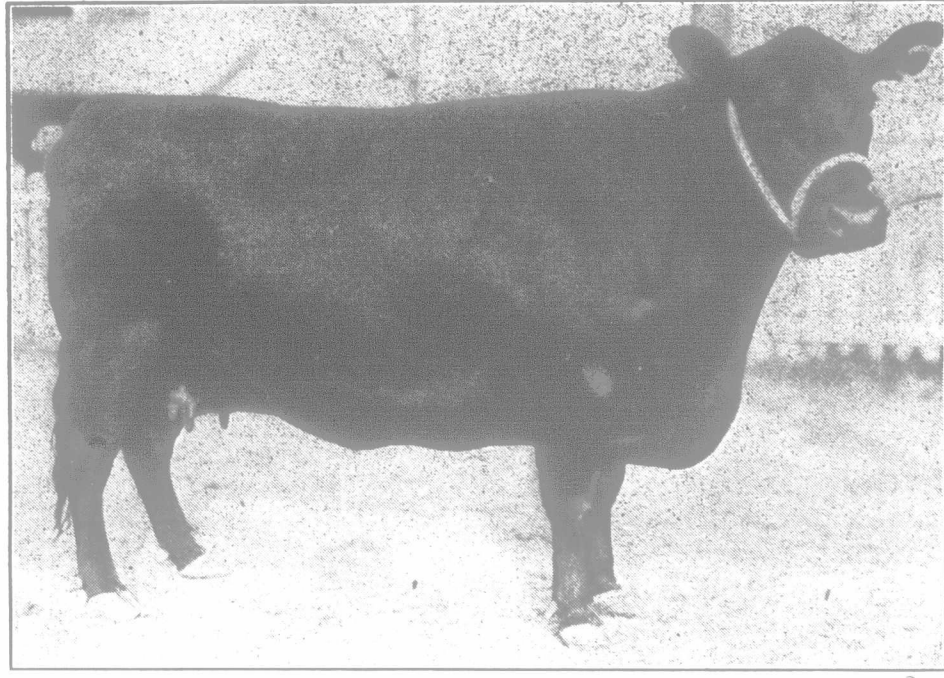
There is a considerable spread in price between the grades of wheat below No. 3 northern. The reason given for this remarkable spread has been that the British Government is buying only the top three grades. However, experiments have been carried out at the Dominion grain research laboratory, Winnipeg, under Dr. F. J. Birchard and authorized by the board of grain commissioners for Canada, which go to show that the spread is altogether too wide. Milling and baking tests of grades No. 3, No. 4, No. 5, No. 4 Special, and No. 5 Special, were made with the following results. These results are not absolute but are relative, showing the comparative milling value of the different grades. Later, absolute tests will be made, but for all comparative purposes the results given are satisfactory.

The table shows the grade and percentages of bran, shorts and flour, and prices on the data tests were made—December 6.

	No. 3	No. 4	Special No. 4	Special No. 5	No. 5
Bran and Cleanings.....	24.5	26	27	27.5	31
Coarse Shorts.....	2.5	2	3	5	2
Fine Shorts.....	3	3.5	3	4.5	4.5
Flour.....	70	68.5	67	63	62.5
Price Dec. 6.....	\$1.76½	1.64½	1.64½	1.33½	1.40½

In the loaves of bread it might be stated that the flour had not been aged, and the loaves had not the appearance that would have been the case if the flour had been stored for some time before baking. There were differences in the appearance of the loaf, but not nearly so much as might be expected.

The establishment of this laboratory should give further data on the relative value of different grades of wheat for milling purposes, and the real injury that is done by certain detrimental factors before it reaches the mill. To date the public have been largely depending upon sight and feel and traditional ideas that have



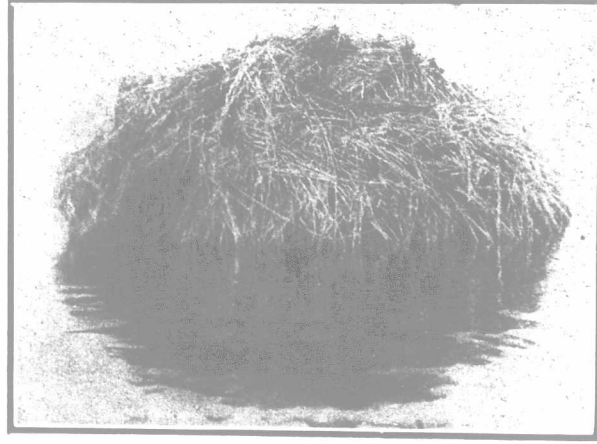
Pride of Glen Rose.

Senior champion Aberdeen-Angus female at Toronto and grand champion at Ottawa for Larkin Farms, Queenston, Ont.

been handed down from generation to generation. Actual knowledge can only be obtained by accurate milling and baking tests.

Muskrats and Their Favorite Haunts.

Trappers claim that muskrats are plentiful this fall, and these claims are substantiated by the large number of muskrat homes seen in the marsh lands and along the streams. These homes, or winter quarters, are elaborate houses of conical or dome-like form, cleverly built of sedges, grasses and similar material, plastered together with mud. The haunts of muskrats are along streams or



Muskrat House.

A common sight this winter.

rivers, and their favorite diet consists of roots, stems and leaves of water plants, or fruits and vegetables which grow near the streams which they haunt. As a rule muskrats are most active at night, and spend their days at home. While these homes are built right in the centre of the stream or pond, as the accompanying illustration clearly shows, the muskrat has it so arranged that he is dry and comfortable. He enters his home through passages which open under the surface of the water. In this way his quarters are protected from many rodents. The sleeping quarters are above the water.

The muskrat is aquatic in habits and is related to the English water rat, although it is of larger size. It is a heavily built, little animal, with a broad head, short limbs and small, alert eyes. The tail is laterally compressed and is scaly. The general color is dark amber

brown, almost black on the back. The fur of this little animal is much in demand, and hunters and trappers eagerly search for it during the open season. In former years muskrats and their homes were wilfully destroyed, a favorite pastime being to spear them at the mouths of their homes. However, at the present time the game and fishery laws make shooting or spearing of muskrats, or the cutting, spearing, or breaking of their houses, at any time, prohibitory, except when necessary in defence or preservation of property. The season for trapping muskrats for that part of the province lying south of the French and Mattawa Rivers is from the first day of March to the 21st day of April, and in that part of the province lying north of these rivers, from the 1st of April to the 21st day of May.

Progress of Farmers in Commerce.

When the Grain Growers' Grain Company concluded its annual meeting recently it meant the consolidation of the farmers' organized interests and business in Alberta and Manitoba, together with what shareholders of the former company there are in Saskatchewan. This union of these interests meant the closer co-operation of the 18,000 shareholders of the Grain Growers' and 12,000 shareholders of the Alberta Farmers' Co-operation Elevator Company under the new name of the United Grain Growers. The new organization will be ready to handle the grain of the 1917 crop. Between now and that time legislation must be granted by the Dominion Government to enable an increase of stock to \$5,000,000, to abolish the use of proxies and to enable the formation of local

units where \$8,000 of capital stock has been subscribed and where it is owned by at least 40 shareholders.

This reorganization and consolidation means that the United Grain Growers will be bigger and stronger and better able to look after shareholders, and in fact all farmers' business, than has been the case in the past under separate organizations.

The Grain Growers' Grain Company last year saw very marked progress in every department of its business. The number of shareholders has been increased to 18,163. The reserve fund has been increased to \$600,000. The usual dividend of 10 per cent. has been declared from the total profits of \$565,542.10. During the year there was handled a total of 48,375,420 bushels. The country elevators handled 14,773,687 bushels, and the terminal elevators at Fort William 28,463,438 bushels. During the year there was also constructed a new, large warehouse in Winnipeg for handling farmers' supplies and machinery. Through this department there was handled \$1,363,511 worth of supplies. Perhaps most important there was established a live-stock commission department at the Union Stock Yards, St. Boniface. Through this department from March to August there was handled 196 cars of stock for individual shippers and associations.

This annual meeting marks a decade in the life of the company established in August of 1906 by a few farmers it has grown to its present proportions which, before the close of the year, will see a farmers' company with a capital of \$5,000,000.

Such has been the record of farmers in business. But after giving the record in detail before the annual meeting. President Crerar stated further as follows:

"What I have just said has to do with the material advancement, or perhaps better the purely commercial aspect of the work. While progress has been made in this direction, equally as great progress has been made in the direction of elevating the whole status generally of the worker on the land, as a factor in the development of the country. The farmers' organizations are to-day regarded by thoughtful men as important factors in the development of our national life. The work of agriculture has taken on a new dignity, and is looked upon in a new light by the well-informed men in other positions of life. There has, unconsciously perhaps, been growing in the minds of farmers generally, a heightened self-respect for the work they are engaged in, and a true estimate of their position in society and of their importance in national development. The time was when the great majority of farmers (and in a great many communities, the idea still holds), thought that because a man earned his living by manual labor on the land, he therefore occupied an inferior position in society as against the professional man or merchant, and because of his isolation, the incentive to develop his own faculties was largely lacking. His view was that muscle was the chief requisite in his work, and the brain was a part of the human anatomy that he required to use only in a

very small degree. However, a change is taking place. There is now a growing consciousness among our farmers that this is a mistake, and that there is scarcely any occupation in life that requires in the same degree for its successful operation the continuous application of intelligent planning and thought that the business of farming requires. The idea of thoughtlessly trusting to what is called luck, is giving way to the better method of trusting to intelligent thought and action. That this change, which has gone on unconsciously, very important though scarcely noticed, is due in great measure to the influence emanating from the meeting of men working together for a common cause cannot be questioned. Our farmers' organizations in and by this work have contributed powerfully to this end, and this company to the extent that it has assisted in this, by promoting and aiding by financial help, or in any other way, has played a part by no means small in helping in this very important work. Let us all keep in mind that we are working not alone for what concerns our material advantage, important as that may be, but for the bringing about of a better and higher type of citizenship. One of the most important responsibilities resting with those charged with any authority in any of our grain growers' organizations is to foster and develop and extend the growth of this idea not along the lines of sectionalism and selfishness, but along the broad-minded plan that seeks to inculcate as the best principle of human relations, the Golden Rule—"Do unto others as you would have them do unto you."

What Readers are Saying About "The Farmer's Advocate."

As in other years "The Farmer's Advocate" is having some good things said of it at this season. Never have more testimonials been received at this office, and never have the expressions of our readers been so generous and whole-hearted as has been the case following our recent Christmas Number. And, while that special issue drew forth considerable comment the regular issues of the year have been appreciated. Where one sits down to write to the publishers to tell them how much he has benefited from the paper it is safe to say that hundreds think the same but do not take the trouble to write. It is gratifying to know that our efforts are doing good and that our readers are appreciative. This year we hope to do better. Everything is mapped out for a greater effort. The special articles alone will be worth double the price of the paper. But we started out to introduce some of those who have told us what they thought of "The Farmer's Advocate." We have room for only a few. Read them.

"I have just read carefully your holiday issue of your publication and I want to say, without any sort of reservation, that it is the most attractive publication of its kind I have ever seen, both as to the class of matter and from a typographical appearance. They tell us that the laws of a country are no better than the inhabitants thereof. If 'The Farmer's Advocate's' readers generally, are as high class as the publication itself, then you certainly have a most superior class of farmers throughout the Dominion."

A. G. DAWSON,
Editor and Manager, Buffalo Daily Live Stock Record.

"Truthfully I must say that the Christmas Number this year is more readable, heartier, homier, and more calculated to make men better than ever before."

R. J. MESSENGER,
Pres. N. S. F. A.

"As an old and interested subscriber of 'The Farmer's Advocate', I wish to congratulate you on the excellence of your Christmas Number which I have just finished reading. To my mind it is the best number that you have yet issued and the fact that you have accomplished this, notwithstanding the unfavorable conditions which now exist, merits an extra word of encouragement. Every department is sound, interesting, reliable and instructive and the illustrations in this number furnish food for all thoughtful readers. The different conclusions as to the best thing in life are especially interesting. This is a problem which most of us have wrestled and perhaps you might be interested to know my own conclusion—just one of the common folk. I have decided that the best thing in life is the faculty to enjoy it regardless of all circumstances."

Glengarry Co., Ont. J. B. FERGUSON.

"The Christmas Number of 'The Farmer's Advocate' to hand and it certainly is a good one. What gets me is where you get it all."

Missisquoi Co., Que. CLARENCE H. L. HAWLEY.

"The Christmas Number is a Christmas delight. We haven't yet had time to read closely all the admirable articles written by your genuinely Canadian contributors, but enough to note that almost every phase of Canada's life and interest has been suitably recognized. Again I congratulate you upon your ability to present so thoroughly and to depict so attractively Canadian ideals of the highest practical order. And let me say, too, that those members of 'The Farmer's Advocate' staff who are responsible for the mechanical part of this latest production have done exceptionally good work."

Brant Co., Ont. DAVID PATTON.

"Your Christmas Number is a dandy."

Parry Sound District, Ont. ROBT. McNAUGHT.

"Your Christmas Number, as usual, was very creditable to both the Editor and Publisher, and I shall take much pleasure in reading it."

O. A. C. H. H. DEAN.

"I feel that I must write to tell you what I think of it as a farmer's paper. It is simply first class. Your Christmas Number was a treat and I did enjoy it. What appealed to me most was the article by Mr. McNeillage on the Ups and Downs of the Clydesdale in Scotland. Being from the home of the Clydesdale and a breeder of them there, I enjoyed it to the full as I am sure many others would."

Wellington Co., Ont. DOUGALD MCKINNON.

"I was very much pleased with the Christmas Number of 'The Farmer's Advocate.' Would not do without your paper for twice the amount."

Waterloo Co., Ont. A. McDONALD.

"I have taken 'The Farmer's Advocate' ever since I started farming for myself (about forty years) and consider it the best agricultural paper in Canada."

Wellington Co., Ont. LAZARUS PARKINSON.

"I read 'The Farmer's Advocate' carefully every week. No matter how busy I am I try to find time. Sometimes when things have not been going very well with me I have looked at the three words 'Persevere and Succeed' on the cover of the Advocate. There is a lot in those three words."

Grey Co., Ont. JAMES MCPHERSON.

"I have been reading your paper for these two years, and I would not do without it if it cost ten dollars per year."

Nipissing District, Ont. S. G. PARENT.

"It is with pleasure I enclose two new names for your subscription list—glad because it expresses, in a tangible way, my appreciation of your paper—and then I feel I am conferring a favor on the home where I introduce 'The Farmer's Advocate.' No better reading can be placed before the young people of the home than that found in its pages, holding up to them as it does the very highest ideals. It is refreshing to me to read your opinions on the different questions of the day, I feel that they are honest and sane, arrived at without thought of party or selfish interests, which cloud so many views we see expressed in our leading papers."

Durham Co., Ont. C. H. SNOWDEN.

"If 'The Farmer's Advocate' did not come every week the family would want to know the reason why."

Wentworth Co., Ont. JAMES SMITH.

"We have tried a good many farm papers, but 'The Farmer's Advocate' is the best yet."

Prince Edward Co., Ont. B. C. MOORE.

"You certainly gave your subscribers a generous treat in the Anniversary Number of 'The Farmer's Advocate' I thank you very much. It is worth many times the price of the paper."

Prescott Co., Ont. ANGUS MCINTYRE.

"I am more than pleased with 'The Farmer's Advocate' as an honest, fearless and independent advocate of the farmers' interests in Canada."

Halton Co., Ont. MATTHEW WILSON.

"We look for you every Saturday and cling to you, notwithstanding inducements of other farm journals at cheaper rates."

P. E. I. S. C. LANES.

"I am too well pleased with 'The Farmer's Advocate' to give it up. I must say it is a light to lighten future days."

Algoma District, Ont. MAGNUS TAIT.

"I would not like to be without 'The Farmer's Advocate,' as it is to us like some inseparable friend."

Rainy River District, Ont. WM. H. SMITH.

"I have been taking 'The Farmer's Advocate' for two and a half years, and can tell you I have learned much by its many suggestions and practical advice."

Muskoka District, Ont. HARRY EVELEIGH.

"We could not do without 'The Farmer's Advocate,' it is an educator for all farmers, and find some wonderful hints that help."

Dundas Co., Ont. GEORGE RENWICK.

"I could not miss 'The Farmer's Advocate,' because it has become a part of my weekly menu."

Haldimand Co., Ont. CHAS. F. HOWARD.

"I think your paper is an easy first in its own field."

Simcoe Co., Ont. T. F. GAVILLER.

Suggested Changes in Winter Fair Prize-List.

At a meeting of the executive of the Ontario Provincial Winter Fair, the following recommendations were made to the incoming directorate: 1, that the classes for shearing wethers and grade heifers be eliminated from the prize-list; 2, that breeding pens of the leading varieties of poultry be added to the 1917 list, with an entry fee of \$1.00; 3, that the entry fee for pigeons be 50 cents.

Some Yields and Winners in the Acre-Profit Competitions.

Fifty-three Acre-Profit Competitions were carried on during 1916 by young men throughout Ontario who had taken the four-weeks' courses in agriculture, conducted by the District Representatives. The prize received by the winner in each case is the Short Course in livestock and seed judging at the Ontario Agricultural College, January 9 to 20, with expenses paid. Fifty-seven young men will take the Short Course at Guelph this month at the expense of the Ontario Department of Agriculture, as winners in these competitions. In estimating the cost of operation, \$5 per acre was allowed for the rent of the land, \$2 for plowing, 15 cents an hour for manual, and 10 cents an hour for horse labor.

Fifty cents per bushel was the value placed on oats raised by the contestants. Russell Warner, of Haldimand County, had a yield of sixty bushels to the acre, which cost \$13.57 to produce, leaving a profit of \$16.43. This particular soil was a clay loam, and the oat crop followed buckwheat. The land has been farmed for a hundred years. O. A. C. No. 72 was the variety raised. George R. Hill, of Hastings County, was next up in this competition, with a yield of 58 bushels of Banner oats, costing \$13.07 to produce, leaving a profit of \$15.92. This crop followed timothy. Almost sixty-five bushels of O. A. C. No. 72 were produced by Wilson Bell, of Simcoe County, but his production cost amounted to \$17.42, leaving a profit of \$14.93, placing him third in the competition.

Potatoes were valued at \$1 per bushel. William S. Courtis, of Middlesex County, reported a yield of 320 bushels per acre, grown at a cost of \$44.67, leaving a profit of \$275.33. These were Dooley, grown on a sandy loam and following wheat. The land had been fertilized with twelve loads of barnyard manure. Napoleon Chenier, of Sudbury, was next with a yield of 295 bushels and a production cost of \$38.55. This left a profit of \$256.45. These were Early Rose, grown on a sandy loam, and fertilized with five loads of manure. The land had only been farmed three years. Arthur Griesse, of Renfrew County, was third, having a yield of 288 bushels per acre and a profit of \$246.75.

Turnips and mangels were valued at 14 cents per bushel. In the first-mentioned crop, Harry Oldfield, of Muskoka and Parry Sound, reported a yield of 1,173 bushels and 20 pounds, costing \$26.36, and leaving a profit of \$137.90. These were Purple Top Swede, grown on clay loam, following peas. James Moffat, of Grey County, showed a profit of \$133.03 from his mangels, which yielded 1,112 bushels per acre and cost \$22.65. These were Giant Sugar Mangel.

There were nine winners from the different counties in the corn-for-silage competition. This crop was valued at \$3.25 per ton. Wesley B. Tudhope, of Simcoe County, reported a yield of 39 3/5 tons, which cost \$17.97, thus leaving a profit of \$78.20. This corn crop followed millet on a sandy loam soil. In the seed-corn trials, which crop was valued at \$1.50 per bushel, Geo. V. Robinson, of Kent County, had a yield of 62.89 bushels, leaving him a profit of \$74.20. Production cost with him amounted to \$20.13.

Barley was valued at 80 cents per bushel. Stanley R. Browning, of Kenora, had a yield of 50 bushels, which cost \$15.48, leaving a profit of \$24.52.

Robert J. McDonald, of Kent County, had a yield of 12 1/2 bushels of beans, which were valued at \$3.50 per bushel. These cost \$14.74 to produce, thus leaving a profit of \$28.42.

Twenty-nine bushels of wheat, valued at \$1.30 per bushel, were produced per acre by Hugh M. Boland, of Lanark County. The cost in this case was \$16.08, and the profit \$21.62.

Ernest Norris, of Muskoka and Parry Sound, reported a yield of 15 bushels and 6 pounds of peas, valued at \$2.25 per bushel. The cost was \$19.94, and the profit \$14.04.

The End Does Not Justify the Means.

EDITOR "THE FARMER'S ADVOCATE":

One mornin' last week I drove intae toon tae attend tae some business that had been on ma mind for some time an' that had got tae be mair o' a nuisance juist thinkin' aboot it than it wad hae been tae hae done it at once. I got it fixed up wi' no great trouble aifter a', an' wis aboot tae start for hame when I met the Mayor o' the toon, wha isna' a bad sort o' a chap in spite o' the fact that he has got intae office. It's maybe mair his misfortune than his fault.

"Hauld on a meenute," says he, "ye're juist the mon I wis on the lookout for, Sandy. Ye ken the Red Cross Society are hauling a raffle these times tae mak' monee for carryin' on their line o' wark whatever it is, an' they've got me intae the business o' sellin' tickets, an' I want ye to buy a couple, onway." What is it they're fittin' up as a prize," says I. "It's a calf," says the mayor, "a pure-bred Ayrshire calf, an' ye hae a chance tae get it for feefty cents. Ye'll no stock up yer farm cheaper than that these hard times," says he. "I hae na use for it," I answered, gettin' ready tae start for hame, "an' what's mair, it's ower late in life for me tae stand ony chance at makin' a success o' gamblin'. I've managed tae pay for pretty nearly everything I've got so far," says I, "sae I don't think I'll bother tryin' tae get somethin' for naething while I'm able tae wark for a livin' onyway." "Hoot Sandy," says he, "ye're no lookin' at it in the richt way. The monee is gaein' tae a guid cause. I ken it's gamblin' a'richt, but ye know that 'the end justifies the means'."

"I dinna' ken aboot that," I said, "gin ye go on that rule there isna' mony things ye need stick at. An' ye'll hae to be careful ye dinna' get intae jail, too, for

proverbs like that willna' stand in a law court. The Auld Book has a word on that point gin I remember richtly. Somethin' about those that say 'let us dae evil that guid may come, whose condemnation is just.' 'What dae ye mak' oot o' that?' says I. "O weel, Sandy," he replied, "gin ye're no' in sympathy wi' the Red Cross I'll no' be askin' ye for yer support. It's yer ain business."

"But I am in sympathy wi' them," says I. "At the same time I'm no' going tae say that I approve o' a' their methods o' raisin' money. We can win this war wi'oot takin' tae gamblin' an' maybe gicin' some young chap a start on the road that will send him tae the deil as quick as gin took tae the drink. There's no' muckle difference atween the twa things sae far as results are concerned. I've seen eneuch tae ken that. I mind o' a young lad that used tae live on a farm close by, that used tae gang tae all the raffles an' dice-throwing in the neeborhood. He got married a few years back an' moved tae the city, an' the last I heard about him wis that he wis spendin' every dollar he could get hauld o' in the gamblin' dens an' such like places in the toon. His wife used tae gang oot an' bring him hame at nights for a while, but she gave him up for a bad job at last. Of course, I ken that a mon has got tae mak' use o' his will-power an' develop back-bone eneuch tae carry him past these sort o' things, but at the same time I dinna' believe in decent folks takin' onything to dae wi' them. Let us pit oor hands intae oor pockets an' give what we can afford tae the cause, an' leave this rafflin', gamblin' business tae those that mak' their living that way. I'm thinkin' some o' the respectable people o' this toon are lyin' awake nichts tryin' tae square things wi' their

conscience, an' sayin' tae themselves that the end justifies the means, an' sae on, but it winna' dae. It's either richt or it's wrang, an' I ken a lot of folks that willna' say it's richt. When a mon is asked tae gie his dollar or his hundred dollars tae help his fellowman in some way, it is supposed that baith parties tae the transaction are the better for it. He that gives as weel as he that gets; but what benefit a mon can get from buyin' a sort o' lottery ticket, I canna' see. Gin we dinna' gie oor money tae the boys in France that are fightin' for us, because we want tae dae it, and because we appreciate what they are gaein' through for the rest o' us, we'd better keep oor money in oor pockets. The Red Cross Society, or whatever kind o' an institution ye call it is supposed tae be one o' the greatest organizations in the world to-day, an' I'm thinkin' ye're makin' it pretty cheap lookin' wi' yer calf lotteries an' such things," says I.

"Weel, Sandy," says the mayor, "gin ye've finished yer sermon I must be goin'. We've pit oor hand tae this thing noo, an' we must see it oot, guid or bad. But just wait Sandy," says he "till we're askin' for straight subscriptions for this business. I'll make ye wish ye'd bought a ticket for the calf." An' wi' that he left me, an' I cam' on hame, wonderin' how muckle I'd pit myself in for this time. They say talk is cheap, but I've seen it cost some chaps a muckle sight mair than they expected. Hooveer, it's in a guid cause, an' gin they come at me wi' their subscription list I'll pit ma name doon like a mon. They say that ye should give till it hurts ye, gin it's to dae ye ony guid. I'm thinkin' I'll get the benefit o' it a'richt.

SANDY FRASER.

Bringing Home the Buffalo.

One cold, windy—almost stormy—day, early last October, I procured a saddle horse—the stumbling, rocking equine passed as one at the livery—and rode out from Wainwright to Buffalo Park. After a lifetime spent on the prairies, beginning just as the buffalo disappeared in one last great slaughter, here was an opportunity to see the old relic of the plains brought back from practical extinction to his old haunts and living as near under natural conditions as a park enclosed by 76 miles of fencing would permit. In the past I had seen buffalo specimens mounted in museums, and I had seen a few head confined in yards at city parks, where they looked all that the artificial conditions might be expected to create. Both were unreal. What I cherished as my conception of the buffalo herds of former days and their traits had been gathered from the old buffalo trails of the prairie, ever a guide for the easier grades over hills and through ravines, that made travelling easy if one happened to be following their route, but the acme of discomfort if crossing these routes, from the bleached buffalo bones and horns, the collection and sale of which made an income for the Indians for years, that provided food in place of the buffalo. Many was the prairie fire that I fought as a boy, that these same Indians had set, in order that on the blackened prairie the bones might be more easily seen. And further, my conception of buffalo traits came from the stories of old hunters and traders of those former days, told in the pioneer farm homes and to which I as a boy listened as only a boy could listen to such tales.

From these varied sources, imagination had formed in early life ideas of the buffalo in his natural state. The museum and city park specimens did not fit, and here was an opportunity to match my early formed ideas with reality. There was something more than mere curiosity; there was that something called sentiment that cannot be described.

While I appreciated the regrets of the courteous keeper that urgent work prevented him from accompanying me in a search over the huge park, dotted with poplar bluffs for one or more buffalo herds, I was quite contented that alone on that excuse for a mustang I was to meet some herd and without explanation fit my conception and sentiment into the reality.

Some buffalo, though, must be within a reasonable distance of the park gate if my hopes were to be fulfilled as only a few hours separated me from the time when a train must take me on to actual work, and modernizing an old proverb "trains hesitate for none but money barons."

I struck out against a cold wind that took the breath away, across four miles of the park, around sloughs and poplar bluffs—still on the hurricane deck of that stumbling cayuse—and saw nothing. Turning to get the wind out of my face, I took another direction and rode suddenly upon a herd of 50 odd elk in a slough. A beautiful sight. I gave them, though, but a passing thought and look, they were not what I came to see. At last I had gone the limit from which that particular piece of horse flesh could return me in time to catch

the train, so I turned to the park gate, now several miles distant. As I turned a couple of moose that had seen me first, made a short run from a slough into a poplar bluff. I let them go, my interest was in buffalo alone, and disappointment was creeping over me, when coming over a rise I found myself looking down on a moving herd of some sixty head. As they came suddenly into view my mind picture held true and blended into the reality. There was the herd moving along towards a slough in four separate files close together, with a few straggling animals. The stories of the old traders had been well told and had stamped a true vision on my mind. The buffalo, when at last they saw me, stopped, stolidly gazed, and went on. I forgot time and train and the limited speed of my cayuse and gazed at the scene.

I saw only this one small herd, but within the confines of that park were 2,415 head or about that number. In 1909 about 800 head had been brought to that park, some 90 from Banff, and the remainder from the Flathead reservation in Montana. Looking at that little herd back in its traditional surroundings, in my mind I looked back to the buffaloless plains of 15 to 20 years ago and wondered if there was not a story attached to



The Buffalo Back Home.

the saving of the buffalo from extinction and bringing back this herd. Then I thought of the train, and in a neck-and-neck race I, chafed and sore, climbed from the back of the mustang and handed him over to his proud owner just as the train pulled into the station. But there was a story and strange truth—these were originally Canadian buffalo brought home—there lies the story.

There was no big killing of the buffalo in Canada as there was in the United States in 1879 and 1880 as a commercial proposition for the hides. From our best knowledge the big Saskatchewan River herd went south in 1878 never to return. They fell in that great slaughter on the Missouri, where for miles carcass touched carcass. But the Buffalo were the Indians sole food, and the remaining small herds rapidly fell in the Red man's fight against starvation. Where the last buffalo fell in the Canadian West we cannot say. Near Wood Mountain in the fall of 1882 a killing by Indians and half-breeds resulted in contractors, building the C. P. R., then nearing Swift Current, having buffalo roasts as a change in their monotonous menu. The remnants of this herd went the following winter.

Dr. John McDougall, that veteran pioneer missionary, records that he saw his last, lone buffalo bull in September 1883, about 40 miles west of Medicine Hat, and between the Bow River and the C. P. R. He states

further that a few were killed that same fall north-east of Maple Creek and across the South Saskatchewan. So ended the regime of the buffalo, except that little known herd of wood buffalo fighting for its existence against wolf and Indian in the Little Slave Lake country.

So might have ended the buffalo with buffalo lore, but back in 1873, an Indian bearing the illustrious name of Walking Coyote, forsook the ways of the Indian and instead of killing four buffalo calves that came his way, he captured them. Two were bull calves and two were heifers. This was in the sweet grass country of what is now Southern Alberta, and were from the big Saskatchewan herd. Entirely unconscious of international boundaries, unconscious of such things as tariffs and custom officers, he took his captives across the line to St. Ignatius Mission, in Montana. Here in semi-captivity the calves grew to full grown buffalo and reproduced, until in the early eighties his herd numbered 13.

Then people awoke to the fact that buffalo had disappeared and that any animals in captivity possessed a real value. The factor at the Hudson's Bay post at this point, the last post in the United States, was the first to approach Walking Coyote, but he could not procure the buffalo. However, Pablo and Allard, half-breed ranchers, also saw possible money in the remnant of an extinct race, and possibly knowing Indian nature better, secured the herd for a sum that is told anywhere from \$50 for the lot to \$200 per head. It mattered little to Walking Coyote, for whatever the sum, it procured enough fire water to give him one grand debauch right to the happy hunting grounds. His friends found him dead on the prairie shortly afterwards.

These 13 head formed the nucleus of the Michael Pablo herd of the Flathead reservation in Montana. Michael Pablo placed them in no confines, they ranged over the whole reserve. In the summer they fed out on the plains, and in the fall swam the Pend O'Rille River and wintered in the hills and bluffs closer to the mountains. They in fact followed the buffalo traits of the big herds of the older days when the huge herds swam the Missouri or Saskatchewan Rivers, going to the plains in summer and woody country in winter. As the herd grew larger a couple of half-breeds, spring and fall drove in any stray individuals or herds that wandered off the reserve.

A number of years afterwards, quite a number in fact, Michael Pablo acquired new blood, also from Canada, when he secured the famous Buffalo Bill herd that had travelled North America and Europe. Even "Buffalo Bill," or Colonel Cody to give him his orthodox name, found buffalo could not be tamed and he wished to be forever rid of them. Colonel Cody secured his herd from Colonel Bedson, of Winnipeg. Part of this herd went to Lord Strathcona, and later to Banff.

Michael Pablo might have secured other individuals, but these two herds were the progenitors of most of his herd in 1906, the year that he began to think of turning his unique herd into money. He estimated he had 200 head at the time in scattered herds over the reserve. About this time an offer was made by the United States Government, but it was so low that no sale resulted. Very shortly afterwards it was also announced that the Flathead reservation was to be thrown open for settlement. Michael Pablo, with true Indian suspicion (he was three-quarters Indian), connected the low offer of the United States Government and the throwing open of the reserve. To him, the government was attempting to force the sale of the buffalo.

At this time the Canadian immigration agent learned of conditions, and communicated particulars to the Canadian Government. The matter was turned over to Howard Douglas, Dominion Parks Commissioner, who in February went to Montana and found Michael Pablo very ready to sell. A contract was drawn up for the purchase of 200 at \$200 per head. Later Pablo, fearing he had not that number and also that he would be called upon to deliver them whether he had them or not, insisted upon a new contract including the entire herd instead of 200. This was fortunate for the Canadian Government, as it turned out he had well over 700 head on the reserve. The contract was again altered and Michael Pablo was paid \$240 for every live buffalo delivered at Strathcona, Alberta.

In May, 1908, he reported that he had 200 head ready for shipment, and that there seemed to be as many more on the range. His ranch headquarters were some 30 miles from a station, and in the drive to Ravalli, he lost about 20 head.

With true Indian reticence, Michael Pablo kept the sale to himself, and nothing was known of the sale until he drove the first herd into the stock yards at Ravalli. Then the storm broke. The buffalo had become a part of the country, and with true patriotism and sentiment the inhabitants objected to their exportation. Influential individuals wired Washington to have an embargo placed upon the exportation of buffalo but without avail. Then the "bad men" of the range threatened to open the gates and drive the buffalo out of the yards. A guard was placed in them every day and night, and when the buffalo finally left the yards it was back to the home of their ancestors.

With his best riders Pablo was unable to make another round up. Then Charlie Allard, a relative of Pablo's old partner, boasted that he could bring in any buffalo that ever shed hair. As a cowboy he held an enviable reputation over the entire range. To him Pablo offered \$2,000 if he would bring in 125 head more, or nothing if he did not get that number. Allard with some 40 of the best riders he knew rounded up some 300 head, but only managed to drive about 100 head into the yards at Ravalli. The second and third round ups failed to land a hoof. After resting up he brought in about 30 more, completing his contract. This was in the fall of 1908.

By this time the buffalo were so very wild that Pablo

realized it was futile to attempt to make any more drives to the station, so no further attempts were made that year.

The following spring a new plan was adopted—or rather an old Indian plan known as "pounding" was rejuvenated. A fence was run across a narrow neck of land formed by an elbow of the Pend O'Rille River. This enclosed quite a large area of land. The steep cut banks of the river made escape impossible except in a few places. Nearly all these were fenced. On the opposite side of the river a wing fence was run out for six miles in one direction and another four miles at an angle in another direction. From the river bank where the fences converged to each other, back for a couple of miles, they were covered with white cotton so that the buffalo would not stampede through the fence. Several drives brought the buffalo down through the gap where they swam the river and climbed the bank on the other side into the pound. Then all possible approaches were fenced and the last phase of the trip began.

The buffalo were then driven into a small yard, loaded into huge vans carrying two animals, and hauled by six-horse teams to Ravalli.

Through the whole round up there were hair-raising episodes. Men escaped enraged buffalo without knowing just how. Fifty horses were lost, vans were smashed, cattle cars reinforced inside were wrecked, but somehow 700 buffalo were finally carried to the park at Wainwright.

There were left a few outlaws that could not be brought in, and these fell in a buffalo hunt in which a few invited guests participated with Michael Pablo, among them Colonel Cody, or as he was better known "Buffalo Bill."

Twenty years ago the buffalo was all but an extinct race. Through no foresight of the authoritative bodies, but of individuals, he was saved from extinction. Today he has returned to such numbers under the care of man that he has passed that stage of extinct or all but extinct animals. So far he has not proven himself amenable to domestication. Far from it. Even in the broad confines of Buffalo Park he must be treated as wild and at times dangerous. His future remains to be seen. From a herd of 800 in 1909 to 2,400 in 1916 is a fairly

rapid increase, and each year the increase will be more rapid.

We have spoken of the past—what of the future? The herds at Wainwright Park must be held by the people of Western Canada as a relic of more than usual interest. The buffalo have been brought back until there is now no danger of them slipping into absolute extinction unless some blunders are perpetrated. No doubt that these herds will supply specimens of this great race, original only to the plains, for the parks over the country, where curious people will gaze in wonder. What may be their place in the economic life of the country remains to be seen. That they might play a part is possible. Buffalo robes and buffalo meat might again become a part, though no great part, in the lives of the people of the country. We have areas of land that might well be turned into buffalo ranches where they could be bred not merely to perpetuate the race, but as a financial proposition and from which would come the robes and meat referred to. But this is for the future. We will for the time, rest content that the buffalo have been saved from extinction, and are reproducing and increasing under conditions controlled by man.—R. G. T.

Automobiles, Farm Machinery and Farm Motors.

Starting Cold Motors.

By this time, there has not been a part of Canada which has escaped at least one severe spell of cold weather, and so you are extremely fortunate if you have not had trouble starting your motor during a period of low temperature. In some isolated cases owners are able to start their cars in warm garages and return with them from continuous trips, thus avoiding any starting trouble. If, however, you have been compelled to leave your car exposed to zero weather, or if a friend of yours has been placed in a similar unfortunate position, you doubtless have been called upon to exercise the widest knowledge in overcoming trying obstacles. There are a number of excellent things to be done when a motor refuses to start. If the radiator is filled with plain water, it is always advisable to drain it off and substitute the warmest water possible. In many cases, however, the radiator may contain a valuable anti-freeze solution, and so it is not deemed advisable to drain it with a consequent loss in real money. The radiator cleaning action, however, can be followed if receptacles are handy for retaining the original liquid, which when the motor has been started, can be again placed in the radiator. If the use of hot water in the radiator does not give you results, it is always well to pour some on the front of the carburetor, but be very careful that none of it gets through the tickler to the gasoline inside. We also strongly suggest that you pour hot water on the intake manifold. If after carrying out these maneuvers you should again fail to develop power, you may find it an excellent idea to place very hot bricks or hot water bottles against the intake manifold and around the carburetor. The idea in all these movements is to encourage the development of quick vapour. Perhaps these methods may not bring gratifying results, but there is one that generally will, and that is the use of a blow torch on the intake manifold. We must insist that such a method be not adopted unless you are an expert, as you can readily understand that if a flame touches the gas or a wave of vapour from it, a disastrous fire is bound to take place. It has been said that an "ounce of pre-

vention is worth a pound of cure," and therefore you will be well advised to cover up your radiator with a robe or rug if you find it necessary to leave the car standing in a cold atmosphere any length of time. It is surprising how much heat can be retained in a radiator that is even partially enclosed with warm material. A great many rural districts now have electric lights, and a simple system for keeping the intake manifold warm is to burn a small incandescent lamp inside the hood covers, close to the intake manifold. The amount of heat from an ordinary lamp will maintain a temperature at which starting should be easy.

Cold weather also prompts us to give some advice regarding oil for winter use. Many of the brands which are sold at present are not entirely suitable for zero weather as they freeze readily and so make it difficult, in general, for the motor to operate, and in particular for the pump to handle the oil itself. In this, as in many other matters we do not expect our readers to use our judgment but rather to seek out the agents from whom their cars were purchased and secure from them information based upon experience.

Recently a circular has been sent out by a manufacturing firm of considerable prominence, and in it we read an interesting paragraph regarding the filling of radiators. The item states that, "Care should be observed especially in the case of block motors, to only fill the radiator about to the center of the name plate. The remaining space is required for natural expansion and if this is not provided for, the expanded water will only waste through the over-flow pipe, and under certain conditions, once the over-flow pipe becomes full, a syphoning action may set up, and this may continue until the level of the cooling system is below the radiator inlet. This condition shuts off the circulation and results in a heated motor. This is responsible for warping the cages, valves and cylinder." AUTO.

Greater Home Comforts.

Only two and one-half per cent. of the 400 farmers visited in connection with the Agricultural Survey of the

Commission of Conservation in 1915 had the complete service of water on tap, bath and toilet in their houses. Five per cent. had automobiles; 38 per cent. had pianos, 32 per cent. had organs, and 22 per cent. had gasoline engines on the farm. While it is well that 70 per cent. possess sufficient musical interest to have either a piano or organ in the house, it is regrettable indeed that 39 out of 40 have not installed the water service and bath.

No investment yields more in conserving the women's health and strength, in creating greater home comforts, and in elevating the general tone of the material side of living than the installation of water service and the sanitary conveniences in the home. Thousands of farmers who could well afford to do so have not put in the service for various reasons—because they have not thought of it, or because they do not know how to go about it, or because they think it too expensive. The cost is not so great as many imagine. A bath tub can be purchased for \$10.00, a sink basin for \$3.00, a closet for \$16.00, a 30-gallon hot-water tank for \$10.00. Various means are employed in obtaining pressure at the taps such as a force pump to elevate water to a tank in the attic or the pneumatic tank in the cellar, and the cost of piping and installation will vary according to circumstances.

One farmer had the hot-water attachment, tank, bath and dry closet installed for \$50.00, the farmer himself helping the plumber to do the work. The complete service, which would be used 365 days in the year, can be installed on the average farm for less than the farmer pays for the binder he uses for a few days at harvest time and which stands idle for the balance of the year. The man on the farm thinks he cannot get along without the many labor-saving devices. How about a labor saver for the farm women? It is unquestionably a common-sense business proposition to have the water service and bath in the house as a comfort to every member of the family, and a constant labor-saving convenience for those who do the daily recurring work of the household, the farm women.—F. C. N.

Canada's Young Farmers and Future Leaders.

Topics for Discussion for Young Farmers.

Each week we shall announce topics for discussion in this department. Three topics will appear each week during the winter season, with the dates upon which manuscript must be in our hands. Readers are invited to discuss one or more topics as they see fit. All articles published will be paid for in cash at a liberal rate. Make this department the best in the paper. This is the boys' and young man's opportunity. Here are the topics:

1. What is Needed to Make the Farm Home More Attractive to Boys and Girls?

Is it convenient, more attractive surroundings, or better live stock? Does the system of farming in vogue give an opportunity to mix with people in a commercial atmosphere, or must the young man remain too much on the land with production his only aim? What is lacking? Articles should reach us by Jan. 6th.

2. By-products of Production.

Give your experience in feeding skim-milk, whey and buttermilk to young pigs and shoats. What is their comparative feeding value for pigs of different ages. Give weights of milk and grain fed and gains made. Have you ever used whey for raising calves? If so, how much did you feed per day? How did the calves do compared with skim-milk calves? What results have you had in feeding root tops in the field or when hauled to stable? Give results of feeding bean and clover straw, stating amounts fed and class of stock. What value have small, unmarketable potatoes when fed to hogs? Which gives best results, feeding them whole, pulped or cooked? Some years there are many cull

apples for which there is no market. Can they be profitably fed to stock? Articles should reach this office by January 13.

3. What are the Gross Returns From Your Farm?

State number of acres in farm, and give gross returns from the different branches of farming. What does it cost to run the business? Have you authentic information as to which departments are the most profitable? Have you thought of a plan whereby the returns can be increased the coming year? If you haven't kept books you, no doubt, have an account of the stock and other material sold. Make a resume of an average season's operations and put it into an article of not more than 800 words, and let us have it by January 20.

Crop Competitions Teach Many Lessons.

EDITOR "THE FARMER'S ADVOCATE":

A great deal of excellent advice has been given by winners in field crop and acre-profit competitions as to the best methods of excelling in crop production. All have been very beneficial. But behind these winners have been dozens of "farmers" who have tried hard, yet we seldom hear of them. It may be interesting to learn of the fun and benefits we have received.

The first lesson we receive from field crop competitions, is that they take the conceit out of one about as quickly as anything. We were always fairly careful farmers, tilled the land well, fought weeds, and sowed, as we thought, good seed. A year or two ago, having a chance for a good crop, we entered the local crop competition in oats. The crop did well and, viewed through our rose-colored glasses, appeared hard to beat. The

editor of the local paper, on a driving tour, informed us "it was the best he had seen," and our hopes rose high. I had a place prepared for at least \$10 if not the \$20 prize. Alas! so much for expectations. In due time the judge arrived, accompanied by the vice-president of the agricultural society, just in time for dinner. It might have helped to have fed him first, but evidently he wasn't to be thus bribed. Before dinner he took a ramble through those oats. After praising mother's dinner sky-high, probably because it was gratis, they departed without the judge giving us a hint as to all the noxious weeds and other varieties he had seen in those oats, so we were quite unprepared for the blow which was to follow. A few days of suspense till the scores came out, and "biff," down came our conceit to zero. I really didn't expect it of that judge after our using him so nicely, but our oats were close contestants for bottom place. The fact that most of the prizes had gone to the other township, and that others in our community whom we had thought poor farmers were scored as high as ourselves, wasn't much consolation. Lesson No. 1 well learned; we began to see that others could farm also.

Lesson No. 2. Competitions teach one to take a trimming gracefully. It is a poor dub who can't be licked a little without getting angry. To parody an old verse:

It's easy enough to be pleasant,
When prizes come in by the score
But the chap that's worth while,
Can lose, and still smile
Without being peevish and sore.

So it teaches one to give the other fellow the credit due him, and to be good enough sport to tell him so. The third lesson is perseverance. The following year we got five bushels of special oats and tried again.

Our conceit wasn't exactly dead. That was 1915; the wet year. By the time the judge visited us, they were so flat that we had given up all hopes of a prize, but for good sportsmanship we stayed in the race. We got a little higher score, owing to cleaner seed and better tillage. During these two years an experiment with 5 pounds of O. A. C. No. 72 oats, brought home from the stock and seed judging course, was having a very precarious existence. The first year they were sowed late in a corner of a field, as father "wouldn't be bothered with my nonsense" earlier in the season. They had to fight against a plague of sow thistle blown in from other farms, of course! By the time I got through hoeing these out, there were precious few oats left. Had about half a bag, which were cleaned and sowed the next year on a half acre of potato ground. They grew about five feet high, and then "the rains descended and the floods came" till my treasures somewhat resembled a carpet. However, I managed to reap a few sheaves and got five or six bags from the run. Another lesson—stick to it in spite of difficulties.

This year I had sufficient of these to sow six acres of corn ground in good heart and clean. Although they were not sown until May 28, we took another chance on it and again entered the competition. We cut out the few Canadian thistles apparent, and this time the fates were kinder, as we broke into the money with fourth prize. Our concession received the five prizes won in the township, which made up for the other year.

Of course, it is a long way to the top yet, but we intend to keep trying. Here is another lesson. When we win it is no time to be vain glorious, or to drop out and rest on our honors. Give the others another chance to beat you, and don't crow if they don't. Besides, there is always the fellow who says "he has a better crop in his back field." Probably threshing proves him right, but why doesn't he show them? Honest competition is the life of these contests. Anyway this year I have my \$10.

Field crop competitions, in my opinion, are beneficial because they emphasize, in a practical way, the importance of clean land, clean seed, and thorough cultivation. I believe they could be improved by more variation of the crops and including corn more often. Probably an acre of mangels or turnips would be an agreeable change. If they increase the yield and quality of oats and other grain, why not these also? However, while the practical lessons in better farming, derived from field crop competitions, are of great value, not the least benefit are the moral lessons learned. Here they are: humility, good sportsmanship, fairmindedness, perseverance, thoroughness and modesty.

Huron Co., Ont.

M. J. SLEMMON.

Constant Attention Should be Given the Crop.

EDITOR "THE FARMER'S ADVOCATE":

The field crop competitions are undoubtedly of inestimable value to the sections of Ontario which are energetic, enthusiastic and progressive enough to engage in them. The beneficial effect is felt, not only by the competitors, but by their neighbors throughout the entire district, which usually has a radius of about fifteen miles. The farmers, as a rule take particular pains with the crop entered in the competition. The land is thoroughly prepared and the furrows completely levelled so that the crop when mature has an even appearance. The grain is generally thoroughly cleaned and treated for smut. The start in the race is an important part and these points should always be considered by a competitor. The grain should be carefully sown and never doubled at the ends where the drill is thrown in or out of action. Some even go to the trouble of "checking" the grain in, which is sowing one-half the seed in one direction and the other half in the opposite direction.

The crop grows rapidly, and with the rush of work many pay no further attention to the field till judging time. These farmers frequently boast to the judge that they have never entered the field since they sowed it. This, however, is never to their credit, and the judge seldom sees sufficient merit in the field to award it the "Laurel wreath."

The best fields I have ever judged were usually on farms that showed a general air of prosperity and keen supervision. The buildings were neat, the yards tidy, the fence-corners mown, the stock choice, and the fields naturally showed the same care and attention. What weeds there may have been were hand pulled and thrown in the fence-corners or along the lane. The farmers or their sons had walked systematically through the field with peering eyes while the crop was developing.

Some of the better cared for fields were mown around to give a good impression of the height and stand of the grain, others were staked. Many, however, showed little or no signs of care or attention, and in a few cases the farmer wished the judge to pick out his best field or portion of it and then proceed with the judging. These few however, are always persuaded to point out the field entered.

The judge must have a mind of his own and proceed in a systematic manner to judge the crop. If it be grain, walk up and down the field at intervals of a few rods and then diagonally, being sure to cover the field thoroughly. I fully believe that the set of rules are as complete as they can well be made. Some farmers think the judges score too heavily for certain weeds, but this is the amount decided upon at the convention of the judges, and since all the fields are judged upon the same set of rules the competitors certainly get used squarely and alike.

I firmly believe that the field crop competitions

are exerting an influence that will be felt and noted in the future. The grain will be more thoroughly cleaned, the ground better prepared, the crops more thoroughly looked after and the general yield improved. Middlesex Co., Ont. FARMER'S SON.

Competition Leads to Better Farming.

EDITOR "THE FARMER'S ADVOCATE":

Farmers who have not received permanent benefit from field crop competitions are those who have not entered these competitions, and those who did not make any special effort to secure good seed or prepare their own, and failed to cultivate their land. All a judge can do is to score them low. Where a whole competition is that way, very little good is done except to those who get the prize money. Such a competition is of no special benefit to any district. Field crop competitions have made rapid strides since their inception, and should lead to better farming throughout the province.

When these competitions were started in our district competition was small, but to-day it is one of the largest in Ontario and there is keener rivalry every year. Even though you are not a prize winner, if you have entered with any interest at all, you can readily see some improvement in the quality and yield of grain, as selected seed will yield better than that which is carelessly cleaned.

Those who win prizes can fight it out again at Toronto, Ottawa and Guelph shows with their grain and sheaves.

If you are not successful you can easily see where you can make improvements by comparing your own crop grain and sheaves with those of others.

A very encouraging feature of the competition is the controlling of noxious weeds. A miller in our district who buys the largest percentage of spring wheat entered in the competition, states "that the yield and quality is superior to what it was before the competition started and it is much easier to obtain uniform samples."

Here are a few improvements I would suggest: For best results buy seed from prize-winning fields. Sow your crops as near as possible at the same time, thereby ensuring an evenness in ripening. This would give the judge a chance to do his work more satisfactorily as he is liable to score the ripest grain higher. It would be to the advantage of the competitors if the judge would invite the farmers' sons to go into the field with him, explaining his reasons for scoring high or low as the case may be. Further, the crop selected should not be changed from one year to another, as that prevents it from coming up to any standard.

York Co., Ont.

A. A. FRISBY.

Judges Should Give Reasons.

EDITOR "THE FARMER'S ADVOCATE":

The field crop competition was inaugurated for the betterment of field crops and for the purpose of educating the farmer to grow better crops, through the use of purer seed and up-to-date methods of cultivation. In the use of better seed, the competitions have done a great deal of good, but as to the educational influence I believe that they have very nearly failed. The farmer has obtained pure seed of a good variety and has grown a good crop, better than he had grown previously, yet very often he does not obtain a prize, at least not one of the larger ones. There would be no discouragement in that if he knew and was satisfied with the reasons for his defeat, but, unfortunately, he is not informed of those reasons. Most farmers are matter-of-fact persons. We must know definitely why such and such is the case before we can accept it as the truth. Consequently we have to know the reasons for the judge's decision before we can agree with him. I was interested in a field of oats in the competition this year, which was not awarded a prize, and I do not know why unless it was that the other fields had more thistles. The score gives us some little information, but not nearly enough. We want to know the reason why our neighbor's field is given more for general appearance, why we do not get more on our field for yield, etc.

The majority of farmers, I believe, do not understand the methods used to judge the fields. I know of one instance where a winner said that he did not know why he got the prize unless it was that the judge thought he needed the money.

I do not see why the judge could not be allowed to explain his reasons for giving the different score-points while at the field. Of course it is sometimes necessary for him to change them afterwards, and that might cause some dissatisfaction, but there could be no reason against his giving the information after he has finished. As he is always a stranger in the district, the farmer has no chance to talk with him after he leaves the field. It would help out greatly if it were compulsory for him to send in his reasons along with the score cards, or he might leave them with the secretary of the agricultural society. They could then be made known, or the farmers could call on the secretary and read them over. In any case they should be given very fully so that every contestant would know why he did or did not win a prize.

The standing crop competitions have done inestimable good, but I believe that they could be made much more educational, and I hope that we will see a change for the better in our contests in the succeeding years. Lambton Co., Ont. KEITH S. OKE.

Crop Competitions Encourage Seed Selection and Weed Eradication.

EDITOR "THE FARMER'S ADVOCATE":

In many districts the field crop competitions have been introduced, and I firmly believe they are of great benefit to any neighborhood. The field of oats must consist of not less than five acres, and, of course, must belong to the man who is showing it. The crop must be judged before it is cut. The judge goes over the field, and I might mention the scoring points: 1st, general appearance, 20 points; 2nd, freedom from weeds, 25 points; 3rd, freedom from smut, rust, blight and insects, 10 points; 4th, freedom from other varieties, 20 points; 5th, yield and quality of grain, 25 points. Now, in regard to general appearance, I might state a few things that help to improve the appearance. In the first place, do not be afraid to pull the plough back if knocked out of the ground by a stone or any other means, because wherever there is an unfertilized place the crop will be short, which may take away the appearance. Always work the furrows or crowns until they are level. If the crop is a manured crop then be careful how the manure is spread. The secret of this commences at the manure pile. Each day as we take the manure from the stable we mix the different kinds together; it only takes a short while and has a lot to do with the appearance and even ripening of the grain. You know that where the pig and sheep manure goes the crop will be strong and ripen quicker. Let me say again, mix your manure as it comes from the stable and use each part of the field alike.

The second point of great value is freedom from weeds. We always have the field we enter in the competition sowed on last year's root ground. We make sure the root field is perfectly clean, and this assures us of a clean crop the next year. Another way by which we keep down weeds is while cutting our hay we have a box attached to the mower and we carry a shovel. When a bad weed is noticed we dig it out and put it in the box. One weed will mean a lot more the next year.

In the third place the score is for smut, rust, blight and insects. The smut is very easy to remedy, and no one should neglect it. Just get a bottle of formaldehyde and treat according to directions. Rust and blight are both a pest to late-sown crops. Try and have your field in early.

The fourth is the freedom from other kinds of grain. I think about all I can say for this is use a good fanning mill, and by hand picking one bushel each year you will soon have several bushels of clean grain. In the fifth and last place comes the yield and quality of grain. The yield is due in particular to the way a field is fertilized, as usually the richer the soil the better the crop. Also, early sowing plays a particular part to the yield. Have the field all ready in the fall and work it the first in the spring, as late oats never are a heavy yielder. Now, as to quality. We have always used the Banner oats, and clean thoroughly so as to get nothing but the heavy, plump oats. Dry well while in the stook, because oats that heat in the granary are never good.

The field crop competition induces everyone to take an interest in keeping their farm clean, in growing the best of seed, and is splendid for abolishing noxious weeds.

Grey Co., Ont.

JAMES PARK, JR.

Competitions Encourage Young Men to do Their Best.

EDITOR "THE FARMER'S ADVOCATE":

These competitions in field crops are a branch of the work started by the Department of Agriculture, with the general purpose of keeping the young men interested in farming. The Department is certainly succeeding in its purpose as the young men who have taken part are more intense and thorough in their work than they would otherwise have been.

The rules, though not very strict, are as follows: Each competitor must be a former Short-Course student of twenty-five years or under, he must keep an accurate account of all expenses and receipts. Forms are supplied, which are to be filled out and returned to the Department as soon as possible in the fall. The judge is supplied by the Department. If the crop be potatoes, it is judged according to vigor of growth, indications of blight, general appearance of crop, etc. A small piece, 12 feet square, is dug to get an estimate of the yield and to see if there is scab.

It would be much better if the judge could visit the crops throughout the summer, as some years the frost appears very early in the fall before the judging is done. Thus we see that a crop which looked excellent in the summer would be poor looking when judged. The results of these competitions are very encouraging as the older men want to keep ahead of the boys. The competitor also sees where improvement might be made, the value of sowing good seed, and of good cultivation. As I was a Short Course student during the winter of 1915, I took part the following summer in growing an acre of potatoes. The previous year the ground was pastured, then plowed late in the fall. The following spring it was disked, and manure applied at the rate of twenty loads per acre. The potatoes were cut in sets with one or two eyes in each set, and planted on June 4. As the beetles were very bad, Paris green was applied three times and Bordeaux mixture once. On the 25th of August the tops were completely frozen so that they grew very little, if any, more.

The crop was dug about the middle of October, and when weighed there were 310 bushels. There were 28 bushels of small potatoes and culls, this being due to the early frost.

Grenville Co., Ont.

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It Pays to Test and Select Seed Corn.

EDITOR, "THE FARMER'S ADVOCATE":

Success in corn growing is not always achieved the first year in a field crop competition. In these competitions the principal scheme is getting pure seed. As a general thing I have a fair to good crop every year, and, had my seed been purer, I would probably have won during these past years. I have found that success only reigns when certain conditions are fulfilled. Soil, corn is adapted to, should be well drained, manured and plowed in the spring, of most years, although this year, it being so dry, I do not see that it would harm it much by being plowed this fall, as the ground is dry and sod will not rot before spring. I like the heat of the decaying sod to give the corn an early start. This done, the ground must be well cultivated and a good seed bed prepared. If this work is done in early spring you will not be sorry in the latter part of the season. When the soil is well disked and harrowed we are ready to plant. I always use a planter, and plant in hills forty-four inches apart each way. It takes about one bushel to plant four acres. As forty points out of one hundred are allowed for purity of variety, it pays to plant only pure seed of a standard variety which is adapted to your locality. Before planting my corn I like to test the seed and plant only seed of cobs that show 100 per cent. germination. This part is very interesting. In order to test it I get a box 22 x 22 x 4 inches and place two inches of earth in it. By planting every two inches, I am able to test 100 cobs at once. I take five kernels off each cob. Each row in my box or tester is numbered from 1 to 10, and I have corresponding numbers on the cobs. All cobs that do not show 100 per cent. germination are discarded for seed purposes. Having the corn planted, it should not be neglected. After giving it about two weeks' start I spend a half day in the corn field with a hand planter, replanting where the mischievous crows or grubs might have eaten out, as sometimes they play havoc in new sod. The June showers give the corn more vigor; it also brings the weeds on,

and unless they are stopped now I find they turn out to be a bother later on. As a general rule I give my corn field about two or three hoeings in the season, and cultivate about once a week. About the third to fifth week, each hill should be thinned down to three or four stalks, so as to give them more room to grow and mature. I have followed this plan and found it successful. This year, being a very backward season, I did not get my corn planted until July 8, but I had a good stand and was a successful competitor in our contest.

I think each county should have a breeding station for each kind or variety of corn; if not, there is going to be many different kinds of each variety, as no two persons pick the same quality of corn for seed purposes in the same variety.

Lambton Co., Ont.

KEITH R. HILLIER.

A Graded Prize List Might Mean Increased Entries.

EDITOR "THE FARMER'S ADVOCATE":

The purpose in establishing field crop competitions is to encourage the production of larger crops. They also encourage the growing of clean crops that shall be as free as possible from weeds, and uniform in variety and quality. They also help to determine the varieties of grain and roots that are best adapted to each particular part of the province.

Field crop competitions have undoubtedly done more to interest farmers in good seed and better methods of cultivation than any other scheme instituted by the Department of Agriculture. A man who enters a crop competition puts his best into making that entry as good as possible. If he puts the same principle into the management of his whole farm he has a fine farm, a farm that is improving every year, a farm that is an example and inspiration to his neighbors.

A further improvement is the bringing to the notice of farmers a few good varieties of grain, rather than a

large number of poor sorts. An example of this is the O. A. C. No. 72, Banner, and Lincoln oats. When the field crop competitions were originated, in looking over the annual report one would see nearly all varieties known. Now, looking over the report we see few except the above three. Similarly O. A. C. No. 21 barley has defeated all competitors.

One improvement that might be made is to extend the prizes according to the numbers of entries. If there are twenty entries or less, give the regular prizes, and for every ten extra entries give say two extra prizes. This I think would encourage a large number of farmers to enter, as there would be more chance of getting a prize.

Another improvement, I think, would be to give each prize-winner a ribbon, similar to that given for horses etc., at the fall fairs, with the winner's name and place in the competition on it.

Now that we hear so much about Patriotism and Production it should give an added impetus to field competitions for if we can increase the yield per acre it is much better than putting in a larger acreage.

Dufferin Co., Ont.

WM. EWING.

THE DAIRY.

Changes in Dates of the Live-Stock Meetings.

Since the dates of the Live-Stock Meetings were published in "The Farmer's Advocate of December 21, 1916, we have learned from John W. Brant, Accountant, National Live-Stock Records, Ottawa, that the Directors' Meeting of the Canadian Jersey Cattle Club will be held at 7.00 p.m. on Monday, February 5, instead of on Tuesday, and the annual meeting will begin at 1.00 p.m. on Tuesday, February 6, instead of at 10.00 a.m. on Wednesday.

Harvesting Ice for Use Next Summer.

From the standpoint of economy, a supply of ice should be stored on every farm. Ice aids in making more palatable many a food product, and in preventing the souring of milk and the spoiling of fruit and vegetables. The city housewife considers it almost impossible to get along without a daily supply of ice, but, owing to the impossibility of having meat, fruit and vegetables delivered at the door daily, it is more indispensable on the farm than in the city. Besides supplying the household refrigerator, in which butter, meats, fruit and milk can be kept in good condition from one meal to another, many refreshing desserts may be provided. Possibly dairymen find more use for ice than any other class of farmers, as it is necessary to cool the milk down quickly after it is drawn, in order that it may be delivered to market in the best condition. It is also necessary to keep the cream and butter at a low temperature during the hot weather of summer. Some are able to do this by the use of water from deep wells or by utilizing running streams. This oftentimes requires a good deal of labor, and it is seldom that the milk or cream is cooled to as low a temperature as if ice were used. Each year sees the demand increasing for higher quality of dairy products. In order to supply this it is almost essential that there be access to a supply of ice during the summer months. With the introduction of the cream-grading system, there will be some incentive to market only high-grade cream, but this cannot always be done without some means available of holding the cream at a low temperature from the time it comes from the separator until it is placed on the market. The cost of putting up ice is not great, but the advantages are many. The season for harvesting ice is again at hand, and no farmer should fail to secure a supply which will facilitate the handling and marketing of many perishable products, and will also aid in furnishing many luxuries during the summer season which are dependent on ice for their keeping qualities.

Ice-house Requirements.

It is necessary to have some form of building in which to store the ice. It does not need to be an expensive structure, although the permanent ice-house with a refrigerator-room attached is possibly the most serviceable. At this season of the year it would be almost impossible to construct a permanent house. This need not deter anyone from harvesting a few tons of ice, as a shelter that will prove adequate can be built at very small expense, and will serve the purpose where ice is required for putting in a house refrigerator, or in water for cooling milk. One end of the driving shed, or woodshed, may be utilized, or a lean-to may be built at the north end of the barn. The ice-house should be out of the sun as much as possible, and it is advisable to have it convenient to the place where ice is most in demand. If it is to be used for cooling milk and cream, it is a good plan to build it near the milk-house. Drainage is essential, as ice is bound to melt more or less during the summer, and, if the water is allowed to accumulate at the bottom, it further tends to melt it. If the soil is of a heavy, compact nature artificial drainage may be supplied by excavating to the depth of eight or ten inches, lay a row of tile a little below this and then fill the trench with stone, gravel or cinders. If this material is not available for this winter, a few rails can be laid on the ground, which tend to give a fair amount of drainage. Care must be taken to bank up around the sides

to prevent air circulating between the rails. While free circulation of air under the ice is detrimental, provision should be made for it at the top; otherwise the sun coming in contact with the roof would tend to cause the air to become stagnant and result in waste of ice. By having an opening beneath the eaves and in the gables, the air will circulate through. A good roof is necessary, as it would not take long for the water from a leaky roof to spoil a large quantity of ice. In a permanent storage place care should be taken to build the walls of non-conducting material. With the cheaper house insulation may be secured through the proper packing of the ice in good-quality, dry, clean sawdust or planer shavings.

It is generally estimated that three tons of ice will supply the house refrigerator, and that one and one-half tons should be stored for cooling the milk of each cow. If building a house this will give some idea of the size necessary. It is usually figured that one ton of ice will require about forty-five cubic feet, then at least one foot must be allowed on all four sides, two feet on the top, and about one foot on the bottom for packing. If twenty tons of ice are required, the ice-house should be about twelve feet square and twelve feet high. This will allow for the required amount of packing. Several feet could be added to the length of this to serve as a milk-house. It would save carrying the ice any distance for cooling the milk or cream. The accompanying illustration shows a house built of rough lumber, serving the purpose of milk-house and ice storage. We have seen ice kept very satisfactorily in the driving shed. The cracks were battened to keep out the air, and the inside partition consisted of a single ply of lumber. If a building of this nature is not available, a few posts can be sunk in the ground even at this time of year, and rough lumber nailed on either the inside or outside of the post will keep the packing around the ice. There is little outward pressure. For an ice-house of the size

required to store twenty tons, four posts on a side would be quite sufficient, in fact three might do. If located beside another building a shanty-roof can be put on it. This can be made of various materials, some of the prepared roofings being the quickest to apply. The main thing is to have something that will keep out the rain and, to a large degree, deflect the rays of the sun. A door can be put in one end, although we have seen houses where the opening was closed by loose boards as the packing was put in.

Where to Get Ice.

There are two sources of supply, natural and artificial. Those located near where artificial ice is manufactured might find it very convenient to get their supply in this way. A pure product is generally secured and the cakes are cut square, which facilitates packing. However, very few are near a source of supply of this kind, and must depend on securing their crop from some pond or stream. Care should be taken that the water from which ice is made is clean and pure, especially if the ice is to come in contact with food products. Freezing does not necessarily destroy disease germs which may abound in water. Ponds where green scum forms should be avoided. To secure twenty tons will not require a very large area. It is estimated that a cubic foot of ice weighs about fifty-seven pounds, and that a ton will occupy approximately forty-five cubic feet of space. On this basis a ton of ice with cakes twenty-two inches square and ten inches thick may be cut from 42.1 square feet, and twelve and one-half cakes would be required to the ton. When the ice acquires a thickness of twelve inches, ten cakes make a ton, and thirty-five square feet would be required, or to fill an ice-house of the capacity of twenty tons it would be necessary to have seven hundred square feet of ice. This will give some idea of the area of pond necessary. Very frequently the ice becomes covered with snow,



Cutting the Season's Ice Crop.

which should be scraped off before commencing to cut, as it does not keep well even though it may appear quite solid. If the ice is cleaned several days in advance of cutting, the thickness will be increased if the weather is below freezing. Where a farmer is working alone the shovel can be used to clean it, but, if two or three co-operate, it would pay to make a cheap scraper and utilize horse-power for removing the snow. Where large quantities are stored, the ice-plow is used for cutting the blocks, but it is doubtful whether it would pay the one man to purchase this implement when only a small quantity of ice is required each year. The ordinary cross-cut saw, with one handle removed, can be used for cutting the blocks, and a long plank will serve as a straight edge and as a guide to the saw. Aim at cutting the blocks as nearly square as possible, as it makes it much easier to pack. A couple of ice tongs, and an ice hook would complete the equipment. Ice is an awkward and heavy material to handle, and the use of a simple derrick, as illustrated, for loading, will make the work a lot easier. This may be made by fastening a stout upright to a solid base and then attaching a long pole at the top in such a way that it will act as a lever. A pair of tongs can be attached to a chain on the one end, and a rope on the other end can be used for raising the ice and swinging it on to the sleigh or wagon. For unloading, a block and tackle comes in very handy for raising the blocks and swinging them into position. While it is not a difficult task, cutting the ice and removing it from the water, it will very often be as cheap to buy it from some of the ice companies, who have every means of cutting and loading the ice at their disposal. In most towns there is an ice company who sell ice at a very reasonable price.

Packing the Ice.

In the permanent ice-house, built with insulated walls, no packing material is necessary. The blocks of ice are merely placed firmly together and the outside air not being able to penetrate the thick, insulated walls, the ice lasts through the season. In the cheaper houses packing material is necessary. As previously mentioned, sawdust and planer shavings are most commonly used, but if these are not available straw or hay are serviceable, although they are not so effective. It is advisable to use old sawdust rather than fresh, green material, as the fresh has a tendency to heat and thus melt the ice around the edges, but if no other material can be secured it is better to put up with this little waste than to have no ice at all. First place a layer of the packing material on the floor or ground and then proceed to lay the blocks of ice close together, leaving space around outside for the packing. Care should be taken to have as few openings as possible, and this is where care in cutting the ice is noticed. Chips of ice or snow should be packed into any cracks or openings, and if the weather is frosty a little water might be poured over it. While this improves the keeping qualities it makes it much more difficult getting the ice out. The surface of each layer should be level, and the best instrument for doing this is the common adz, and the ice shaved off may be utilized in filling any cracks. Continue putting in the ice layer upon layer until the required amount is stored and there will be one solid block when completed. The space left around the outside for packing can now be filled, and it is advisable to pack it thoroughly as it is being put in. The main point is to keep the air from striking the ice. The top must also be covered with a good thickness. About two feet of sawdust or planer shavings proves very satisfactory. When the supply is all harvested and carefully packed it requires no more attention until it is needed for use when the summer heat makes some cooling substance necessary.

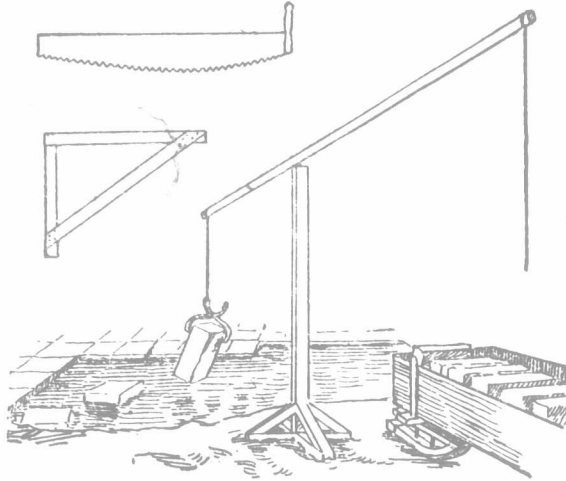
If the ice-house is already built you cannot afford not to fill it, and if no provision has been made for the storing of ice it will pay to purchase some rough lumber and build a cheap structure before the ice season is over.

The Small Breeder's Chance.

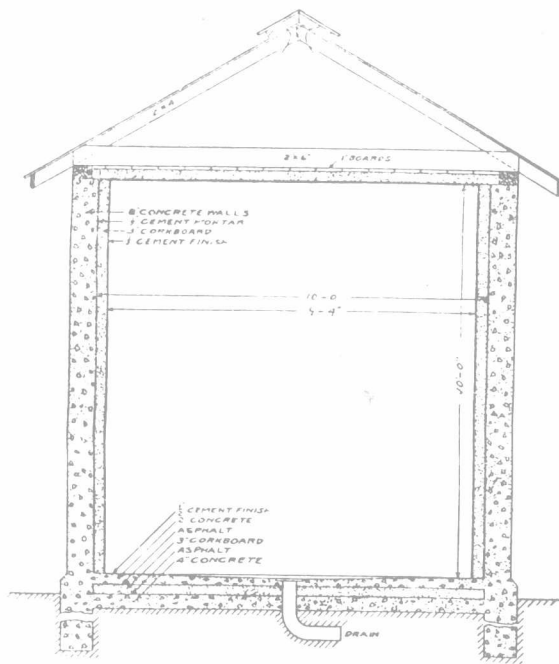
There seems to be an idea abroad that it is only breeders with large, well-developed herds that can command top prices for their stock. The small breeder with apparently as high-class individuals, although not in large numbers, fails to attract the attention of breeders who will pay a high price in order to secure the desired quality of animals. Naturally buyers of most classes of stock will go where they have a choice of individuals, but the cow which proves herself valuable always attracts attention whether she is located in a large or small herd. The small breeder is inclined to be too conservative regarding pushing his herd to the front. If a man has good stock it is to his interests to know it by testing, and to bring the fact to the attention of the public. With the official and semi-official systems of testing, dairymen, whether working on a large or small scale have a splendid opportunity of finding out the real producing value of individuals of the herd. If it is known that an animal is capable of producing a large flow of rich milk her value is enhanced above what it would be had no testing been done. The owner of a small herd that has made creditable records has no difficulty in finding a market for animals he wishes to sell. This is being proven more forcibly each year. Dairy stock without records, whether raised by the large or small breeder finds

slow sale. There is no reason why testing cannot be done in every herd.

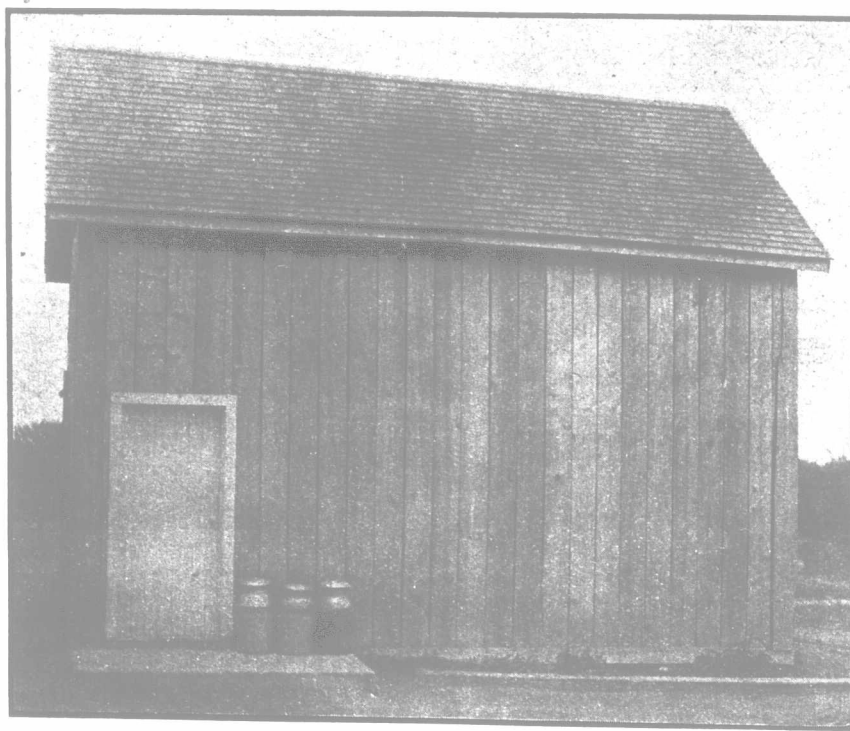
By the use of a good sire the small breeder can soon improve the quality of his herd. Records will show some of the heaviest producers and most valuable cows to have been bred by the amateur or small breeder. When records show a cow to be unprofitable she can be weeded out and attention directed to the best. There is no class of breeders that have an equal opportunity with dairymen to prove the true value of their herds. New records are frequently being made by individuals



A Simple Derrick for Loading Ice.



Ice House Built with Concrete.



A Cheap but Serviceable Ice House with Milk House at One End.

in inconspicuous herds. It will pay the young man starting for himself, on a dairy farm, to keep records of his herd and to always use a sire from high-testing stock. By careful selection, right breeding, and good feeding, it is possible to build up a profitable herd. There is a demand for both bulls and heifers backed by the right kind of ancestry. Records aid in selling dairy stock, whether by public or private sales. There is no cause for discouragement if the herd is small. A high average production and possibly outstanding records may be made by paying attention to breeding and feeding.

POULTRY.

How Remodeling Improved Several Hen-Houses.

Poultry are housed in many styles of houses. Some buildings are constructed according to the latest ideas of what poultry accommodation should be, but there are many in which conditions are such that hens or pullets cannot be induced to lay until the warm rays of the spring sun take the cold, clammy dampness out of the atmosphere. The pen may be well constructed from a contractor's viewpoint. A good foundation, double-boarded and papered walls, with windows and doors well fitted may keep out the wind. A ventilator in the roof may be installed with good intentions, but yet the pen is damp and birds may refuse to lay. They mope around during the day, and colds, roup and other diseases are common.

It is not necessary that the pen be particularly warm if it is dry and free from drafts. However, unless there is sufficient ventilation the moisture from the breath of the birds condenses on the walls and gives a clammy feeling in the hen-house. It may be possible to slightly change the construction of the present house so that conditions will more nearly conform with what is essential in a winter laying pen.

A poultry house which gives good results is built of one thickness of boards with cracks battened, except on the north side where it is advisable to use two thicknesses of lumber and one of paper. The front can be low and open, with a window facing south-west or west. If the walls are six or seven feet high, one-third of the side facing south should contain glass, and one-third cotton. This gives light and ventilation without a draft. Even when a gale is blowing no wind is felt inside the cotton. The air diffuses through and keeps the pen fresh. In a pen of this nature very little moisture will be seen on the walls or roof during the coldest weather. The air is dry and the birds do not suffer as much as those in a warmer but damp pen.

It will only take a few hours' work to remodel some of the present hen-houses to make them more nearly meet the requirements of the hen. Concrete examples will illustrate how few changes are sometimes necessary to make the pen healthier for the bird to live in. One pen that was built in three compartments, each large enough to accommodate about forty hens, had considerable moisture on both the walls and roof during the first winter. When building, the owner thought he was constructing a model hen-house. It was double boarded on the north, and had a shanty roof which gave plenty of space for the windows in the south side. All through the winter the rays of the sun streamed into the pen, but it failed to rouse the birds into activity. They appeared mopey. The straw on the floor could not be kept dry, and the walls were dripping with moisture at every mild spell. The birds were bred right, and were particularly well fed on a wide variety of feeds, but they failed to lay when eggs were high in price. The following winter there was the same trouble, until the beginning of January, when it was suggested that there was not sufficient ventilation in the pen. True, there were ventilators in the roof, but they did not seem to meet the requirements. It was advised that several of the large windows be removed and the openings covered with cotton.

The objection was raised that the pen would then be too cold for the birds, as it was necessary that they be kept warm if they were expected to lay. However, he finally yielded to make the suggested alterations, and to close the openings in the roof which were allowing what warm air there was to escape. The weather set in particularly cold after the cotton front was put in, but the birds did not seem to mind it nearly so much as the previous cold spell when their house was tightly closed. No dampness appeared on the walls; the straw on the floor began to dry and the birds appeared to take a new lease of life. In fact, in less than two weeks after the change was made several had commenced laying. That was two years ago, and that poultryman has secured a fair percentage of eggs, when prices were high, since he remodeled his pen. Another instance comes to mind of a well-built, little poultry pen of sufficient size to accommodate from sixty to seventy birds.

It was about half as wide as it was long, with the long side facing the south. This was filled with windows, and really the pen looked ideal the fall it was built. However, no eggs were gathered that winter, nor the next, until warm weather. The owner was lamenting the fact that he had put so much money into his poultry house, when the suggestion was made that he substitute cotton for part of the glass and fill the gable of the pen with straw. This was done, and returns have been satisfactory ever since. On one farm the poultry was kept in a pen at one end of the stable. It was so constructed that very little light was available, but it had the advantage of always being

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warm. While the flock usually laid a few eggs during the winter, better results have been obtained since the birds were partitioned off by themselves and a large opening made in the wall for glass and cotton. Poultry will not stand dampness, but it is almost impossible to avoid it unless the proper ventilation is given. It does not seem that this can be obtained satisfactorily through a ventilator in the roof; the curtain-front is a much more satisfactory means. It is not expensive and is easily put on. True, it collects dust, which has a tendency to clog the pores of the cotton and so keep out the air, but this can be remedied by occasionally cleaning the cotton. If your poultry house is damp and the curtain-front has not been tried as a remedy, it might pay to try it this winter.

Balanced Rations for Hens.

Feeders of horses, cattle, sheep and hogs have claimed for years that these animals must be fed a "balanced ration." Special attention has been given to balanced rations for dairy cows. By this is meant that one food constituent should not be fed in excess, while another is lacking for the upkeep of the animal's body. The protein must be in a certain proportion to the sugars, starches and fat in the food. Now the hen comes in for her share in this scientific feeding.

Ten times as many eggs were produced by hens fed a well-balanced ration as by those given only corn, wheat and oats in an experiment conducted by the Ohio Experiment Station. The balanced ration consisted of three parts by weight of corn and one part of wheat fed twice daily in the litter, and a mash mixture of two parts meat scrap added to two parts ground corn and one part bran fed in self-feeding hoppers.

The 21 Barred Plymouth Rock pullets in each lot received the same house space and treatment, except for the difference in feed. The test period lasted for 140 days.

The hens given the balanced ration ate more feed, which cost about 50 per cent. more than the ration of corn, wheat and oats. However, they gained more in weight and produced ten times as many eggs, making a net profit while the other lot was kept at a loss.

HORTICULTURE.

Is that small quantity of vegetable seed, so carefully harvested last fall, in a safe and dry place?

Watch for the seed catalogues. Select your varieties, and have your order placed in good time.

In all your planning for next season's operations, remember the great emphasis now being placed on quality.

What about the neglected farm orchard? Would it not pay to expend some labor now and later, as well as a few dollars in cleaning it up.

Don't allow the apples or vegetables in the pit to spoil for lack of covering or on account of too much covering, and remember that the snow is a good protection.

Will your spraying supplies be purchased co-operatively this year? Get an estimate of the requirements of your local association or a few of your neighbors and write for quotations.

Decomposing apples in barrels or boxes will affect those lying against them. It will pay well to sort them over early, and feed or destroy any that may be showing signs of disease or a tendency to rot.

It will soon be time to commence pruning. The disadvantages of winter pruning are perhaps more than offset by the lack of sufficient pruning, which is sure to result from the scarcity of labor if the job is left till spring.

Have your delegate to the annual Fruit Growers' Convention secure information regarding your local problems. It will help you and it will help the Convention. The very subject in which your local association is interested may not be discussed at the Central Meeting, unless your representative introduces it.

Fruit Growers' Conventions and local meetings will be held during the following three months. It was never more important than at present to know the latest ideas regarding cultural and marketing methods and these should be discussed fully at such gatherings. Your presence and ideas will help to make these meetings a success.

Tramp the Snow Around the Trees.

If no protection has been afforded the young trees against mice and vermin of this kind, it would be well from this on to keep the snow firmly tramped around the trunks. Towards spring when the mice begin to get quite active and burrow through the snow long distances in search of food, the bark of the young tree is very likely to suffer if it happens to come in their way. When the snow is tramped about the stem, the mice are more inclined to divert their channels where the burrowing is easier, and the tree is spared. It would be a good plan after every snowfall to take a trip through the young orchard and make the snow firm about the trunks of

the trees. Watch for injury wrought by rabbits also. Sometimes a few fresh twigs cut from the branches and left on the ground will attract the rabbit and spare the tree.

How to Prevent Sun Scald.

The injury to trees, known as sunscald, is confined principally to northern districts. Yet in almost every locality trees can be found in the various orchards that have been damaged in this way. It is caused by the alternate freezing and thawing of parts exposed to the hot sun in early spring. The bark on the southwest side looks unhealthy, dies and splits when dry; oftentimes the dead, blackened bark separates entirely from the stem, which either causes the tree to die or to become so weakened as to be useless. Oftentimes the oblique and horizontal branches exposed to the intense heat of the sun will be blistered, after which borers are very likely to gain a foothold and finish the work of destruction. Any orchardist who has noticed these unfavorable conditions existing in his plantation in former years would do well to prevent a future occurrence of sunscald.

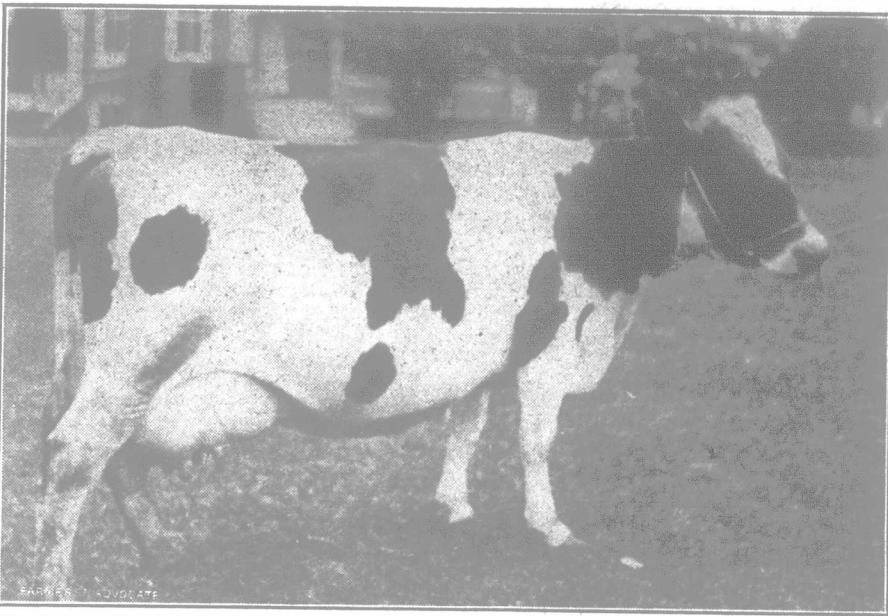
Some protection which simply breaks the force of the sun and does not entirely obstruct it is preferable. Under these conditions the bark is partially injured to exposure to sunshine, and will not suffer, but if it is entirely darkened from the sun it is liable to remain weakly and to become affected some other time. Finely woven wire netting rolled around the tree is serviceable, but too expensive to recommend at this time. Corn stalks placed against the exposed side of the stem will answer the purpose quite as well and incur no actual expense, except that for labor. Some fruit growers set a board on the exposed side, or two boards nailed together in a V-shaped or trough fashion. Lath can be driven into the ground on the southwest side of the tree and do quite as well. It is a very simple operation to prevent sunscald, yet there are thousands of trees that succumb to it every season.

Oftentimes the limbs are injured by this alternate freezing and thawing. Where winter pruning is done and there is danger from sunscald, it is not wise to thin the top of the tree too much, for if sufficient branches remain the sun's rays will be broken up before they strike directly on to the exposed side of the large limbs.

The Characteristics of a Few Good Peaches.

There are many at this season of the year who are approached and requested to buy young peach trees for spring planting. Some may desire to do so and are not acquainted with the different varieties, their quality, color, or date of maturity. The following description of a dozen different varieties is taken from the Ontario Bulletin 201, and will convey considerable information to those who may be considering setting peach trees in the spring of 1917.

Alexander—The first peach of any importance to reach the market; it ripens early in August; it has poor quality, white flesh, cling pit; its only value is in earliness, but it comes into competition with southern fruit.



Toitilla De Kol Sarcastic 6189.

Official record for seven days: Milk, 534.4 lbs.; butter, 29.42 lbs. Dam of Toitilla of Riverside, present R. O. P. champion, with a record of 1057.5 lbs. butter and 24,049 lbs. milk in a year.

Triumph—This variety ripens about mid-August; it is largely planted but is not exceedingly popular on the market on account of its downy skin; in color it is dull and is a poor advertisement for what is to follow.

Yellow St. John—This is the first good yellow-fleshed peach to reach the market. It ripens from the middle to the last of August, has good color and good quality; it is a heavy bearer, a good shipper and is one that almost everybody grows.

Early Crawford—This kind ripens in early September; it has good quality, good color, is a good shipper and is well known to the trade. Many other varieties of the same type are sold under this name.

Garfield or Brigdon—This kind ripens about the

first of September. It is a good peach of the Crawford type; medium size, excellent color, a good shipper, and fills the space between St. John and Crawford.

Reeve's Favorite—This ripens with New Prolific; it has good size and color, is a good shipper and a favorite with a number of growers.

Niagara variety ripens the same time as Chair's Choice. It is inclined to bunch, but the quality is good. It is also a good shipper with large size.

New Prolific—This kind ripens from mid to late September. It is a very heavy bearer of medium size with good quality. It is a good shipper and responds in production to manure, cultivation and thinning. This latter quality caused a prominent grower to remark: "If I could grow but one variety it would be New Prolific."

Elberta—This popular variety ripens about ten days or two weeks after Early Crawford. It is large in size, of fair quality, and is one of the best shippers if not the best. It is the best commercial peach now grown and is more largely planted than any other variety.

Crosby—This is medium sized, flesh a rich yellow, a good canner, and one of the best quality peaches grown.

Chair's Choice—This is a good peach of good quality and a good shipper. It is quite largely planted.

Smock—The best late peach we have. It has fair color, fair quality, is an excellent canner, and ships well to distant markets.

Any five of the above varieties would make a good combination for the commercial orchard.

To show the difference of opinion regarding the varieties, the choices of five prominent growers are here quoted:

I. Triumph, St. John, Crawford, (type), Elberta, Crosby, Chair's Choice, Niagara and Smock.

II. Triumph, St. John, Crawford, Fitzgerald, Elberta, Niagara.

III. St. John, Fitzgerald, Reeve's Favorite, Jacques Rareripe, Elberta and Oceana.

IV. St. John, Fitzgerald, Crawford, Reeve's Favorite New Prolific, Elberta.

V. St. John, New Prolific, Elberta and Niagara.

It will be noticed that St. John and Elberta appear in every list. The former is one of the best early peaches we have. Elberta comes later with good quality and is an excellent shipper. The smaller varieties are gradually being discarded, as size and color bring the price. The four following are preferred by the factories for canning purposes: Hill's Chili, Elberta, Crosby, and Smock.

FARM BULLETIN.

The Mystery of Lord Brunswick.

BY PETER MCARTHUR.

That sounds a good deal like the title of an old-fashioned, three-decker novel, but I can't help it. What I proposed to write about this week seems more like romance than reality, and it may as well be given a romantic title. The papers tell us that we are to have a new Canadian Lord who will probably take the title of "Brunswick" in honor of his native province, New Brunswick—and thereby hangs a tale. If I am not mistaken this will be our first native-born, Canadian Lord.

Shaughnessy was an American, Strathcona a Scotchman, and I think Mount Stephen was also British born. Anyway, our new Lord is a native-born Canadian, and about the most surprising specimen we have yet produced. Only about forty years of age, with the appearance of a chubby-faced boy, he has to his credit the accumulation of many millions of dollars, a seat in the British House of Parliament, a baronetcy, and now a seat in the House of Lords. Assuredly Max Aitken, to give him his baptismal name, is a hummer. Outside of the inner circle of High Finance, practically no one had heard of him until he was ready to emigrate to England, a full-fledged multi-millionaire. My first acquaintance with his name "synchronized" with the job of putting a cement foundation under the house. While the work was in progress the price of cement went up forty cents a barrel, and on making a wrathful investigation I found that the new price was ascribed to the activities of Max Aitken, who had re-organized, merged and otherwise high financed the cement industry. Then I found that when nobody was looking, he had merged a whole lot of other Canadian industries, and it was suspected that the low level of the water in the Great Lakes at that time was due to the amount he had used in his stock flotations. And just when Canadians were waking up to the fact that we had a wizard of finance "in our midst," and were undecided whether to lionize him or "leave 'arf a brick at 'im" he suddenly emigrated to England. Shortly afterwards he got into the British Parliament and acquired the title of Sir Max. This was a great mystery which has

never been explained, though it has caused much debate. No one could discover who had recommended him for the honor, though the opinion prevailed that whoever did it felt about such titles as Lord Melbourne did about the Order of the Garter—that "There was no d—d merit attached to it." Now Sir Max has been made a Lord, and just what he is being rewarded for no one seems to know. It was certainly not for the journalistic ability he showed as the official "Eyewitness" with the Canadian troops. If titles were given for work of the quality he produced, every daily paper would have its police news done by an Earl or a Viscount.

Now, far be it from me to say anything that might prejudice anyone against Lord Brunswick—if that is the name he finally decides to adopt. I know nothing about him that most people would not consider entirely praiseworthy. What puzzles me is to find out anything about him or his achievements that properly accounts for him. I have read at least half a dozen biographical notices of him, no two of which agree. He has been described to me by a judge, a clergyman and a banker who knew him personally, but their descriptions failed to make him seem real. Out of the many descriptions I visualize a good-natured, smiling, chubby-faced, boyish individual who has nothing about him to suggest the cold, calculating, financial freebooter. In his pictures he looks as if he would be ready to play base-ball with the children and would make a star short-stop. Yet there must be something absolutely Napoleonic about him. The banker, in his description, dropped one significant remark. "He has a most uncanny power of making bankers and capitalists do whatever he wants them to do." He must have the same uncanny power in his dealings with those who dispense honors and titles.

And yet he appears to be only a "hyacinthine boy." But whatever he is, it is becoming apparent that he promises, in the near future, to be not only our most distinguished Canadian abroad, but one of the strong men of the British Empire. Current news credits him with having brought about the understanding between Lloyd-George and Bonar Law that made possible the present War Government. It is reported that he occupies a room next to Lloyd-George in the War Office, and that he spends his days with Bonar Law. And on top of that comes the news of this elevation to the peerage. Certainly there must be something about this amazing young Canadian which has escaped his journalistic biographers and his personal friends. Finding him so near the centre of power I am almost prepared to go a step farther than the Advocate did a couple of weeks ago, when it surmised that Lloyd-George might prove to be the dominant figure of Tolstoi's prophecy about the future master of Europe. As nearly as I can remember the Russian seer's vaticination he prophesied the coming of a man "from the Northwest, more a journalist than a military man, who would hold Europe in his grip for ten years." Our new Lord may be said to come from the Northwest, for there is a chapter in his life, not given in any of his biographical notices, that deals with his activities in Calgary. As Eyewitness, he has learned war as a journalist, rather than as a military man. Certainly the description seems to fit him better than it does Lloyd-George. Then there is the unceasing mystery of the man. He is either a man of destiny or one of the most amazing accidents in history.

I notice that some of our papers are railing at Sir Max's activity as a representative Canadian. As he has never held office or received a mandate of any kind

from the Canadian people they are inclined to repudiate him. Yet I never saw that he made any pretence of speaking for Canada, though he has been associated with the overseas work of our War Department. Sir Sam Hughes evidently valued his co-operation, and he seems to maintain the same cordial relations with Sir George Perley. He has been persistently mentioned for the position of High Commissioner, and now that he is a Lord his chance of securing the position will be greatly increased—if he really wants it, which I am inclined to doubt. When he wants a thing we never hear anything about it until after he has got it. But I am hoping that when he finally decides on his title he will not choose "Brunswick." Isn't there a German Duke of that name already? I think so, and as our bustling fellow-countryman may yet decide to be a Duke, he had better take another name that will leave the future open. Besides, the name Brunswick already has a place in history and literature. There was once a red-headed Duke of Brunswick who wielded a two-handed sword and banded hardiments with Louis the Eleventh. Then you will all remember Byron's Waterloo, in the old Fourth Reader.

"Within a window'd niche of that high hall
Sate Brunswick's fated chieftain. Etc."

On the whole I think our new Lord should adopt something more original that would help to endear him to his fellow Canadians—such as Lord Waterstock, or Lord Cashwater, or Lord Manymergers. There are a lot of Canadian editors who could give him a more appropriate title than Brunswick. But in the meantime it is worth while for us to keep an eye on him and try to learn something about him. Everything suggests that he is not in the rank of ordinary men.

Some Phases of Prince Edward Island's Agriculture.

There are some peculiar and interesting features in the agricultural life of that little Island, situated in the Gulf of St. Lawrence. Its soil is fertile and its people conservative, but staunch and true, and, while they still have their narrow-gauge railroads and up to the present have surrounded the automobile with considerable restrictions, they were good enough sports to warm up over the silver-black fox proposition and make it one of the biggest institutions of its kind in America. The revenue of the Province is not large, for land pays practically no taxes. This immunity, so dear to them and so far removed from others, they are determined to maintain, and several years ago a candidate was elected to the Legislature because the people liked his no-land-tax policy. A tunnel to the mainland has been advocated, but the production of the Island apparently will not warrant such a stupendous undertaking. In place of this a car ferry, capable of conveying fourteen cars at a time, will navigate the Strait, and the gage will be widened as soon as finances permit, so transportation will soon be made more effective. The difficulties of transportation have been the greatest obstacles during recent years to rapid growth, but in former times an autocratic system of absentee landlordism stifled development and prevented the inhabitants owning land and bequeathing it to their heirs, the sovereign right of a free people. Prince Edward Island is small but productive. The people are large of stature and big of heart, yet there is that separation from the mainland which prevents a speedy movement of the crop, the highest market price and a development of the natural resources commensurate with the possibilities of the "Garden of the Gulf". In spite of this, the Islander can produce at a lower cost and, with a small tax rate, can enjoy as much remuneration for his efforts, perhaps, as those operating under more ostentatious circumstances.

Prince Edward Island has a population of 93,000 and 90 per cent. of that population is rural. Those living outside the towns and cities are not all farmers; some are fishermen and others are engaged in activities which, though not connected altogether with the land, have a rural atmosphere. This is why laws and regulations regarding which the country folk may entertain adverse ideas, are not easily foisted on to the people. For instance, automobiles are allowed to run only on Mondays, Wednesdays, and Thursdays, and then over a limited area. This may appear like a ruling born of prejudice, and perhaps it is; prejudice not towards the automobile, but towards those irresponsibles who at first drove recklessly through the country with little regard for human life or property. One school section in the eastern part of the Province will not yet allow an automobile within its limits. This may appear from the distance like obstinacy, but behind it all is the past record of drivers who lost their heads or abused their privileges. Farther west we might be willing to overlook these abuses and consider a broken limb or a fractured skull simply as a sacrifice on the altar of progress. On the Island they hold the saner view that the wheels of progress should turn without the sacrifice of human life, and that laws must be enacted to protect the women and children against the recklessness of a few who are not guided in their actions by the Golden Rule. If the temperance laws of the Maritime Provinces were as well enforced as the motor laws of Prince Edward Island, prohibition in that country would amount to more than it does at present. It should be stated here, however, that considerable false doctrine was preached with regard to the automobile. The anti-feeling is now dying out and soon the motor car, it is expected, will have access to all the roads of the Island; although it will be just as well at the first for drivers to keep their heads and remember what a fight the automobile has had to get a foothold.

The past has had and will continue to have some effect on the Island. Back as far as 1763 it was divided into lots of about 20,000 acres each and these were given to Old Country Gentry. They were known as "Proprietors", but they continued to live in Britain while the inhabitants, called "Tenants", worked the land without the privileges of ownership. In 1875, however, the Island Government purchased the rights of these absentee landlords and sold the land to the tenants, but no arrangement was made for a complete or up-to-date system of land taxation. At present five to ten dollars covers the taxes on 100 acres of land. This system has one commendable feature, however, the farmers are not taxed to death.

Size of Farms and Nature of Farming.

The tendency is to small farms, ranging in area from 50 to 125 acres. The Island as a whole comprises 1,397,991 acres; 1,202,347 acres of this are cleared, and divided into 14,369 holdings. The soil generally is red and, as a rule, a sandy loam, but it is estimated that 200,000 acres are in need of underdrainage. Not until last season did neighbors attempt any co-operative system of ditching, but then after some encouraging legislation, similar in effect to the Ditches and Water Courses Act of Ontario, they set to work on broader plans. Formerly land tile could be procured only with difficulty and at a very considerable cost, but the Provincial Department of Agriculture got local capital interested and a tile and brick plant erected. On September 27, 1916, the first tile and the first machine-made brick, manufactured on the Island, left the plant at Richmond. This will mean a great deal both to the agriculture and to the industrial life of the Province.

In 1915 the estimated value of the field crops amounted to \$11,130,000. The hay crop stood highest; oats were second, and potatoes third. A published report placed the yield of oats at 6,500,000 bushels, and potatoes at 3,750,000 bushels. Blue varieties of potatoes predominate. These find a market at home, in Newfoundland, and parts of Nova Scotia. Some red varieties, chiefly the Dakota Red, are grown for the New England trade, but the white kinds do not leave the Island in very large quantities, as, near at home, the market would be Middle Canada, and this trade is to a certain extent cut off by the heavy production in New Brunswick. A fair average price is 25 cents per bushel, and the starch factories contract for them in large quantities at that figure. Two hundred bushels of marketable potatoes per acre is considered a fair yield. While the writer was on the Island during the latter part of September, buyers were coming in and taking advantage of the ridiculously low price. Potatoes jumped to 40 cents per bushel in a few days, but even then they were retailing for \$2.00 per bushel and more in Ontario and Quebec. Such was the difference in price at that time between producer and consumer.

The rotation of crops, which for years has been practiced most, is as follows: grain (oats), hoe crop, grain (usually wheat or barley), hay, hay, pasture, pasture. This covers a period of seven years, and to the infrequency of the hoe crop is attributed a considerable immunity from club root and bad potato diseases. Fruit growing is still in its infancy yet we visited one grower, A. E. Dewar, of Queen's County, who had a splendid fruit farm, and the quality of his products, with those seen in orchards in Nova Scotia or Ontario, at that time of year. If more were only interested in fruit they would find the soil and the climate of P. E. I. quite congenial to its production. The future of the fruit industry there depends not upon the soil or the atmosphere, but upon the men.

In 1891 Dr. James Robertson, at that time Dairy

Commissioner for Canada, put on an active campaign and introduced the co-operative factory. There are now about twenty-eight cheese factories and twelve creameries in operation.

Since this Province began to receive its share of the federal grant, agricultural instruction has made rapid progress. The greatest item in this expenditure is the introduction of agriculture into the public schools. An up-to-date, rural-science department has been established, and all pupils training for teachers must measure up to the requirements of this branch of the educational system. In March of 1915, W. R. Reek was appointed Director of Agricultural Instruction, under the Agricultural Instruction Act. He took with him to the work many good ideas gleaned from his experience in the agricultural work of Ontario, and as representative of the Ontario Department of Immigration. By working in harmony with the Provincial Commissioner of Agriculture, Murdock McKinnon, who has piloted some useful legislation through the House, splendid work has been done both for the farming and industrial interests of Prince Edward Island.

Sea Manures.

Farmers who live near the ocean are in a position to obtain a large quantity of manure from the beach. Eel grass, dulce, and kelp all furnish a considerable amount of humus and contain some potash. All these are available on P. E. I., and, in addition to this, mussel mud is used very extensively. This latter material is the result of the death and decay of myriads of oysters in the bays and inlets of the Island. For generations this deposit has been dug in the winter and spread on the land. It contains from 75 to 85 per cent. lime, some nitrogenous matter and a trace of potash. Twelve to fifteen tons is applied per acre about every fifteen years. The Government has undertaken to lift this mud on an extensive scale with dredges and sell it to the farmers at cost, which averages around 50 cents per ton. A dock was built where fifty-five carloads were being loaded weekly. At the first of October orders were on file for 800 carloads. Refuse from the lobster factories also goes to the land, so the quantity of fertilizer actually yielded by the sea is no small factor.

Egg Circles a Success.

This small Province can boast of a successful egg-circle system. There are about fifty local circles; each with its own manager and collector. Then there is the Central Board of Directors, President, Secretary and Manager. From 20,000 to 40,000 dozens of eggs are handled weekly. These are taken by the Maritime markets, as well as by Montreal and Boston. Some shipments have even been made to England. Recently they decided to handle crate-fattened poultry. Tangible evidence of success was the purchase, in September last, of a building and vacant land in Charlottetown. The building purchased will be added to, and ample accommodation provided for the growing business of this organization.

The Experimental Farm.

In August of 1909 an Experimental Farm, which is a branch of the Central System, was inaugurated. This is situated on the outskirts of Charlottetown, and under the supervision of J. A. Clark. First of all, the object has been to improve the seed grain of the Island, and, through co-operative efforts, to establish certain varieties which prove most prolific. Three different types of oats have been experimented with on ten different farms, over a period of five years. These were the Old Island Black, Ligowa and Banner. In four years' work the latter is leading, with a yield of 62 bushels per acre. Ligowa comes next with 54 bushels,

and Island Black with 52 bushels per acre. In wheat the Early Red Fife has proved superior both in quality and yield. In 1915 this produced 41 bushels per acre under field conditions.

The six-rowed and two-rowed varieties of barley have been tried side by side, and the latter has proved most productive. A new variety has been developed which drops its awns in the field and has the habit of heavy production. Mr. Clark thinks this was originally the English Chevalier, and later known as the Old Island Two-row variety. It is now registered under the name of Charlottetown No. 80. It leads all others by 8 bushels per acre in the test plots, and under field conditions it has threshed 52 bushels per acre for two years.

It has been the practice also to test out the different strains of the varieties produced by the Seed Growers' Association on the Island. For instance, eleven different strains of Banner oats were grown side by side in order to see which of the good types was really the best.

With regard to crop rotation, the old Island rotation mentioned previously in this article is being preserved and new ones are being adapted to various conditions which exist. The good qualities of the Island rotation have been enumerated, namely, the immunity which it provides from club root and bad potato diseases; yet it is almost impossible to get a good stand of clover under this system, and the two years which the land is in pasture are almost wasted, for the soil produces little more than enough to pay rent. Hay is also a light crop under this seven-year rotation. To eradicate noxious weeds, the following three-year rotation is being recommended; roots, grain, hay. To get rid of ordinary field weeds, a five-year system can be followed such as this: roots, grain, hay, grain, hay. A stockman might require even a different rotation, and a short one, which is giving good service, follows: roots, grain, hay, pasture. As a five-year rotation for stockmen this one is being advocated: grain, roots, grain, hay, pasture.

More cultural work is being started, and considerable work has been done in the stables with feeding steers and lambs. The purpose is to utilize those roughages that are actually grown on the Island farm. In one experiment of feeding steers from November 1 to March 10, they made a gain of 250 pounds each, and increased two cents per pound in value.

Twenty acres of the 110 acres in the Farm are under horticulture. Perennials are supplied free to the schools, women's institutes, and to the women of the Province. From the time of the inception of the Farm an effort has been made to get the people to come to the place and look it over. A splendid grove has been maintained on the Farm and accommodation is provided for picnics and visitors.

The Silver-Black Fox.

It would not be fair to draw this article to a close without a mention of the silver-black fox industry. There are now over three hundred ranches on the Island, and in the fall these contained about 5,000 foxes, counting the 1916 pups. There is considerable money invested in this proposition and the ranches are reconstructed and operated on most approved lines.

Skating on the Snow.

EDITOR "THE FARMER'S ADVOCATE":

From December to Easter the magnificent fjords of Scandinavia are entirely in the grip of the King of Winter, because we have none of the "January thaw" of Canada; instead, our atmosphere is dry, and with the bright, winter sunshine makes this the season of greatest enjoyment for all.

Our all-absorbing pastime is skating, and we skate on the snow instead of ice as you do. Skis are snowskates. They are made of narrow, thin, elastic strips of wood, 3 feet long, which turn up at the front ends in a point like a sleigh runner. Your skis do not fit you if they are longer than one-third your height. This is always the rule. Skis may be fastened to one's boots, but they are oftener just strapped on. Everyone who uses skis steers himself along his course by means of a long pole carried in the hands. One accustomed to skis is able to skim over the snow with great grace and a feeling of lightness conducive to wonderful speed. To ski has the same effect on its devotees that ice skating has. It is an exhilarating sport, and the more you ski the more you want to.

The movements required in skiing are very similar to those required in ice skating. A person on the skis glides along with a swinging movement, and going down the hills the skis are held together and the body balanced by means of the long pole or staff that is always part of the equipment of the person on skis.

The momentum attained and the velocity gained as one proceeds down the ice-clad snow hills is exciting to a degree, and fairly makes the nerves thrill as the blood bounds in your veins and your lungs fill with the pure, cool, fresh air, delicious with the breath of the pines. Going up hill, on the other hand, is real hard work. It takes a really proficient performer on skis to climb hills. It is necessary to place the skis side-ways against the hill, making a kind of stairs in the snowy banks. I can assure any would-be pupil that it is no easy matter to learn to ski. I speak from experience, but it is such a grand accomplishment that it is worth all the hard knocks and tumbles in the snow incident to learning to acquire the art of so gently and gracefully gliding over the snow.

The Scandinavians all ski and take to it naturally, but learners often sustain severe bodily hurt, but none

of these things daunt these hardy, northmen who have braved the sea and a thousand storms.

To ski in Denmark, Norway and Sweden is a necessary bit of training, for the winter season is so long that it makes a novel and speedy way to travel, besides it is an eminently healthful sport, and the scenery is so changeable and varied that it is a real education to go on these ski trips; and so we have our national sport just as tobogganing is to Quebec.

Those who would become proficient need to be agile, alert and quick to act. It requires steady nerves, and even with these traits it is not uncommon to be thrown headlong into the snow even when you and the other fellows continually cry, "Av vei," which is our Danish way of saying "Clear the hill—A."

The women and girls keep out of doors a great deal, both in summer and winter in these countries. To their minds beauty resides in physical well being, and the whole body is harmonized by exercises that are conducive to perfect health. A person in perfect health is always beautiful.

The bright costumes of the women and girls, with the rose of health on their cheeks, is a gladsome sight and lights up the snow with color; the reds in their caps, scarfs and cloaks are enhanced by the evergreen of the pines and spruces which are abundant in the woodlands, through which they that go on skis pass on the miles and miles of excellent ski-trails. Every Dane sings with one of our poets:

"Ah, nowhere is the rose so red,
Ah, nowhere so small the thorn,
Ah, nowhere so soft the downy bed,
As those where we were born."

Welland Co., Ont.

F. M. CHRISTANSON.

A New Idea on Rural Depopulation.

EDITOR "THE FARMER'S ADVOCATE":

The problem of why the boys and girls leave the farm in such large numbers is a complicated one. Many reasons have been given, such as lack of social advantages, poor rewards for labor, wrong education, wrong ideals, inconveniences, etc., and we believe that all of these have an influence more or less. But to say which one is predominant would be a difficult task, because doubtless it varies in different individuals. Probably the laudable desire to see life and to improve their financial status is the principal reason, but there are some young people, and older ones too, who would not live in the country though they could make five times what they can in the city. They could not do without city conveniences, to say nothing of the social life. It is a physical impossibility to have the social conditions as perfect on the farm as they are in the city, also the conveniences. There is bound to be more isolation, and young people do not usually relish a quiet life. This is probably the chief reason that sooner or later most boys tire of the farm. But we think that the evil, if such it be, is more common among the girls, and when the girls go it is usually harder to keep the boys. The average farm girl, especially if she is clever and ambitious does not want to live on a farm because she thinks (often erroneously, it is true) that there is insufficient scope for her abilities. Then most young girls are naturally vain; they are fond of dress and want to be where they can be admired and flattered, and have a good time. Woman is the weaker sex, and it takes a strong mind to live isolated. Some young men leave the farm for the same reasons, but with them it is mostly financial, rather than social or from lack of conveniences or fine clothes. I believe that the average farm boy would stay on the farm provided he could have a fair start on one and could persuade the girl of his choice to stay with him, but in most cases the girl will not live on the farm, and who can blame her? The farmer's wife has harder work and longer hours than the citizen's wife in like circumstances. And, if the young man is rich, neither he nor the girl will live on a farm. They think that they are rich enough to live in the city. It seems to be the rule that as soon as a farmer gets rich enough he sells out to a poorer man and retires to the town or city. There seems to be an irresistible attraction in the city for the average man or woman, especially the latter, and we do not believe that it will ever be entirely overcome, because the city has the advantage of the country in co-operative organization. The modern city is a wonderful example of co-operation and interdependence. It is almost as perfect as a colony of honey bees, or a hill of ants. It seems natural for most persons to want to lean on someone else, and the benefits are patent to every thoughtful student. On the other hand, the farmer is isolated and is compelled to work more independently, and consequently at a financial disadvantage.

I do not believe that there is an effective remedy for this rural exodus, and furthermore, I am not sure that it is best to attempt to remedy it. If Canada is ever to become a great nation, it is necessary that she develop her manufactures and turn her raw materials into finished products, and to do this a large proportion of her population must live in the cities and towns. There has always been too large a proportion engaged in production, and too small in manufacturing. This was inevitable in a new country, but there are still too many producers as compared with the manufacturers. We need to finish our products, rather than to produce more. This world war shows that the manufacturing nations are the leaders. What is Russia, with all her land and men, as compared to Germany or Britain, which are highly organized manufacturing nations? I believe that the rural exodus is the natural result of a sane national policy of the Government,

which is following the natural course leading to national greatness, and, as such, should not be unduly retarded.

Perth Co., Ont. J. H. BURNS.
[Note.—Fortunately some people have more faith in farming and its importance to the nation than has Mr. Burns. Few can agree that Canada has, at the present time, too many producers.—EDITOR.]

Ontario Agricultural College Examination Results.

First Year—maximum, 1,200. 1, Hopper, 973; 2, Murdoch, 939; 3, Lindsay, 925; 4, Thompson, 900; 5, Zavitz, C. H., 885; 6, Watson, 872; 7, Frey, 855; 8, Maynard, 854; 9, Harris, 852; 10, Mead, 848; 11, Currier, 845; 12, King, 810; 13, Taylor, 791; 14, McKay, H. T., 790; 15, Hall, 785; 16, Marritt, 774; 17, Bouis, 769; 18, Clarke, 765; 19, Smallfield, 764; 20, Williamson, 763; 21, Peters, 759; 22, Brickley, 753; 23, Pegg, 748; 24, Quirie, 743; 25, Porter, A. M., 740; 26, Pawley, 735; 27, Johnson, 733; 28, Jamieson, 731; 29, Carnochan, 730; 30, Beatty, 715; 31, Broughton, 710; 32, Arnold, 707; 33, Fraser, 703; 34, Leavens, 702; 34, West, 702, No. 3; 36, Nixon, 701, No. 12; 37, Leitch, 700; 38, Patchett, 695; 39, Scott, 683; 40, Silcox, 682; 41, Caldwell, 679, No. 2; 42, Hamilton, 671; 43, Whillans, 656, No. 12; 44, Porter, H. F., 640; 45, Patterson, 630; 46, Dunn, 622, Nos. 3, 12; 47, Spofford, 619, No. 6; 48, MacLean, 613, No. 12; 49, Brown, 593, No. 2; 49, McGuigan, 596, No. 2; 49, Whiteside, 596, Nos. 2, 5, 12; 52, White, 586; 53, Misener, 585; 54, Penhale, 582, Nos. 5, 10, 12; 55, MacKay, J. W., 577, Nos. 3, 5, 10; 56, Kernohan, 558, Nos. 3, 5; 57, Sheppard, 540, No. 12; 58, Salter, 491, Nos. 3, 4, 5, 12.

Remainder of class failed in more than four subjects.

List of subjects: 1, English Literature; 2, English Composition; 3, Arithmetic and Elementary Drainage; 4, Hydrostatics; 5, Chemistry; 6, Botany; 7, Field Husbandry; 8, Animal Husbandry; 9, Dairying; 10, Poultry; 11, Apiculture; 12, Vet. Anatomy.

Second Year. Maximum, 1,300: 1, Shales, 1,047; 2, Atkin, E., 1,005; 3, Musgrave, 984; 4, Campbell, 980; 5, Grant, 972; 6, Odell, 956; 7, Quail, 931; 8, Hunter, 925; 9, Brink, 921; 10, Oliver, 912; 11, Gunn, 911; 12, Gowland, 901; 13, Barber, 886; 13, Matheson, 886; 15, Kezar, 876; 16, Clark, 875; 17, Kimball, 864; 17, Munro, 864; 19, McKay, 858; 20, MacKenzie, 854; 21, Steckle, 842; 22, Stewart, 841; 23, Almey, 831; 24, Peters, 830; 25, Way, 828; 26, Goudie, 827; 27, Rutter, 826; 28, Frost, 825; 29, Caldwell, 823; 30, Ziegler, 816; 31, Toole, 815; 32, Minielly, 814; 33, Jackson, 812, No. 2; 34, Wadsworth, 798; 35, Aylsworth, 797; 35, Scuten, 797, No. 3; 37, Allan, 796; 38, Mason, 777; 39, Crews, 776; 40, Higgins, 768; 40, Sibbick, 768; 42, Jones, 767; 43, Delamore, 766; 44, Cook, 761; 44, Stillwell, 761; 46, Atkin, R., 758; 47, McLean, 744; 47, Tice, 744; 49, Lamont, 739; 50, Argue, 730; 51, Stover, 681.

List of subjects: 1, English Literature; 2, English Composition; 3, Economics; 4, Surveying and Drainage; 5, Manual Training; 6, Chemistry; 7, Entomology; 8, Horticulture; 9, Botany; 10, Field Husbandry; 11, Animal Husbandry; 12, Dairying; 13, Vet. Pathology.

Third Year. Maximum, 1,100: 1, Geddes, 883; 2, Elder, 860; 3, Robinson, 855; 4, Wilson, 852; 5, Maxwell, 851; 6, O'Neill, 849; 7, Patterson, 843; 8, Arnold, 840; 9, James, 839; 10, McCulloch, 837; 11, Ferguson, 835; 12, Snyder, 824; 13, Sullivan, 816; 14, Hempsen, 808; 15, Davis, 802; 16, Heimpel, 781; 17, Cooper, 766; 18, Hamilton, 764; 19, Newton, 750; 20, Timms, 749; 21, Gandier, 734; 22, McBeath, 724; 23, DeLong, 704; 24, Parfitt, 694; 25, Wallace, 681; 26, Michael, 675; 27, Lavis, 662; 28, Richards, 582, No. 3; 29, Hawley, 574, No. 2; 30, Scales, 557; 31, Mann, 537, No. 3; 32, Munro, 534, No. 3; 33, Edgar, 509, No. 3; 34, Sproule, 473.

List of subjects: 1, English Literature; 2, Economics; 3, French; 4, Heat; 5, Inorganic Chem.; 6, Qual. Chem.; 7, Geology; 8, Botany; 9, Syst. Entomology; 10, Econ. Entomology; 11, Bacteriology.

N.B.—No. indicates subjects on which supplemental examinations must be written.

A Suggestion to Those Who Offer Pure-Bred Stock.

EDITOR "THE FARMER'S ADVOCATE":

Perhaps I might be permitted to offer a suggestion to a great many who advertise pure-bred stock in the columns of "The Farmer's Advocate." I often look over the ads. and find just the post office and no county, and unless I write to the party or go to considerable trouble I have no means of knowing how far away the advertiser lives. If you would just ask advertisers to always put in the name of their county I believe it would be greatly appreciated.

Kent Co., Ont.

W. W.

Corn Embargo Removed.

Earlier in December an embargo was placed on feed corn coming from the United States to Canada owing, we believe, to the shortage of cars. This embargo was removed December 29 after the United Farmers of Ontario had made representation to the Dominion Minister of Agriculture and to the Chairman of the Railway Commission. Feed is very scarce this year and before the embargo was removed 150 cars of corn bought for Canada in Chicago were held up. Thirty-five of these were on the way the next day after the embargo was removed.

The Vote Can Help.

EDITED "THE FARMER'S ADVOCATE":

As surely as the Germans have allowed their country to get into the control of a gang of military madmen, which will only spell ruin and disaster to them in the long run, so surely have we, farmers, consumers, and working men, allowed our country to get into the hands of moneyed interests which are sucking its vitality and even threatening its very existence.

Combines, money interests, loan companies and our banking system, under present conditions are at the bottom of it all, and are working for their own selfish ends. Who is to blame? What is the remedy? Is it conferences, deputations, commissions? Never! Only the vote itself can help it. If ever a country needed a Moses, or leader of men, it is right now. Our parliaments are full of doctors, lawyers, etc., who don't know the needs of the country and care less, and are working for selfish or party ends. That is not what they are there and paid for.

Wake up! Farmers, if you are disheartened and think it of no use, think of your families who are drifting to towns, making matters worse. It is not too late to take hold, but if left long, those who see it will be more sorry than I am. Some will say this is prophecy, but not so, the conditions are here now and we may as well acknowledge it, in the face of these glaring facts. Very few farmers are able to buy a farm for even one of their family and make a decent payment down. The farms are undermanned, the attendance at our rural schools is diminishing fast; our young men and women are drifting to towns, and the lower production from our farms is all caused by these same conditions, each tells its own tale.

For instance, take the production of hogs, what is the reason for the present high prices, simply because there isn't enough to go round, and why is there not enough? A very short time ago farmers dropped out of them because they couldn't make them pay. The writer had, some years ago, upwards of a hundred hogs making ready for market, and inside of two months the price fell over three dollars a hundred. We find no fault with that, if the supply and demand were the cause, but they were not. Tasked a well-known firm, who dealt in that line in a nearby town if they could buy cured meats from the wholesale any cheaper than before, and they told me without hesitation, "no."

How can a country thrive or even exist under such conditions? And the most of our farm produce goes through this same performance before it reaches the consumer, until to-day the working man is worse off than he was when only getting half the wages. The producer and consumer are both being robbed at the same time, and the twenty and fifty per cent. finds its way into this whirlpool of dishonor, selfishness and greed.

Most of the farmers will agree on this point, the farmer's business is not looked upon as it should be by the general managers of our banks. When a farmer is fortunate enough to get a loan, it is only for three months, which is much too short to do any good. There should be some system, government or otherwise, for lending money to farmers who are worth it, to extend over a length of time from one to four years, with a fair rate of interest, not exceeding five per cent., so that they can buy their implements, stock or anything else at the lowest cash price.

Another thing should be done and that right now, while our country is passing through this crisis. No farm should be sold at a forced sale, by any loan company, as long as the man is paying interest, and then only after a final appeal to the county judge. In other words, if a man is doing all he can, he should have every chance not only for himself but for the good of his country. We will not say anything about his wife and children, who might be thrown on the road at the discretion of any moneyed man or corporation.

Elgin Co., Ont.

WM. LAWRENCE.

Ayrshire Sale at Tillsonburg.

The third annual consignment sale of Ayrshire cattle to be held under the auspices of the Southern Counties Ayrshire Breeders' Club, was held at Tillsonburg, on Thursday, December 28. Prices realized were not so satisfactory as those of recent sales. However, cows that were fresh or springing sold fairly well; the top price was \$235, which was paid by W. E. Robinson, London, for the six-year-old cow, Annette 5th, consigned by McConnell & Fergusson. Buyers secured a number of bargains. The stock was in good condition and the breeding was right. There was not a large crowd present, and, owing to trains not running on schedule, many buyers were forced to leave before the sale was over. With one exception every animal catalogued was sold. The sale was well conducted in every detail, and the officers and consigners merited the confidence of the public.

The 49 head sold for a total of \$5,405, an average of \$110.30. Twenty cows brought \$3,112.50, an average of \$155.50. Six two-year-old heifers averaged \$110.80. Ten bulls brought \$675. The following is a list of the animals selling for \$100 and over, together with name of purchaser and his address.

White Legged Kirsty, E. B. Palmer, Norwich	\$115.00
Brighton Brae Jean's Babe, G. L. Ackert, Belmont	115.00
White Frost, W. Mehlenbacher, Otterville	130.00
Maud of Hillview, W. Marr, Norwich	135.00
Trixy 4th, J. M. McVicar, Belmont	185.00
Selwood Dinah, W. Marr	210.00
Neidpath Rose 28th, W. Marr	100.00
Springburn Valentine, Ross Bros., Innerkip	160.00
Sybella of Fernbrook, H. Kerr, Niagara Falls	175.00
Brighton Brae Dairy Queen 2nd, G. L. Ackert	115.00
Brownie of Fernbrook, M. B. Stafford, Shedden	205.00
Gairclaugh Grace, A. E. Reid, Verschoyle	100.00
Blue Bell 11th of Neidpath, Smith Bros., St. Thomas	100.00
Maggiedell, W. Mehlenbacher	147.50
Betsy 2nd, McConnell & Fergusson, London	197.50
Buttercup of Fernbrook 5th, F. E. Doan, Wycombe	115.00
Ella of City View, A. Sandler, Morsley	105.00
Buttercup of Fernbrook 2nd, W. Marr	150.00
Daisy of Norfolk, G. L. Ackert	120.00
Gairclaugh Adalia, B. Pearce, Norwich	105.00
Morning Glory of Trout Run, D. W. Sharp, Norwich	197.50
Monkland Mary, E. B. Palmer	125.00
Lady Marjorie 4th, B. Pearce	110.00
Roxie, J. A. McKenzie, Innerkip	112.50
Annette 5th, W. E. Robinson, London	235.00
Milkmaid 3rd, W. Marr	135.00
Letty 2nd, W. Marr	170.00
Daisy 2nd, G. L. Ackert	127.50
Selwood Ideal Hero, J. W. Millington, Beachville	127.50

A Western View of a Bacon Bulletin.

We have always believed that the hog for Canada to produce is the bacon hog and our reasons have been set forth time and again. It is just as true, however, that the man who produces high-class bacon should get a premium for doing so. In the past, especially in times of high prices, the man who produced the thicker types got just as much for them as the feeder of choice bacon got for his product. This is true to-day and "The Farmer's Advocate and Home Journal of Winnipeg," Man., has this to say of a recent bulletin on bacon production.

"The bacon hog and the British market is the title of a bulletin recently issued by the Department

of Agriculture, Ottawa. It strongly advocates the production of the bacon hog and at that increased and regular production of this type, that Canadian bacon or Wiltshire sides at this auspicious period may corral the British market. The trade of Denmark, our greatest competitor, it claims, is now demoralized and that we can, with the co-operation of the farmer, packer and other interests, build up a bacon trade that will survive. It is a message to the farmer intended to stimulate the production of bacon, the effects of which will never pay for the paper required for its publication.

"Is it not time that a department, which claims to have foresight, should have enough intelligence to commence at the right side of this matter? Is it not time that the live-stock branch realized that if a certain type of hog is desired the desire should be realized in a monetary way and effort by the farmers will be put forth to produce that type, provided the remuneration when he sells his hogs is sufficient for his endeavor? Some few years ago we had a bacon campaign and bacon trade. Instead of there being extra remuneration by the packers for the bacon type, all hogs up to a certain weight brought a flat price. The production of the bacon kind was maintained for a time by mere volume of enthusiasm and thence without any discrimination the farmers realized the folly of their efforts and allowed the types to drift into natural channels. Hence the types and trade gradually dwindled in spite of worthless bulletins and addresses.

"If the live stock branch wishes to encourage the bacon trade, publicity is not the first essential. Why not standardize all of our bacon exports? Have a government grading system that will ensure a high quality article sought after by the consuming Britisher. Thence if this Wiltshire side is the type desired, why should the packer not pay a premium for it? And if the farmer finds sufficient remuneration for its production he will put forth all the energy necessary to produce it, because he will treat such a matter as a business proposition.

"In this way the product of the energetic farmer is paid for and the promiscuous breeder gets what he deserves. The live-stock branch says: 'produce such a type,' but offers no recompense. It is to be purely a philanthropic project on the part of the farmer.

"What improvement was made by verbal enthusiasm before the cream grading system came into effect? What would be the value of bulletins and addresses on the production of No. 1 hard wheat if all wheat was produced at a flat rate? So what can be expected of the system now being advocated to encourage the production of bacon without financial inducements? If there is a preference in our market for a certain class of pork it is a certainty that, owing to the great demand, the consumer pays a higher rate for that preference. Then why should not the greater market value find its way back to the producer? Why should it stop at some intervening point? If there is no increased price there is no preference; then why encourage the bacon type?

"The live-stock branch states in their bulletin: 'There is no sound argument for the production of the fat hog in Canada.' We would also state that without a preference there is no sound argument for the production of a bacon hog in Canada. Without a preference the logical hog should be of the type which our feeds tend to produce. That type is neither the fat nor the bacon, but the medium thick as may be observed in any farmer's yard if selection has not been a pertinent factor. The bacon types tend to become thicker; the lard types tend to become lengthier and more of the medium, hence the natural type or the medium thick, in harmony with our feeds, will find its way weekly to market this year and for years to come, until a remuneration sufficient to induce farmers to select to the bacon, contrary to our natural conditions, is paid."

Toronto, Montreal, Buffalo, and Other Leading Markets.

Toronto.

Receipts of live stock at the Union Stock Yards, West Toronto, on Monday, January 1, 1917, numbered 65 cars 1,246 cattle, 143 calves, 515 hogs, 377 sheep. Active, strong market. Best steers and heifers, one dollar higher than last week; best cows and bulls 50 cents higher. Balance of cattle 25 cents higher. Sheep and lambs strong and 25 cents higher. Calves steady. Hogs at last week's prices.

The total receipts of live stock at the City and Union Stock Yards for the past week were as follows:

	City	Union	Total
Cars	28	184	212
Cattle	325	645	970
Calves	40	153	193
Hogs	291	4,874	5,165
Sheep	384	367	751
Horses	—	1,661	1,661

The total receipts of live stock at the two markets for the corresponding week of 1915 were as follows:

	City	Union	Total
Cars	15	178	193
Cattle	239	2,642	2,881
Calves	15	169	184
Hogs	226	3,515	3,741
Sheep	16	682	698
Horses	—	228	228

The combined receipts of live stock at the two markets for the past week show an increase of 19 cars, 9 calves, 1,424 hogs, 53 sheep and lambs and 1,433 horses, but a decrease of 1,911 cattle, compared with the corresponding week of 1915.

Hog Prices.—Packers quote hogs for this week as follows: f. o. b., \$11.40; fed and watered, \$11.90; weighed off cars, \$12.15.

The live-stock market in Toronto the past week was exceedingly quiet. Shippers in general do not seem to have recovered from the Christmas holiday, and no doubt there is difficulty in some quarters in shipping live stock on account of the condition of the roads. The total offerings of the week would hardly make a good day's market. All that can be said of the week's business was that packers bought every grade of cattle at prices steady with the previous week's quotations, and the same may be said of sheep, lambs and calves. Packers decided to lower the price of hogs by 25 cents per cwt., and sent out prices to their agents as follows: \$11.25 f. o. b., \$11.75 fed and watered and \$12.00 weighed off cars. Drivers would not sell at these prices and packers were forced to pay \$12.25 fed and watered, and \$12.00 weighed off cars.

Live stock quotations.—Butcher steers

and heifers, choice, \$8.50 to \$8.75; good \$7.50 to \$8; medium, \$7 to \$7.25; common, \$6 to \$6.75.

Cows, choice, \$7 to \$7.50; good, \$6.25 to \$6.75; medium, \$5.50 to \$6; common, \$4.85 to \$5.25.

Canners and cutters, \$4.50 to \$4.75.

Bulls, best heavy, \$7.50 to \$8; good, \$7 to \$7.25; medium, \$6 to \$6.50; common, \$5 to \$5.75.

Stockers and feeders, \$5.50 to \$7.

Milkers and springers, best, \$85 to \$110; medium \$60 to \$70.

Lambs, choice, \$12 to \$13; culls, \$8 to \$9.50.

Sheep, light, \$8.50 to \$9.75; heavy, \$7.50 to \$8.50.

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THE ROYAL BANK OF CANADA

Capital Authorized - - \$ 25,000,000
 Capital Paid Up - - - 11,785,000
 Reserve Funds - - - 13,236,000
 Total Assets - - - 214,000,000

HEAD OFFICE: MONTREAL

Branches throughout every Province of the Dominion of Canada

Accounts of Farmers Invited
 Sale Notes Collected

Savings Department at all Branches

Calves, choice, \$11.50 to \$12.50; medium, \$8.50 to \$10.50; common, \$5.50 to \$8; heavy fat, \$7 to \$9.50.
 Hogs, fed and watered, \$12.25; weighed off cars, \$12.50.
 Less \$2.50 to \$3.50 per cwt. off sows, \$4 to \$5 per cwt. off stags, \$1 to \$2 per cwt. off light hogs and \$2 to \$3 per cwt. off thin feeder pigs, and one-half of one per cent. government condemnation loss.

Breadstuffs.

Wheat.—Ontario, No. 2 winter, new, per car lot, \$1.65 to \$1.67; No. 3 winter, per car lot, \$1.63 to \$1.65, (according to freights outside). Manitoba, track, bay ports—No. 1 northern, new, \$2.01; No. 2 northern, new, \$1.98; No. 3 northern, new, \$1.90; old crop, trading 4c. above new crop.
 Oats.—Ontario, No. 2 white, 62c. to 64c., nominal; No. 3 white, 61c. to 63c., nominal. Manitoba oats (track, bay ports)—No. 2 C. W., 69½c.
 Barley.—Malting barley, according to freights outside, \$1.16 to \$1.18, nominal; feed barley, nominal.
 Peas.—According to freights outside; No. 2, \$2.40.
 Buckwheat.—According to freights outside, \$1.20, nominal.
 Corn.—American (track, Toronto) No. 3 yellow, no sellers owing to embargo.
 Rye.—No. 2, \$1.32 to \$1.33.
 Flour.—Manitoba first patents, in jute bags, \$9.40; second patents, in jute bags, \$8.90; strong bakers', in jute bags, \$8.50. Ontario, new, winter, according to sample, in bags, \$6.80 to \$6.90, track, Toronto.

Hay and Millfeed.

Hay.—Track, Toronto, No. 1, per ton, \$13 to \$13.50; No. 2, per ton, \$9 to \$11.
 Straw.—Car lots, per ton, \$9.50 to \$11, track, Toronto.
 Bran.—Per ton, \$32.
 Shorts.—Per ton, \$37.
 Good feed flour.—Per bag, \$2.70 to \$2.80.

Country Produce.

Butter.—Creamery, fresh-made pound squares, 48c. to 49c. per lb.; creamery solids, 44c. to 45c. per lb.; dairy, 40c. to 41c. per lb.; separator dairy, 43c. to 44c. per lb.
 Eggs.—New-laid eggs remained stationary on the wholesales during the past week, selling at 65c. per dozen, in cartons; cold storage selects bringing 43c. per dozen; fresh, in case lots, 40c. per dozen.
 Poultry.—Poultry slumped in price, turkeys especially, receipts being very heavy. They now bring the following live-weight prices: spring chickens, per lb., 14c.; spring ducks, per lb., 13c.; geese, per lb. 11c.; turkeys, young, per lb., 22c.; fowl 4 lbs. and over, per lb., 14c.; fowl, under 4 lbs., per lb., 10c.; squabs, per dozen, dressed, \$3.50 to \$4.
 Cheese.—June, 26c. per lb.; new, 26c. per lb.; new, twins, 26½c. and 26¾c. per lb.
 Honey remained stationary in price with an active demand. Sixty-lb. tins selling at 12c. per lb.; one-lb. sections, \$2.40 to \$3 per dozen.

Hides and Skins.

City hides, flat 25c.; country hides, cured, 24c.; country hides, part cured, 22c.; country hides, green, 19c.; calf skins, per lb., 45c.; kip skins, per lb., 32c.; sheep skins, city, \$2.50 to \$3.50; sheep skins, country, \$1.50 to \$3; lamb skins and pelts, \$1.50 to \$2; horse hair,

per lb., 38c.; horse hides, No. 1, \$7 to \$9; No. 2, \$7 to \$8; wool, washed, 44c. to 47c. per lb.; wool, rejections, 35c. to 38c. per lb.; wool, unwashed, 34c. to 37c. per lb.

Wholesale Fruits and Vegetables.

Receipts have been light and trade quite dull on the wholesales during the past week.
 California Navel oranges declined slightly in price, selling at \$2.75 to \$3.25 per case. The Florida orange season is just about over and they have kept about stationary in price, selling at \$3 to \$3.50 per case with pineapple Floridas bringing \$4 per case.
 Grapefruit has been a slightly better sale this last week at \$3.75 to \$4.25 per case for Floridas.
 Strawberries continued to arrive, selling at 90c. per box.
 Tomatoes, hot-house, of good quality have been scarce, the No. 1's selling at 25c. to 30c. per lb., and No. 2's at 20c. per lb.
 Potatoes.—There is a firming tendency in potatoes. The New Brunswick Delawares being quite stiff at \$2.25 per bag. Prince Edward Islands and Quebecs, \$2 per bag.
 Vegetables kept stationary in price—Beets selling at \$1.50 per bag; cabbage, \$2.75 to \$3.25 per bbl.; carrots, \$1.25 per bag; turnips 65c. per bag; parsnips, \$1.35 to \$1.50 per bag.
 Leaf lettuce has been scarce and is a good sale at 30c. per dozen.

Montreal.

The cattle market was rather dull last week. Butchers, for the most part, purchased freely before Christmas, and many of them had sufficient stock on hand to last them until after New Year. Receipts of live stock were not very large, so that prices held fairly steady. The quality of the stock offered was good, and a few choice cattle changed hands at 10c. to 10½c. per lb. For the most part, however, choice steers sold around 10c. to 9¾c., with some good stock around 9c. per lb. Bulls brought from 8c. to 8¾c. per lb., and cows from 7c. to 7½c. Canners' cattle were in good demand around 5½c., while cows ranged down to 4½c. Choice Ontario lambs ranged from 13c. to 13¾c. per lb., while sheep were 8¾c. to 9c. per lb., for choicest, with other qualities ranging lower. The market for live hogs was active and the price was strong. The price of choice stock was in the vicinity of 13c., while inferior hogs sold all the way down to 7c. per lb. Calves ranged from 9c. to 10½c. per lb. for milk-fed stock, and down to 5c. for grass fed.

Horses.—There was nothing new in the market for horses during the week, and practically no trading took place. Prices were steady as follows: heavy draft, weighing 1,500 to 1,700 lbs., \$200 to \$250 each; light draft horses, weighing 1,400 to 1,500 lbs., \$150 to \$200 each; small horses, \$100 to \$125 each; culls, \$50 to \$75 each, and choice saddle and carriage horses, \$200 to \$250 each.

Poultry.—Turkeys have come down somewhat in price since Christmas, and geese and ducks were firm, being in demand for the New Year. Turkeys ranged all the way from 30c. to 31c. per lb. for choice, in a wholesale way, while common stock sold at 25c. Choice chickens brought 22c. to 24c., and common as low as 18c., while fowl ranged from 15c. to 22c. Geese were 19c. to 21c., and ducks 20c. to 23c. per lb.

Dressed Hogs.—The market for dressed hogs was very firm, and sales of abattoir, fresh-killed stock took place as high as 18½c. per lb. Even choice, country-dressed hogs sold up to 18c.

Potatoes.—A wide range was still quoted on potatoes. The market was uncertain and varied according to circumstances. Green Mountains were quoted all the way from \$1.75 to \$2.15 per bag, while Quebec vary from \$1.65 up. Alberta stock was quoted at \$1.70 per 80 lbs., ex-store.

Maple Syrup and Honey. The market for maple syrup was steady at 90c. to 95c. per 8-lb. tin; \$1.10 for 10-lb. tins, and \$1.25 to \$1.50 for 13-lb. tins. Honey was unchanged at 15c. per lb. for white clover comb; 13c. for extracted and for brown clover comb; 11c. for brown extracted, and 10c. for buckwheat.

Eggs.—The market for eggs was very firm, but prices were unchanged. Production is falling off and is now very light. Strictly new-laid eggs were quoted at 70c.,

and fresh eggs at 60c. No. 1 selects ranged from 42c. to 44c. per dozen, No. 1 candled 38c. to 40c., and No. 2 candled, 34c. to 36c. per dozen.

Butter.—At the auction sale here, winter creamery sold at 40c. for best, down to 38½c. for fine. Dealers quoted winter creamery at 42c. to 42½c. for choicest and undergrades at 40½c. to 41½c. Finest fall creamery held at 43c. to 43½c., and fine at 42½c. to 42¾c. Dairy butter ranged from 37½c. to 39c., according to quality.

Cheese.—The market was dull with western colored quoted at 25½c. to 25¾c., and white at ¼c. less. Finest eastern colored was 24½c. to 24¾c., with white at a discount of ¼c.

Grain.—The market for oats was stronger last week, No. 1 Canadian Western being quoted at 70c.; No. 3 was 64½c., and No. 2 feed 63c. per bushel, ex-store.

Flour.—The flour market was rather firmer during the week, and first patent Manitoba flour was quoted at \$9.50; seconds at \$9, and strong bakers' at \$8.80 per barrel, in bags. Ontario flour was quiet, and 90 per cent. patents were \$8.50 to \$8.80 per barrel, in wood, and \$4.25 per bag.

Millfeed.—There was no change in this market. Bran was \$32 per ton, in bags; shorts, \$35; middlings, \$38 to \$40; mixed mouille, \$43; pure grain mouille, \$45 to \$48.

Baled Hay.—No. 2 hay was quoted at \$13 in car lots; No. 3 at \$11.50, and clover mixed at \$10.50 per ton, ex-track.

Hides.—Beef hides were 1 cent lower at 26c., 25c. and 24c. per lb., while calf skins were steady at 33c. and 36c. per lb.; lamb skins were steady at \$3.50 each, and horse hides at \$8.50 each. Tallow was 3c. to 5c. per lb. for rough, and 8c. to 9c. for rendered.

Buffalo.

Cattle.—Offerings were light last week, the result of the holidays, and the Monday trade—Christmas day—for the first time within the history of the Buffalo market, being thrown on Tuesday. Instead of a couple of hundred cars, as have been the runs of late weeks on Mondays, there were only seventy-five loads for the Tuesday trade. Market would have been better on shipping steers, if there had been more liberal offerings in this division, for the usual number of buyers were here, and there was demand for all classes of shipping steers. Trade on steers generally was steady to shade easier, best here bringing from \$9.25 to \$10, with yearlings and best butchering steers from \$8.40 to \$9.25. Very few of the real choice kinds of cattle offered. All classes of mixed butchering stuff sold at steady prices, canners and cutters and bulls being in especially good demand. Milk cows and springers, especially where real good, are selling very high. Receipts last week reached 2,500 head, as against 6,275 for the previous week, and 3,200 head for the corresponding week last year. Quotations:

Shipping Steers.—Choice to prime natives, \$10 to \$11; fair to good, \$8.50 to \$9; plain, \$7.75 to \$8.25; very coarse and common, \$7.25 to \$7.75; best heavy Canadians, \$9.75 to \$10.35; fair to good, \$8.25 to \$8.60; common and plain, \$7.75 to \$8.

Butchering Steers.—Choice heavy, \$9 to \$9.75; fair to good, \$8.50 to \$8.75; best handy, \$8.75 to \$9.30; fair to good, \$7.75 to \$8.50; light and common, \$6.75 to \$7.25; yearlings, prime, \$9.50 to \$10.25; fair to good, \$8.50 to \$9.

Cows and Heifers.—Best heavy heifers, \$8.25 to \$8.75; best butchering heifers, \$7.50 to \$7.75; fair butchering heifers, \$6.50 to \$7.25; light and common, \$5.25 to \$6.25; best heavy fat cows, \$6.75 to \$7.25; good butchering cows, \$6 to \$6.50; medium to fair, \$5 to \$5.50; cutters, \$4.35 to \$4.50; canners, \$3.50 to \$4.25.

Bulls.—Best heavy, \$6.75 to \$7; good butchering, \$6.25 to \$6.50.

Stockers and Feeders.—Best feeders, \$7 to \$7.25; common to fair, \$5.25 to \$5.60; best stockers, \$6.50 to \$7; common to good, \$5 to \$5.50.

Milchers and Springers.—Good to best, in small lots, \$80 to \$100; in car loads, \$70 to \$75.

Hogs.—Last week started with 125 loads, and while a top of \$11 was made on some good hogs, bulk of the crop sold at \$10.85. Wednesday values were declined 5 to 10 cents, nothing bringing above \$10.95, with majority selling from \$10.75 to \$10.80, and Thursday prices were steady to a shade higher. Friday

showed the highest average of the week, when bulk sold at \$11. Pigs and roughs ranged from \$9.50 to \$9.75, and stags from \$8.50 down. Last week receipts were 37,000 head, as against 43,636 for the week before, and 32,987 head for the same week a year ago.

Sheep and Lambs.—Market on lambs showed improvement as the week advanced. Tuesday, which took the place of Monday, there being no market on Christmas, top lambs sold generally at \$13.50. Wednesday some sold up to \$13.75; Thursday the bulk landed at \$13.75, and Friday they sold as high as \$14. Cull lambs the fore part of the week went from \$12 down, and on the high day some real good throwouts reached as high as \$12.85. Yearlings showed a top of \$11.75; wether sheep were quoted from \$9.50 to \$9.75, and ewes from \$9 down. Last week receipts totaled 13,500 head, being against 21,385 head for the week previous, and 13,968 head for the same week a year ago.

Calves.—A new American record was hung up last week at Buffalo for calves. Tuesday tops landed at \$14 and \$14.25; Wednesday bulk sold at \$14; Thursday some made \$14.75, and Friday, which was the highest day on record, tops landed generally at \$16, with a few selling up to \$16.25 and \$16.40. Receipts last week were 1,600 head, as against 2,393 head for the week before, and 1,375 head for the same week a year ago.

Chicago.

Cattle.—Beeves, \$7.25 to \$11.80; western steers, \$7.25 to \$10; stockers and feeders, \$5.25 to \$8.25; cows and heifers, \$4.25 to \$10; calves, \$9 to \$13.

Hogs.—Light, \$9.50 to \$10.15; mixed, \$9.85 to \$10.50; heavy, \$10 to \$10.50; rough, \$10 to \$10.15; pigs, \$7.50 to \$9.15.

Sheep.—Lambs, native, \$11.25 to \$12.60.

Cheese Markets.

New York specials, 24c. to 24½c.; fancy, 23½c. to 24c.; Montreal, finest westerns, 25c.; finest easterns, 24c.

Gossip.

Owing to the increasing requirements of alcohol in the production of munitions in Great Britain, steps are afoot that may lead to the purchase of the drink trade by the Government.

The Ayrshire cow Annette 5th, which sold for \$235, the highest price at the recent sale at Tillsonburg, was consigned by W. Fergusson, of the firm McConnell & Fergusson, London, Ont.

Sale Dates.

Jan. 31, Brant District Holstein Consigner's Sale.

Feb. 1-2, Canadian Shorthorn Breeders, Union Stock Yards, Toronto, Ont. R. Miller, Stouffville, Manager.

Coming Events.

Jan. 4 and 5.—Eastern Ontario Dairymen's Association Annual Convention, Napanee.

Jan. 9 and 10.—Annual meeting of the Experimental Union, O. A. C., Guelph.

Jan. 10 and 11.—Western Ontario Dairymen's Association Annual Convention, Woodstock.

Jan. 16 to 19.—Ottawa Winter Fair.

Short Courses at Ontario Agricultural College, Guelph. In stock and seed judging, Jan. 9 to 20; poultry raising, Jan. 9 to Feb. 3; bee-keeping, Jan. 9 to 27; dairying, Jan. 2 to March 23; horticulture, Jan. 9 to Feb. 16; business and marketing, Jan. 9 to 20.

Feb. 5 to 9.—Live Stock Meetings, Toronto.

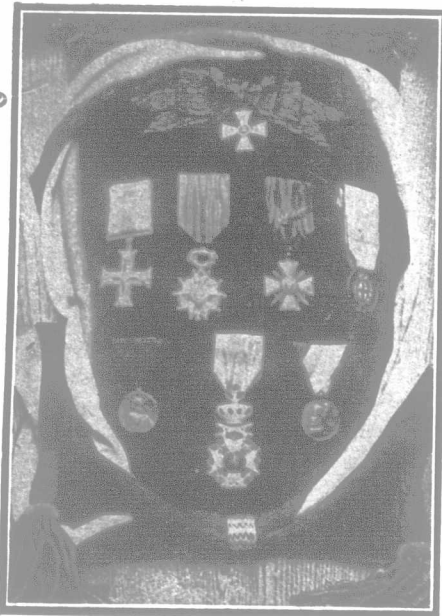
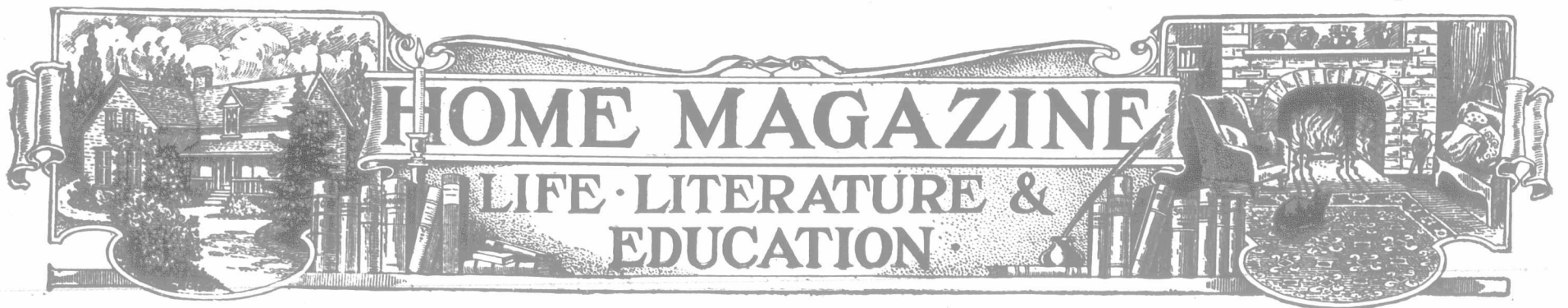
Feb. 6 to 7.—Fairs and Exhibitions Convention, Toronto, 2 p.m. at Forrester's Hall.

Feb. 8.—Annual meeting of the Ontario Vegetable Growers' Association, Parliament Bldgs., Toronto, 9 a.m.

Feb. 8.—Annual meeting of the Ontario Plowman's Association, Forrester's Hall, Toronto, 2.30 p.m.

Feb. 13 to 16.—Corn Show and Convention, Kingsville.

Annual meetings of United Farmers of Ontario and the Dominion Grange—the week of Live Stock Meetings, Toronto.



Decorations Presented to the City of Verdun by President Poincaré.

President Poincaré some weeks ago gave to the City of Verdun, decorations from all the allied powers. The top cross is the Cross of St. George, Russia. Reading from left to right: Military Cross, England; Legion of Honor, War Crosses, France; Military Bravery, Italy; Leopold Cross, Belgium; Gold Medal, Montenegro.

Faith.

"You that have faith to look with fearless eyes
Beyond the tragedy of a world at strife,
And trust that out of night and death shall rise
The dawn of ampler life;
Rejoice, whatever anguish rend your heart
That God has given you, for a priceless dower,
To live in these great times and have your part
In Freedom's crowning hour.
That you may tell your sons who see the light
High in the heaven, their heritage to take:—
'I saw the powers of darkness put to flight!
I saw the morning break!'"
SIR OWEN SEAMAN, in "WAR-TIME."

Roumania.

Roumania, before it was devastated by the war, was one of the most beautiful spots in all the world, a little country less than one-eighth the size of Ontario, yet diversified with every kind of scenery, seashore and mountain, pastoral plain and rushing river, forested slope and deep, dark glade, with everywhere a picturesque people wearing the garb of the various tribes as worn centuries ago. In the midst of all this place cities, few but modern, with Bucharest, one of the richest and most beautiful cities in all Europe, and one may have some idea of what Roumania was—before the war. The great majority of Roumania's population of something less than 8,000,000, were engaged in agriculture, with numbers devoted to shepherding in the north and west, where the sheep were driven into the Carpathians during the summer months to feed on the quick, rich pasturage of the mountain slopes. The land devoted to grain-raising was apportioned into 1,000,000 "farms" averaging 8 acres each, and 4,471 estates averaging 2,200 acres each, this astounding difference perhaps accounting for the not less astounding difference in farm methods, for while on the large estates the most modern machinery was in use,

all about them, on the peasant farms, were to be seen the most primitive contrivances, sickles and scythes, home-made forks and rakes, ox-carts for hauling, flails for threshing out the grain. Yet, in spite of all this Roumania has been one of the most productive countries in Europe. In 1915 her output was 89,000,000 bushels of wheat, 110,000,000 bushels of corn, 29,000,000 of barley and the same of oats. For its size it has averaged, during late years, more cereals than any other grain-producing country in the world.

Bucharest, in which most of the rich estate-owners live, has been one of the richest, most beautiful and most modern cities in Europe, noted for its fine hotels and theaters. . . . The government of the country has been administered by a constitutional monarch and a parliament. Military service has been compulsory.

The Roumanians have for long enough objected to having their country classed as one of the Balkan States, considering themselves quite in advance of the Bulgars, Serbs and even Greeks. Although their country has been torn asunder again and again, they have managed to remain intact as a race, and their reasons for entering the present war were: (1) the fear of strangulation should they not be on the side of the winners, and (2) the hope of regaining some part of their lost territory, for in times past Bessarabia—the richest of all the provinces—had been taken by Russia, Bukovina by Austria, and Transylvania by Hungary. In Bessarabia two-thirds of the population are still Roumanians, in Transylvania 60 per cent, and in Bukovina more than half, but the grip of the Slav and the Teuton has been firm.

The present king, Ferdinand, is a son of the famous King Carol, to whom the prosperity of Roumania was largely due. He was a Hohenzollern, sent forty years ago, to rule the land, and crowned, after the battle of Plevna, which he waged against the Turks, with a steel crown made of bits of captured cannon. His wife was the accomplished "Carmen Sylva", who died a few months ago. The wife of King Ferdinand is an English princess, daughter of the Duke of Edinburgh and so granddaughter of Queen Victoria.

Salonika.

Salonika, a city that is to-day being watched, perhaps, with more interest than any other in the whole war zone, is a city set on a hill, yet about it rise taller hills, among them the famous classical peaks, Athos, Olympus, Ossa and Pelion. It stands at the end of a long curving gulf from the sea, which, near the city, is landlocked by islands into a very safe and perfect harbour. All about, through the mountains, are valleys which afford communication with the surrounding districts, and although no railway has been built to the south of Greece, there is railway connection with Monastir, 120 miles away, and with the Bulgarian town of Dedeagatch, 160 miles away.

Although very ancient, Salonika is also a very modern city, well provided with electric lights, American street-cars, even a fine "movie" theater and skating rink. In appearance it has been said to resemble very much an Italian city of to-day, especially the portions along the water-front where vessels from the Adriatic throng, but the population lends a distinct Balkan note. Greeks, Serbs and Montenegrins are everywhere seen, everywhere mingling in their characteristic dress, with the Parisian costumed folk from Western Europe, and in peace times to this motley throng are added Bulgars from the north and red-fezzed Turks. At the

present time, in addition to the population of about 150,000 men, who have been kept there, continually augmenting since the beginning of the war, for the most part inactive, waiting for some contingency unsuspected and incapable of being fathomed by those not initiated into the secrets of the military situation.

It was impossible that a city possessing such advantages strategically should escape much bandying about of war. The ancient city, in 512 B. C., fell into the hands of the Persians. The "modern" one, founded 315 B. C. by King Kassander who named it after his wife, Thessalonike, was sacked by the Saracens in 904 A. D., and by the Normans in 1185, but during all these years it was, for one reason or other, the scene of events, interesting in other ways than military. Famous men lived there, among them Cicero, when in exile, and St. Paul, whose letters to the Thessalonians we know; the infamous Nero decorated the city with a colonnade and Trajan erected a rotunda. At last the whole district fell into the hands of the Turks and remained thus for 500 years, but towards the end of that period outbreaks of rebellion came thick and fast. In 1909 the young Turk movement at Constantinople resulted in the dethronement of "the sick man of Europe," Abdul Hamid II, who was exiled to Salonika and kept there, practically a prisoner in a palace for over three years,—then came the autumn of 1912 and the outbreak of the Balkan war, when Abdul was taken back to Constantinople. A few weeks later the Greeks entered the city, and the treaty signed at Bucharest in 1913 confirmed their possession.

There are even yet many interesting marks of this long and eventful history in Salonika. The main street is a segment of the old Roman highway from the Adriatic to the Bosphorus, and runs at one point under a triumphal arch believed to have been erected by the Roman Galerius in A. D. 296. About the city are still remains of the old walls, which are, however, gradually being torn away. Most interesting of all are the old churches, now "Christian" again, after having been used as Mohammedan mosques for 500 years. Some of them are very beautiful, and are decorated with Byzantine mosaic, now a lost art.

It is to be hoped that the fickle fortunes of war will spare this beautiful spot, with its many traces of the mighty minds of past ages.

Athens of To-day.

Athens, like Salonika, is a city in which to-day runs hand in hand with two thousand years ago and more, modern buildings and modern improvements creeping in side by side with monuments of past history. In no other place in the world, however, are these monuments so beautiful and so wonderful; indeed modern architects, even the best that our civilization has produced, can only hold their breath with admiration and almost awe, marvelling at the skill and inspiration with which the architects of the old time here worked out their dream in beauty of line and perfection of proportion.

The crowning glory is the old temple of the Parthenon, on the hill of the Acropolis, whose proportions, marble pillars and decorated frieze have been pronounced as perfect as human art can achieve. It was designed by the architects Ictinus and Callicrates, and was dedicated to the goddess Athena in 438 B. C. The frieze which runs about above the pillars and just beneath the roof, is 524 feet long, and 3 feet 3 1/2 inches wide, its decoration in bas-relief representing the festal procession that ascended the Acropolis to present to the goddess the robe woven in her honor

by the virgins of Athens,—a wonderful medley of plunging horses, robed Athenians, flower-wreathed cattle and dancing votaries. Accurate measurement has shown that in all the great Parthenon there is not a single absolutely straight line. The pillars bulge very slightly at the centre, all the lines everywhere curve, imperceptibly to the casual sight-seer, yet in such a way as to form a perfect model of grace and beauty. The Parthenon has suffered comparatively little with the ravages of time, and so sensible are the Greeks of its worth that recently they besought the warring nations, in case Athens should fall beneath the pall of war, to spare her antiquities.

At the foot of the Acropolis hill still stand a number of huge pillars as beautiful as those of the Parthenon the ruins of the ancient Temple of Jupiter, and not far away is the old Theater of Dionysus, in its proportions even yet the model play house of the world. . . . In startling contrast, intellectually, to these magnificent relics of paganism, is the eminence called the Hill of Mars, crowned by the huge rock from which Saint Paul proclaimed the "Unknown God."

Relics of Roman rule may yet be seen in the Arch of Hadrian, and the great aqueduct finished A. D. 146, which still brings in the city's water supply,—so honest and strong was the work of those old builders.

Every year relics and fragments of great value from the antiquarian standpoint, are dug up about the city, and, indeed, in many other parts of Greece, and these are placed in museums, which are kept open for inspection or study without fee.

One point of pilgrimage for tourists which must not be forgotten is the prison in which the great Socrates was confined, a rock-hewn chamber with iron-barred doors. Socrates, it will be remembered, while living in pagan times conceived the idea of immortality and a supreme ruler of the Universe, but dared to scoff at the popular gods. For this he was imprisoned and condemned to drink a cup of the poison hemlock; but his soul was not conquered, he spent the night before his death talking with his friends on the soul and its deathlessness.

The modern improvements in Athens have dated since its passing from the control of the Turks, at which time, it is said, the revolt that finally developed into the War for Independence was organized by an Archbishop of the church, Germanos, from his cell in the monastery at Kalavitra.

Passing out from the city one finds that the country is essentially agricultural, although the methods are scarcely anywhere so modern as on the estates of Roumania, partly, no doubt, because of the fact that so many of the men emigrate to America and elsewhere. It is told that upon one occasion the *Themistocles* arrived in port with 800 Greeks on board, who had made their "pile" and returned to set up business on their own account in the old home. But life in a more progressive land had struck deep. The 800 young men took a look at the villages and farms of their childhood then put for the shore again and sailed back to America on the same boat on which they had come. So great indeed has been this drain from the rural parts of Greece that in many places the ploughing, sowing, harvesting and road-making are done almost exclusively by girls and women.

Another deterrent to agriculture in Attica is the sharp division of the year into the dry season from May to October, and the wet season from October to May; on the Greek islands the rainfall is better distributed. But on the whole the climate is not very cold, and oranges and palms grow readily. During the summer the dryness of the air makes the heat not unbearable, and nearly

all meals are eaten on the housetops and in the gardens.

The people of Greece are, on the whole, very democratic, and titles of nobility are forbidden by the Constitution. The men are generally of martial spirit, and whereas the late king encouraged, most of all, agriculture, owning a farm himself and organizing Agricultural Societies and Experimental Stations, the present king, Constantine, is distinctly military in his sympathies, and has brought the troops to a high state of military efficiency. Ordinary labor, however, is held at but low monetary value, day-laborers receiving an average of about 60 cents a day, and skilled laborers about double that amount.

A man who had spent four years in Greece stated recently in the National Geographic Magazine, in speaking of the intense patriotism of the Greek people, that they have throughout their career been possessed of one "Great Idea," viz. the re-creation of the Byzantine Empire, "a dream of dazzling allurements, and one for which Hellenism has made tremendous sacrifices," as for instance, in the fierce raids against Bulgars and Turks which have added territory to Greece in the north. Yet the idea of patriotism must be divided. Venizelos has come out, evidently looking upon the king as an adherent of the Hohenzollerns, because of his wife, holding that the only hope for an independent Greece is taking side with the Allies. He has had his followers, who have joined him with a "rebel" army at Salonika. To Constantine, on the other hand, it must have been bitter to see French and English armies on his soil, the ships of the Allies blockading his ports, and their Ambassadors dictating in regard to the arming and disposition of his troops. And yet the distrust of the Allies in regard to Constantine made these measures necessary.

To quote from the Tribune, N. Y.: "At the beginning of the war the Allies offered to Greece Smyrna, the coast of Magna Graecia, which had been Greek at the dawn of history; islands of the Aegean Sea held by Italy; and the British island of Cyprus. More than 2,000,000 Greeks, the commanding position in the Aegean, a future in Asia Minor, were the prizes offered to Constantine.—But the Hellenic monarch was a field-marshal in his brother-in-law's army; he was convinced as a soldier and as a statesman that German victory was inevitable. So it was that Constantine "sat on the fence," and, although his people were sworn enemies of the Bulgars, permitted them, despite the warning of Venizelos, to take Serbian Macedonia and wage disastrous war against the Serbs who were really bound by treaty to Greece.

Constantine's attitude has no doubt been one of the reasons why the great army of the Allies at Salonika has been held there instead of striking decisive blows northward against the Bulgars.

Red Cross and C. W. C. A.

Shall We Forsake France.

BY MARIAN KEITH. PRESS SECY., LONDON RED CROSS.

A recent number of that nonsensical periodical which is often so profoundly wise, "Life," mentioned a few of the things for which the American nation should return thanks to Providence. First came "The Atlantic Ocean," second, "The British Navy" and third, "France." If this is true of the American nation it is doubly true of Canada. These three great barriers between us and the most ruthless enemy that hate has ever produced should raise a chorus of thanksgiving from humble and grateful Canadian hearts.

Where would we be to-day but for the gallant French army that bore the burden and heat of the awful struggle at Verdun? Listen to what an English poet has said of France:

"Death and Night And tyrant Wrong, and endless Woes Turn her no inch from Truth and Right; Hell storms her, but she does not cower, Death smites her, but she stands more strong; She is the Dawn that comes with pow'r She is the Spring that comes with song!"

No words can picture what she is

suffering; her villages are hospitals, her wounded lack the necessities for the relief of pain, her soldiers march doggedly to the trenches in rags, her women are toiling in the fields, and yet there she stands unconquerable, invincible. Are we worthy to stand up with such an ally? No one can doubt that our men are. They have endured the horrors of the trenches as unflinchingly and have fought just as gloriously. But we women of Canada, are we able to stand shoulder to shoulder with the women of France? Let us look at our record. An extract from a letter of our Secretary at Red Cross Headquarters will serve as a mirror for us to see ourselves.

"It has been unfortunately found necessary for us to reduce our gift of five thousand cases a month to France, owing to the diminution of stores in reserve in our warehouses. It is impossible for us to allow our supplies to be entirely distributed as we are bound to have a reserve for the use of the Canadian Corps in times of emergency, as the Canadian hospitals are the first charge of our supplies."

And these words from the report of Major Blaylock, Assistant Commissioner of the Canadian Red Cross:

"There is no doubt that many of the voluntary hospitals in France are much in want, and I gathered that they would have the greatest difficulty in carrying on if it were not for outside assistance, and we are, from what they said, the largest contributor.

"They are particularly in need of socks, sheets, pyjamas, sweaters, underwear, pillowcases, towels, shirts, dressing-gowns, blankets, mufflers, slippers, pillows and, in short, bedding and warm clothes."

This, then is what we are doing for France. In our day of plenty we gave her a little out of our surplus, and felt very generous in consequence, now,

What shall we say to France, in this her day of desperate need? Are we, then, unworthy to stand by her side in this awful struggle for Liberty? The women of Canada must answer:

Hope's Quiet Hour

Bring the Children.

They brought the young children to Him, that He should touch them.—St. Mark 10: 13.

The great Teacher was surrounded by a crowd of listeners; some were eagerly drinking in His inspiring words, while others were as eagerly watching for a chance to find fault. The Pharisees had tried to entrap Him by asking whether divorce were lawful or not; and the question drew forth a beautiful description of Christian marriage—as superior to the "harem" plan of Orientals, as light is superior to darkness. Perhaps the picture He drew of the loveliness of God's idea of marriage—of the two whom God Himself joined as one—roused the courage of the mothers in the crowd. They were so accustomed to be kept in the background; but this conception of marriage proved that they were the equals of men. The heart of a real mother is little concerned about her own rights, but she is very jealous for her children's rights. Perhaps one mother, forgetting how people would stare at her, pushed her way close to the Master and held up her child for the benediction of His touch. Other mothers were encouraged by her boldness, and probably the sermon on marriage was interrupted by the laughter of little children and the stormy crying of some who clung

little children. It is we who are there on sufferance, not they.

How glad those Jewish mothers must have been that they had seized the opportunity of bringing their children to Christ. How thankful those children would be when they grew old enough to understand the privilege which had been theirs, to know that they had been held in the arms of the Saviour of the world, and that the benediction of His touch still lingered upon their heads.

The Friend of little children has not changed. He is waiting, with open arms, to gather them to His heart. When the babies are brought to Him at the font, for baptism, there is no fear of His refusing them. But there is fear that He will be "much displeased" with those who wilfully or thoughtlessly keep them away. The children love to sing:

"I wish that His hands had been placed on my head, That His arm had been thrown around me, And that I might have seen His kind look when He said, 'Let the little ones come unto Me.'"

That desire need not be an empty wish. The children may be placed in His arms in their unconscious infancy—who are we that we should dare to hold them back?—and they may have the benediction of His touch every time they kneel at His feet in prayer.

"Golden head so lowly bending; Little feet so white and bare; Dewy eyes, half shut, half opened—Lispings out her evening prayer. Well she knows when she is saying, 'Now I lay me down to sleep,' 'Tis to God she is praying, Praying Him her soul to keep. Half asleep, and murmuring faintly, 'If I should die before I wake'—Tiny fingers clasped so faintly—'I pray the Lord my soul to take.' O the rapture, sweet, unbroken, Of the soul who wrote that prayer! Children's myriad voices floating Up to heaven, record it there. If, of all that has been written, I could choose what might be mine, It should be that child's petition, Rising to the throne divine."

A few days ago I saw a little girl who had climbed through the narrow wicket in a post-office. She was sitting on the ledge, with her tiny legs dangling, and singing joyously:

"Jesus loves me, this I know, for the Bible tells me so."

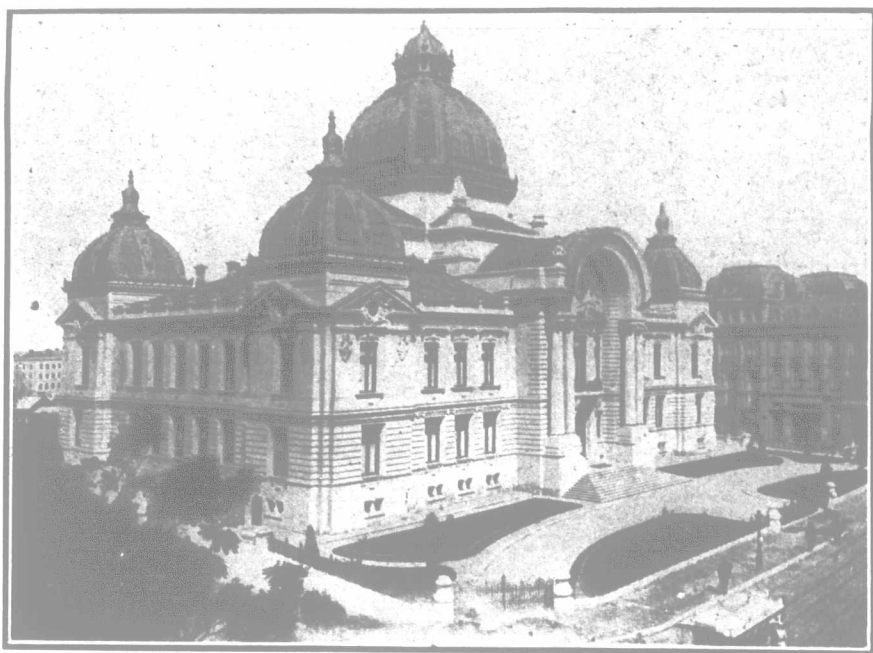
Are you only teaching the children to "say their prayers," or are you bringing them to God and encouraging them to speak to Him—to really pray? Do they think they say their prayers "to mother," or have you opened their eyes to the marvellous truth that they are speaking to Him Who can hear and see them though they cannot see Him? Children can see the invisible more readily than grown people. They realize, better than we do, that they live in a world of mystery. And they understand clearly the vast difference there is between "saying prayers," with the lips only, and really praying.

Mr. Moody's little son on one occasion went sulkily to bed after refusing to obey his mother. The father went upstairs, sat down on the side of the bed, and the following dialogue ensued:

"Did you pray to-night?" "I said my prayers." "Did you pray?" "I told you that I said my prayers." "Yes, I heard you; but did you pray?" The conscience-stricken child, who knew that he could not pray while he was feeling angry and rebellious, pleaded to see his mother. He made his peace with her, and then got out of bed and really "prayed."

If you have the opportunity of influencing little children, you need not sigh for a "great mission," for a glorious opportunity is already beside you. The strong imagination of childhood makes the unseen very real to the little ones. It is easy to encourage them to do little acts of service for their Lord, to speak to Him naturally and reverently and to fight real battles against bad temper, selfishness or vanity, remembering that they are soldiers fighting for and with the Great Captain.

But you cannot bring the children to Christ unless you come with them yourself. You cannot inspire them with love to Him unless you love Him yourself.



The National Bank, Bucharest, Roumania. Underwood & Underwood.

in the pressure of our growing need, we withdraw the much needed help, saving ourselves extra effort at the sacrifice of those gallant French soldiers. The officials at Red Cross Headquarters are quite right in withholding supplies from our ally, when our own store-houses are in danger of becoming empty. They dare not run the risk of finding themselves without adequate supplies for our own wounded.

And yet, we dare not forsake France. Surely it is not possible that we should allow this cruel thing to happen. We must be made of better stuff than this would show. It cannot be that the women of Canada could rest in their warm beds at night while the wounded heroes of France go uncovered. The only way to help is to so flood our Red Cross and C. W. C. A. storerooms with supplies, that they will have to send some to France just to get rid of them. We can do it if we will. We women of Canada have not begun to sense even dimly the meaning of that word sacrifice. Look at the pitiful list of the needs of the French hospitals, the barest necessities, chiefly warm clothes! And we, upon whom they depend principally, are withdrawing our support!

to their mothers' necks in sudden fear of strangers. The disciples sternly tried to maintain order. Their Master must not be interrupted in this fashion. He was speaking to men; and women and children should keep in the background. But their Master thought differently. He was, indeed, "much displeased," but His indignation was not against the mothers and children, but against his too-officious friends and disciples. The mothers only asked for a touch of His hand, but He stooped to lift the little ones in His arms, tenderly saying those marvellous words which have rung like a chime of Christmas bells through the centuries: "Suffer the little children to come unto Me, and forbid them not: for of such is the kingdom of God."

Let us be careful lest we arouse the displeasure of our Lord by trying to keep the children from Him. When the mothers bring them to church they may be sure of Christ's pleased welcome, but they are apt to feel the disapproval of the congregation. "The children fidget so, how can we listen to the sermon or fix our minds upon the prayers?" One child can distract the attention of dozens of grown-up people. Yes, but "of such is the kingdom." Grown-up people cannot even enter the kingdom unless they come as

Never imagine that your life is cramped and commonplace if you have this wonderful opportunity of service within your reach. When the Master takes the children into His arms, He looks with kind approval on those who have taken them by the hand and drawn them close to His side.

"Ye in the fold your task fulfill,
And the Good Shepherd on the hill
From far, approving sees."

DORA FARNCOMB.

Gifts.

When the wise men brought their rich gifts—offerings for their King—and gave them, in trust for Him, to a lowly village maiden, she must have felt overwhelmed. The treasure was His, not hers; but on her was laid the responsibility of spending it. Should it buy clothes, to replace the strips of cloth or linen which formed His first garments? Should it go for rent or food? Should it be used to defray the necessary expenses of the hurried flight into Egypt?

I believe I understand something of her feelings, for "gifts for the King"—from readers of the "Advocate"—have been arriving almost daily during the Christmas season. During the last ten days I have received \$5 from "a friend who appreciates Hope's Quiet Hour," \$5 from an old friend in Alberta, and \$10 from a new friend in Alberta—"H. E. H." Two readers sent \$2 each, and three readers sent \$1 each. A little boy—"Bennie B"—sent his savings (50 cents) to brighten some child's Christmas (that will be spent on a little girl who is never able to walk without crutches, and for several weeks has not been able to walk at all).

The "Advocate purse" has been filled up again, after paying out more than fifty dollars for Christmas cheer to the sick and needy. Next week I hope to make up my accounts for 1916. In the meantime I can only thank you for your great and continued kindness and wish you, and all the readers of the "Advocate," a Happy New Year. HOPE.

The Great Santa Claus Family.

Santa Claus has many relations, who are busy at this season scattering seeds of kindness in desert places and making the wilderness blossom as the rose. Scarcely a day has passed this week without some gifts "for the needy" reaching me from readers of the "Advocate." One old friend of mine sent \$5. for a lonely, struggling, crippled woman whom she helped once before. "Dorris" sent a dollar, which will cheer another poor and lonely woman who has not heard a sound for forty years or more. "B. M. S." sent five dollars (two for a special purpose, and three for Christmas gifts to the needy). Two sisters sent seven dollars, and "The Maple Leaf Sewing Circle," Thornbury, Ont., surprised me with a splendid bale of clothing to give away at Christmas time. Three dollars and 12 Christmas stockings (filled to the top with good things) were sent by some teachers and scholars in a Sunday School. The stockings are all going to "shut in" children—I only hope they won't be too much for their digestions.

This will be a busy week, but my own Christmas preparations are well in hand, and I will do my best to faithfully execute all the commissions entrusted to me. I wish "Country Woman"—who started the "Advocate purse"—would send me her address. Two letters which I have written to her have been returned to me.

With many thanks, and best wishes for a joyful Christmas—we are to be joyful even in tribulation, you know—

Yours faithfully,

HOPE.

P.S.—"Dorris" says she sends "a lone dollar" to cheer someone, "in remembrance of our Beautiful Christ's Birthday." I am sending the letter with the gift. The lovely thought will cheer my deaf friend. D. F.

[We regret that this letter did not appear before Christmas—Ed.]

The Beaver Circle

Parody on Longfellow's "Hiawatha".

He killed the noble Mudjewas,
With his skin he made him mittens,
Made them with the skin side inside,
Made them with the skin side outside,
He got the warm side inside,
He got the warm side inside,
He got the cold side outside,
He got the cold side outside,
Put the warm side, fur side inside,
That's why he put the fur side inside,
Why he put the skin side outside,
Why he turned them inside outside.

[Note: How many of our Beavers have read Longfellow's "Hiawatha"?)

Little Bits of Fun.

Politeness Returned.—A few days after a farmer had sold a pig to a neighbor, he chanced to pass his place and saw his little boy sitting on the edge of the pig-pen, watching its new occupant.

"How d'ye do, Johnny," said he.
"How's your pig to-day?"
"Oh, pretty well, thank you," replied the boy.
"How's all your folks?"—Harper's.

Our Puzzling Language.—"Now," said a teacher to his class during a lesson in English, "can anyone give me a word, ending with 'ous', meaning full of, as 'dangerous,' full of danger, and 'hazardous,' full of hazard?" There was silence in the class for a moment. Then a boy sitting in the front row put up his hand. "Well," said the teacher, "what is your word?" "Please, sir," came the reply, "pious," full of pi!"



Vera Costello.
An enterprising little girl.

A Bright Little Girl.

The following letter from a very bright little girl will explain itself. Vera has not only distinguished herself by working for "The Farmer's Advocate and Home Magazine", and coming head of the list of workers, she passed her examinations with the highest possible marks, and at the School Fair got first prize for running and second for potatoes.

The second on our list of boys and girls who are working to get subscribers for "The Farmer's Advocate and Home Magazine", is Norman Wilson, Tupperville, who, up to the time of writing this has got ten new subscribers for us.

If any more of the Beavers would like to try here are our terms. We allow 50 cents on each new, paid in advance subscription, at \$1.50 a year; you keep the 50 cents on each and send the rest to us. When you have sent us 10 new subscriptions in this way, we mail you at once a special cash prize of \$2.50. Vera Costello won her first special prize in 2 weeks. Now, Beavers, see what you can do.

Here is Vera's letter:

Dear Puck and Beavers: My first letter to your charming Circle. I am 11 years old. I got first prize in sports and second on potatoes at the school fair and put the money in the bank. It was only \$1, but started my account. I have just sent in 15 new subscribers to the Advocate and I go to school every day. I am in the third class. We have 100 hens. They are laying. We get 70 cents a dozen for the eggs.

VERA C. COSTELLO.

R. R. 2, Branchton, Ont.

Senior Beavers' Letter Box.

Dear Puck and Beavers: As I have never written to the Beaver Circle before I thought I would try my luck. I like reading the Beavers' letters, especially the ones with riddles. My father has taken the Farmer's Advocate for as long as I can remember. I also like reading Sandy Fraser's letters and sometimes Peter McArthur's.

I go to school every day there is school. Our teacher's name is Miss Collins.

Next year I am to try my entrance examinations. I am trying my best to get ready for it. I have read many "Alger books" and many others. I like reading books with lots of conversation in them. In the summer holidays I took music lessons for a while, but after school commenced there was too much studying to do and some evening chores, so I had to quit.

Well as my letter is getting long I will close.

WALTER CLARKE, age 13.

Grand Valley, Ont.

Dear Puck and Beavers: I have been a silent reader for quite a few years. My father has taken the "Advocate" for as long as I can remember. I live on a farm of two hundred acres.

I have a little more than two miles to walk to school. I have two brothers, Walter and Leonard and one sister, Edna, going to school. Our teacher's name is Miss Collins. We all like her fine. I have seen some Beavers names that I know. I thought I would try to write to your Circle. Well as my letter is getting long I will close, hoping this escapes the w. p. b.

ELGIN CLARK, Class jr. IV., age 12.

Grand Valley, Ont.

Dear Puck and Beavers: This is my first letter to your interesting Circle. My father has taken the Farmer's Advocate for many years and finds it a great help on the farm. The C. P. R. railway and the school are both off our farm.

I go to school every day. My teacher's name is Miss Brown. We like her very well. I am in the fourth book.

Every person around here is working diligently for the Red Cross. I live near the town of Lindsay in which they are building a new arsenal. I have not read very many books. Those I liked best were: "Pollyanna," "Adventures of a Brownie," "The Tin Soldier," and others. I wish some of the Beavers would write to me. I hope the w. p. b. has his store in when my letter arrives. I also wish the Beaver Circle every success.

RUTH MITCHELL, Age 12.

R. R. No. 4, Lindsay, Ontario.

Dear Puck and Beavers: The Farmer's Advocate has been coming to our home for over thirty years.

I live on the 9th line of Fitzroy in the County of Carleton, and am twelve years old. I go to school and am in junior fourth class. My favorite subjects are: Reading, writing, art, arithmetic, nature study. I have two brothers and one sister; they are all older than I. One brother is going to high school. Hoping to see my letter in print.

HARRY STEVENSON.

Kinburn, Ontario.

Dear Puck and Beavers: I wrote before to your Circle, I mean your charming Circle. It is joy and pleasure to me to sit and read your letters. It is almost the first thing I think of when I first open the Advocate. I am one of a family of seven children, five brothers and one sister, of which I am the eldest. I go to school every day I can.

What about the war in Europe? Are we thinking of it? It seems to be one of the greatest and most interesting wars, and also it is more than human to think of the way in which people, country and buildings are being destroyed. Can any one tell what will be the result of it? The ones to whom I give my sympathy are the soldiers and the Belgium nation. We sing our patriotic songs, but what good is it to the wounded, dying soldiers?

My letter is growing long so I will close with a Merry Christmas and a Happy New Year to Puck and all the Beavers.

EDITH SMIBERT, Age 11, Jr. IV.
R. R. No. 3, Thorndale, Ont.

Dear Puck and Beavers: I received your book Thursday, November the twenty-third and am writing to thank you for it. I appreciate it about as well or really better than anything else you could have given me, for I like reading very much. I was very glad when I received the book, and thought it very kind of you Puck to send such a lovely token.

Puck, I would like very much to become a member of your charming Circle. If you would Puck, I would like you to send me one of your club pins and I will gladly pay what it costs.

Again thanking you for the book and wishing your circle every success. I shall close.

From a Beaver,
MINA ROGERS.

R. R. No. 2, Kingsville, Ontario.

We have no club pins, Mina. You are already a member of our Circle, as all you have to do is to write a letter to it. I am glad you liked your prize book. I want to say right here that nearly all of the Beavers who win prizes write very nice little notes of thanks. We are glad to see that they are so polite.—Puck.

The Windrow

Mr. T. P. O'Connor, M. P., has been appointed Chairman of the Board of Film Censors, London, England.

In recognition of his services General Joffre is to be given the title of Marshal of France.

After May 1st bars at which intoxicating liquors can be sold will no longer exist in the Province of Quebec.

Nearly 8,000 Barnardo Boys are serving the Empire in the army and navy and mercantile marine. Several have been decorated for heroic action.

Three women are among the public school trustees elected by acclamation in the town of Niagara Falls.

The war, notwithstanding its many evils, has brought about many measures of reform in the belligerent countries. In England, for instance, women have arisen to privileges never before known to them; the prospect of liquor limitation, if not complete prohibition, is assured; a scheme is under way to make "preventable poverty" a thing of the past; reform in the educational system is being demanded; the question of minimum wage is being considered, also schemes for municipal bacon shops, governmental control of the wheat supply, civic markets.

Poilu, the French equivalent for "Tommy Atkins," literally means "shaggy," or "hairy."

There are few handicaps that can long hold back a man gifted with brains, ability, energy and perseverance. Premier Lloyd-George is pointed out as a man who starting with neither wealth nor position fought his way from a country school to the highest office in the land. Premier William Morris Hughes of Australia is another example. He is described as "deaf, nervous and dyspeptic, with a constitution undermined by the terrible hardships of his early days," which were spent in extreme poverty. Not many inches over 5 feet in height, he is not even impressive in appearance, and yet he has made himself one of the greatest men alive. He was born in England, and was a pupil-teacher at the Burdette-Coutts school in Westminster when he became fired with

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the ambition to go to Australia. At nineteen, with but a few shillings in his pocket after paying his way, he arrived in the island Commonwealth. Cook in a timber-camp, scrub clearer, boundary rider, seaman on a sailing ketch—these were but a few of the "jobs" that fell to his lot, for he was willing to take anything that came along. Often he did not know where his next meal was to come from. For 15 months he was a sheep-driver, and it was through a cold contracted while sleeping in the open that his deafness originated. But personality, perseverance and "brains" could not be held back. Ten years after he landed in Australia he was returned as one of the members in the New South Wales Parliament, and his political career began. At 36 he was a member of the Federal Parliament, at 40 a Cabinet Minister, and at 41 Attorney-General. Ten years later he became Prime Minister.

The Ingle Nook.

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

Clothes, Books and Other Matters.

Dear Junia,—Early last spring you told us you were going to plant moonflowers; I've wondered much what success you had. "Years and years ago" a certain boy and I, eagerly studying a new seed catalogue, decided to try moonflowers. Local dealers having no seed, we sent to Toronto and got a packet of seven seeds for ten cents. We divided these as evenly as possible without recourse to Solomon's expedient, but not one grew. Next spring we tried again, eight seeds this time, but none of the boy's grew; after allowing ample time for mine to germinate I began to investigate. I found two with no sign of growth; the third had a tiny sprout which I, alas! had broken. Since then I've read that these seeds should be soaked in warm, almost hot water, and some other writer advised taking a fine file and making a slight incision in the outer shell. Will you tell us what success you had?

Might I ask "City Woman" just how "up-to-date" a person ought to be? Would she approve of me if I wore a neat and becoming gown of, say three years ago, or must I purchase recognition by an exaggeratedly short skirt, a wide, open throat, and a pair of lofty heels? And how soon should this outfit have to be replaced with another newer creation? Isn't there danger that in this striving to be "up-to-date" we shall neglect weightier matters, and at last find ourselves with "a mind unfurnished and a withered heart?"

And why should both city and country woman heap scorn on the "ready-made?" I see many city people wearing them and looking well dressed, too. Are dress-maker or tailor-made gowns always perfect in fit? How much time from start to finish does it take to get a dress made? The fact that I can get a ready-made at one trip—or even order it from the catalogue—instead of taking two or three long drives to town for tiresome fittings, is a point very much in favor of the ready-made.

Are the most up-to-date books the best worth reading? Some doubtless are excellent, yet if time for reading is limited, or even if it isn't limited, is it wise to spend all or much of it in reading books of very transient value.

As to sanitation, I confess ignorance, but plead extenuating circumstances, we do try to keep our water supply pure, though that doesn't always protect us from typhoid, for I know cases where one member of a family contracted the disease in town and brought it home to the farm with him. I really feel like saying, "you too," for how many city women understand sanitation? When things go wrong they do as I should do, get a man who understands the business to look after it.

Yet should I meet "city woman" I'd expect a good time discussing gardening, poultry, hollyhocks and cats, and I must tell her there's a treat in store when some farmer's husk opens and she gets a glimpse of a poet—a poet none the less, though

unable to express himself as did the one who lamented crushing the "wee, modest, crimson-tipped flower;" who dined on "hamely fare" and wore "hoddiin' grey," home-made at that, I suspect. Welland Co., Ont. RUE.

Rue, O Rue!—rueful indeed was the fate of my moonflowers! I filed a notch in each, put in part of the very few seeds and sent the rest to my mother. One of mine came up all right, but soon like the rose with "the worm i' the bud," turned brown and died. One of mother's came up, too, and was growing lustily in a pot in the window; but the black kitten that rejoices in the name of "Booker T. Washington," evidently liked moonflowers also, but in a different way, for he climbed up and ate that one off right down to the root—seeking "light within," no doubt, since he had to be all black without. But I'm not daunted; I'm going to try them again, some day.

I agree with you in the matter of ready-made clothes. I'm afraid if I myself had to take time for fittings I should have to "go" like the "baby" in the nursery rhyme. Luckily I am of the easy size to be fitted with the cut-and-dried article. Did you ever hear this story?

A three-hundred-pound man stood gazing longingly at the nice things displayed in a haberdasher's window for a marked-down sale. A friend stooped to inquire if he was thinking of buying shirts or pajamas.

"Gosh, no!" replied the fat man wistfully. "The only thing that fits me ready-made is a handkerchief."

Nonsense aside, you can get ready-made things that are both "cheap and nasty," but I find that you can also get those that are well-cut, well-made and of good material, very satisfactory once you have given a few extra stitches to the hooks, eyes and buttons. Of course, you have to pay quite as much for them as if you got them made to order.

Coming to books—yes, Rue, I really think some of the very latest books are among the very best. Why should they not be? Are men any less clever now, less educated, less capable of thinking and judging, than they were 50 or 100 years ago? If advantages count, the balance should swing to the Twentieth Century. Of course, one needs the literary sense, or—what is next thing to it, commonsense—to discern the good among the chaff. Do you know H. G. Wells' new book, "Mr. Britling Sees It Through," Hugh Walpole's "Dark Forest," Margaret Sherwood's "The Worn Doorstep," Mildred Aldrich's "Hilltop on the Marne," and "In a French Garden," Dr. Frank Crane's "Foot-Notes to Life," Albert Watson's (a Canadian) "Sovereignty of Character," that delightful little war-book, "Sunny Subaltern," and a score of other new books that are literature. I know that to you, Rue, with your keen literary and artistic sense (for I remember you from old "F. A. Literary Society" days) these books would be a delight. Peter McArthur's "Pastures Green," too, is a joy to those who love the country. And if you care for poetry it may interest you to know that Canada is beginning to be proud of its poets who are writing this very day, at the top of the list, in addition to our old friends Carman and Roberts, Service, Watson, Norwood, Marjorie Piekthall, Stringer, the two Scotts, Campbell, Father Dollard, with many others who are doing creditable work.

Don't you think, Rue, that every one of us, in city or country, might understand public health (including all sanitation) and first aid better than we do?—I've an idea!—to find some expert who will write us a series of short articles on the subject!—Thank you, Rue.

Yes, I believe that when you get beneath the husk of many farmers you find a poet. As a rule a farmer wears a husk—of silence—about such things, a little because such things are very sacred to him, a little because he is afraid of being laughed at, a little because in working out in the silence of the fields he is not practiced in words, and finds that the deeper the thought or the emotion the less readily it comes to his lips. Occasionally the heart of the country finds expression, and then is born to the public a Whittier, a Bobby Burns, a Thoreau, for Thoreau was a poet in prose.

What a text you gave me to-day, Rue!

A Chat About This and That. Dear Junia,—I hardly know how to start this, but here I am anyway. For

a long time I have been trying to make up my mind to drop in and say a few words; I can imagine a lot of fine faces and forms sitting in the "Ingle Nook" and saying yes to what I am about to tell you. First, I want to say how much we enjoy the book with yellow cover, and try to follow where it leads. It surely does persevere, and can't help but succeed. Then there is our own page and "Hope's Quiet Hour," which bring pleasure to us all; not forgetting Peter McArthur with his just splendid talks every week, and wise "Sandy Fraser"—how I laugh at his quaint sayings sometimes! And those useful hints, too; every time we feel at a loss over any particular thing, it is, "Where is the Advocate?" It seems to serve every purpose, for either house or barn, and, Junia, let me say, how we all do appreciate your efforts. It doesn't matter when I open the paper, there you are helping us on. I often think of a time, many years ago, of the kindly welcome you gave me when I was a "stranger" to you and this country. You asked me to come back, I remember, and if I have been long in coming, why, it is just this, that your fair Canada (and shall I say mine) has taken up so much of our time and interest. We are settled now, thankful to have made good—but I am selfish talking of my own affairs.

I was wondering, Junia, after reading some of our boys' essays, would it not be nice if our girls would give us a few of their ideas, and so help each one of us, for there are none too old to learn a little more. I think, too, it would be nice if every one of the "Ingle Nook" folk would contribute an idea, or suggest something, regarding the duty of the girl on the farm, on taking care of house-plants, the family sewing, or nice, easy suppers for our men. You know, we have not too many, such a large number of our loved ones have gone, perhaps, who can say, never to return, so that one thought alone should inspire us to care for those left, even more if that were possible. I am afraid you will think I am wandering, Junia, in this time of sorrow and stress it is very hard to collect one's thoughts, at least I find it so, and so I must really stop, but not before I say I feel we have much to be thankful for. Just to think of poor Belgium and France, and even our own England! Many would be sad this Christmas. Let us hope the new year may bring a ray of peace to all those so much in need, and may we look to it to bring more love and kindness the world over. Simcoe Co., Ont. "LASSIE."

Your suggestions are excellent, Lassie. I hope many will act on them.

Letter From Lankshire Lass.

Dear Junia, Hope and all Writers,—How Father Time has hastened on, with the war still going on! How I feel for those left behind! Mothers, sisters, wives all have my prayers and sympathy as well as the brave lads now in khaki. And the poor and needy too; now prices are so high this will be hard winter for many. Even some farmers will have it hard, as crops failed in many places. Prices are high to be sure, but many farmers have to buy all they need. Yet there is never a cloud without a silver lining, so we can only hope for better crops next year, and look out now for all the brightness that can be found and be thankful for blessings given us, which are so many if we only could count them from day to day. What grand words, "The story that never grows old, though over and over 'tis told, the story so dear, bringing heaven so near, sweet story that never grows old. How I long to serve faithfully through darkness as well as the light. It is very hard to write at all now; I almost gave up trying to write this letter, but felt I must try, so you all will know my flowers and I are still here and thankful, indeed, to each one who so kindly wrote or remembered me in any way. I would be so glad to write to each one but it is impossible, so dears you will forgive me won't you, and don't forget to try again for I get so lonely. I am never able to read much. My flowers are blooming away, and Jack Frost will not trouble them.

Must say, "Housewife," your candy receipts were good, and so were others of different things. Was so glad to see Ruby's letter, and where is Jaunita with her nice little stories? Bernice, too, where art thou? and so many old friends of the Nook.

To any one who has children subject to

croup I have an old, tried remedy. Take a teaspoon of alum ground fine and mix it with honey or granulated sugar. Give it to child who has croup, it will give relief right away. They will likely "throw up," and if they do not it helps them any way and they fall asleep. Another cure is a cold compress around child's neck.

Before I close will give a cheap and very good cookie receipt—now eggs are dear. Take one cup of light sugar, one cup sour cream, one small teaspoon soda, one teaspoon cinnamon, a little salt, add currants if you wish, flour to mix, and sprinkle granulated sugar on top before cutting in cakes.

Please will anyone who writes me sign name and address? I enjoy letters better if name is added. LANKSHIRE LASS.

In regard to your query about the gramophone record, Lankshire Lass, would say that any music dealer could probably supply it. Most of them keep Harry Lauder's songs, and would probably have "Bonnie Leezie Lindsay."

Plants, Etc.

Dear Junia,—Is it unhealthy to sleep in a room where there are a lot of house plants? Will it prevent flowers from freezing—in a cool room—if water is kept in it? If so, should the water be cold or hot, and would a pailful be sufficient? I would be very thankful for light on this subject, as I have lovely flowers, 26 different kinds of ferns. Is paraffine and turpentine good to use on hard-wood floor and oilcloth? Is it durable, and should it be used equal parts? What will most effectually clean a white enamel sink?

We could not keep house without The Farmer's Advocate. I turn to it for information on all subjects. Could anyone tell me where I could get words and music of the old song, "Remember or Forget."

BRIAR ROSE.

As house-plants exhale carbonic acid gas during the night it is as well not to have too many of them in one's sleeping room. A few will do no harm.

In a very cold room one could scarcely depend on a pail of water to prevent frost. A good idea is to line a very large packing box well with two or three thicknesses of paper. Invert the box, put a pretty cover over, and, in daytime, keep the plants on it. At night spread papers or flannel on the floor, place the pots on it, and put the box over the top. It should be as high as an ordinary table.

I do not know about the floor coating you mention. Very excellent mixtures for the purpose are sold at any good hardware store.

Dutch cleanser or powdered ammonia will clean an enameled sink perfectly. Apply with a damp cloth, then wash off with clear water.

Seasonable Cookery.

"Mother's" Apple Pie.—Make a good pastry with 2 cups flour, ½ cup shortening, ½ teaspoon salt, and a little cold water. Mix to a dough with a knife (never knead pie pastry, as it makes it hard) roll out and line a large pie plate, then fill the dish with sliced apples, rounding them up high. Dredge slightly with salt, add 3 tablespoons water, and fit on the top crust without pressing it down much at the edges. Let bake about 25 minutes, then lift off the top crust, and to the apple add 1 cup sugar, 2 or 3 tablespoons butter and a grating of nutmeg. Set the upper crust in place and serve at once, with sugar and cream. Very delicious.

Apples Baked in Bean Pot.—Pare, core and slice about 2 quarts apples, and put them in an earthen or granite dish with a cover, alternately with 1½ cups sugar sprinkled in. Add ¼ cup cold water, cover and bake in a very moderate oven for 4 hours. Serve hot or cold, with or without cream.

Ginger Sponge.—One-eighth lb. butter, 2 eggs, 1 small cup sugar, ½ cup treacle, 1½ cup flour, 1 teaspoon each ginger and allspice, ½ cup milk, a little grated nutmeg, 1 teaspoon soda. Beat butter and sugar to a cream. Break in the eggs and beat well. Next add treacle and beat again. Sift in the dry ingredients, and lastly mix in the milk. Cook in 2 square or oblong pans, when cold put whipped cream between and on top, and decorate with bits of preserved ginger.

Chocolate Pudding.—Two tablespoons

butter creamed with $\frac{1}{2}$ cup sugar, 1 egg, 1 generous square, melted chocolate, $\frac{1}{2}$ cup milk. Sift together 1 cup flour, 1 teaspoon cream of tartar, $\frac{1}{2}$ teaspoon soda, a pinch salt, and add to above mixture. Steam $1\frac{1}{2}$ to 2 hours and serve with whipped cream or creamy sauce.

Creamy Sauce.—Work $\frac{1}{4}$ lb. butter until creamy and add gradually, beating all the time, 1 cup powdered sugar; then add $\frac{1}{2}$ teaspoon vanilla and $\frac{1}{4}$ cup cream beaten stiff.

Rice Griddle Cakes.—Boil $\frac{1}{2}$ cup rice. When cold mix 1 quart sweet milk, yolks of 4 eggs and flour to make a stiff batter. Beat the white to a froth, add 1 teaspoon soda and 2 of cream of tartar, a little salt, and lastly the whites of the eggs. Bake on a griddle. Spread while hot with butter and jelly or marmalade, roll them up, sprinkle with sugar and serve at once.

Indian Meal Pudding.—Take 4 tablespoons tapioca, 4 tablespoons cornmeal, $\frac{3}{4}$ cup molasses, 2 tablespoons butter, 5 cups milk, 2 teaspoons salt, $\frac{1}{2}$ cup chopped preserved ginger. Cover the tapioca with warm water and cook an hour. Scald the milk, add the tapioca and cook 15 minutes. Mix remaining ingredients, stir into the tapioca mixture and cook over hot water until thickened, then turn into a buttered baking-dish and bake 3 hours in a slow oven. At end of 2 hours add 1 cup milk.

Baked Onions.—Six large onions (preferably medium-sized Spanish.) Peel them and cut crosswise in 3 thick slices. Put into bean-pot, cover with boiling salted water, and cook in the oven until tender. Drain, reserving 1 cup of the liquor. Thicken this with a mixture of $1\frac{1}{2}$ tablespoons butter, $1\frac{1}{2}$ tablespoons flour, $\frac{1}{2}$ teaspoon salt and $\frac{1}{8}$ teaspoon pepper all rubbed together. Add $\frac{1}{4}$ cup rich milk beaten with 1 egg yolk. Heat well, but do not boil, and serve at once.

The Scrap Bag.

Soft Corns.

Every night and morning dip a piece of soft linen rag in turpentine and wrap it round the toe. The corn will probably disappear in a few days.

Scrubbing Brushes.

Do not leave scrubbing brushes soaking in the water, as this spoils the bristles. Fasten a piece of tape to the brush, and always hang it up while not in use.

A Rattling Window.

To stop the rattling of a window, cut a clothes peg in half, and insert in between the sash and the frame. Then your sleep won't be disturbed on a windy night.

To Make a Muff.

First in order in the manufacture of a muff comes the foundation or "bed," as it is called by furriers. This can be made at home, and the lightest filling that will give sufficient warmth should be chosen; a heavy muff is tiresome to carry. Baked batting will be fluffy and fairly light. A foundation, ready lined with satin and finished at the ends can be bought of a furrier for \$2 or \$3, according to its quality. Then for the covering. Fur is used in combination with velvet or with almost any fabric you desire. A piece of the suit material is sometimes used, but that rather limits the use of the muff to that one suit. In using old pieces of fur, perhaps a wide band can be contrived for the centre of the muff with a narrow strip at each end, and velvet either plain or puffed between, with a ruffle at the ends, or just the gathered finish of the muff foundation.

In cutting fur be careful not to cut the hairs. The best way is to cut it with a very sharp knife on the wrong side, cutting just through the skin or leather.

As to shape—muffs are all shapes this season, barrel, round, and flat, some large, some very small.—Sel.

Uncle Silas (visiting city relatives who use electrical appliances for cooking at the table)—"Well, I swan! You make fun of us for catin' in the kitchen. I don't see as it makes much difference whether you eat in the kitchen or cook in the dining room.—Life.

Our Serial Story

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The Brown Mouse.

CHAPTER XII.

FACING TRIAL.

A distinct sensation ran through the Woodruff school, but the schoolmaster and a group of five big boys and three girls engaged in a very unclasslike conference in the back of the room were all unconscious of it. The geography classes had recited, and the language work was on. Those too small for these studies were playing a game under the leadership of Jinnie Simms, who had been promoted to the position of weed-seed monitor.

The game was forfeits. Each child had been encouraged to bring some sort of weed from the winter fields—preferably one the seed of which still clung to the dried receptacles—but anyhow, a weed. Some pupils had brought merely empty tassels, some bare stalks, and some seeds which they had winnowed from the grain in their father's bins; and with them they played forfeits. They counted out by the "arey, Ira, ickery an'" method, and somebody was "It." Then, in order, they presented to him a seed, stalk or head of a weed, and if the one who was It could tell the name of the weed, the child who brought the specimen became It, and the name was written on slates or tablets, and the new It told where the weed or seed was collected. If any pupil brought in a specimen, the name of which he himself could not correctly give, he paid a forfeit. If a specimen was brought in not found in the school cabinet—which was coming to contain a considerable collection—it was placed there, and the task allotted to the best penman in the school to write its proper label. All this caused excitement, and not a little buzz—but it ceased when the county superintendent entered the room.

For it was after the first of January, and Jennie was visiting the Woodruff school.

The group in the back of the room went on with its conference, oblivious of the entrance of Superintendent Jennie. Their work was rather absorbing, being no more nor less than the compilation of the figures of a cow census of the district.

"Altogether," said Mary Talcott, "we have in the district one hundred and fifty-three cows."

"I don't make it that," said Raymond Simms. "I don't get but a hundred and thirty-eight."

"The trouble is," said Newton Bronson, "that Mary's counting in the Bailey herd of Shorthorns."

"Well, they're cows, ain't they?" interrogated Mary.

"Not for this census," said Raymond. "Why not?" asked Mary. "They're the prettiest cows in the neighborhood."

"Scotch Shorthorns," said Newton, "and run with their calves."

"Leave them out," said Jim, "and to-morrow, I want each one to tell in the language class, in three hundred words or less, whether there are enough cows in the district to justify a co-operative creamery, and give the reason. You'll find articles in the farm papers if you look through the card index. Now, how about the census in the adjoining districts?"

"There are more than two hundred within four miles on the roads leading west," said a boy.

"My father and I counted up about a hundred beyond us," said Mary. "But I couldn't get the exact number."

"Why," said Raymond, "we could find six hundred dairy cows in this neighborhood, within an hour's drive."

"Six hundred!" scoffed Newton. "You're crazy! In an hour's drive?"

"I mean an hour's drive each way," said Raymond.

"I believe we could," said Jim. "And after we find how far we will have to go to get enough cows, if half of them patronized the creamery, we'll work over the savings the business would make, if we could get the prices for butter paid the Wisconsin co-operative creameries, as compared with what the centralizers pay us, on a basis of the last six months. Who's in possession of that correspondence with the Wisconsin creameries?"

"I have it," said Raymond. "I'm hectographing a lot of arithmetic problems from it."

"How do you do, Mr. Irwin!" It was the superintendent who spoke.

Jim's brain whirled little prismatic clouds before his vision, as he rose and shook Jennie's extended hand.

"Let me give you a chair," said he.

"Oh, no, thank you!" she returned. "I'll just make myself at home. I know my way about in this schoolhouse, you know!"

She smiled at the children, and went about looking at their work—which was not noticeably disturbed, by reason of the fact that visitors were much more frequent now than ever before, and were no rarity. Certainly, Jennie Woodruff was no novelty, since they had known her all their lives. Most of the embarrassment was Jim's. He rose to the occasion, however, went through the routine of the closing day, and dismissed the flock, not omitting making an engagement with a group of boys for that evening to come back and work on the formalin treatment for smut in seed grains, and the blue-vitriol treatment for seed potatoes.

"We hadn't time for these things," said he to the county superintendent, "in the regular class work—and it's getting time to take them up if we are to clean out the smut in next year's crop."

They repeated Whittier's *Corn Song* in concert, and school was out.

Alone with her in the schoolhouse, Jim confronted Jennie in the flesh. She felt a sense of his agitation, but if she had known the power of it, she would have been astonished. Since that Christmas afternoon when she had undertaken to follow Mr. Peterson's advice and line Yim Irwin up, Jim had gone through an inward transformation.

He had passed from a late, cold, backward sexual spring, into a warm June of the spirit, in which he had walked amid roses and lilies with Jennie. He was in love with her. He knew how insane it was, how much less than nothing had taken place in his circumstances to justify the hope that he could ever emerge from the state in which she would not say "Humph!" at the thought that he could marry her or any one else. Yet, he had made up his mind that he would marry Jennie Woodruff.

She ought never have tried to line him up. She knew not what she did.

He saw her through clouds of rose and pink; but she looked at him as at a foolish man who was making trouble for her, chasing rainbows at her expense, and deeply vexing her. She was in a cold, official frame of mind.

"Jim," said she, "do you know that you are facing trouble?"

"Trouble," said Jim, "is the natural condition of a man in my state of mind. But it is going to be a delicious sort of tribulation."

"I don't know what you mean," she replied in perfect honesty.

"Then I don't know what you mean," replied Jim.

"Jim," she said pleadingly, "I want you to give up this sort of teaching. Can't you see it's all wrong?"

"No," answered Jim, in much the manner of a man who has been stabbed by his sweetheart. "I can't see that it's wrong. It's the only sort I can do. What do you see wrong in it?"

"Oh, I can see some very wonderful things in it," said Jennie, "but it can't be done in the Woodruff District. It may be correct in theory, but it won't work in practice."

"Jennie," said he, "when a thing won't work, it isn't correct in theory."

"Well, then, Jim," said she, "why do you keep on with it?"

"It works," said Jim. "Anything that's correct in theory will work. If the theory seems correct, and yet won't work, it's because something is wrong in an unsuspected way with the theory. But my theory is correct, and it works."

"But the district is against it."

"Who are the district?"

"The school board are against it."

"The school board elected me after listening to an explanation of my theories as to the new sort of rural school in which I believe. I assume that they commissioned me to carry out my ideas."

"Oh, Jim!" cried Jennie. "That's sophistry! They all voted for you so you wouldn't be without support. Each wanted you to have just one vote. Nobody wanted you elected. They were all surprised. You know that!"

"They stood by and saw the contract signed," said Jim, "and—yes, Jennie, I am dealing in sophistry! I got the school by a sort of shell-game, which the board worked on themselves. But that doesn't prove that the district is against me. I believe the people are for me, now, Jennie. I really do!"

Jennie rose and walked to the rear of the room and back, twice. When she spoke, there was decision in her tone—and Jim felt that it was hostile decision.

"As an officer," she said rather grandly, "my relations with the district are with the school board on the one hand, and with your competency as a teacher on the other."

"Has it come to that?" asked Jim.

"Well, I have rather expected it."

His tone was weary. The Lincolnian droop in his great, sad, mournful mouth accentuated the resemblance to the martyr president. Possibly his feelings were not entirely different from those experienced by Lincoln at some crises of doubt, misunderstanding and depression.

"If you can't change your methods," said Jennie, "I suggest that you resign."

"Do you think," said Jim, "that changing my methods would appease the men who feel that they are made laughing-stocks by having elected me?"

Jennie was silent; for she knew that the school board meant to pursue their policy of getting rid of the accidental incumbent regardless of his methods.

"They would never call off their dogs," said Jim.

"But your methods would make a great difference with my decision," said Jennie.

"Are you to be called upon to decide?" asked Jim.

"A formal complaint against you for incompetency," she replied, "has been lodged in my office, signed by the three directors. I shall be obliged to take notice of it."

"And do you think," queried Jim, "that my abandonment of the things in which I believe in face of this attack would prove to your mind that I am competent? Or would it show me incompetent?"

Again Jennie was silent.

"I guess," said Jim, "that we'll have to stand or fall on things as they are."

"Do you refuse to resign?" asked Jennie.

"Sometimes I think it's not worth while to try any longer," said Jim. "And yet, I believe that in my way I'm working on the question which must be solved if this nation is to stand—the question of making the farm and farm life what they should be and may well be. At this moment, I feel like surrendering—for your sake more than mine; but I'll have to think about it. Suppose I refuse to resign?"

Jennie had drawn on her gloves, and stood ready for departure.

"Unless you resign before the twenty-fifth," said she, "I shall hear the petition for your removal on that date. You will be allowed to be present and answer the charges against you. The charges are incompetency. I bid you good evening!"

"Incompetency!" The disgraceful word, representing everything he had always despised, rang through Jim's mind as he walked home. He could think of nothing else as he sat at the simple supper which he could scarcely taste.

Incompetent! Well, had he not always been incompetent, except in the use of his muscles? Had he not always been a dreamer? Were not all his dreams as foreign to life and common sense as the Milky Way from the earth? What reason was there for thinking that this crusade of his for better schools had any sounder foundation than his dream of being president, or a great painter, or a poet or novelist or philosopher. He was just a hayseed, a rube, a misfit, as odd as Dick's hatband, an off ox. He was incompetent. He picked up a pen, and began writing. He wrote, "To the Honorable the Board of Education of the Independent District of—"

"And he heard a tap at the door. His mother admitted Colonel Woodruff.

"Hello, Jim, said he.

"Good evening, Colonel," said Jim. "Take a chair, won't you?"

"No," replied the colonel. "I thought I'd see if you and the boys at the schoolhouse can't tell me something about the smut in my wheat. I heard you were going to work on that to-night."

"I had forgotten!" said Jim.

"I wondered if you hadn't," said

the colonel, "and so I came by for you. I was waiting up the road. Come on, and ride up with me."

The colonel had always been friendly, but there was a new note in his manner to-night. He was almost deferential. If he had been talking to Senator Cummins or the president of the state university, his tone could not have been more courteous, more careful to preserve the amenities due from man to man. He worked with the class on the problem of smut. He offered to aid the boys in every possible way in their campaign against scab in potatoes. He suggested some tests which would show the real value of the treatment. The boys were in a glow of pride at this co-operation with Colonel Woodruff. This was real work! Jim and the colonel went away together. It had been a great evening.

"Jim," said the colonel, "can these kids spell?"
"You mean these boys?"
"I mean the school."
"I think," said Jim, "that they can outspell any school about here."
"Good," said the colonel. How are they about reading aloud?"
"Better than they were when I took hold."

"How about arithmetic and the other branches? Have you sort of kept them up to the course of study?"

"I have carried them in a course parallel to the text-books," said Jim, "and covering the same ground. But it has been vocational work, you know—related to life."

"Well," said the colonel, "if I were you, I'd put them over a rapid review of the text-books for a few days—say between now and the twenty-fifth."

"What for?"
"Oh, nothing—just to please me."

And say, Jim, I glanced over a communication you have started to the more or less Honorable Board of Education."

"Yes?"
"Well, don't finish it. . . . And say, Jim, I think I'll give myself the luxury of being a wild-eyed reformer for once."

"Yes," said Jim, dazed.
"And if you think, Jim, that you've got no friends just remember that I'm for you."

"Thank you Colonel."
"And we'll show them they're in a horse race."

"I don't see. . . ." said Jim.
"You're not supposed to see," said the colonel, "but you can bet that we'll be with them at the finish; and, by thunder! while they're getting a full meal, we'll get at least a lunch. See?"

"But Jennie says," began Jim.
"Don't tell me what she says," said the colonel. "She's acting according to her judgment, and her lights and other organs of perception, and I don't think it fittin' that her father should try to influence her official conduct. But you go on and review them common branches, and keep your nerve. I haven't felt so much like a scrap since the day we stormed Lookout Mountain. I kinder like being a wild-eyed reformer, Jim."

CHAPTER XIII.
FAME OR NOTORIETY.

The office of county superintendent was, as a matter of course, the least desirable room of the court-house. I say "room" advisedly, because it consisted of a single chamber of moderate size, provided with office furniture of the minimum quantity and maximum age. It opened off the central hall at the upper end of the stairway which led to the court room, and when court was in session, served the extraordinary needs of justice as a jury room. At such times the county superintendent's desk was removed to the hall, where it stood in a noisy and confusing but very democratic publicity. Superintendent Jennie might have anticipated the time when during the March term, offenders passing from the county jail in the basement to arraignment at the bar of justice, might be able to peek over her shoulders and criticize her method of treating examination papers. On the twenty-fifth of February, however, this experience lurked unsuspected in her official future.

Poor Jennie! She anticipated nothing more than the appearance of Messrs. Bronson, Peterson and Bonner in her office, to confront Jim Irwin on certain questions of fact relating to Jim's competency to hold a

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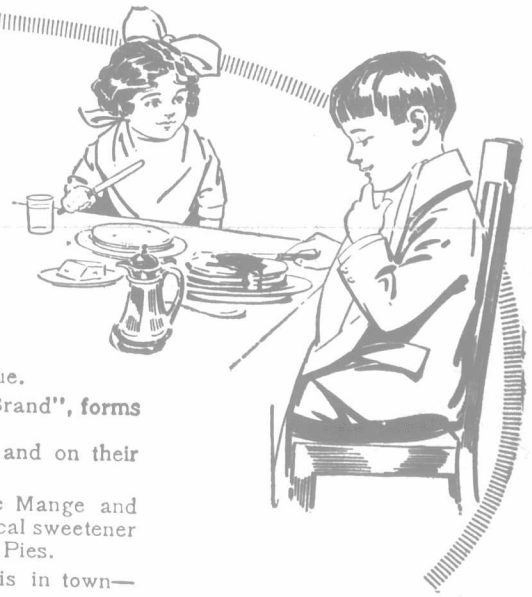
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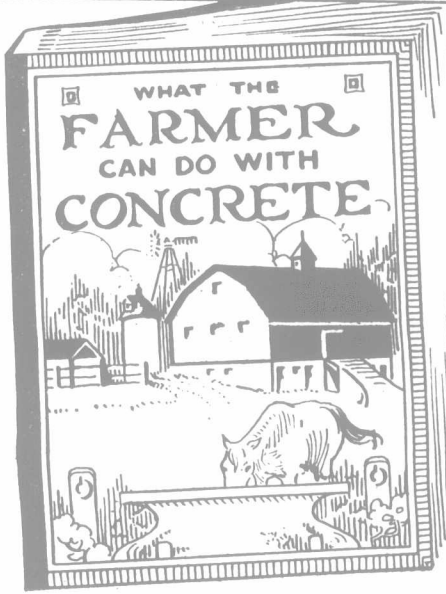
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teacher's certificate. The time appointed was ten o'clock. At nine forty-five Cornelius Bonner and his wife entered the office, and took twenty-five per cent. of the chairs therein. At nine fifty Jim Irwin came in, haggard, weather-beaten and seedy as ever, and looked as if he had neither eaten nor slept since his sweetheart stabbed him. At nine fifty-five Haakon Peterson and Ezra Bronson came in, accompanied by Wilbur Smythe, attorney-at-law, who carried under his arm a code of Iowa, a compilation of the school laws of the state, and *Throop on Public Officers*. At nine fifty-six, therefore, the crowd in Jennie's office exceeded its seating capacity, and Jennie was in a flutter as the realization dawned upon her that this promised to be a bigger and more public affair than she had anticipated. At nine fifty-nine Raymond Simms opened the office door and there filed in enough children, large and small, some of them accompanied by their parents, and all belonging to the Woodruff school, to fill completely the interstices of the corners and angles of the room and between the legs of the grown-ups. In addition, there remained an overflow meeting in the hall, under the command of that distinguished military gentleman, Colonel Albert Woodruff.

"Say, Bill, come here!" said the colonel, crooking his finger at the deputy sheriff.

"What you got here, Al!" said Bill, coming up the stairs, puffing. "Ain't it a little early for Sunday-school picnics?"

"This is a school fight in our district," said the colonel. "It's Jennie's baptism of fire, I reckon. . . . and say you're not using, the court room, are you?"

"Nope," said Bill.
"Well, why not just slip around, then," said the colonel, "and tell Jennie she'd better adjourn to the big room."

Which suggestion was acted upon instantly by Deputy Bill.

"But I can't, I can't," said Jennie to the courteous deputy sheriff. "I don't want all this publicity, and I don't want to go into the court room."

"I hardly see," said Deputy Bill, "how you can avoid it. These people seem to have business with you, and they can't get into your office."

"But they have no business with me," said Jennie. "It's mere curiosity."

Whereupon Wilbur Smythe, who could see no particular point in restricted publicity, said, "Madame County Superintendent, this hearing certainly is public or quasi-public. Your office is a public one, and while the right to attend this hearing may not possibly be a universal one, it surely is one belonging to every citizen and taxpayer of the county, and if the taxpayer, *qua* taxpayer, then certainly a *fortiori* to the members of the Woodruff school and residents of that district."

Jennie quailed. "All right, all right!" said she. "But, shall I have to sit on the bench!"

"You will find it by far the most convenient place," said Deputy Bill.

Was this the life to which public office had brought her? Was it for this that she had bartered her independence—for this and the musty office, the



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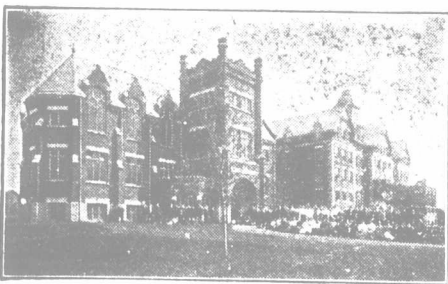
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stupid examination papers, and the interminable visiting of schools, knowing that such supervision as she could give was practically worthless? Jim had said to her that he had never heard of such a thing as a good county superintendent of schools, and she had thought him queer. And now, here was she, called upon to pass on the competency of the man who had always been her superior in everything that constitutes mental ability; and to make the thing more a matter for the laughter of the gods, she was perched on the judicial bench, which Deputy Bill had dusted off for her, tipping a wink to the assemblage while doing it. He expected to be a candidate for sheriff, one of these days, and was pleasing the crowd. And that crowd! To Jennie it was appalling. The school board, under the lead of Wilbur Smythe, took seats inside the railing which on court days divided the audience from the lawyers and litigants. Jim Irwin, who had never been in a court room before, herded with the crowd, obeying the attraction of sympathy, but to Jennie, seated on the bench, he, like other persons in the auditorium, was a mere blurry outline with a knob of a head on its top.

She couldn't call the gathering to order. She had no idea as to the proper procedure. She sat there while the people gathered, stood about whispering and talking under their breaths, and finally became silent, all their eyes fixed on her, as she wished that the office of county superintendent had been abolished in the days of her parent's infancy.

"May it please the court," said Wilbur Smythe, standing before the bar. "Or, Madame County Superintendent, I should say."

A titter ran through the room, and a flush of temper tinted Jennie's face. They were laughing at her! She wouldn't be a spectacle any longer! So she rose, and handed down her first and last decision from the bench—a rather good one, I think.

"Mr. Smythe," said she, "I feel very ill at ease up here, and I'm going to get down among the people. It's the only way I have of getting the truth."

She descended from the bench, shook hands with everybody near her, and sat down by the attorney's table. "Now," said she, "this is no formal proceeding and we will dispense with red tape. If we don't, I shall get all tangled up in it. Where's Mr. Irwin? Please come in here, Jim. Now, I know there's some feeling in these things—there always seems to be; but I have none. So I'll just hear why Mr. Bronson, Mr. Peterson and Mr. Bonner think that Mr. James E. Irwin isn't competent to hold a certificate."

Jennie was able to smile at them now, and everybody felt more at ease, save Jim Irwin, the members of the board and Wilbur Smythe. That individual arose, and talked down at Jennie.

"I appear for the proponents here," said he, "and I desire to suggest certain principles of procedure which, I take it, belong indisputably to the conduct of this hearing."

"Have you a lawyer?" asked the county superintendent of the respondent. "A what?" exclaimed Jim. "Nobody here has a lawyer!"

"Well, what do you call Wilbur Smythe?" queried Newton Bronson from the midst of the crowd.

"He ain't lawyer enough to hurt!" said the thing which the dramatists call A Voice.

There was a little tempest of laughter at Wilbur Smythe's expense, which was quelled by Jennie's rapping on the table. She was beginning to feel the mouth of the situation.

"I have no way of retaining a lawyer," said Jim, on whom the truth had gradually dawned. "If a lawyer is necessary, I am without protection—but it never occurred to me."

"There is nothing in the school laws, as I remember them," said Jennie, "giving the parties any right to be represented by counsel. If there is, Mr. Smythe will please set me right."

She paused for Mr. Smythe's reply. "There is nothing which expressly gives that privilege," said Mr. Smythe, "but the right to the benefit of skilled advisers is a universal one. It can not be questioned. And in opening this case for my clients, I desire to call your honor's attention—"

"You may advise your clients all

you please," said Jennie, "but I'm not going to waste time in listening to speeches or having a lot of lawyers examine witnesses."

"I protest," said Mr. Smythe.

"Well, you may file your protest in writing," said Jennie. "I'm going to talk this matter over with these old friends and neighbors of mine. I don't want you dipping into it, I say!"

Jennie's voice was rising toward the scream-line, and Mr. Smythe recognized the hand of fate. One may argue with a cantankerous judge, but the woman, who like necessity, knows no law, and who is smothering in a flood of perplexities, is beyond reason. Moreover, Jennie dimly saw that what she was doing had the approval of the crowd, and it solved the problem of procedure.

There was a little wrangling, and a little protest from Con. Bonner, but Jennie ruled with a rod of iron, and adhered to her ruling. When the hearing was resumed after the noon recess, the crowd was larger than ever, but the proceedings consisted mainly in a conference of the principals grouped about Jennie at the big lawyers' table. They were talking about the methods adopted by Jim in his conduct of the Woodruff school—just talking. The only new thing was the presence of a couple of newspaper men, who had queried Chicago papers on the story, and been given orders for a certain number of words on the case of the farm-hand schoolmaster on trial before his old sweetheart for certain weird things he had done in the home school in which they had once been classmates. The fact that the old school-sweetheart had kicked a lawyer out of the case was not overlooked by the gentlemen, of the fourth estate. It helped to make it a "good story."

By the time at which gathering darkness made it necessary for the bailiff to light the lamps, the parties had agreed on the facts. Jim admitted most of the allegations. He had practically ignored the text-books. He had burned the district fuel and worn out the district furniture early and late, and on Saturdays. He had introduced domestic economy and manual training, to some extent, by sending the boys to the workshops and the girls to the kitchens and sewing-rooms of the farmers who allowed those privileges. He had used up a great deal of time in studying farm conditions. He had induced the boys to test the cows of the district for butter-fat yield. He was studying the matter of a co-operative creamery. He hoped to have a blacksmith shop on the schoolhouse grounds sometime, where the boys could learn metal working by repairing the farm machinery, and shoeing the farm horses. He hoped to install a co-operative laundry in connection with the creamery. He hoped to see a building sometime with an auditorium where the people would meet often for moving picture shows, lectures and the like, and he expected that most of the descriptions of foreign lands, industrial operations, wild animals—in short, everything that people should learn about by seeing, rather than reading—would be taught the children by moving pictures accompanied by lectures. He hoped to open to the boys and girls the wonders of the universe which are touched by the work on the farm. He hoped to make good and contented farmers of them, able to get the most out of the soil, to sell what they produced to the best advantage, and at the same time to keep up the fertility of the soil itself. And he hoped to teach the girls in such a way that they would be good and contented farmers' wives. He even had in mind as a part of the schoolhouse the Woodruff District would one day build, an apartment in which the mothers of the neighborhood would leave their babies when they went to town, so that the girls could learn the care of infants.

"An' I say," interposed Con Bonner, "that we can rest our case right here. If that ain't the limit, I don't know what is!"

"Well," said Jennie, "do you desire to rest your case right here?"

Mr. Bonner made no reply to this, and Jennie turned to Jim.

"Now, Mr. Irwin," said she, "while you have been following out these very interesting and original methods, what have you done in the way of teaching the things called for by the course of study?"

"What is the course of study?" queried

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JOHN GILLESPIE, R.R. No. 5, Galt, Ontario

Jim. "Is it anything more than an outline of the mental march the pupils are ordered to make? Take reading: why does it give the children any greater mastery of the printed page to read about Casabianca on the burning deck, than about the cause of the firing of corn by hot weather? And how can they be given better command of language than by writing about things they have found out in relation to some of the sciences which are laid under contribution by farming? Everything they do runs into numbers, and we do more arithmetic than the course requires. There isn't any branch of study—not even poetry and art and music—that isn't touched by life. If there is we haven't time for it in the common schools. We work out from life to everything in the course of study."

"Do you mean to assert," queried Jennie, "that while you have been doing all this work which was never contemplated by those who have made up the course of study, that you haven't neglected anything?"

"I mean," said Jim, "that I'm willing to stand or fall on an examination of these children in the very text-books we are accused of neglecting."

Jennie looked steadily at Jim for a full minute, and at the clock. It was nearly time for adjournment.

"How many pupils of the Woodruff school are here?" she asked. "All rise, please!"

A mass of the audience, in the midst of which sat Jennie's father, rose at the request.

"Why," said Jennie, "I should say we had a quorum, anyhow! How many will come back to-morrow morning at nine o'clock, and bring your school-books? Please lift hands."

Nearly every hand went up.

"And, Mr. Irwin," she went on, "will you have the school records, so we may be able to ascertain the proper standing of these pupils?"

"I will," said Jim.

"Then," said Jennie, "we'll adjourn until nine o'clock. I hope to see every one here. We'll have school here to-morrow. And, Mr. Irwin, please remember that you state that you'll stand or fall on the mastery by these pupils of the text-books they are supposed to have neglected."

"Not the mastery of the-text," said Jim. "But their ability to do the work the text is supposed to fit them for."

"Well," said Jennie, "I don't know but that's fair."

"But," said Mrs. Haakon Peterson, "we don't want our children brought up to be just farmers. Suppose we move to town—where does the culture come in?"

* * * * *

The Chicago papers had a news item which covered the result of the examinations; but the great sensation of the Woodruff District lay in the Sunday feature carried by one of them.

It had a picture of Jim Irwin, and one of Jennie Woodruff—the latter authentic, and the former gleaned from the morgue, and apparently the portrait of a lumberjack. There was also a very free treatment by the cartoonist of Mr. Simms carrying a rifle with the intention of shooting up the school board in case the decision went against the schoolmaster.

"When it became known," said the news story, "that the schoolmaster had bet his job on the proficiency of his school in studies supposed and alleged to have been studiously neglected, the excitement rose to fever heat. Local sports bet freely on the result, the odds being eight to five on General Proficiency against the field. The field was Jim Irwin and his school. And the way those rural kids rose in their might and ate up the text-books was simply scandalous. There was a good deal of nervousness on the part of some of the small starters, and some bursts of tears at excusable failures. But when the fight was over, and the dead and wounded cared for, the school board and the county superintendent were forced to admit that they wished the average school could do as well under a similar test.

"The local Mr. Dooley is Cornelius Bonner, a member of the 'board.' When asked for a statement of his views after the county superintendent had decided that her old sweetheart was to be allowed the priceless boon of earning forty dollars a month during the remainder of his contract, Mr. Bonner said, 'Aside from being licked, we're



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No? Well, that makes no difference. You can run a Vessot "Champion" Grinder

just as well as any miller could. With it you can save the miller's profit on all kinds of grinding—flax, barley, corn, crushed ear corn, oats, wheat rye, peas, buckwheat, screenings, mixed grain, or any kind of feed stuff, fine or coarse, as desired.

This grinder cleans grain as well as it grinds. The spout that carries the grain to the grinder is made with two sieves, a coarse one above and a fine one below. The coarse sieve catches nails, sticks and stones, but lets the grain fall through. The fine sieve holds the grain, but takes out all sand and dirt. The grain passes to the grinding plates as clean as grain can be.

And it comes from the plates well ground. VESSOT plates have such a reputation for good work that we have had to protect our customers and ourselves by placing the trade mark, "SV," on all the plates. Look for it on the plates you buy. It marks the genuine high-grade VESSOT plate.

To do its best work, a VESSOT GRINDER should be run by the steady power of a Mogul Kerosene Engine. Then you have an outfit that cannot be beat for good work or economy. Write us a card, so that we can send you catalogues of these good machines.

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BRANCH HOUSES:
West—Brandon, Man.; Calgary, Alta.; Edmonton, Alta.; Estevan, Sask.; Lethbridge, Alta.; N. Battleford, Sask.; Regina, Sask.; Saskatoon, Sask.; Winnipeg, Man.; Yorkton, Sask.
East—Hamilton, Ont.; London, Ont.; Montreal, Que.; Ottawa, Ont.; Quebec, Que.; St. John, N. B.

Mr. Farmer!

Get your bricks in now during slighing. We have a large stock of the famous Milton Red Pressed Brick on hand and can give you immediate delivery.

Owing to the coal situation, later deliveries will doubtless be advanced in price, so secure yours at once.

MILTON BRICK

For 25 years Milton Brick has been the standard of quality and durability—and still leads.

Write to-day for samples and prices.

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Sizes for 2, 3 and 4 horses.

THE BISSELL DISK has made a great record throughout all Canada. There are good reasons why this is so. Balanced Right—Does not hump up. Improved Plate—Cuts and turns soil over. Hitches well Back—Easy draught. This Disk has several imitators, but no equal. None genuine without the name "BISSELL." Test trials given on hard land with anything that cultivates. Write Dept. W for free Catalogue. 92

T. E. BISSELL CO., LIMITED, ELORA, ONT.

"Metallic" Ceiling

and wall plates make very handsome, easily cleaned, fire-retarding interiors. Splendid for home, church, school, etc. Fix up one room and see how you like it.

Get illustrated price list from

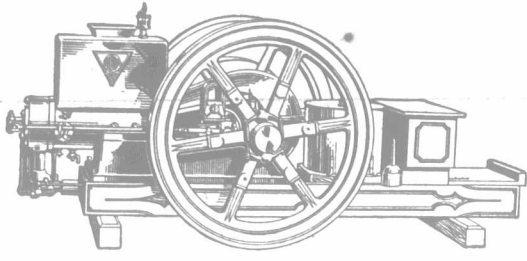
Metallic Roofing Co., Limited - Manufacturers, Toronto

SALEM SHORTHORNS

Head headed by Gainford Marquis (Imp.), Canada's champion show and breeding bull. Special offering—ten high-class young bulls. J. A. WATT, ELORA, ONTARIO

A

The Best Gas Engine to Buy



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WHEN selecting a gas engine, the most important thing is to get a good engine. There is no economy in buying an engine that is going to require frequent repairs and that is likely to balk just at the time you need most to use it.

The wise man considers service, reliability and durability first and price second. Selected on this basis, the ALPHA is the logical engine to choose, because it is the simplest and most durable in construction and the most reliable in operation. It runs smoothly and powerfully on a minimum consumption of either gasoline or kerosene, and operates on a simple magneto without the use of any batteries.

It is so simple that a woman or boy can start and operate it and the sensitive governor, which acts the instant there is the slightest variation in the load, insures steady running without any waste of fuel.

Before you put any money into a gas engine, investigate the ALPHA—and remember that the man who buys the best is never sorry.

Ask for catalogue, prices and complete information. Made in eleven sizes, 2 to 28 H. P. Each furnished in stationary, semi-portable or portable style, and with hopper or tank-cooled cylinder.

THE DE LAVAL CO., Ltd.

LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA. Sole distributors in Canada of the famous De Laval Cream Separators and Alpha Gas Engines. Manufacturers of Ideal Green Feed Silos.

Catalogues of any of our lines mailed upon request.

MONTREAL PETERBORO WINNIPEG VANCOUVER 50,000 Branches and Local Agencies the World Over

London No. 5. Washer

\$10—f.o.b. Cars, London



Our No. 5 model is the latest and most improved high-grade washer on the market. It can be operated by power by applying belt to the fly wheel, which is direct on the hinge line, or by inserting lever in either of two sockets.

It has babitted bearings, machine-cut gears, protected by handsome guards, smooth round guard over end of dolley post, which protects clothes from pinching. Strong, five-peg dolley. Tub is made of best dried Cypress—"The Wood Eternal".

We also manufacture Electric and Engine driven Power Washers, with power-driven wringers. London Washers are sold by all live dealers or write us direct.

THE LONDON FOUNDRY CO., LIMITED London, Ontario

Cloverlea Dairy Farms Two Choice Bulls ready for service. OFFER FOR SALE from R. O. M. dams. Write for tended pedigrees. GRIESBACH BROS., Proprietors, COLLINGWOOD, ONT. price and ex- L.-D. phone

Its reproduction of vocal and instrumental music is clear, sweet and full. The Phonola plays any style and make of disc record. Priced from \$15 to \$250. Write to-day for free catalogue and name of local dealer. Agents wanted in unrepresented territory. The Pollock Mfg. Co., Ltd., Kitchener, Ont.

RAW FURS—Trappers are finding out that the manufacturer is the only place to send their furs. No large newspaper price lists with one dozen sorts for each kind; just a fair deal every time is bringing us greatly increased shipments. Large prices on paper are no good to you, boys. Write for shipping tags and price list free. C. H. Rogers, Desk 10, Walkerton, Ont.

You can assure your family a MONTHLY INCOME FOR LIFE or assure yourself an income during your old age, by means of an Imperial Monthly Income Policy Write for particulars now, and mention The Farmer's Advocate. Address: Imperial Life Assurance Co. of Canada Head Office: TORONTO

DO YOU NEED FURNITURE Write for our large photo-illustrated Catalogue No. 7—It's free to you. THE ADAMS FURNITURE CO., Limited Toronto, Ontario

We are prepared to make good our claims that THE SHERLOCK-MANNING 20th Century Piano is "Canada's Biggest Piano Value"

and that we can save you fully \$100 on the price you would pay for equal value in any other make. Write Dept. 18 for Catalogue "T". THE SHERLOCK-MANNING PIANO CO. London. (No street address necessary) Canada

SHOEMAKER'S BOOK ON POULTRY and Almanac for 1917 has many colored plates of fowls true to life. It tells all about chickens, their prices, their care, seasons and remedies. All about incubators, their prices and their operation. All about poultry houses and how to build them. It's an encyclopedia of chickendom. You need it. Only 15c. C. L. SHOEMAKER, Box 920 Freeport, La.

all right. But we'll get this guy yet, don't fall down and fergit that!

"The examinations tind to show," said Mr. Bonner, when asked for his opinion on the result, "that in or-r-r-der to larn anything you shud sthudy some-thin' ilse. But we'll git this guy yit!"

"Jim," said Colonel Woodruff, as they rode home together, "the next heat is the school election. 'We've got to control that board next year—and we've got to do it by electing one out of three.'"

"Is that a possibility?" asked Jim. "Aren't we sure to be defeated at last? Shouldn't I quit at the end of my contract? All I ever hoped for was to be allowed to fulfill that. And is it worth the fight?"

"It's not only possible," replied the colonel, "but probable. As for being worth while—why, this thing is too big to drop. I'm just beginning to understand what you're driving at. And I like being a wild-eyed reformer more and more."

To be continued.

The Dollar Chain

A fund maintained by readers of "The Farmer's Advocate and Home Magazine," for (1) Red Cross Supplies; (2) Soldiers' Comforts; (3) Serbian Relief; (4) Belgian Relief; (5) Prisoners of War.

Contributions from Dec. 22 to Dec. 29: Ospringle Friends, R. 3, Acton, Ont., \$15; Stanley N. Henderson, R. 1, Blair, \$1; Allison Peacock, Woodbridge, Ont., \$5; Thos. Hart, Woodstock, Ont., \$1; Mrs. W. L. Johnson, R. 5, Perth, Ont., \$5; J. A. S., Dorchester, Ont., \$3; Wilson R. Bell, Cookstown, Ont., \$5; William Bull, Alliston, Ont., \$1; S. S. Alexander, New Liskeard, Ont., \$3.50; "Toronto," \$2; John Rodger, Lachute, P. Q., \$5; J. E. McIntyre, R. 5, St. Thomas, Ont., \$5; Kathleen Wilson, Tupperville, Ont., \$1; Charlie Wilson, Tupperville, \$1; Norman Wilson, Tupperville, \$1; "A Puslinch Friend," \$65; Mrs. Ed. Lear, Blyth, Ont., \$5.

Previously acknowledged.....\$3,277.25

Total to Dec. 29th.....\$3,401.75

Kindly address contributions to "The Farmer's Advocate and Home Magazine," London, Ont.

We may say that notes of thanks to Dollar Chain contributors are continually reaching us from the various organizations engaged in war and relief work. Every effort is greatly appreciated, and is making easier the huge task of relieving suffering.

Current Events.

December 29th was marked by the death of two eminent Canadians, Hon. T. Chase Casgrain, Postmaster-General, who died at his home in Ottawa, and James Loudon, President of the University of Toronto from 1892 to 1906, who died at his home in Toronto.

The Trappist Monastery and Chapel at Oka, Que., completed in 1912 at a cost of \$100,000, were destroyed by fire.

Since the issuing by Germany of proposals for a peace conference there has been much talk of peace, but little certainty of it until the Teutons are willing to make concessions that will satisfy the Allies who, all unprepared for war, were plunged into the midst of it, and that will also provide against the possibility of a similar occurrence in the future. The greatest hope, perhaps, may be found in repeated reports that Austria-Hungary is anxious for peace, and on the verge of being willing to make it independently of Germany. Posters appealing for an end to the war are daily paraded, it is said, in Vienna, while the new Emperor, Charles, is known to favor it as the only hope of saving his country, which is now on the brink of starvation and financial bankruptcy. Since Christmas no important engagement has taken place on the West front, although artillery and aerial activity has been continuous. British aviators have bombarded the German blast furnaces and munition plants in Lorraine, also the Turk camp at

Galata on the far-away Gallipoli. In Roumania, General Mackensen is feverishly pushing forward in his evident desire to reach the grain ports of Braila and Galatz, but when he reaches them the stores, in all probability, will have been removed or destroyed. In the Valley of the Rimnik, on the Moldavian front, the Russians and Roumanians have been again defeated, the Germans claiming the capture of 9,000 prisoners. In Greece, however, things look somewhat brighter, as the bulk of the army is being demobilized according to the demands of the Allies. This will afford relief to the left flank of General Sarraill's army at Salonika. In the still farther east the British are vigorously continuing their campaign along the Tigris, advancing towards Kut-el-Amara, while the Russian army under Grand Duke Nicholas is again making itself felt in the region southeast of the Black Sea.



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.

CALIFORNIA ALFALFA, FRUIT, DAIRY, HOG, and poultry farms for sale. Easy payments. Write for list. E. R. Waite, Shawnee, Oklahoma. HERDSMAN WANTS SITUATION; Married, fifteen years experience feeding and fitting Shorthorns for show. Thomas A. Wilson, Pickering, Ontario.

THREE HUNDRED AND TWENTY ACRES of good land in Saskatchewan for sale cheap. Particulars sent on request. Owner, Box C, Farmer's Advocate, Toronto.

WE REQUIRE PARTIES TO KNIT MEN'S wool socks for us at home, either with machine or by hand. Send stamp for information. The Canadian Wholesale Dis. Co., Dept. S., Orillia, Ont.

PATENTS AND LEGAL FETHERSTONHAUGH & CO., Patents SOLICITORS—The Old Established Firm. Head Office, Royal Bank Building, Toronto, and 5 Elgin Street, Ottawa, and other principal cities.



MAIL CONTRACT

SEALED TENDERS, addressed to the Postmaster-General, will be received at Ottawa until noon, on Friday, the 9th day of February, 1917, for the conveyance of His Majesty's Mails, on a proposed Contract for four years, six times per week, over Belmont No. 2 Rural Route, from the 1st of April, next.

Printed notices containing further information as to conditions of proposed Contract may be seen and blank forms of Tender may be obtained at the Post Offices of Belmont, Glanworth and Harrietsville, and at the office of the Post Office Inspector, London.

G. C. ANDERSON, Superintendent. Post Office Department, Canada, Mail Service Branch, Ottawa, 29th Dec., 1916.



MAIL CONTRACT

SEALED TENDERS, addressed to the Postmaster General, will be received at Ottawa until noon, on Friday, the 9th day of February, 1917, for the conveyance of His Majesty's Mails, on a proposed Contract for four years, six times per week over Dorchester Station No. 2 Rural Route, from the 1st of April, 1917, next.

Printed notices containing further information as to conditions of proposed Contract may be seen and blank forms of Tender may be obtained at the Post Offices of Dorchester Station, Nilestown, Mossley and Thamesford, and at the office of the Post Office Inspector, London.

G. C. ANDERSON, Superintendent. Post Office Department, Canada, Mail Service Branch, Ottawa, 29th Dec., 1916.



MAIL CONTRACT

SEALED TENDERS, addressed to the Postmaster General, will be received at Ottawa until noon, on Friday, the 9th day of February, 1917, for the conveyance of His Majesty's Mails, on a proposed Contract for four years, six times per week over Hyde Park Corner No. 1 Rural Route, from the 1st of April, 1917, next.

Printed notices containing further information as to conditions of proposed Contract may be seen and blank forms of Tender may be obtained at the Post Offices of Hyde Park Corner, London and Ettrick, and at the office of the Post Office Inspector, London.

G. C. ANDERSON, Superintendent. Post Office Department, Canada, Mail Service Branch, Ottawa, 29th Dec., 1916.

THE BEST LINIMENT

OR PAIN KILLER FOR THE HUMAN BODY

**Gombault's
Caustic Balsam**

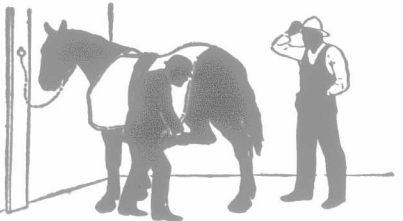
IT HAS NO EQUAL

For the Human Body
It is penetrating, soothing and healing, and for all Old Sores, Bruises, or Wounds, Felons, Extremities, Cancers, Boils, Corns and Bunions. CAUSTIC BALSAM has no equal as a Liniment.

We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.

Perfectly Safe and Reliable Remedy for
**Sore Throat
Chest Cold
Backache
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Sprains
Strains
Lumbago
Diphtheria
Sore Lungs
Rheumatism
and all Stiff Joints**

REMOVES THE SORENESS—STRENGTHENS MUSCLES
Cornhill, Tex.—“One bottle Caustic Balsam did my rheumatism more good than \$120.00 paid in doctor's bills.”
Price \$1.50 per bottle. Sold by druggists, or sent by express prepaid. Write for Booklet B.
The LAWRENCE-WILLIAMS COMPANY, Toronto, Can.



Where Is He Lame?

Can he be cured? Our FREE Book will tell you 99 times out of a hundred and we are here to help you if you are not sure.

SAVE-TH-HORSE

Is sold with a Signed Contract-Bond to return money if remedy fails on SPAYIN—Ringbone—Throspin or ANY Shoulder, Knee, Ankle, Hoof or Tendon Disease. You should have both book and remedy on hand for an emergency. It's cheap horse insurance. Send for your copy of BOOK, Advice and sample of Guarantee-Bond today. All FREE.

TROY CHEMICAL CO., 145 Van Horn St.
(Made in Canada) Toronto, Ont.
Druggists everywhere sell Save-The-Horse with CONTRACT or we send by Parcel Post or Express Paid.

Bone Spavin

No matter how old the blemish, how lame the horse, or how many doctors have tried and failed, use

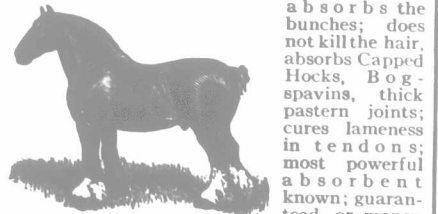
Fleming's Spavin and Ringbone Paste
Use it under our guarantee—your money refunded if it doesn't make the horse go sound. Most cases cured by a single 45-minute application—occasionally two required. Cures Bone Spavin, Ringbone and Sidelbone, new and old cases alike. Write for detailed information and a free copy of

Fleming's Vest-Pocket Veterinary Adviser
Ninety-six pages, durably bound, indexed and illustrated. Covers over one hundred veterinary subjects. Read this book before you treat any kind of lameness in horses.

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

Dr. Page's English Spavin Cure

Cures the lameness from Bone-Spavins, Sidelbones, Ringbones, Curbs, Splints, etc., and



absorbs the blemish; does not kill the hair, absorbs Capped Hocks, Bog-spavins, thick pastern joints; cures lameness in tendons; most powerful absorbent known; guaranteed, or money refunded. Mailed to any address, price \$1.00. Canadian Agents:—

J. A. JOHNSTON & CO., DRUGGISTS
171 King St. East, Toronto, Ont.

MESSRS. A. J. HICKMAN & CO., (late Hickman & Scruby), Court Lodge, Egerton, Kent, England. Exporters of **PEDIGREED LIVE STOCK** of all descriptions. Specialty made of draft horses, Beef and Dairy breeds of cattle, Show and Field Sheep. Illustrated catalogues and testimonials on application. All inquiries answered with pleasure. Now is the time to import, prospects were never better, and insurance against all war risks can be covered by payment of an extra 1% only.

Gossip.

Seed corn promises to be very scarce next spring, and those who need corn should buy early and insist upon immediate delivery. Furthermore, all seed should be tested, as a great deal of it may not be up to the mark this year. The fall was unfavorable for ripening the corn, and much of it may not show strong germination. We would advise every farmer to sow more corn. It is the cheapest feed produced on the average farm, and the country needs more feed to feed more stock to produce more manure to grow bigger crops. In buying seed corn do not purchase the cheapest. Get the best for the best is always the cheapest.

In a recent letter to "The Farmer's Advocate", Robt. Miller of Stouffville, says: "Since writing you last, I have sold the three-year-old bull from one of my big milking cows; have also sold a younger one, but I have three bulls at this writing, that are bred from the best milking strains that I know of, and they are good bulls for any man to use. They are smooth and I have never had easier and quicker feeders than they are. I also have some high-class Scotch bulls and heifers, that will suit the most critical to head and improve their herds. I have sold a lot of good things since I last wrote you, but have a lot more to sell yet."

J. Watt & Son's Recent Sales.

J. Watt & Son, Elora, Ontario, report that they have recently sold to Mr. Cutten, of Chicago, the first-prize Shorthorn senior-heifer calf at Sherbrooke and Ottawa, and the first-prize two-year-old heifer at Ottawa. To J. A. Watt they have sold the junior heifer calf that won grand championship at Sherbrooke. Hon. Duncan Marshall, of Alberta, has purchased two extra good young bulls and a heifer calf; all were winners at Sherbrooke and Ottawa. To Messrs. McCamus, of Millbrook, has gone a well bred junior yearling bull, which was sired by Oak Bluff Champion, a son of Royal Sultan and Fairstart, both American champions. His dam is by Oakland Star, champion at Winnipeg in 1915, and grandam by Avondale the American champion and sire of champions. They also report two nice young bulls on hand; one a red, fifteen months old, sired by Gainford Select, and out of a well-bred, good milking dam; also an April calf sired by the same bull and out of a Roan Lady dam. There are also, priced within the reach of all, some good young cows, either in-calf or with calves at foot by Gainford Select.

The Canadian Shorthorn Sale.

Regarding the coming Shorthorn sale in Toronto, advertised in this issue, Robt. Miller, manager, has the following to say: "This is the tenth annual sale of Shorthorns made by the leading Canadian breeders, and the sale is established as a thing of the greatest importance in Canadian breeding circles. It is known that many of the best specimens of the breed have gone through this sale and it is also known that many of the animals that have been sold there have been resold at a great advance within a short time. The herds from which the selections are made, stand in the foremost rank amongst Canadian breeders, they have been in that rank for one, two and some of them for the third and fourth generation. These breeders know what they are trying to do, and it is worth something to have the judgment of such men behind the purchases you make to go in to your herds. There are a lot of splendid young imported bulls and cows, there are a lot of the choicest cows to be found with calves at foot, there are bulls to head the herds of the most critical; in fact, in the great collection, there is just what you want, if you are looking for a good thing. Two of the greatest dual-purpose cows with three young bulls of great merit bred from them, should not be overlooked.

FOR CONDITION AND STAMINA ADD Gardiner's SAC-A-FAT to Your Working Horses' Rations

Gardiner's SAC-A-FAT is valuable as a feed, but even more so as a medicinal tonic. With it working horses get full value out of their hay and oats, and the variety it gives to their diet does them good.

when they get SAC-A-FAT regularly. It will pay you to feed it all the year round. Get SAC-A-FAT in 25, 50 and 100 lb. bags from your dealer. If he does not handle it write us for prices, and information about Gardiner's Calf Meal, Pig Meal, Ovatum and Ontario Feeders' Cotton Seed Meal.

GARDINER BROS.,
Feed Specialists
SARNIA, Ont.



Jay Brand Cotton Seed Meal 36 to 38 per cent Protein

We highly recommend this Brand to your consideration. Finely ground, good yellow color, and free of excess lint, runs uniform in analysis.

Cotton seed meal is cheapest concentrate on the market, and no grain ration is balanced without it. Animals need protein. Everything now is high, and best results are absolutely necessary to show proper profits in your operations. Use more cotton seed meal, more farm roughage, less grain, and get larger profits.

Let us quote you.

F. W. BRODE & CO. (BRANCH OFFICE)
DALLAS, TEXAS
Established 1875 MEMPHIS, TENN. Incorporated 1915

OWNERS: Celebrated — Owl Brand Cotton Seed Meal—41 to 43% protein
Dove Brand Cotton Seed Meal—38½ to 41% protein
PRICES ON REQUEST

CLYDESDALES WANTED

Pedigreed Clydesdale Mares, Fillies and Stallions. Must have good quality, and up to a fair size. Mares 3 to 6 years old, Fillies rising 1 year up, Stallions 2 to 6 years old. All stallions over 2 years old must have proven themselves reasonably sure. When writing state County, nearest railway station, G.T.R. or C.P.R., and telephone exchange. Also quote prices. Any one with good pedigreed Clydesdales for sale should communicate at once.

Also WANTED—A Number REGISTERED SHORTHORN CATTLE

Bulls and heifers. Must be well mated—good colors. Ages—bulls 8 months to two years. Heifers, 6 months to three years.

W. J. McCALLUM, BRAMPTON, ONT. Bank—Merchants Bank, Brampton, Ont.

Pear Lawn Clydesdales, Shorthorns, Improved Yorkshires and B. P. Rocks

Two nice young dual-purpose bull calves from one month to seven, from dams testing 4.01; also a choice lot of young sows of breeding age and a fine lot of boars and sows, rising four months; and a dandy lot of B. P. Rock Cockerels, all offered at selling prices.

HERBERT J. MILLER, Keene, Ont. R.R.1

Clydesdales We have still left some exceptionally good, drafty stallions, ranging in age from one to eight years, prizewinners, including champions; also in-foal mares and fillies. There is a horse boom coming. Buy now.
SMITH & RICHARDSON, COLUMBUS, ONT.

Highest Quality Hillsdale Clydesdales Richest Breeding

I am now offering a number of in-foal young mares from imp. sires and dams, bred from Scotch and Canadian winners and champions for generations. They represent the highest standard of the breed's quality and breeding. B. Rothwell, Ottawa, R.R.1, L.-D. Bell 'phone. Farm, 3 miles from city.

ABERDEEN-ANGUS

We have a number of young bulls to offer at reasonable and attractive prices. At the recent Canadian National Exhibition, with 15 animals shown, we won 24 prizes, among which was Grand Champion and Gold Medal for best female of the breed.

To insure prepotency of the right kind in your next herd bull, buy him from **Berkshire Swine, Shropshire and Southdown Sheep Larkin Farms Queenston, Ontario**

HEREFORD BULLS WANTED

From sixteen months to four years, must be good individuals and sure breeders. Can supply 13 good young bulls, nine to twelve months old, and a few choice yearling heifers, including first and third prize heifers, London, 1916.

ARTHUR F. O'NEIL, R.R. No. 2, DENFIELD, ONTARIO

ORCHARD GROVE HEREFORDS

Have several young bulls and heifers for sale. Satisfaction Guaranteed.
L. O. CLIFFORD, Oshawa, Ontario

Elm Park Aberdeen-Angus

& Suffolks. Our cattle and sheep at the large fairs of Eastern and Western Canada this year have won 154 first prizes and 19 champion prizes. Our produce. We have stock of all ages and both sexes for sale. A strong lot of ram lambs.
JAMES BOWMAN, ELM PARK, GUELPH, ONT.

WOODLANDS BROWN SWISS AND PONIES

We have no Clydes. left for sale. Our special offering is Brown Swiss bulls, out of high-testing and big-producing dams. Strictly high-class. Also Shetland and Welsh ponies.
R. BALLAGH & SON GUELPH, ONTARIO

Questions and Answers.

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

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

3rd—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

4th—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

Veterinary.

Flat-footed Horse.

I have a flat-footed horse with a very tender spot in the sole of one foot, which occasionally causes lameness. I am using bar shoes with leather pads. How can I promote growth of horn on the thin spot?

W. B. P.

Ans.—There is no method by which the congenital conformation of the feet can be improved or changed. You are adopting the best method to protect the sole. As the horny sole is secreted (formed) by the sensitive sole, applications to the wall of the foot or the coronet will have no effect. If you can allow rest and remove the shoes, you may be able to improve matters by applying poultices of warm, linseed meal to the sole for 8 or 10 hours daily, but when you put him to work again it will be wise to wear leather soles. Bar shoes in winter-time do not give satisfaction when there is snow.

V.

Miscellaneous.

Living up to a Contract.

I employed a ditcher to put in a certain amount of drains, which were to be 2 1/2 feet deep. I find that in many places they are only 18 inches deep, and in no place are they more than 22 inches. He is likely to demand pay for the 2 1/2 feet. How should this matter be settled in justice to both parties?

R. R.

Ans.—If the drains are only 22 inches deep, the ditcher has certainly not lived up to his contract and would not be in a position to charge for a full depth. By digging down every few rods you can secure proof of the average depth of the drain, and if the ditcher is at all reasonable he should be willing to adjust matters if he has failed to live up to the contract. Owing to the contour of the land it is quite possible that, even with a drain that is supposed to be 2 1/2 feet deep, the tiles would come within 18 inches of the surface in places. Of course, in other places they are likely to be 3 feet deep or more, in order to have the ditch bottom of a uniform grade. Unless the field is very level, there is bound to be these ups and downs, and when a man contracts for a 2 1/2-foot ditch it is generally considered that it will average about that throughout the field. From the information supplied the ditcher has failed to live up to his contract, and, if he will not come to some agreement with you, you would no doubt receive justice from the court.

Termination of Lease.

A owned a lot next to mine. Ten years ago she came to live on it with her husband and son, but after staying a few months they did not like it and returned to the city. I rented the place, with the understanding that if they ever decided to sell I was to have first chance of purchasing it. I have two witnesses to the agreement, which was only verbal. She has now sold it without giving me any notice, I having no idea the place was for sale. I took possession of the place on April 1. Can the purchaser of the property put me off without giving six months' notice, from October 1 next?

H. E.

2. Can he raise the rent?
3. Can I bring action for damages on A for selling without giving me the first chance, as agreed?

Ans. 1.—It will all depend on the nature of the lease. If you have rented the place for a term of years, and it is explicitly stated that certain notice must be given from a certain date, it should be lived up to. If there was nothing in the lease regarding giving notice of leave, the purchaser of the property can take possession on a month's notice.

2. If there is a written agreement that the rent will be a certain sum for a term of years, he is not justified in raising it, as the sale should have been made subject to the terms of the lease.

3. No. In order to bring action it would be necessary that you have a written agreement.

NOTICE!

TO OUR CUSTOMERS:

Considering the present cost of wire, it is an acknowledged fact that wire fencing is at present being sold at very low prices. Had we to buy wire at prices now prevailing, Page Fence would have to be sold at prices much higher than we are now quoting.

For the immediate present we are selling Page Fence for cash, direct to the user, at low prices. How long we can do this is highly uncertain. We strongly advise our customers to take advantage of the present opportunity by ordering now such fence as they may require for some time to come.

THE PAGE WIRE FENCE COMPANY LIMITED.

Walkerville, Toronto

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The Great Canadian Annual Sale of SHORTHORNS

On Thursday and Friday Feb. 1st and 2nd, 1917

At the Union Stock Yards Toronto, Ont.

In which seven of the leading Canadian breeders will sell One Hundred and Twenty of the best that their herds can furnish.

Bulls that have made good as sires and in the shows. Young bulls fit for anybody. A great array of young cows with calves at foot and near calving. Heifers near calving for the first time. All to the best sires. A lot of young heifers of the most fashionable kind. A special feature is the imported bulls and heifers, full of Duthie, Marr, Cruickshank and Campbell blood, with the quality that is needed to make them valuable.

There are some cows with marvelous milk records and a few young bulls

bred from them, such as we have not seen sold before.

Nearly all are of the most fashionable and valuable Scotch breeding. Many of them were winners in past shows, and many are good prospects for future shows.

This sale will be greater and better than those that preceded it.

Robert Miller, J. M. Gardhouse, John Miller, Jr., Kyle Bros., A. F. & G. Auld, W. R. Elliott & Sons and George Amos & Sons will furnish the cattle.

CAREY M. JONES, Chicago, Auctioneer.

Send your name now for catalogue to:

ROBERT MILLER, Stouffville, Ontario, Manager of Sale

Escana Farm Shorthorns

FOR SALE—Two imported bulls, proven valuable sires; 12 bulls, 10 to 20 months old, all by imp. sires and from high-class dams; also for sale 20 heifers and young cows, several with calves at foot, all of very choicest breeding and especially suitable for foundation purposes.

Mail orders a specialty. Satisfaction guaranteed. MITCHELL BROS., BURLINGTON P.O., ONT. Jos. McCrudden, Manager. Farm 1/4 mile from Burlington Jct.

SPRING VALLEY SHORTHORNS

Herd headed by the two great breeding bulls, Newton Ringleader (imp.) 73783, and Nonpareil Ramsden 83422. Can supply a few of either sex.

KYLE BROS., DRUMBO, ONT. Phone and telegraph via Ayr

When writing please mention Advocate

Oil Cake Meal

(Old Process)

AND

Cotton Seed Meal

Special Price for January and February Shipments. Carlots and less.

Write, 'phone or wire.

The Chisholm Milling Company, Limited Toronto, Ontario

Agricultural Instruction Cars

THE GRAND TRUNK RAILWAY, in co-operation with the Provincial Department of Agriculture Including the Agricultural College at Guelph

Are equipping a couple of baggage cars to be run over the GRAND TRUNK LINES of Western Ontario from

January 8th to March 14th inclusive. The exhibits are being prepared by the staff of the Agricultural College and specialists connected with various branches of the Department of Agriculture. Farm crops, soils, lighting protection, feeds, fertilizers, dairying, poultry and egg production, weeds, insects and fungous diseases, vegetable growing, household conveniences and labor-saving devices will be included in the exhibits. **This Miniature Agricultural College and Experimental Farm on Wheels**

will be found of great interest to those who are interested in seed improvement, cultivation, drainage, potato growing, economical feeding of live stock, testing of milk, sanitary methods in handling milk, poultry and egg production, the eradication of weeds, the control of insect, pests and fungous diseases, the growing of vegetables for the household, canning of vegetables, water supply and sanitary conveniences in the home, labor-saving devices, etc.

Both the men and women, as well as the boys and girls, should find much of interest in the cars.

PLACE	DATE	HALL
Elora	Jan. 8th	Town Hall
Fergus	Jan. 9th	" "
Alma	Jan. 10th	Public Hall
Drayton	Jan. 11th	Town Hall
Palmerston	Jan. 12th	Library Hall
Mount Forest	Jan. 13th	Town Hall
Durham	Jan. 15th	" "
Clifford	Jan. 16th	" "
Mildmay	Jan. 17th	" "
Walkerton	Jan. 18th	Hall of Dis. Rep.
Pt. Elgin	Jan. 19th	Town Hall
Listowel	Jan. 20th	Christ Church Hall
Brussels	Jan. 22nd	Town Hall
Wingham	Jan. 23rd	Opera Hall
Lucknow	Jan. 24th	Town Hall
Ripley	Jan. 25th	" "
Clinton	Jan. 26th	" "
Seaford	Jan. 27th	" "
Mitchell	Jan. 29th	Town Hall
Shakespeare	Jan. 30th	" "
St. Mary's	Jan. 31st	Town Hall
Ailsa Craig	Feb. 1st	" "
Forest	Feb. 2nd	" "
Blackwell	Feb. 3rd	" "

Every Person Welcome! No Charge!
The cars will be open for inspection from 10.30 a.m. to 5.30 p.m. each day, when competent instructors will be in attendance to answer questions and to explain exhibits. Special lectures for the school children will be given from 10.30 a.m. to 12 noon.

MOVING PICTURES

Evening meetings will be held in the halls indicated, when lectures will be delivered and moving pictures bearing upon agriculture exhibited. Fare-and-a-third rates will be given on all Grand Trunk Railway trains within a radius of 80 miles, good going the date announced and preceding day, good returning date announced and following day. List for February 5th to March 14th will appear in a later issue.

For folder giving fuller announcements, apply to
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Dept. of Agriculture, Parliament Buildings
TORONTO

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by CUTTER'S BLACKLEG PILLS
Low-priced, fresh, reliable, preferred by western stockmen, because they protect where other vaccines fail.
Write for booklet and testimonials.
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50-dose pkg. Blackleg Pills, \$4.00
Use any injector, but Cutter's simplest and strongest. The superiority of Cutter products is due to over 35 years of specializing in VACCINES AND SERUMS ONLY. INSIST ON CUTTER'S. If unobtainable, order direct.
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COMMISSION MEN PAY MORE.
Dealers at the Stock Yards pay more for cattle that have been dehorned. The hides are worth more, and the flesh has less bruises. It pays to dehorn your cattle. Write for booklet telling about the **KEYSTONE DEHORNER.**
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ANGUS SOUTHDOWNS, COLLIES, PRIZE BULL CALVES AND RAMS, COLLIE PUPS.

ROBT. McEWEN, R. R. 4, London, Ont.

Beaver Hill Aberdeen-Angus
Males and females, all ages, for sale. Prices right.
ALEX. McKINNEY
Cheltenham, G.T.R. R.R. No. 1, Erin, C.P.R.
Buy Seed Oats Now—Now is the time to make sure of getting good Ontario-grown seed. I have a limited amount of good, clean seed oats left, which I will sell reasonably. Samples and prices sent on request. Apply soon.
BENJ. J. WAECHTER, Gold Medal Farm
R. R. No. 3 Walkerton, Ontario

Questions and Answers. Miscellaneous.

White Diarrhoea.

Is there any preventive measure or remedy for white diarrhoea, and scaly legs in mature hens? W. A. B.

Ans.—There are several forms of diarrhoea which arise from different causes. When the trouble is first noticed, the birds should be isolated, and the feed troughs and drinking fountains scalded daily. It is recommended that a little potassium permanganate be used in the drinking water, and powdered charcoal mixed with the mash. These are to a degree preventive measures. Feed little bran and more shorts. Sour milk is also beneficial. Care should be taken in feeding, as the trouble may be caused by undigested feed setting up irritation in the intestines. Administer a teaspoonful of Epsom salts to each bird. This may be done by dissolving the salts in water and mixing in the mash. Medical treatment consists of the following: subnitrate of bismuth, 3 grains; powdered cinnamon or cloves, one grain; powdered willow charcoal, 3 grains. Give twice a day mixed with food. Diarrhoea may be prevalent in a weak bird. Keep the birds in good health by proper feed and housing. The following tonic is recommended: powdered fennel, anise, coriander and cinchona—30 grains of each. Mix and give in the feed. Scaly legs are caused by a minute mite working under the scales. Individual treatment is necessary to cure the disease. Soak the legs and feet in warm, soapy water, then apply some penetrating oil to the diseased parts. A stiff toothbrush is useful in applying the remedy. One part oil of caraway to 5 parts vaseline is a good oil to use, or one part kerosene to two parts raw linseed oil is effective.

Walls Under a Shed.

I purpose building two walls under a shed 24 feet by 40 feet. Would concrete be dry enough and suitable for a horse stable? It is much cheaper than stone. The shed runs north and south, with the horses facing west, and a box stall and harness-room at the south end. Give ideas how best to fit it up and ventilate it. Hay is to be stored overhead.

Ans.—Concrete and stone are similar as far as dampness is concerned. For a horse stable we would prefer a stone or a concrete foundation, possibly a couple of feet above ground and build the remainder of lumber. It will be drier and healthier for the horses. The width of the stable gives sufficient room for a nice-sized passageway behind the horses, and a good feed passage. Five feet is about the average width of the stall for horses. Therefore, you could put in eight single stalls, or six stalls and one box stall, which would be ten feet wide. A concrete floor is the most permanent, but we like to lay plank on top where the horses stand. The stalls may be separated by plank to a height of possibly five feet, and then iron bars could run from there to the ceiling to prevent the horses snapping at each other. A post could be put in at the front and back of each stall before the concrete is put in; this would make them stationary. We would prefer feeding hay in a manger, rather than in an overhead rack. The manger could be about two feet wide at the bottom and sloped towards the passageway in front, thus facilitating the feeding of hay. The fresh air could be brought in through windows or intakes in the wall. Galvanized piping, possibly fifteen inches or a foot and one-half in diameter, extending from within a foot of the floor to the roof, carries off the foul odors and gives very satisfactory ventilation. By having a slide in this ventilator, near the ceiling, the temperature of the stable can more easily be controlled.

Veterinary.

Soft Swelling.

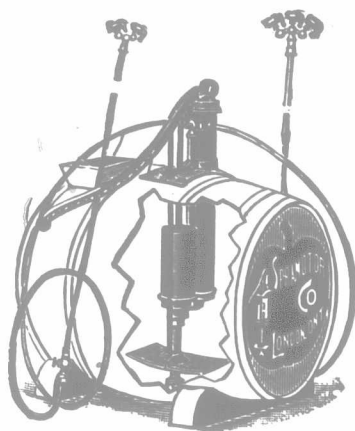
For several months a soft swelling has been coming on my cow's hind leg from the heel to about a foot up the leg on the outside. The leg now looks almost double size. She is not lame.

J. M. B.

Ans.—It is possible that a veterinarian would operate and remove the contents. All that you can do is to apply absorbents. Get a liniment made of 4 drams each of iodine and iodide of potassium and 4 oz. each of alcohol and glycerine. Rub some of this well in once daily. Have patience, as quick results will not be noticed.

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from being destroyed (or their market value lessened) is the SPRAMOTOR. It will enable you to combat the potato-beetle and blight quickly and effectively. In the orchard—to produce 75% No. 1 fruit and have cleaner, healthier trees—free from scale and bark-louse.



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FIELD MARSHALL = 100215 = the calf of 1915, sold June 7, 1916, for \$3,775.

TWO BULLS---Born April 1916

Either will make show animals. No. 1: two nearest dams average 109 lbs. milk a day, and over 30 lbs. butter a week. No. 2: dam and grandam average 24,000 lbs. milk in the year. Three nearest dams average 109 lbs. milk a day and over 30 lbs. butter a week. Can spare a few females.

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of high-class, fashionably bred Scotch Shorthorns in calf to Sittyton Sultan's Dale, a Mina-bred son of Avondale, dam by Whitehall Sultan, is of interest, come and examine my offering.
A. J. HOWDEN, Columbus, Ont. **Myrtle, C.P.R., Brooklin, G.T.R.**

Spruce Glen Shorthorns When in want of Shorthorns visit our herd. We have 70 head to select from. Minas, Fames, Miss Ramadens, Florences age-level, thick, mellow fellows and bred just right.
James McPherson & Sons, Dundalk, Ont.

Young Bulls of serviceable age. Young cows with calves by their side and rebred. Heifers well on in calf. A few good Shropshire ewes bred to good rams. A nice bunch of ewe lambs.
John Miller, Ashburn, Ontario

Pleasant Valley Herds—For sale: Several good young bulls, reds and roans, of the very best breeding; also females of all ages; all the leading families represented; 100 head to select from.
Inspection invited. Farm 11 miles east of Guelph, C.P.R., ½ mile from station.
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BURNFOOT STOCK FARM
Breeders of high-record, dual-purpose Shorthorns with a splendid conformation for beef. Visitors welcome.
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IRVINEDALE SCOTCH SHORTHORNS
Our offering this year in Scotch Shorthorns is probably the best we have offered for many years, there are several young bulls of serviceable age, right good ones and breeding the very best; also females of any age.
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Shorthorns Pure Scotch and Scotch topped—Booth. Also five (5) young bulls from ten to twenty months old, of the low down, thick kind, good colors—reds and roans. Prices reasonable.
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IMPORTED SHORTHORNS
Cows and heifers in calf, or with calf at foot. Yearling bulls and bull calves. One of the best importations of the year. You will be surprised when you see them.
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BROOKLIN, ONT.

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Have sold all the Shropshires I can spare this season. Present offering in Shorthorns—ten really choice young bulls, sired by Broadhooks, Golden Fame = 50018 = Imp., and out of such noted families as Campbell-bred Clarets, Nonpareils, Marr Missies, Stamfords, Crimson Flowers, Village Girls and Charming Gems, ranging from 9 to 16 months old. All good reds and roans.

Imported Shorthorns 40 more imported Shorthorns have arrived home from quarantine. We now have 18 heifers in calf and 19 cows with calves at foot, also a few good imported bulls. They are all good individuals and represent the choicest breeding. We can meet visitors at Burlington Jct. at any time if notified.
J. A. & H. M. Pettit, Freeman, Ont.

SCOTCH SHORTHORNS, YORKSHIRES & OXFORD DOWNS
Our Shorthorns are of the most noted Scotch families and the Scotch (imp.) bulls, Joy of Morning (imp.) = 32070 =, Benachie (imp.) = 69954 =, and Royal Bruce (imp.) = 80283 = have been used in succession. Two choice bulls of breeding age and heifers for sale. Also sheep and swine.
Erin Station, C.P.R. L.-D. Phone
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Kendall's Spavin Cure has now been refined for human use. Its penetrating power quickly relieves swellings, sprains, bruises, and all forms of lameness. It is just what you need around the house. Write for many letters from users to prove its effectiveness.

T. J. Smith, Spencedale, Ont., says—
"Have used Kendall's for many years in my stable and house and it never has failed us yet."

Kendall's Spavin Cure

—has been used by horse-men, veterinarians, and farmers for over 35 years. Its worth has been proved, for spavin, sprain, curb, ring-bone and the many other hurts that come to horses.

ONION LAKE, Sask., April 22nd, 1915.
"Kendall's Spavin Cure is about the best all-round liniment for both man and beast that I know."
THE HUDSON'S BAY COMPANY.

112



Get Kendall's Spavin Cure at any druggist's. For horses \$1. bottle—6 for \$5. Refined for man 50c.—6 for \$2.50. "Treatise on the Horse" free from druggist or write to
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SELDOM SEE

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

ABSORBINE

TRADE MARK REG. U.S. PAT. OFF.

will clean it off without laying the horse up. No blister, no hair gone. Concentrated—only a few drops required at an application. \$2 per bottle delivered. Describe your case for special instructions and Book 8 K free. ABSORBINE, JR., antiseptic salve for mankind. Reduces Painful Swellings, Enlarged Glands, Goitre, Wens, Bruises, Varicose Veins, Varicostics, Old Sores, Allays Pain. Price \$1 and \$2 a bottle at druggists or delivered. Manufactured only by W. F. YOUNG, P. D. F. 258 Lyman Bldg., Montreal, Can.

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SHORTHORN BULL

Royal Warrant Imp. = 86056 = (113205)

Rosebud-bred son of the great Newton Crystal. Photo and extended pedigree sent.

H. M. VANDERLIP
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GLENFOYLE SHORTHORNS

7 bulls, big, straight, smooth, fleshy fellows, some from cows milking 40 to 60 lbs. a day. Also a few out-standing heifers that are bred. Three young cows. Prices right. Bell 'phone.

Stewart M. Graham, Lindsay, Ont.

Northlynd R.O.P. Shorthorns and Jerseys—Butterfly King 19th heads our Shorthorn herd. Edgeley Prince Sunbeam heads our Jersey herd. For sale: A few young heifers and bulls, the get of these great bulls, out of high-record cows. G. A. Jackson, Downsview, Ont.

Shorthorn Bulls for sale, by Mina Boy 18th, sire of first-prize calf at Guelph. Also one imp. Clydesdale stallion. GEO. B. ARMSTRONG, Teeswater, Ontario
Mildmay, G. T. R. Teeswater, C. P. R.

DUAL-PURPOSE SHORTHORNS
Plaster Hill Herd—Five young bulls, seven to fifteen months old. A number of cows in our herd with high records. Visitors always welcome.
F. Martindale & Son, Caledonia, Ont.

MARDELLA SHORTHORNS
Bulls, cows, heifers. Have size, quality; breeding dual-purpose cattle over 40 years. Have great milkers and beefers. Glad to have you see them, or write—Thomas Graham, Port Perry, R.R. No. 3

Questions and Answers. Miscellaneous.

Lice on Hogs.

We are troubled with a few lice on our hogs. Give a remedy for them, and a disinfectant for hog pens. S. J.

Ans.—Any of the advertised sheep dips are effective. Coal oil is also a sure remedy, but there is danger of it slightly blistering the skin. Lard can be mixed with linseed oil and applied with a rag. Some use ordinary machine oil, while others steep tobacco and apply the liquid to the hogs. Clean the walls and apply a coat of whitewash to which has been added a little carbolic acid. Coal-tar disinfectants advertised in these columns may be applied as they prove effective in destroying vermin.

Ventilation—Wintering Bees.

1. I have some clover-seed chaff. Is it advisable to feed this mixed with other chaff or cut straw?

2. How many openings, and of what size, are required to ventilate a stable 70 feet by 45 feet and 8 feet high? I expect to put on three ventilators. What size should they be?

3. When wintering bees indoors, what is the lowest temperature they can be kept at? J. K.

Ans.—1. Many feed the clover-seed chaff by itself, but we would prefer mixing it with other chaff or cut straw.

2. It is customary to figure out the size of ventilators so as to allow a certain amount of air for each animal in the stables. There are two systems of ventilation, known as the Rutherford and the King system. The total cross section of the area of the intake should allow at least 15 square inches per head of cattle or horses, that is, there should be about one square foot of intake for each ten head. The outlet should be double the capacity of the intake. The intake openings should be so distributed as to permit of the air entering from as many sides as possible, and no opening should be less than four inches wide and ten inches long. The fresh air may enter through openings about two feet from the floor. To prevent a direct draft on the stock, board or tin should be placed over the openings in such a way as to shoot the fresh air upwards. In exceptionally cold weather the intake of fresh air may be closed by covering the opening with a bag. The outlets should never be less than eighteen inches across, and should be built of two-ply lumber with an air space in order to make them air-tight and to lessen the danger of the air condensing in them. They should be on the same principle as a chimney. If the warm vapor commences to condense their action ceases more or less. Some recommend that the outlet commence at the ceiling, but the coldest air is at the floor, and also the cattle breathe the impurities directly downward, and, as carbon-dioxide is heavier than air, it tends to remain near the floor. Consequently, if the outlet commences at the floor there is greater likelihood of these impurities being removed. However, an opening should be provided at the ceiling in order to allow the escape of warm air should the stable become overheated. The size of the intake and outlet depends more on the amount of stock kept in the stable than on the size of the stable. From the figures previously given the size of intake and outlet for the stable mentioned, can be figured out according to the number of horses or cattle in the stable.

3. About 48 degrees is considered to be the best temperature for wintering bees indoors. The temperature should be reduced to about 42 degrees when the faeces commence to accumulate.

Bee-Keepers' Short Course.

After the annual convention of the Ontario Bee-keepers' Association, held last December, the next event of interest to bee-keepers is the Short Course in Bee-keeping at the Ontario Agricultural College, Guelph. The need of more practical work at a winter course has necessitated adding another week to it, and the course will start January 9 and conclude on the 27th. A very attractive program has been arranged and is, at the time of writing, in the hands of the printer. People wishing a copy should write Morley Pettit, Provincial Apiarist, O. A. College, Guelph, Ontario.

Life Insurance A Privilege

WE are fortunate, living as we do in the age of the telephone, the wireless, the steam railway and, above all, in the age of life insurance.

Life insurance is a comparatively modern invention, and has not been known for more than a few generations.

In the old days, if a man lost his life prematurely, his widow and children were in most cases left destitute: the only remedy thought of was the poor-house.

By means of life insurance the modern man can make provision for the maintenance of his family in the event of his death.

The Mutual Life of Canada will pay the beneficiary a fixed income if desired and this will continue at least twenty years, payments monthly or yearly.

Is this not a vast improvement on a system which entailed a life of labor, dependence or of charity?

Life insurance is a great privilege, and fortunate is the man who is in good health so that he can secure its protection for those whom he loves.

Life, Limited Life and Endowment Policies.

The Mutual Life Assurance Company of Canada

Waterloo, Ontario

Robert Miller Pays the Freight.—I have now ready for sale, some extra choice young bulls of gilt-edged breeding, some young bulls bred from the best milking Shorthorns known to me, and of good form as well. I have some young cows and a lot of heifers, all that are old enough are in calf to great sires, amongst them some of the best in both breeding and form that I have ever had.

I have several cows that have made wonderful records, others are in the making; will spare a few of them if desired; two cows in the lot are making records of over 13,000 lbs. milk that is rich in butter-fat. These cows are well-bred and they are the ideal dual-purpose type. The bulls are bred from them and their sisters.

Write for what you want and you will get an immediate reply with full particulars. Stouffville Post Office, Telephone, Telegraph and Station. I live near station. Robert Miller, Stouffville, Ont.

SHORTHORN BULLS—SHORTHORN FEMALES

A HERD THAT YOU WILL LIKE

You will like our females; you will like the breeding and you will like the sires that have been used on these in the past year. Right Sort (Imp.), Bandsman (Imp.), Newton Friar (Imp.), Lytton Selection, Escana Champion—all these bulls have been used in the past year. We can show you some young bulls by these sires that are show calves. Come and see them or let us send you particulars. We can also spare some females bred to them; heifers, four and six-year-old cows, as well as cows with calves at foot.

WM. GHENT & SONS, FREEMAN P.O., ONT. Farm 300 yds. from Burlington Jct., G.T.R.

GLENGOW SHORTHORNS AND COTSWOLDS
Pure Scotch in breeding, we have an exceptionally choice lot of bulls for this season's trade, ranging in age from 8 to 15 months, big mellow fellows and bred in the purple. Also ram and ewe lambs of first quality.
Wm. Smith & Son, Columbus, Ont. Myrtle, C.P.R., Brooklin, G.T.R., Oshawa, C.N.R.

Oakland Shorthorns

John Elder & Sons, Hensall, Ontario

51 to select from. 20 breeding cows and as many choice heifers, many of them bred, also a lot of choice young bulls, all of the dual-purpose strain. All sired by choice bulls and registered and offered at prices to live and let live.

MEADOW LAWN SHORTHORNS

We are offering a splendid lot of young bulls from 10 to 18 months old, of the low-set, thick, fleshy type from good milking dams. You are invited to inspect this offering.
Elora, R. R. No. 1, F. W. EWING

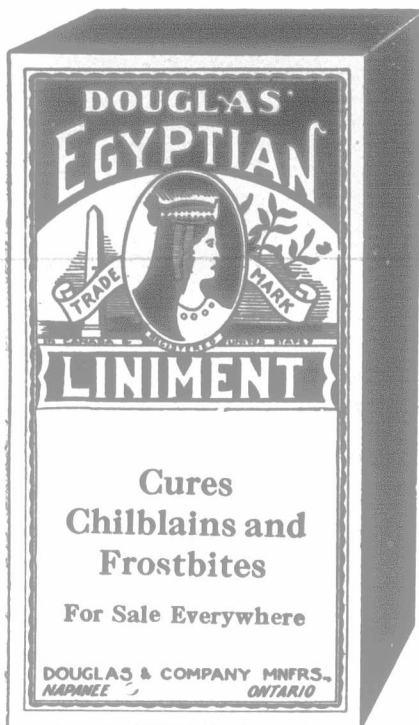
Creekside Farm Shorthorns We have for sale at present, a number of young things by our former herd sire, Clan Alpine, (the Claret bred bull by Proud Monarch). We like them, so will you. If it's young bulls, or a few females you need, we would welcome a visit from you. Write or phone, visitors met by appointment
Geo. Ferguson, Elora Sta. C.P.R., G.T.R., Salem, Ontario

WILLOWBANK STOCK FARM SHORTHORN HERD

Established 1855. This large and old established herd has at the head the two great bulls: Imported Roan Chief = 60865 =, a butterfly, and the prizewinning bull, Brown Dale = 80112 =, a Mina. An extra good lot of young stock to offer of either sex. Splendid condition. Good families of both milking strain and beef.
JAMES DOUGLAS CALEDONIA, ONT.

Choice Breeding High Quality
SCOTCH SHORTHORNS
We are offering this fall the choicest lot of young herd headers we ever bred, several are of serviceable age, high in quality, rich in breeding. Also a number of heifers.
GEO. GIER & SON, WALDEMAR, R.M.D. Grand Valley Sta.

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"King Segis Pontiac Duplicate" is a son of "King Segis Pontiac," sire of more high-priced bulls than any other in U.S.A. Duplicate's dam is by King of the Pontiacs, having made 21 lbs. butter, 17,500 lbs. milk at 2 years, and is sister to two 40-lb. cows (one 44 lb.), seventeen 30-lb. cows, also sister to 185 A.R.O. cows, a showing made by no other bull, living or dead. One of Duplicate's first tested daughters is Queen Pontiac Ormsby, first heifer in Canada to give 600 lbs. milk in seven days. Write and get a brother of this great heifer for your next sire. **R. M. Holtby, Port Perry, Ont.**

Glencairn Ayrshires Herd established 40 years. Producing ability from 8,600 to 11,022 lbs. If that sort of production appeals to you, we have heifers all ages and young bulls for sale. **Thos. J. McCormick, Rockton, Ont. Copetown Sta., G.T.R.**

The Annual Meeting of the Experimental Union.

Arrangements have been completed for holding the 38th annual meeting of the Ontario Agricultural and Experimental Union at the Ontario Agricultural College, Guelph, on the 9th and 10th of January. Owing to the peculiar weather conditions of the past year, the results of the co-operative experiments conducted throughout Ontario on between three and four thousand farms will be of peculiar interest and value. Since the last meeting, co-operative experiments have been conducted throughout Ontario with varieties of farm crops; quantities of seed per acre; mixed grains for grain production and for fodder; farm-yard manures and commercial fertilizers with winter wheat, potatoes, mangels and rape; the eradication of weeds; the reforesting of waste places; bee-keeping in Ontario, etc.

Not only will the results of the co-operative experiments be presented, but several agricultural subjects of importance will be discussed at the annual meeting, some of which are as follows: "What Ontario Should do in Regard to Potato Production," "Potato Growers' Co-operative Associations," "The Farmers' Apple Orchard," "The Home Vegetable Garden," "Best Sources of Seed for 1917," "The Production in Ontario of Food-stuffs, 1-Vegetable Products, 2-Meat Products and 3-Dairy Products," "Cultivation of the Soil," "Management of Soil Fertility," etc. Some of the speakers are: Henry G. Bell, Chicago; Dr. G. C. Creelman; Andrew Elliott; Hon. Nelson Monteith; Prof. Jas. Murray; Prof. H. H. Dean; F. C. Hart; Prof. G. E. Day; R. S. Duncan, and A. H. McLennan.

All sessions of the Union Meeting to be held on Tuesday and Wednesday, January 9th and 10th, are open to any person interested in agriculture, and everyone is welcome to take part in the meeting. Cheap railway rates have been arranged on the certificate plan. For fuller information and a copy of the program apply to C. A. Zavitz, Ontario Agricultural College, Guelph, Ontario.

Questions and Answers.

Miscellaneous.

Horse Book.

Let me know, through your valuable paper, where I could get a horse book telling me all about stallions and mares.

A READER.

Ans.—The question is rather ambiguous. If it's a book giving the history of the breeds, Plumb's "Types and Breeds of Farm Animals," would prove interesting. For diseases of horses "Farmers Veterinarian," by Burkett, would be valuable. Other books are "Productive Horse Husbandry," by Gay, and "Horse Book," by Johnstone. These may be secured through this office.

Crossing Breeds—Books on Shorthorns.

1. Would a dual-purpose Shorthorn bull be satisfactory to use on a grade Holstein herd to increase the beefing quality of the offspring, or should a beef-bred animal be used?

2. Where can a person get a book on the raising and breeding of Shorthorn cattle, with explanation of the families?

3. Why is it that we never see any discussion of the new Dairy Standard Act in the Advocate? I think it should be discussed, as I consider it very unjust legislation.

W. W.

Ans.—1. We do not advocate crossing of the breeds. The offspring of a dual-purpose Shorthorn bull would show a tendency toward beef form, although possibly not to the same extent as from a straight, beef-bred sire.

2. There is a book published entitled "The History of Shorthorn Cattle," by Sinclair. "Types and Breeds of Farm Animals," by Plumb, also gives the history of different breeds of animals. Both these books may be secured through this office.

3. Reference has been made to the new Dairy Standards Act on several occasions in the Dairy Department of our paper.

FERTILIZERS FOR 1917

The time is now at hand when you must purchase your requirements of fertilizers, and your concern is to get the best value for your money. One ton of

SYDNEY BASIC SLAG

costs \$20, and hundreds of Ontario's leading farmers say it gives better results than other goods costing dollars more. You have been reading lots about BASIC SLAG, and we know you have been thinking of trying it. Why not get a ton this season? You are making no experiment. Over 3,000 tons were used in Ontario in 1916, as against 230 tons in 1913, the first year of its introduction. The world's consumption is four million tons.

If you don't know our local agent, drop us a line, and we will put you into communication with him, or if we are not represented in your territory, perhaps you could distribute a car of 20 tons among your neighbors.

The Cross Fertilizer Co., Limited
Sydney, Nova Scotia

Yearling Heifers For Sale

As our stables are full, and expect several more calves shortly, offer for quick sale 3 yearling daughters of Dutchland Colantha Sir Mona; also 2 beautiful daughters of Pontiac Korndyke Het Loo. The 35-lb. bull is sold. We also have a 17-months' bull by King Pontiac Artis Canada, and out of a 25-lb. sister of the great May Echo. Another, same age, by Dutchland Colantha Sir Mona, and from the noted 25-lb. show cow, Cherry Vale Winner. Come and see these, you will like them.

Gordon H. Manhard, Supt.

W. L. Shaw, Newmarket, Ont.
Stops 69 Yonge St., Toronto and York Radial Cars.

HIGHLAND LAKE FARMS

Offer for sale at attractive prices a few choicely bred Holsteins. No. 1—A yearling son of a 34-lb. bull, and a 20-lb. 3-year-old prizewinning cow. No. 2—An 8-months' son of a 34-lb. bull and a 16.21-lb. 2-year-old granddaughter of King Segis. The dams of these bulls are in our foundation herd, and will be tested again at next freshening. Write for printed pedigrees. We also have for sale a few females bred to our herd sire, KING SEGIS PONTIAC CANADA.

R. W. E. BURNABY (Farm at Stop 55, Yonge St. Radial) Jefferson, Ont.

HOLSTEIN BULLS READY FOR SERVICE

Two are by King Korndyke De Kol, a son of the great Pontiac Korndyke. One is from a 25-lb. 3-year-old, and the other from Queen of Oxford, dam of Queen Butter Baroness. We have others younger, by King Walker Pride, a 24.36-lb. son of King Walker. Write us also for females.

COLLYER V. ROBBINS, BELL PHONE WELLANDPORT, ONTARIO

DUMFRIES FARM HOLSTEINS

Think this over—we have 175 head of Holsteins, 50 cows milking, 25 heifers due to calve in the fall, and 60 heifers from calves up to 2 years, as well as a dozen yearling bulls, and anything you may select is for sale. Breeding and individuality the very best. S. G. & Erie Kitchen, St. George, Ontario

Hospital for Insane, Hamilton, Ont.

Holstein bulls only, for sale. One fit for service from a R. of P. dam, testing 4.08 per cent. butter-fat; also four ranging from three to nine months, all from our Korndyke bull. Apply to Superintendent.

Orchard Leigh Holsteins—Special offering, three heifer calves 6 to 11 months, sired by King Veeman Ormsby. Several fine bulls from cows with records of 29.20 lbs., 27.96 lbs., and 20.79 lbs. butter in 7 days, and from a 18.69-lb. junior two-year-old. Write, or better, come and see them.

(Electric car stops at the gate.) JAS. G. CURRIE & SON, Ingersoll, Ont.

THREE HOLSTEIN BULL CALVES

Twelve months old, and good individuals. They are all sired by Lynwood Duke, a son of Daisy Poesh (29.01 lb., 4 yr. ol d) and sweepstakes winner, Ottawa Dairy Test, 1914. We also have others younger and would price a few females, freshening early. Everything offered has official backing. Write W. J. BAILEY, JARVIS, ONTARIO.

PIONEER FARM HOLSTEIN HERD

Of long-distance record makers, the kind that milk heavy and test around 4 per cent. the whole year. Of the six highest butter-fat-record two-year-olds in Canadian R. O. P.; one half were bred at Pioneer Farm. Young bulls for sale from dams of the same breeding as these and sired by Canary Hartog whose three nearest dams average 30 lbs. butter in 7 days and 108 lbs. milk in one day.

WALBURN RIVERS, R.R. NO. 5, INGERSOLL, ONT. Phone 343 L. Ingersoll Independent.

30-LB. GRANDSON OF KING SEGIS

Two years old. The records of his dam, grandam and her full sister average 30 lbs. Mostly white, long, straight, evenly developed—very smooth and stylish. A real promising individual, weighs over fifteen hundred pounds, price two hundred dollars, on car, Toronto.

R. F. HICKS, Newton Brook, York Co., Ont.

Bog Spavin

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

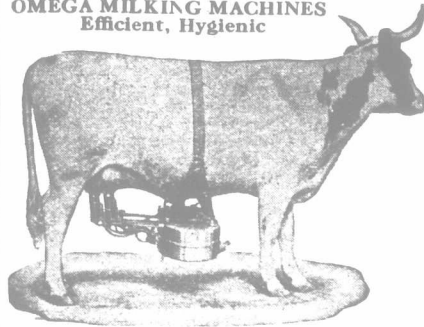
FLEMING'S SPAVIN CURE (Liquid) is a special remedy for soft and semi-solid blemishes—Dog Spavin, Thoroughpin, Splint, Curb, Capped Hock, &c. It is neither a liniment nor a simple blister, but a remedy unlike any other—doesn't irritate and can't be imitated. Easy to use, only a little required, and your 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.

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WRITE TO-DAY for free booklet describing the special features of the Omega.
C. Richardson & Co., St. Mary's, Ont.

Ayrshires

The value of a good dairy cow depends upon the quantity of high-testing milk that she can give from year to year under normal conditions. Daisy of Fernald—26735—in four years and nine months, produced 73,456 lbs. milk and 2,879 lbs. butter-fat. When you start in pure-breeds, start with Ayrshires. For information write:

The Canadian Ayrshire Breeders' Association
W. F. Stephen, Sec.
Huntingdon, Que.

Choice Offering in Ayrshires

At Special Prices—Several young bulls of serviceable ages. All from R.O.P. sires and dams. Come and see them.
Jno. A. Morrison, Mount Elgin, Ontario

JERSEY BULLS. For sale—Knoolwood's Raleigh sire Fairy Glen's Raleigh (Imp.), 22 daughters R. O. P.; dam Eminent Honeycomb (Imp.) R. O. P. 596 lbs. butter; reserve champion on island. Capt. Raleigh ready for service, sire Knoolwood's Raleigh, dam Mabel's Post Snowdrop; first as calf, 1914, first Junior Champion, 1915, 2nd 1916, Toronto. Milked 38 lbs. day, 6 per cent. milk, first calf. Ira Nichols, Burgessville, Ont. R.R. No. 2

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Manufacturers, Baden, Ont.

SHROPSHIRE

We have something particularly good in Ram and Ewe lambs this year; and a choice lot of young Shorthorns, bulls and heifers. Peter Christie & Son, Manchester P.O., Port Perry, Ont.

Tower Farm Oxfords

Champion Oxford flock of Canada. Choice Oxfords of all ages for sale. Prices reasonable.
E. Barbour & Sons, R.R. 2, Hillsburg, Ont.

Willowbank Dorsets

Our present offering, while not large, includes some extra good yearling and ram lambs. All imported sires. Jas. Robertson & Sons, Hornby, Ont.

Maple Leaf Shropshires & Shorthorns

In Shropshires, have only ewe lambs now to offer. In Shorthorns one good 3-year-old Missie bull, bull calves and heifers of popular families.

JOHN BAKER, R. R. No. 1, Hampton, Ont.

Please mention "The Advocate"

Questions and Answers.

Miscellaneous.

Killing Ticks in Winter.

What is the best way to remove ticks from sheep in cold weather? What is the reason for a horse's mane coming out, and is there a remedy? K. C.

Ans.—Owing to the density of the fleece it is impossible to work any powder into the body which will be effective in destroying the ticks. By exercising care, any of the proprietary sheep dips advertised in these columns may be effectively used. It is not advisable to dip the sheep in cold weather, but some shepherds have found that by taking a small quantity of the dip, not more than a pint, and opening the wool along the centre of the back and pouring on the small quantity of material, that the ticks are destroyed without any danger to the sheep.

The hair may come out from several causes, and it is just possible that the horse has a slight attack of mange, although no particular symptoms are given. If it happened to be the disease mentioned, wash the affected parts thoroughly, using carbolic soap and a brush, and apply some of the disinfectants advertised. It is necessary to continue treatment for several days and the stable should be thoroughly disinfected. There is a possibility that the hair may be coming out, due to some other skin trouble, and the first thing to do would be to administer something that would purify the blood.

Implement Shed.

Could you give me a plan and specification of the frame work of an implement shed 20 by 36 x 10 feet? Material to be used is 2 by 4-inch scantling on a low foundation. A. G.

Ans.—Each winter we publish plans of barns and stables of a certain size, but we have found it impossible to give plans and specifications for barns, stables or implement sheds of different dimensions, as no two persons desire exactly the same style and size of building. Your local contractor will, no doubt, be pleased to furnish you with a plan of an implement shed of the dimensions given, and would also furnish the specifications. We might say, however, that the style which is commonly used has the studding or scantling set at 2-foot centres, spiked to a sill at the bottom, which may be made of two pieces 2 by 4, or 2 by 6, and the plate of the same material placed on top. The rafters are set at the same centre, and the length will depend on the pitch of the roof. Sixty scantling would be required for studding, that is, allowing for a double scantling at the corner; the same number will be necessary for rafters, and the number required for sill and plate would depend on the thickness. Between 1,200 and 1,300 feet of lumber will enclose the structure, with the exception of the roof.

The Pig's Lament.

O Pig of aldermanic size,
I would I were as plump and big
As thou art, happy, happy pig!
Thy shape enchants, thy beauties charm;
Thou art a credit to the farm.

"Master"—the pig looked up and sighed—
"I wish in youth I'd drooped and died;
For had I then from here been taken
I should at least have saved my bacon."

O pig! O pig! why this lament?
Were I as free from care, as sound
As thou art; were my limbs as round
As thine, O pampered pig of ease,
I'd happy be. Thou'rt hard to please.

"O master, 'tis the flesh you praise
That makes me sad. 'Id mend my ways
Were there but time—alas! alas!
Between to-day and Michaelmas."

But why did'st get so fat, O pig,
If fatness disagrees with thee?
O stupid pig, pray answer me,
And surely fat, and fat alone,
Scarce justifies that hollow groan?

"Ah, master!" came the doleful cry,
That rent the air and shook the sty,
"I got so blessed fat and big
Because I always was a pig!
And for poor pigs, O master, master!
Fat spells, near Christmas-time, disaster!"
ERNEST H. A. HOME.

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AMERICAN SEPARATOR CO., Box 1200, Bainbridge, New York

Glenhurst Ayrshires For 50 years I have been breeding the great Flos tribe of Ayrshires, dozens of them have been 60-lb. cows; I have lots of them get 60 lbs. a day on twice-a-day milking. Young bulls, 1 to 10 months of age, females all ages. If this kind of production appeals to you, write me.
James Benning, Williamstown, Ont.

YOUNG Brampton Jerseys BULLS
For the next fortnight we are making a special offering on young bulls, bred from the highest producing families ever introduced into Canada. Brampton Jersey and their descendants hold all Jersey R.O.P. records save one. Females, all ages, also for sale. B. H. BULL & SON, Brampton, Ont.

THE WOODVIEW FARM JERSEYS
LONDON, ONTARIO
Jno. Pringle, Prop.
Canada's Most Beautiful Jersey Herd Present Offering—Some high-class bull calves ready for service, from Record of Performance dams, including grand champion bull at last Western Fair and his full brother; also cows and heifers. State distinctly what is wanted, if writing. We work our show cows and show our work cows

EDGELEY STOCK FARM
The home of Canada's greatest producing Jersey, SUNBEAM OF EDGELEY, the Sweepstakes Dairy Cow at the recent Guelph test; is also the champion R.O.P. butter cow for Canada. Would a grandson or a great-grandson of this famous cow improve your herd? We have them. Write for particulars.
JAS. BAGG & SON, Woodbridge, C.P.R., Concord, G.T.R. EDGELEY, ONT.

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Largest and oldest importers and breeders of
OXFORDS
in Canada. Look up our show record, it will give you an idea of the kind of Oxfords we have for sale.
PETER ARKELL & SONS, Proprietors, Teeswater, Ontario
Customers, beware of imitations of this advertisement.

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We have a large number of choice males and females, all ages.
Weldwood Farm, Farmer's Advocate, London, Ont.

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Young sows bred for Nov. and Dec. farrow, and a nice lot of boars ready for service. Write:
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Pine Grove Yorkshires. Bred from prize-winning stock of England and Canada. Have a choice lot of young pigs of both sexes, pairs not akin, to offer at reasonable prices. Guaranteed satisfaction.
Joseph Featherston & Son, Streetsville, Ont.

Prospect Hill Berkshires
Young stock, either sex, for sale from our imported sows and boar. Also some from our show herd, headed by our stock boar, Ringleader. Terms and prices right. **John Weir & Son, Paris, Ont., R.R. 1**

Meadow Brook Yorkshires - Am offering sows ready to breed and a few choice boars fit for service; also several litters ready to wean Dec. 1st. All bred from prize-winning stock. Prices reasonable.
G. W. MINERS, R. R. 3, EXETER, ONT.

Yorkshires Sows bred and younger; boars 2 and 3 months, sire Our Champion, winner of 12 firsts and 5 championships in 2 years' showing at Toronto and Ottawa.
Bronze turkeys, from prize-winning stock.
Wm. Manning & Sons, Woodville, Ont.

Lakeview Yorkshires If you want a brood sow, or a stock boar of the greatest strain of the breed (Cinderella), bred from prizewinners for generations back, write me. Young pigs of all ages.
JOHN DUCK, Port Credit, Ontario

Morrison Tamworths and Shorthorns. Bred from the prizewinning herds of England. Tamworths, both sexes, 140 to choose from; Shorthorns, 5 bulls, from 5 to 10 months old, reds and roans, dandies. Females of the best milking strains. **Chas. Currie, Morrison, Ont.**

Cloverdale Berkshires and Shropshires - In Berkshires I can furnish boars or sows, all ages, pairs not akin. All breeding stock imp. or from imp. stock. In Shropshires can furnish rams or ewes, any age, from imp. stock. Prices reasonable.
C. J. LANG, R. R. NO. 3, Burkton, ONT.

Duroc Jersey Swine. I have been importing and breeding Duroc Jerseys for twenty-five years. Present offering some choice sows, bred; a few sows six months old and a number of pigs two months old.
Charles Farough R. R. 1, Maidstone, Ont.

Pollands, Durocs, & Berkshires
Young stock at all times, both sexes, and all ages. Can also supply anything in Dorsets or South-downs. Everything priced to sell.
CECIL STOBBS, Leamington, Ont.

Sunnyside Chester Whites and Dorsets. In Chester Whites, we have both sexes, any age, bred from our champions of many years. In Dorsets we have ram and ewe lambs by our Toronto and Ottawa champion, and out of Toronto, London, and Guelph winners. **W. E. Wright & Son, Glanworth, Ont.**

Yorkshires & Shorthorns
Choice young sows, four months; two good young bulls, six and eleven months.
B. ARMSTRONG & SON, Codrington, Ont.

Questions and Answers. Miscellaneous.

Tonic For Horse.

1. One of my horses has a bad cough. She has always been well taken care of, and outside of the cough, appears as well as the rest of the horses. Of late I have fed hay, and about two quarts of oats and one teacupful of ground flax in the morning. At noon, three quarts of oats and oat straw. The night feed consists of 2 quarts of boiled barley, one quart of oats, and one oat sheaf. The last week or ten days she has eaten very little hay or oat straw, and seems to have trouble to eat her grain. She looks well and is right up on the bit. What do you consider is the matter with her?

2. What is a good tonic for a horse? P. M.

Ans.—1. From the symptoms given we are inclined to think that the horse's mouth is sore. Have a veterinarian examine the mouth. There may be a possibility that the teeth need dressing.

2. Give a teaspoonful of the following, three times daily, viz., equal parts of sulphate of iron, gentian, ginger and nux vomica. Feed well and give daily exercise.

Colt Goes Lame.

I have a colt rising four years old, which went lame in one of his front legs about two months ago without any apparent cause. I could find no soreness in any part of the leg, shoulder or foot, but thought he might have wrenched his shoulder rising in the stall. I rubbed his shoulder well for a few days with turpentine, and he got all right in about a week. Two months later the same thing happened again with the other front leg. I rubbed it same as I did the other and he is all right again. I could find no sore spot anywhere and no swelling. He had been driving on a 20-mile mail route every second day. This is the only kind of work he ever did. Could you explain cause? Would it be rheumatism? W. J. B.

Ans.—There is a possibility that the colt sprained some of the muscles of the leg or shoulder. This is quite easily done when driving on the road. As the lameness is only of short duration, it can be attributed to some local cause, as a sprain or wrench. It is doubtful whether the lameness would leave so quickly if it were due to rheumatism. Treatment for this latter is to keep the horse dry and comfortable, and give two drams of salicylic acid three times daily. Bathe the affected parts three or four times daily with hot water, and after bathing rub well with a liniment made of four ounces of alcohol, one ounce oil of turpentine, four drams of camphor, and water to make a pint.

Hernia—Roup.

1. I have a spring colt which has been ruptured since it was a week old. I spoke to the veterinarian about it, and he advised me to let it go until the cold weather and he would treat it for me by putting on a clamp. I have been told that this is very hard on the colt, and that a better method would be to put a belt around the colt and fasten a pad to it that would rest on the rupture. Two or three weeks of this treatment would effect a cure. Do you think this would be satisfactory, or would it be advisable to allow the veterinarian to operate?

2. Give treatment for roup in hens.
Ans.—1. Apply the truss or belt and arrange it with straps or strings passing forward and attached to a strap around the colt's neck, so as to prevent the truss from slipping out of place. Use this for a while, and if it does not effect a cure have your veterinarian operate.

2. If the eyes and nose are attacked, they should be carefully washed at least twice a day with an antiseptic solution, such as two per cent. boric acid in a decoction of chamomile flowers. This kills the organisms. In the early stages of the disease treatment may be effective by the use of one or two per cent. of permanganate of potash. The bird's head is plunged into the solution for twenty or thirty seconds, or as long as the bird can tolerate it. The solution is distributed through the nostrils in this way and has a disinfecting action. When solid tumors occur, they should be opened so that the skin may bleed freely and the cheesy matter removed. The prepared roup cures, as advertised, also prove effective.

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