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# THE FARMER'S ADVOCATE

AND HOME MAGAZINE

\* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE. \*

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VOL. LI.

LONDON, ONTARIO, JANUARY 6, 1916.

No. 1215

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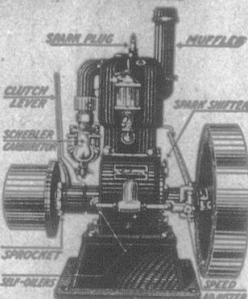
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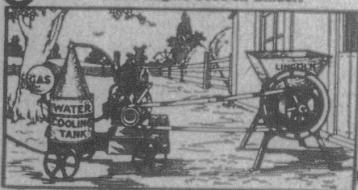


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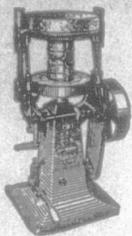
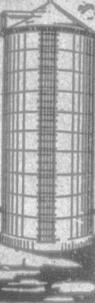
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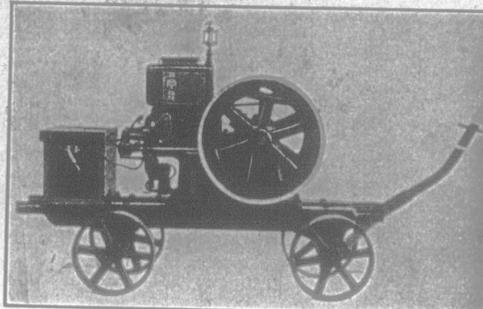
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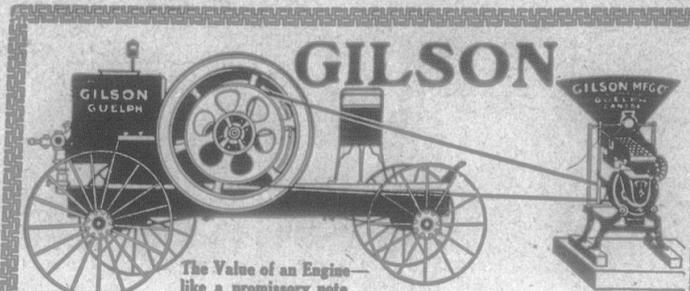
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# The Farmer's Advocate and Home Magazine

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LI.

LONDON, ONTARIO, JANUARY 6, 1916.

1215

## EDITORIAL.

Plan to attend conventions this winter. Agriculture must not lag.

More milk will require either more feed or more judicious use of the feed fed. Study rations.

An article in this issue describes some steer feeding operations. Give us your method and its results.

Live stock will not object to the color of the grain nor yet to sprouts, but they do not, as a rule, relish musty feed of any kind.

In no other way can the rent or interest on invested money be met by the farmers of this country, more surely and safely than by keeping good stock.

At present it does not look as though there would be any unemployment problem in the rural districts next summer, and there should be none in the cities.

Most New Year resolutions are broken, but those who resolved to be better farmers in 1916 than they were in 1915 surely will do their part to keep their good pledge.

We can scarcely believe that the Kaiser is anxious for spring. We would rather think that he is anxious about what will happen to him when spring comes.

Every farmer could get eggs in winter if he would compose his laying flock of early-hatched pullets, fed on a variety of feeds, and housed in a light, well-ventilated, dry house.

If the Farmers' Club in your district has made a success of buying or selling, give our readers the benefit of your experience. Handling goods together pays well if properly managed.

It must keep the Kaiser busy looking for a new front upon which to open an attack. Gradually the gaps close up and the pen about the wild man of Europe grows stronger and tighter.

Go to the Institute meeting and take part in the discussions. If you cannot agree with the speaker say so, with reasons, and so help the meeting to prove interesting and valuable to all.

It is not always the stock that is most closely housed that comes through the winter in the best condition. Very often young cattle, feeding ewes and breeding sows do better with the run of the farmyard, and a shed or open pen for shelter. Of course, they must be liberally fed.

The question of whether or not a man should enter the fight now being waged for freedom, should be decided by him on the basis of duty. If he can be of more service at the front as a soldier, and feels it his duty to go there, no one would for a moment attempt to influence him otherwise, but if he feels that the old farm is a factor in this fight and must be worked to the utmost, and that his duty lies in that direction, then no one can point the finger of scorn at him for doing his duty at home. Produce more! It requires men to produce even as much as Canada did this year.

### Save One Handling.

Last week we advised all those who could possibly arrange it to apply their farm-yard manure to the land, as made, in winter, spreading it on the snow. This is a great summer labor-saver, and as a general thing ensures a much smaller loss of plant food than where the manure is badly looked after in the yard, subjected to rains, and often water from the eaves pouring over it, into it, and through it carrying away its most valuable constituents. Analyses have shown that fresh stable manure contains about 12 lbs. of nitrogen, 2.7 lbs. of phosphorus, and 9.1 lbs. of potassium, per ton, while, after remaining three months in the yard, such manure contains only 7.4 lbs. of nitrogen, 2.3 of phosphorus, and 3.4 of potassium. There is a heavy loss of nitrogen and potassium. Experiments have proven that yields of grain and hay after fresh manure has been applied have been considerably larger than after an equal quantity of manure which had remained some months in the yard. The manure should go to the field as made.

This year, when labor promises to be very scarce, the practice of hauling out and spreading as made should appeal to all, and as a labor-saver in hauling many have their stables so equipped as to be able to drive through with team and sleigh, (or wagon) and load ready for the field, thus saving one handling. A representative of this paper recently visited several steer feeders, and found that most of them had adopted this method of getting the manure from the stable to the field by the most direct route. Those using litter carriers or having stables which could be better arranged through their use than by the wide passage for them, can very easily load their sleighs for the field by dumping the carrier into the sleigh and drawing away each day as the sleigh is loaded. This practice is important as a labor-saver, and as a conserver of plant food.

### Building Up the Farm.

During the next few years farm labor is likely to be comparatively scarce in Canada, and the farmer's ingenuity may be taxed to the utmost in devising means by which the production of his farm may be kept at the maximum with the minimum amount of hired help, and at the same time ensure that the fertility of his land be not depleted. In short, the good farmer must plan to build up his farm with as little labor as possible. It has been time and again demonstrated that the easiest way, and, at the same time, the surest and safest method of doing this is through keeping live stock of some kind, and seeding down the increased acreage necessary to pasture the stock and provide hay for winter feeding. Where the help is available, of course, the best farmer must have a fairly short rotation of crops, but even this makes him less rush work than where the greater part of the farm is in cereals, necessitating more plowing and more cultivation and a greater rush through the summer season. Live stock with plenty of pasture and hay land distributes the work better over the year, the hay is removed earlier in the season, thus obviating, to some extent, difficulties which arise where much grain is grown and ripens at once. And production is not finished with the summer season, for, throughout the winter, the farmer is busy utilizing his labor and his feed to the best advantage in finishing live stock for market or

in producing milk. We believe, then, the best method to follow, if the farm is to be built up and profitable returns derived from it while hired help is hard to get, that a good deal should be seeded down and the live stock increased, both quantitatively and qualitatively. It is possible to clean a farm and increase its fertility through judicious pasturing, and the growth of the necessary corn or root crops to properly balance the rations of live stock through the winter. We would favor corn, we might say here, because it requires less hoeing and can be cleaned with much less man-labor than either turnips or mangels, however, these latter crops have their place. But the pasturing, itself, if the field is properly seeded and looked after, will serve to clean the land. We know one field which was badly infested with wild oats and which is now free from this pest, and is, as well, free from most other weeds. This field has been seeded down for four years, with hay cut from it three, pastured after each hay crop, and the fourth year pastured throughout the season, a number of sheep being the main stock kept upon it. It has returned a good profit from hay and pasture, and has gained in fertility and is much more valuable now because it is clean. The three main points to be looked after in building up the farm should be hoed crops, grass and clover crops, and live stock, and where the necessity arises through shortage of help a farm can be well managed with more grass and pasture and less grain crops than usual.

### Prompt Action Necessary.

We were pleased last week to be able to announce that the Ontario Horse Breeders' Association has appointed a committee of well-known horsemen to confer with the Minister of Agriculture and other agricultural authorities at Ottawa with a view to, in some measure at least, remedying horse market conditions in this country; particularly in so far as these are the result of conditions incident upon the war, and the closing of outside horse markets to this country. The situation has not been satisfactory for months past. Farmers have not been able to find a market for their surplus horses, and naturally they began to ask why, when they saw load after load of horses from the United States passing through on the way to the battle-grounds of Europe. The writer was in a stable only a few days ago where a farmer had eight horses, and only had work for four. These were pure-bred animals and not suitable for military purposes. However, there are large numbers of suitable horses for army purposes being held on the farms of this country, and if they were cleaned out it would make a market for the better class of breeding mares which would raise foals as well as do the farm work, and all to the profit of the farmer. We have felt for some time that something should be done to insure our horsemen a market at a fair price for the horses which they have now held a year, unsaleable. We hope the committee appointed states the case plainly when they get to Ottawa, and that the Minister and all those interested in agriculture and the horse business may bring about something which will make a keener demand for Canadian horses. If the Allied Governments could be induced to, or were permitted to, buy in this country, we feel sure that a keener demand would soon result. If the present condition of affairs goes on very much longer it is surely going to

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AND HOME MAGAZINE.**

THE LEADING AGRICULTURAL JOURNAL IN THE  
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Agents for "The Farmer's Advocate and Home Journal,"  
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have a very detrimental effect upon the horse-breeding industry of Canada. Many mares which should have been raising colts next year were not bred in 1915, and many more will be allowed to miss in 1916. Also, as is the usual case when the horse market is dull, many farmers use the poorer class of sires because they can get the use of them cheaper, and this in itself is a blow to the business. What should be done when the demand is slow is to use nothing but the very best and be sure of a horse which will be saleable at some price, but almost invariably the opposite course is taken and the horse industry is injured thereby. Prompt action is necessary to do justice to the Canadian farmer and to the horse-breeding industry.

**Neglected Training.**

Some farmers lose for themselves many dollars by neglecting the early training of their live stock. We have attended a large number of sales in our time where the live stock offered was not sold to the best advantage, because it appeared wild in the sale ring and had never been broken to lead properly on the halter. As a general thing, on the farm, horses are the only class of stock well broken to lead, but it is almost equally important that the cattle, particularly the breeding stock and especially pure-bred breeding stock, should be broken to lead as calves and be accustomed to walking along quietly on the halter, showing no nervousness, and, at the same time, making the best appearance to the observer. It cuts one-third the price off pure-bred stock when it must be turned loose in the ring and bolls here and there, from side to side, practically unmanageable. It would only require a short time each day during the winter months to break calves to lead, and once broken, they never forget it. Then the animal may be stood where desired, and may be handled without needless running and injury to itself as well as more work for the attendant. The other day we saw a colt coming four years old which has never had

the harness on, and which is running loose in a box stall, having never been broken to lead properly. This colt, if offered for sale under such conditions, would not bring anywhere near his value. He is another case of neglected training. No colt should ever reach the age of weaning from its dam before it has had at least some training at leading and handling. These things cannot be forced upon the stock when they get older, but if done at the proper time give the animals more confidence in their attendants and reduce their nervousness to a minimum, make them better feeders, more docile, more valuable as breeders, and the training stands their owner in good stead if they are chanced to be offered for sale at auction or otherwise. The same is true to a lesser degree with sheep and pigs. A buyer always likes to see sheep quiet, and accustomed to being handled, and he does not care to purchase breeding pigs which are literally "as wild as hawks." The best stockman gives all the stock an early training in being handled, and teaches them not to be afraid of the attendant, but rather to trust him. The colts are led, harnessed and driven at an early age. The cattle are all taught the meaning of the halter in calfhood, and the sheep and pigs walk toward the attendant rather than run away from him. Do not neglect the early training of your live stock.

**Foundations for 1916.**

A building is never stronger than its foundation, and the farmer should, at the present time, be laying the foundations for his work in 1916. The best farmers of the twentieth century are thinkers, and a good deal of the thinking, planning and arranging for the work of the year must be done during the first three months of that year in order that the remainder may turn out to the best advantage for the busy tiller of the soil. Crop rotations may have to be altered to suit changing conditions. Labor grows scarcer and will be increasingly scarce during the coming summer, and it will be necessary for the farmer to lay the foundations of his work that most of it can be accomplished by himself and the help he has with in his own home or through co-operation with his neighbors. It is this point upon which we wish to dwell. The social conditions in the country are not what they once were. Bees and the interchange of farm help have been growing scarcer each year, until about the only time one farmer helps another is at threshing and silo filling season. It would be a good thing if farmers in the different communities would get together this winter, at their Farmers' Club meetings, literary or social gatherings, or would call special meetings for the purpose of discussing how best to meet conditions during the coming year. Where neighbor plans to help neighbor, a great deal more work can very often be accomplished than where each works by himself. We would say that co-operation between farmers in a very local way should be made one of the corner stones of the foundation for 1916 farm work, and again we would advise that farmers attend all agricultural meetings held in their district, in order that they may keep abreast of what is going on, and so avail themselves of any hints that may be thrown out whereby they might improve their own conditions during the coming year. There seems to be a sort of apathy toward public meetings in the rural districts. People have lost the old-time interest in gatherings, even those of a social nature. Personal contact with other people always elevates the man who is capable of sifting the wheat from the chaff. By all means do not neglect the reading of the latest agricultural literature. The excuse is often heard these days, that with all his work the farmer has no time to read agricultural papers, and agricultural bulletins, and other literature of the farm, because all his spare time is taken up in becoming familiar with war news. We cannot afford to allow the doings in France and Flanders and on the other fronts, which doings are so variously reported day after day, to entirely abstract our minds from what we should know regarding agricultural operations in our own country, because so much of the suc-

cess of our army depends upon the efficiency of our farmers, and how well it is applied. Plan rotations, plan cultivation, plan for more and better live stock, plan co-operation with neighbors, plan more social intercourse, plan for better times, better farming and higher returns. Now is the time, by planning, to strengthen the foundation for the 1916 effort. Success to all!

**John Hay and the German Conspiracy.**

A vivid side light from the American point of view on the international machinations of Germany is thrown by "The Life of John Hay," one of the really important biographical works of the past year. With the advantage of a liberal education he enjoyed at an early day the singular privilege of being Secretary to probably the greatest of all Americans, Abraham Lincoln, during the four year's war period, when the President was hampered with all sorts of ill-advised designs organized and otherwise for a peace that would have proven inconclusive, and mischievous for an age to come by abandoning the great cause involved in the conflict. But Lincoln was too wise and resolute a man to be swayed by weak-kneed advisers. Subsequently, Hay became Secretary to the U. S. legations at Paris, Vienna, and Madrid, an editor on the New York Tribune, Ambassador to Great Britain, and Secretary of State under Presidents McKinley and Roosevelt, directing the peace negotiations with Spain and other critical affairs. He was, therefore, in a position to understand the intricacies of European affairs about as well as any one man could, and early became profoundly distrustful of the Pan-German policy which has now precipitated in the most terrific conflict of all history. He was one of the very few who diagnosed it as a conspiracy or intrigue against the United States and other powers, although he probably could not perceive all its ramifications, nor the time and place of its outbreak. He saw German teaching and organization gradually permeating the United States, until to-day it seems powerful enough to almost hold the Washington Government in leash. As early as 1896, Hay resisted German designs calculated to favor Spain. Part and parcel of the plottings were the Kaiser's secret negotiations to secure two harbors off the coast of Lower California and to occupy various South American ports. President Roosevelt met him squarely, and Secretary Hay was in no wise fooled when Prince Henry of Prussia was sent to America on a policy of blandishments, and the war emperor was firmly met on all points. From time to time, as the Kaiser began to rattle his scabbard, Hay realized more and more clearly the danger that menaced civilization, but the world, as a whole, took a more complaisant attitude. It is sometimes urged that had the alarming view of John Hay been more generally credited and greater military preparations made, the final Pan-German blow might have been averted. From what has come to light of the malevolent character of the Kaiser and his war lords, and the calculating deviltry with which their plans have been executed, they would probably have redoubled their preparations, and the delayed blow would have only been the more savage when it came. Germany having played false to every instinct of humanity and every international obligation—stands a convicted outlaw before the bar of humanity, and the very unpreparedness, if so it is to be described, of France, Great Britain and others, is their vindication to-day and will be in history. It was not within the ken even of John Hay to foresee the tragedy of Belgium and Serbia, Armenia and Poland, for which from Germany comes no sign of shame or remorse, no suggestion of compassion or restitution. What can the Ford pilgrims hope from such a power? The most colossal national robber and assassin in all history, Kaiserism, with the blood upon its hands and the stolen territories under foot would like to be left in guilty possession by an early peace, but her crimes cry out for punishment, and her conduct has whetted the sword of justice without which the world might just as well be surrendered to a reign of anarchy and the laws of the jungle, where wild beasts prey upon each other until the most ruthless survive.

The farmer who has a hired man not physically fit for the front will be about the only one to have help next harvest. There is an even more urgent business on at the front than harvesting, and yet our farms must be worked, and must produce abundantly. There is always hard work ahead of the farmer, and he deserves credit for the way he overcomes obstacles.

The practical knowledge of stock-feeding is far more valuable than that built upon reading the advice of other feeders, but an account of what another has done often helps a feeder to overcome some of the obstacles standing between him and success.

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Nature's Diary.  
A. B. Klugh, M.A.

In our consideration of the plant environment we come now to the soil factors. Water in the soil is the most important factor of all. Water is absolutely essential to plant-life, it is necessary for the existence of the protoplasm, which is the vital part of the plant cells, it forms the cell-sap, it enters into the composition of plant food (the water from the soil and the carbon dioxide from the air being formed into starch), all absorption of nutrient salts from the soil, all transference of food-material in the plant, takes place solely by the agency of water, it gives turgidity and consequent rigidity to plants. All plant movements take place through the agency of water. If a plant has not access to sufficient water the stomata close, and both the taking in of carbon dioxide and respiration cease. No other factor impresses its mark to such a degree upon both the internal and external structures of plants as does the amount of water available.

Water must be present in certain proportions in the soil for the successful growth of each species. Either too much or too little is injurious.

Water in the soil may be divided into two classes, that received from precipitation and held in the upper layers of the soil, and ground water.

Ground water is that collected above the impermeable stratum of soil. A layer of clay usually serves as a substratum of ground water. Ground water may contain salts in solution, but when it lies deep it is usually pure, because it has been filtered by the overlying layers of soil. The level of the ground water and fluctuations in this, according to the season of the year, depend upon the amount of precipitation and the evaporation. In many cases the ground water lies too high for certain plants, in other cases it is so far below the roots that they cannot use it. Thus the level of the ground water has a great influence upon the character of the vegetation. It has been found that where this level is at three inches in summer only rushes and sedges prevail, where it is at six inches below the surface sedges and some grasses occur, where it is twelve inches grasses predominate, where at fifteen inches cereals thrive in warm summers, where at from eighteen to twenty-four inches cereals do well in moist or cool summers, and where it is at from thirty to forty inches deep cereals do not thrive, and only plants adapted to very dry conditions do well.

In the layer of soil lying above the water-table the amount of water is influenced by the facility of percolation of the soil, its power of raising water, its water-capacity, the amount of precipitations, and the influx of surface water.

The facility of percolation of soil depends mainly on the size of the particles of the soil. Very fine-grained soil, especially clay and certain humus soils, are almost impermeable to water falling upon them in the form of rain or snow when the soil is densely packed, whereas the coarser-grained and looser the soil the more freely it is penetrated by precipitations. Water penetrates most readily into sand, less readily into humus, and least of all into clay.

The power of the soil to raise water from the deeper layers depends also mainly upon the size of the particles. Sand raises water very rapidly, clay raises it slowly, and humus fairly rapidly. But the height to which it is raised in different soils is in inverse ratio to the rapidity of its rise, being least in sand, greater in humus and greatest in clay.

By the water-capacity of a soil we mean its power to take up and retain liquid, so that none of it sinks into the deeper layers. It depends upon the adhesion of water to the particles of the soil, and varies with the capillary power of the soil and with the nature of the particles. The water capacity is greater, the more numerous and narrow are the spaces in the soil and the more uniform their size. Water-capacity is least in sand, greater in clay and greatest in humus. Some kinds of soil display so strong an adhesion to water that when this is added the little spaces between their solid components are widened and thus their volume is increased, that is, they swell; while on the other hand, if deprived of some of their water they shrink. When wet they are soft and pliable, when dry they are hard and brittle. The physical characteristics of soil are of very great importance to plant-life, because upon them depends, to a very large degree, the availability of water. This is plainly indicated in what we have said above in regard to water in the soil.

The chemical composition of soils has a two-fold influence. If certain chemical compounds are present in excess they may prevent any plants except some few, specially adapted species, from living in that soil. Secondly, upon the chemical composition of the soil depends the presence or absence of those substances which are essential for plant life and are termed nutrient salts. An example of this first case is seen in the plants which grow on the sea-shore, most species being

eliminated by excess of Sodium chloride (common salt), and only those specially adapted, as we shall see later, being able to exist. In regard to the second case the influence of nutritive salts on plant distribution has in the past been greatly over estimated. Later work has shown that the nutritive salts indispensable to plants occur in nearly all soils, with the exception of pure quartz sand, in quantities so considerable that in this respect there is no obstacle to prevent any plant growing almost anywhere on earth. The main point is the availability of these salts and not their mere presence.

THE HORSE.

Lameness in Horses—IV.

In examining a horse for the detection of lameness, the prospective purchaser, or the veterinarian who is examining for a prospective purchaser must be very careful, especially where any doubts exist as to the honesty of the vendor, as some dealers have studied the matter closely and are up to all manner of tricks to hide lameness in a horse where it is not well marked. Some forms of lameness disappear quickly so soon as the horse is put in motion, while others do not show plainly until he has been smartly exercised. In order to, as far as possible, guard against deception it is well to go to the horse after he has been standing quietly for a few hours and ask him to stand over, in the stall, at the same time watching the hind legs closely to observe whether he steps freely and places equal weight upon each foot. Then the groom should put a light bridle with a snaffle bit on the horse and lead him out quietly with a free head. There must be no holding up the

under the above conditions, the examiner is safe, in most cases, in deciding that he is not lame. If the gait be such that the examiner is not quite able to decide whether or not he is "going lame," it is safer to give lameness "the benefit of the doubt" and decide that he is not sound. The horse may have shown "bridle lameness" or may, though perfectly sound, have a peculiarity of gait that leads to the suspicion that he is lame, but such cases are rarely met with, and animals with such peculiarities are very undesirable. Hence, when any well-grounded suspicion exists, it is wise to take no chances. However, if the examiner cannot decide in a few trials whether or not lameness exists, and he wishes to make further tests, it is better to put the horse back into the stable and allow him to stand for a few hours, as exercise in most cases has a tendency to lessen, and in some cases entirely remove the lameness. After having stood at ease for some time, he may again be taken out, and, if the action still be suspicious he should be condemned. In cases of suspected lameness, especially in front, it is good practice to put the horse's back and have him jog slowly on the hard road with a loose rein as the weight upon the back may cause a manifestation of lameness that without it is not quite evident. In most cases, however, this is not necessary, and if the animal be a spirited one the act may defeat its own object. The examiner is not endeavoring to locate the seat of lameness, or diagnose its character or cause. He is simply endeavoring to satisfy himself as to whether or not it exists, and if it be present he takes no trouble to ascertain its cause or nature. He simply condemns the horse as lame. In most cases where the examiners are unable to decide promptly whether or not lameness exists, it is pretty safe to decide that the animal is not "going sound."

In some cases lameness is manifested only after sharp work, and it is necessary to give the animal a few miles at a sharp trot, or a gallop and then tie him in a stall until he cools off. When taken out of the stable and trotted after such a test, lameness, if present, will be detectable. It is only when suspicion exists that such a test is necessary. As in cases of badly-formed hocks, splints near the knee, or some suspicious alteration of structure in any part of the limb, or in cases where there is "pointing" when at rest.

The gait alone is sometimes sufficient to determine the seat of lameness, and in some cases it is the only guide; but it is a good rule, and one that should never be neglected, to examine the whole limb while the animal is at rest. By the latter method we discern lameness by positive and negative symptoms. For example, if there be heat, pain, or swelling in any part of the limb, discoverable by the eye or manipulation, the evidence is positive that the cause is in such a part; but if, on the contrary, there be neither pain, heat nor swelling in the limb, nothing detectable in the superficial parts of the foot to account for the lameness, we must conclude that it is deep seated in the foot or in some part of the limb, thickly covered by healthy tissue, and we must arrive at conclusions by negative symptoms, assisted by peculiarities of action.

Lameness may be caused by a strain of a ligament, tendon or muscular tissue; by fracture; diseased bone or cartilage; nerve or other tumors; plugging of artiers; accidents, as pricks in shoeing, treads, ulcers, rheumatism, etc. WHIP.

Skim Milk for Colts.

To those who may be weaning a late colt and desire to give him a good chance, the following advice, written by a Manitoba farmer to "The Farmer's Advocate and Home Journal," Winnipeg, Man., may prove interesting.

I have raised from two to six colts on my farm every year for the last 20 years, and this is how I do it. I always see that I have plenty of separated cows' milk at weaning time, and when we take the colt away from the mother, it gets one-third of a pail of warm, separated milk twice a day, and in a few days we increase this to a good half pailful, which we continue to feed for six months. We also feed it one quart of oats with a handful or two of bran in it, which it has al-



Adbolton Kingmaker.  
London, Eng., champion, 1915.

head with a tight rein to prevent "nodding." He should hold the rein with his hand about eighteen inches from the mouth, and allow it to hang rather slack. If he gives much more rein than this a spirited or a vicious horse may turn and kick him. A stretch of hard, level road should be selected, and the animal trotted on it immediately after being taken out, for the reason that a slight lameness may disappear if he be walked some distance. Some dealers will knock a horse about in the stall or excite him in some way before leading him out in order to remove such lameness. Any actions of this kind on the part of the owner or groom should be looked upon as suspicious, if not considered of sufficient importance to stay all negotiations. The examiner watches the horse walking out of the stable, hence he decides whether or not he walks sound. If the animal is spirited or frisky and has acted a little fresh, he should be petted and quieted and allowed to stand for a few minutes after reaching the street or road, and then lead straight away from the examiner at a slow, easy jog, of course, with a free head. After having gone about 50 to 75 yards he should be turned slowly and jogged straight back towards the examiner. It may be necessary to do this repeatedly, the examiner watching closely when the horse is turning, in order to observe whether he shows any peculiarity as symptoms of string halt. When a horse, not laboring under excitement or nervousness, walks sound and jogs sound

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ready learned to eat feeding with its mother. We also feed a little of the best and cleanest hay we have on the farm to the colts, and through the winter we throw into their boxes a handful of white carrots every day, and keep a lump of rock salt where they can get it at will.

Either before or after weaning we halter break our colts by tying them up in their box stalls for a few hours every day, but let them free at night. We keep two colts in a box stall, but let them out every day (unless it would be an extremely cold stormy one) to feed and play around a big straw pile which we have in a sheltered place for the purpose. I would like to say here that I find nothing to take the place of the aforementioned milk for a colt. A colt fed as described will go right ahead after weaning, and be sick and fat when spring grass comes. Of course, the oats may be increased as the colt grows older. We always keep our colts well bedded with wheat straw, and only clean out their boxes twice a week.

## LIVE STOCK.

### Feeding Hogs for Profit.

Editor "The Farmer's Advocate":

In your issue of Dec. 16, a Middlesex farmer offered some criticism of the hog-feeding competition carried on in this county last summer. As I was the winner of the trip, and the feeder of the bunch of hogs that aroused so much interest in the writer of the article, I considered it my duty to reply and let the public know what I consider very important points in feeding hogs.

When I entered this competition I made up my mind that I would not spare any time, as far as looking after the pigs was concerned. I made a particular study of how those pigs should be fed and looked after, as I do not consider the amount of feed everything. The type of hog, cleanliness of surroundings, thriftiness before weaning, and the method of feeding, all are considered before the kind and amount of feed consumed.

The hogs which I fed were from a Chester White boar, while their mother was part Poland

China, and her mother was pure-bred Yorkshire. I prefer the Chester White breed. You cannot get a pig that is continually on the move to put on as many pounds, according to feed consumed, as one that will remain quiet and graze until it has plenty, and then go and lie down. The Chester White is the quietest and best grazing pig we have, and I considered the cheapest feed I fed was the pasture that they got. However, a poor Chester White is no better than a poor pig of any other breed, and there is a good deal in selecting from a litter the pigs that will be the best feeders. Personally, I like a long, deep pig, broad between the eyes, with a short head. I like them well filled behind the shoulder with a deep, thick heart. If you get a good heart girth you will always get a strong constitution. I also like a pig to be well-muscled over the loin.

We have all heard the saying, "As dirty as a pig pen." Now, this must not be the case when you are feeding hogs for profit. Put yourself in the place of the hog, and if you are fed right up to the mark and you are filthy you certainly will not feel much like eating, I don't care how good your food is. People often neglect this very much, and then they will complain that their pigs are not doing as well as they should. I kept my pen as clean as it could be kept. I never let the litter remain in it more than two or three days, and each time I cleaned it I covered the floor with dry lime. This kept it dry, and the pen always had a sweet, healthful odor. I would then put in plenty of clean, dry straw, so that the hogs always had a good bed to lie in and were never dirty. I took great care to keep the trough clean and disinfected, and in this way my hogs never missed a meal.

A great deal of what a pig will be is determined before it is weaned, and I must say that if the Middlesex farmer owns a sow that will not raise pigs up to six weeks weighing more than 25 lbs., he had better get rid of her before he goes into the hog-feeding competition. I like to feed the sow so she will nourish the pigs well, and I like to see the pigs in the trough themselves when they are two and a half to three weeks old. I am sure if the sow is well fed on bran, shorts, chop and skim-milk or whey, and the pigs eat anything themselves, there should not be any difficulty in getting pigs from forty to sixty lbs. at six weeks old. Young pigs may be bothered

with worms. However, a little charcoal fed in their feed will keep the stomach free from these pests.

My method of feeding comes next. I follow the new way and only feed twice a day, and just feed what they will clean up nicely in half an hour or so. To my mind by feeding three times a day you nearly lose the noon feed. There were several young farmers in this locality who experimented in feeding hogs twice vs. three times daily, and proved that the pigs made as good gains with less feed fed just twice a day. I always soak my feed one meal ahead. Now, I suppose that it bothered the Middlesex farmer to tell how 1 1/2 lbs. of grain would soak up 1-3 lbs. of whey, but that is easy. I put in plenty of water to make it soft and mushy. After I poured this feed into the trough I would take a couple of handfuls of ground charcoal and throw it in on top of the feed. This kept the hogs healthy and gave them a good appetite. I took great care not to get the pigs tired of any one kind of feed, and to do this I kept changing from one kind to another, and in this way they never missed one of the 224 feeds which I fed them. I always kept one trough filled with good, clean, pure, cold water so that the pigs could have a fresh drink whenever they desired.

When the pigs were twelve weeks old and weighed about 100 lbs. each, I let them on pasture. Now, I don't think I ever saw a better bunch of grazers, and it is to the good pasture they had that I attribute the gains that they made. One thing I would advise any farmer, is to give his pigs good pasture, it is the cheapest feed.

These hogs received 1,025 lbs. of whey in 224 feeds, which is about 1 1/2 lbs. per hog per feed, and 1,125 lbs. of grain, which is 1 1/2 lbs. per hog per feed, plus what grass they would eat (which was considerable). The four pigs weighed 808 lbs. when weighed. At six weeks the four pigs would weigh at least 200 lbs., making 608 lbs. gain. They gained 608 lbs. on 1,125 lbs. of grain. This is not impossible with good care and good pasture.

To successfully feed hogs one must make a very careful study of them, and give them the same care that you give any other animal on the place. To my mind pasture and charcoal were the most profitable feeds which I fed.

Middlesex County. ARCHIE D. LIMON.

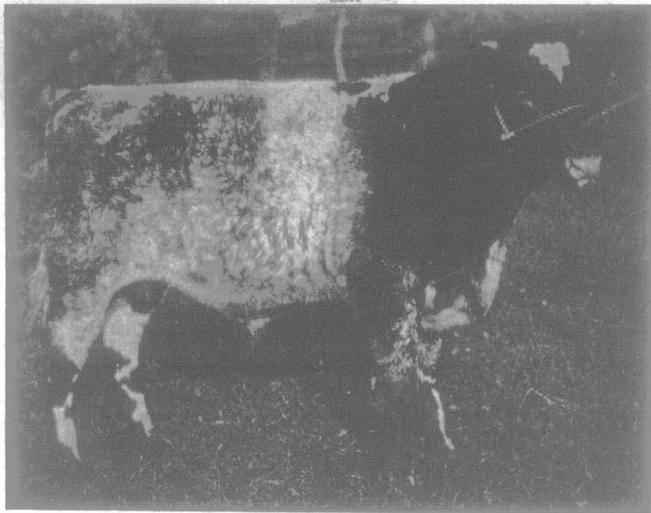
## Steer Feeding Practice in Vogue this Winter.

The era of the heavy bullock, fitted for the trip across the ocean, is past for a time, at least, but steer feeding to supply the home market and the demand in the Eastern States is still flourishing. Many professional feeders relate tales of the prosperous days when they could feed on a two or two-and-one-half-cents margin, but the proposition does not seem a bad one at the present time when one cent per pound as a margin is a fairly high average. The market fluctuates considerably, and it is not uncommon for the "steer-man" to sell at the same price that he paid for his cattle six months previous. However, that does not discourage the man who has played the game for a number of years, for he knows that a fluctuating market, taken advantage of in the proper time, may result in a fairly good profit. A steer feeder must possess two attributes, skill and nerve. He must know what and how to buy and how to feed. That requires skill and experience, but he must also be able to watch a market gradually weakening when he has a load or several loads of finished steers that will daily make a large hole in the bin and mow, when the hay and grain are almost exhausted. That is when he must have nerve. On the other hand a load of proper steers, well fed, will return a fair market price for the feed they consume, and in most cases will sell high enough to provide a surplus over and above actual cost which the feeder may consider as recompense for his labor. Steer-feeding bears no resemblance to a get-rich-quick enterprise, but on the other hand those engaged in the business are usually quite contented, they have a few moments to spare in summer or winter, and appear to be marketing their fodder and grains in such a way as to realize good values for them. There is usually an atmosphere of prosperity about the home of the steer feeder; a prosperity which he takes time to enjoy.

This conception of the business was impressed upon the writer by a recent visit to some of the steer-feeding districts in an endeavor to obtain from professional feeders information as to their methods in the past, and how they are feeding this winter. When all fodders and concentrates are high in price, greater economy must be practiced. Methods that have carried some of the best-known steer-feeders through trying times should be interesting to all that have to do with stock under existing conditions.

A visit to the home of Thos. McMillan, in Huron County, found his stables full of steers and horses. In all 103 head of cattle are being

fed for the shambles, part of which will be finished in the stalls and the remainder off grass. They are all being handled loose, for experience, and the scales have influenced Mr. McMillan in favor of this practice. They were graded into car-load lots so that all in the same run would be alike in size. It is often necessary to grade them twice to get the desired uniformity; once when they go in, and again about one month later. The stables are so arranged that the horse manure, with the coarse litter it contains, can be



Edgecote Pirate.

A Shorthorn bull calf which recently sold for 400 guineas (over \$2,000).

used to bed the cattle. Large doors at both ends of the stalls will permit a team to be driven through so the manure can be taken directly from the stable and spread on the land. In Mr. McMillan's own words, "One cannot add to the value of manure by handling it, but you can add very much to its cost. This system of team work and taking the manure at once to the fields is emphasized very strongly on this Huron County farm.

In the stables under mention there is a differ-

ence in the treatment received by the steers to be finished in the stalls and those to be grassed, which difference lies principally in the feeding. Silage is the basis of every allowance, around it rations are built up.

Stall-finished bullocks are started on 30 lbs. of silage daily and about 2 lbs. of chop, with hay once a day, at night. Sufficient silage is mixed with straw and ground grain once a day to last for three feeds. The chop and shorts, the latter also being fed, are mixed with the silage, and

straw on the cement walk in front of the mangers during the forenoon, and this quantity is sufficient for the following noon, evening and morning feeds. The grain allowance is very carefully and gradually increased until spring, when the steers will be getting 8 or 9 lbs. each, considerable of which is shorts, oil cake and cottonseed meal. In order to balance the ration and feed home-grown grains to the very best advantage, Mr. McMillan strongly advocates mill feeds. Pea-ground oil cake has been found to be the most acceptable form in which to feed that material. Cottonseed meal was used quite extensively last season, and as at a good price it is probable that considerable will be fed again this winter. About the month of March sees the beginning of these highly nitrogenous feeds in the ration. Two lbs. of oil cake and 2 lbs. of cottonseed meal is the maximum amount of these feeds when combined with the chop from the coarse grains. From 1 lb. to 2 lbs. of each per steer is usually fed, however, after the beginning of March. They are not mixed with the silage, straw and chop, previously mentioned, but are sprinkled on them after being put into the mangers. Some of the chop is from mixed grains. Usually a mixture is sown consisting of 1 bushel oats, 1/2 bushel barley and 1 peck of goose wheat per acre. The crop of grain resulting from

this sowing constitutes a large percentage of the coarse-grain ration.

At first the object is to fill the cattle up on silage and such feeds as are easily digestible and are not strong. In this way their digestive systems get into good order for the winter's work of consuming and assimilating large quantities of grain and fodder, and transmuting it into beef. After the first of March two feeds of hay are given each day. The silage is decreased slightly in the morning and good clover hay added. The grain ration, too, from this time on is gradually strengthened until 8 or 9 lbs. is received by each bullock. This change is not effected in a hurry. The aim is never to feed less during one week than they were getting on the previous week. A decrease in the amounts being fed is a bad omen. No feeder cares to cut down an allowance.

To some steer feeders, 8 lbs. of grain will appear small, yet in the spring of 1915 Mr. McMillan turned over 106 steers, and those finished in the stalls showed an average gain of 306 lbs. Eight pounds of grain was the maximum amount given these cattle. This pioneer of the steer-feeding game also stated that many men who were extensive feeders years ago are now doing nothing at it, simply because they fed too much grain and lost out. Meagre feeding was not advised, but the fact was emphasized that the man in charge must watch both ends of his cattle and be able to discern anything wrong. Often the excrement will tell the experienced hand that undigested food is being passed. The man who does not know and study his cattle seldom makes a success of steer feeding.

Steers to be finished on grass do not receive such liberal treatment during the winter months. They get a full feed of silage right up to grass but they never receive more than 4 lbs. of grain, they receive 3 lbs. of grain daily on the average, and last year only received 2 lbs. Oil cake and cottonseed meal were again recommended very highly in this case on account of the silage being rich in carbohydrates and these meals rich in protein; together they make a fairly well-balanced ration. It has not been the custom on this farm during recent years to feed grain to the steers on grass, but it was practiced in former years with excellent results. Labor has been the influencing factor. Mr. McMillan approves of the idea, but in his case says that as a matter of convenience he omits the grain when the cattle are on grass. Four pounds of grain on grass was stated as sufficient, and on this amount with average grass 3 lbs. of gain should be put on each day.

When the cattle are put into the runs in the fall they are sprinkled with a mixture of 1 part hellebore and 4 parts cement. This frees them of vermin of all kinds. They are salted daily, the amount of which is regulated by the condition of the manure. Salt has a tendency to be laxative in its effects, and an excess of this material would manifest itself in the excrement. Drafts are avoided, but every effort is put forth to keep the stables cool. So long as water is not freezing in the stalls, the cattle will be all the better for a low temperature.

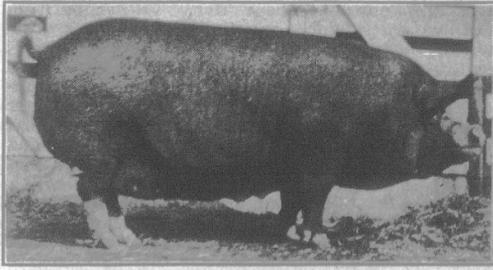
Regarding the financial phases of steer feeding, Mr. McMillan is not so pessimistic as are many feeders of the present era. According to his books, which record all his farming transactions in detail, \$25.00 per steer will cover interest on investment and cost of feeding. He feeds only the good kinds, and consequently can manage to handle each bullock at a fair margin.

IN A MIDDLESEX STABLE.

A Middlesex farmer, J. P. Beattie, this winter is feeding 33 cattle, which averaged some weeks ago just 1,080 lbs. each. Mr. Beattie is not an amateur at this business, for his boyhood days were spent in cutting corn stalks and oat sheaves, and carrying roots to as good steers as crossed the Atlantic in the days of the heavy bullock. Heavy, well-finished steers have been his life-long specialty, and he still stays with the business. A recent visit to his stable found the cattle with an abundance of straw before them, but from their appearance the writer judged they received plenty of grain on the side. Mr. Beattie considers that it does not pay to mix the fodder for steers. When the cattle first go in they are given almost a bushel of silage each per day, 1 quart of chop, 1 feed of clover hay, and all the straw they wish to pick over at the other two feeds. The chop is 1-3 wheat, 1-3 oats, and 1-3 barley. Sprouted wheat is being fed this winter; not because it is sprouted, but because it is the practice to feed wheat. "When wheat sells for less than \$1.00 per bushel," said Mr. Beattie, "it pays better to feed it than sell it." Wheat has been fed in the past on this farm, and the results have been highly satisfactory. The silage is put into the mangers and the chop placed on top. After this is cleaned up, straw or hay is fed, as the case may be. A tablespoonful of salt is also given at each morning feed.

The methods and manner of feeding on this farm are somewhat as follows: In the morning the steers are given their silage and chop; after this they are given a feed of straw. The noon

feed is a duplicate of the morning rations, except that clover hay is fed in place of the straw. The evening allowance is the same as that fed in the morning. The steers are fed in this manner for one month, but during the next two months the quantity of chop is doubled, and 2 feeds of hay, instead of one, are given. The hay is fed morning and night. From this on the chop is gradually increased until 10 or 12 lbs. per day is consumed. After the first of March hay is fed three times each day. As much as 14 lbs. of chop per day has been fed, but 10 to 12 lbs. is considered sufficient for the class of steers being



H. A. Dolson's Champion Berkshire at Toronto, 1915.

fattened this winter, the weights of which have been mentioned.

In the fall, after the steers go into winter quarters, their tails and backs are trimmed, and they are sprinkled with sulphur to destroy all vermin. They are kept chained and have water constantly before them. Behind each row of cattle is ample room for a team. Every day, except Sunday, the manure is hauled directly from the stables to the fields where it is spread from the sleighs or wagon. There is no accumulation of manure to be carted and spread during the busy days of spring.



A Shropshire Wether.

Champion wether of the breed at the Guelph Winter Fair, 1915. Exhibited by J. Lloyd-Jones, Burford, Ont.

For 6 months' feeding Mr. Beattie considers 250 lbs. per steer, on a load of cattle, a fair gain, but he recalled an instance where, on a load, he made 304 lbs. of gain per steer in 6 months.

FEEDING YEARLING STEERS.

For many years Allan Fried, of Oxford County, fattened the big, heavy kind of steers, and exhibitors at the Union Stock Yards, Toronto, will remember his product of the year 1911. This winter he is feeding yearlings which went into the stable at about 700 lbs. each. When on full feed they receive 6 quarts of chop per day, and 1 pint of oil cake twice a day. Living in a sugar-beet section, he finds it profitable to feed the pulp from the mill, and of this commodity the

steers receive a bushel each per day. Mr. Fried is usually able to turn this class of steers off weighing from 1,000 to 1,050 lbs. each, and claims that, owing to the growth made by yearlings, it is possible to produce a gain of 300 lbs. with them for less than it can be done with older steers.

The southern part of Waterloo County and the northeastern part of Oxford are much given to the production of sugar beets. The farmers in those sections, too, are close to a supply of oil cake meal, and we find them making a liberal use of sugar-beet pulp and oil cake. Last winter immense quantities of cottonseed meal, along with silage, were fed to fattening steers, but owing to an advance in price oil cake will probably be the nitrogenous-rich concentrate most largely used this season.

WAYS IN WATERLOO.

In Waterloo County, as has already been stated, beet pulp and oil cake are commonly used. Cottonseed meal also is purchased for the express purpose of balancing the ration, or, in other words, of rendering the home-grown grains and fodders more efficient. John Brown, of Waterloo County, whose name for many years has been well known in live-stock circles, and especially in connection with feeding steers, speaks highly of the value of a little cottonseed or oil cake incorporated with ordinary chop. From the first of March, on, after the cattle have been brought along on silage, cut straw, chaff and chop, Mr. Brown advises hay three times a day; also 2½ gallons of chop, some of which should be one or both of the nitrogenous-rich concentrates already named.

A neighbor of the feeder just mentioned has this past fall demonstrated that silage and chop alone will produce good gains. Eighty-six steers were put into the runs and given silage only, as roughage, with no hay or straw, except the litter that was given them from time to time. Chop made up of ½ oats and ½ rye was fed as a grain ration. They were allowed practically all the silage they would consume, and in two months used approximately 1,000 bushels of grain. Their manure was quite firm, and they apparently suffered little from the lack of dry fodder. Satisfactory gains were made under these methods of feeding, which are, to say the least, unorthodox.

FEEDING LOOSE OR CHAINED.

It is a moot question whether it is better to feed steers loose or chained, and the most experienced feeders are just about evenly divided regarding their preferences for the stalls or loose runs. All will admit that labor is saved by running the steers loose, and labor nowadays is a very important factor. In small lots, however, it might not be convenient to grade the cattle properly in order that they might run loose, in which case tying them would ensure better gains on the smaller and less ambitious ones.

FARM.

Farm Seed Supplies.

Field and garden seed supplies are practically assured for the 1916 planting. There is a scarcity in American-grown crops, including beans, onions, and to a lesser extent sweet corn. Amongst the imported stocks, Swede turnips are rather short, also spinach and salsify and some varieties of carrots. Red clover and alfalfa are unusually short, and show an advance in price from 30 to 75 per cent. Other kinds that might be used as a clover substitute, as alsike, are higher in price than the supply would otherwise warrant. Well-established Canadian seed houses with contracts made two or three years in advance will have no serious trouble this season in taking care of their regular trade. Seed merchants, who depend from year to year on the surplus stocks that may be offered, may have less assurance as to the character of their supplies.

SEED BRANCH, OTTAWA.



Steer Feeding on an Extensive Scale.

### A Province on the Peace.

Editor "The Farmer's Advocate":

The files of "The Farmer's Advocate" of twenty or twenty-five years ago contain a number of very interesting letters on the Peace River country, written by one of the Lawrences, of Fort Vermilion. Though captured by them at the time, little enough did I suppose that I should some day be living in the southwestern part of the vast water shed, whose resources gave Mr. Lawrence his theme. Even yet, to many Canadians the Peace River country is a sort of romantic dreamland, quite off the edge of the immigration map. It is known better in the Western States, where effective exhibits and active immigration propaganda have brought it prominently before public attention, whetting keen interest, which has drawn many hundreds of fine settlers hither across the awful bush trails, which until recently have been the only practicable means of ingress.

"Until recently"—for the bush trails are practically a thing of the past. The Edmonton, Dunvegan & British Columbia Railway, with its branch, the Central Canada, will shortly be delivering Edmonton passengers and freight at Spirit River Settlement (fifteen miles south of the historic trading post of Dunvegan) and at Peace River Crossing, now called Peace River; while from Spirit River a branch is graded south into the famous Grande Prairie District with its thousands of adventurous settlers, the first parties of whom braved the risks and privations of an ox trail five hundred and fifty miles long. Towards this latter district also, is headed the C. N. R. Onoway branch, striking northwardly from Edmonton, while the asphalt and other resources of the Lower Athabasca Valley are being tapped by the Alberta and Great Waterways, leading out northwardly from Edmonton to Fort McMurray. Numerous other lines are chartered or projected through this great Northland, but on those specified, construction has been actually accomplished, and on the three McArthur lines (which includes all those mentioned except the C. N. R.) construction has been energetically pushed during the past twelve months. Indeed, of all Canada, Northern Alberta has been the one theatre of active railway construction. Steel is annually being laid by the hundreds of miles.

And what is the wealth of resources tempting such feverish railway activity? Besides vast measures, asphalt and other minerals, besides timber in some sections of commercial value, including spruce and jackpine logs of diameter up to two feet and over; besides many great water powers, as in the Peace River Canon, the Chutes of the Peace and the fall on Great Slave River, besides one of the finest chains of navigable water in all Canada, extending with but two interruptions from Hudson's Hope clear to the Arctic Ocean—besides all this is a bed-rock foundation of greatness in the forty million acres or so of black-loam soil said to be tributary to the Peace, not counting many large areas of grazing, if not agricultural land, flanking the trunk of the Mackenzie and its other large tributaries, notably the Athabasca. With successful mixed farming as a basis and other resources to help out, what can prevent the Peace River country from becoming great?

The Peace River country is a park-like expanse of prairie and woodland, the tree-growth comprising poplar, spruce, willow, jackpine and tamarack, in order of prevalence about as mentioned. Poplar grows on the best soil and grows rapidly. The country would be all wooded but for the repeated fires which have prairie areas of all shapes and sizes, varying from little patches up to blocks many miles wide. In the best sections the greater part of the land is clear, interspersed with bluffs. The soil is a black loam, overlying chocolate subsoil of enormous depth. The contour is that of a plateau drained by rivers and tributary rivulets of varying width and considerable depth, especially those near the Peace, which latter runs through a narrow trough valley six or seven hundred feet deep at Dunvegan and Peace River Crossing. The scenery along the river and at many other points is grandly vast, commanding vistas to fill the eye and fire imagination with the scope and future greatness of the Province on the Peace.

But the climate? Is it habitable? Is it suitable for the reliable production of a variety of crops? The harvest of 1915 supplies effective answer. It should be explained, however, that the extent of the country involves considerable variation. From Hudson's Hope to its confluence with the Great Slave, the Peace is approximately six hundred miles long, running in a northeasterly direction away from the region of Chinook influence and towards higher latitudes, compensated in some degree by declining altitudes as the course of the river verges toward Arctic levels. Fort Vermilion, the home of the first considerable settlement, is far down the river, and its climate is less favorable for agriculture than that of newer settlements near the mountains. Grande Prairie, whence this is written, is a tract of a million acres or so lying west of the Big Smoky River—the Big Smoky is the

largest tributary of the Peace—north of the Wapiti, extends to the British Columbia boundary on the west, and on the north is divided by Saddle Mountain and the Birch Hills from Spirit River prairie. There has been considerable settlement here now for seven years, during which time there has not been a crop failure, though a percentage of the crop has been frosted in some years. This past summer, almost every acre of wheat, oats and barley ripened hard, and yields have been in some cases phenomenal, running to over a hundred bushels per acre for oats, and forty-five for fields of both spring and winter wheat. Such yields have been obtained within a four-mile radius of where this is penned, and the facts are known to the writer. I refrain from quoting larger figures which I am not in a position to verify, but will add that I had an experimental plot of spring wheat which yielded at the rate of 68 bushels per acre, field peas 35, Banner oats 111, and Irish Cobbler potatoes over 400 bushels. All garden stuff yielded well and is of superior quality, while timothy, alfalfa and even red clover give promise of becoming important and successful crops.

As a stock-raising country its advantages are great. Cattle ranging in summer, on native grass, wild vetch and peavine, in autumn on the stubble fields, and in winter rustling about straw-stacks with a very little sheaf oats, attain good weights and come up in the fall as fat as grain-fed bullocks in the East. I killed a yearling early in December, wintered through his calfhood in an open-front shed, fed on prairie hay, straw, and sheaf oats, and rustling since then, which dressed 475 pounds of first-class beef at barely 18 months of age. Horses range the year round and thrive. Hogs and poultry do well, and sheep doubtless will. The future of this section lies along the line of mixed farming.

From the standpoint of residence, the climate during the past two years has been the most enjoyable, healthful, and favorable for outdoor work of any I have ever experienced. We are subject to cold dips, but for the most part our climate is delightfully tempered by the Chinooks.

The class of settlers is superb. It is enough to add that, though comprising quite a percentage of American-born, this district has sent to the war an exceptionally high quota of volunteers, even for the loyal Province of Alberta, which leads all Canada, I believe, in the recruiting list.

W. D. ALBRIGHT.

Grande Prairie, Peace River District, Alberta.

### Fifty Dollars Reward!

We have been informed that a young man giving the names G. Aderson and H. P. Anderson has been taking subscriptions for "The Farmers Advocate" in the vicinity of Fergus in Wellington Co. Ont., at \$1 per year, claiming to be an agent for this paper. This man is not an authorized agent of this publication and has not turned the subscription money into this office. We hereby offer a reward of fifty dollars (\$50) for information leading to his identification and arrest. The only authorized canvasser we have is T. P. Taylor, now working in Eastern Ontario.

### Soil Management from the Standpoint of the Dairy Farmer.

A herd of fairly good cows, weighing a total of 20,000 pounds, will produce in a year milk containing approximately 600 pounds nitrogen, 100 pounds of phosphorus, 160 pounds of potassium, and 200 pounds lime.

All these chemical substances have been derived from the feed consumed, and this feed has obtained them from the soil, although a part of the nitrogen may have come originally from the atmosphere.

While these substances constitute apparently a very insignificant part of the whole volume of the milk, it is nevertheless true that this volume is absolutely controlled by the quantity of such substances which the cow is able to abstract from her feed and to manufacture into milk. We may control the whole volume of milk, within quite wide limits, by increasing or reducing the supply of feed, or by increasing or reducing the total quantity of nitrogen and mineral elements given in that feed, but we cannot cause, by feeding, any important variations in the relation between these elements and the total volume of milk. Therefore, the whole science of milk production consists in the capture and combination, through the vital machinery of the cow, of these four elements together with a few others not mentioned, because experience has shown that if we can catch these four the others will be found associated with them.

Farmers are familiar with the importance of nitrogen in the feed as supplying the element

most conspicuous in the construction and repair of the muscular tissues, but they have given little attention to the importance, not less urgent, of those elements which are chiefly concerned in the upbuilding of the skeleton and nerve tissues, namely, phosphorus and calcium. Fortunately these elements are closely associated with the protein formers in the ordinary leguminous crops, clover and alfalfa, as well as in soybeans and some of the oil meals; but it is possible to compound an artificial ration which may be well supplied with protein and yet be deficient in the mineral elements.

The fact is of great significance to the dairyman that the feeds which will most perfectly maintain the nutritive balance in the ration for his cows are furnished by the crops which will most economically maintain the nitrogen supply of his soil; but it is important that he should not overlook the fact that while these crops are adding nitrogen to the land they are withdrawing phosphorus in equal quantity with the grain crops, and calcium and potassium in much larger quantity; so that the growing of these crops makes it all the more important that he pay close attention to the supply of the mineral elements. The following table shows approximately the number of pounds of nitrogen, phosphorus, potassium, and calcium removed from an acre of land by equivalent crops, including stover and straw:

	Yield per acre	Nitro-Phos-Potas-Calcium			
		Lbs.	Lbs.	Lbs.	Lbs.
Corn .....	70 bus.	100	12	48	14
Oats .....	67 bus.	60	11	46	13
Wheat .....	26 bus.	56	8	29	6
Timothy hay....	2½ tons	38	6	60	10
Clover hay ....	2½ tons	95	8	50	68
Alfalfa hay ....	4 tons	200	23	135	120
Soy beans .....	25 bus.	150	12	50	40

Of course, these proportionate yields will vary in different sections and on different farms, but the table shows in a general way the relative draft on the soil of the different crops for the several elements.

The table shows that a crop of corn, with its stover, carries away from the land about the same quantity of nitrogen as an equivalent crop of clover hay, but the clover leaves the land richer in nitrogen than it found it, while the corn leaves it poorer. The corn withdraws more phosphorus and as much potassium as clover, but the clover takes off four times as much calcium as corn and ten times as much as wheat; while alfalfa withdraws nearly three times as much phosphorus and potassium and twice as much lime as clover. It is true that clover, and especially alfalfa, roots more deeply than corn, but experience confirms these figures in showing that, if clover is to be grown with continued success, it must be abundantly supplied with all the mineral elements, especially calcium, and it cannot be doubted that larger acquaintance with alfalfa will show that the same rule will hold good with that crop.

It may be laid down as a sure proposition, therefore, that the dairy farmer who desires to maintain a continuous flow of milk must look to it that his crops are able to secure an abundant supply of those mineral elements which are the foundation of milk. If he be the fortunate owner of land originally abundantly supplied with these elements in available form, his task will be easier; but, however abundant they may be, if they are so locked up in insoluble combinations that his crops cannot obtain them, they will do but little good. And he may be sure that, however abundant the present supply may be, the time is not far distant when some form of restitution must be commenced if the land is to continue to yield a satisfactory return. For the plant food which he finds stored in his soil has been accumulating there through many centuries, during which the natural growth has been returned to the land; but when the farmer steps in and removes this growth and returns nothing, it is only a question of time when the accumulated stores will have been exhausted and the land will no longer honor his drafts, except at a heavy and constantly increasing discount.

Analyses of different parts of the cereal plants show that from two-thirds to three-fourths of the phosphorus and nitrogen are contained in the grain, while still larger proportions of the potassium and calcium are found in the stems and leaves. The grain farmer, therefore, may easily maintain fertility by growing occasional leguminous crops and returning them to the soil, together with the residues from his grain crops, and purchasing only phosphorus with a very little potassium to replace the relatively small quantities of these elements carried away in the grass.

But the dairyman removes everything from the land. If he carefully saves and returns the manure he will have restored a large part of the fertilizing elements contained in his crops, but he can never return as much as he has taken off unless he makes liberal use of such purchased feeds as bran and oil meal to replace the phos-

THE DAIRY.

Believes in Exercise in the Open.

Editor "The Farmer's Advocate":

Responding to your request for the opinions of farmers on the winter treatment of cattle, viz., whether they should be allowed to exercise daily in the air or not, I must say that, armed with a Dairying Diploma awarded by Prof. Dean, and the consciousness of having frequently fed and milked my herd of Jerseys, from which I have made thousands of pounds of butter, I feel competent to say something by way of starting the discussion which means so much to the cows. When I read your first request for someone to open the subject, it seemed so obvious that everyone should know that cows need fresh air, far more than people do, that I did not assume the responsibility of answering.

The unnatural confinement in dark, crowded, contaminated stables is one of the reasons cows are so short-lived. I contend their period of usefulness would be prolonged several years if they got common-sense treatment. Were the wild cattle housed and pampered during winter? Who can furnish statistics as to their longevity? I admit, of course, that subjected to the improved methods of treatment our domestic cow is far superior in size and milk production to its ancestors, but this is not an admission that our domestic animal is as long-lived or as hardy.

Why will not the hygiene taught to children apply equally to animals of less value? Do you not think the tuberculin test would fall into disuse from lack of necessity for it, if cattle had the right amount of fresh air and exercise, granted proper food rations? That fable of "Killing the goose that laid the golden egg," is an ignored lesson by many present-day people who are looking for big results now, regardless of the ultimate effects on the herd. Now, the farmers who shut up their stock and over-feed them (unless it be fat cattle almost ready for slaughter) are in the minority; it is the man in town who has to keep his cow shut up and writes of her record-breaking performances, and then attributes her yield to the care and rations, claiming she does not have to run the fat off her, nor pick her living off the manure pile. Some few, deduct from that, that cows do better shut up all winter. My opinion is, that any day that is fit for a child to take outdoor exercise, the cow should have her freedom in a good-sized yard. She is lucky to have a wind-break from the north and west. I can't quote statistics to prove it, but if I could some would not believe them to be of any value.

We have not had a sick cow nor have we lost one in twenty years, with the exception of some toothless old cows we bought on speculation, two of which choked to death on grass, which has nothing to do with this topic, but I find it necessary to keep to facts always.

Naturally the circulation will be impaired if the animal be too closely confined, and do you suppose the milk will be as pure and sweet from a penned-up cow whose blood must be stagnant as from a vigorous animal that enjoys her freedom? Leave it to the intelligent cow to decide. She'll go to the stable door in a storm, and

phorus and lime carried away by his milk. But too often the manure is not so cared for as to prevent great waste of its constituents.

For nearly twenty years the Ohio Experiment Station has studied this question, both in the chemical laboratory and in the field, and the results of the field have confirmed those of the laboratory in showing that in three or four months exposure to the weather manure may lose a very large part of its fertilizing value.

Here is what the laboratory says, as the average of numerous analyses:

Composition of fresh stable manure.....	Lbs. per ton manure		
	Nitro- gen	Phos- phorus	Potas- sium
.....	12.0	2.7	9.1
Composition after three months exposure in open yard.....	7.4	2.3	3.4

More than one-third of the nitrogen and two-thirds of the potassium (which are chiefly found in the liquid excrement, and are therefore the most valuable part of the manure, because already in solution) have disappeared.

And here is what the field says in an experiment in which corn, wheat, and clover have been grown in a 3-year rotation for 18 years, each crop being grown every season:

	Increase per ton of manure			*Total value
	Corn Bus.	Wheat Bus.	Hay Lbs.	
Fresh manure.....	8.00	1.82	177	\$3.57
Yard manure.....	2.46	1.17	109	2.83

\*Computing corn at half a dollar per bushel, wheat at 90 cents, and hay at \$10 per ton.

The manure has been applied to corn at the rate of 8 tons per acre in a rotation in which the clover has supplied much of the nitrogen required by succeeding crops, thus reducing somewhat the demand for nitrogen in the manure, and making the loss less apparent than it would be if the manure had been used on land more deficient in nitrogen.

But leaching in the barnyard is not the only source of loss in the management of manure, especially on the dairy farm; for here the animals which have produced the manure have taken out of their feed the phosphorus and calcium necessary to supply the milk with these necessary constituents. For milk is the natural food of the young animal, and as such it must carry in abundance the materials out of which the animal may build its skeleton. The manure from dairy cows, therefore, must be especially deficient in these elements. In these same experiments, therefore, untreated manures have been used alongside of the same quantities and kinds of manure which has been reinforced with phosphorus, carried in common acid phosphate and in the raw rock. The acid phosphate is made by first grinding the raw rock to a fine powder, called floats, and then mixing it with approximately an equal weight of sulphuric acid.

The outcome of this reinforcement is shown in the following:

	Increase per ton of manure			*Net value
	Corn Bus.	Wheat Bus.	Hay Lbs.	
Fresh manure and acid phosphate.....	4.50	1.98	318	\$5.34
Fresh manure and floats.....	4.01	1.77	278	4.83
Yard manure and acid phosphates.....	4.03	1.89	244	4.66
Yard manure and floats.....	3.24	1.52	197	3.81

\*After deducting cost of phosphate or floats.

In these experiments the manure has been produced by fattening steers, instead of by dairy cows, consequently the results of treatment must be regarded as conservative, for a fattening animal will require less bone building material than one giving milk, and will consequently leave more such material in the manure. The work is being conducted on a soil that has been depleted by many years of improvident husbandry, and is consequently in urgent need of all the elements of fertility. Lime has been added to all the land alike in this experiment, so that it only brings out the importance of reinforcing the manure for such a soil with phosphorus.

In another experiment, however, lime is being added to part of the land on which yard manure has been used for 22 years in a five-year rotation of corn, oats, wheat, clover and timothy mixed. The liming was not begun until the experiment had been in progress several years. The outcome for the years during which lime has been used is shown below:

Treatment	Average increase per acre				
	Corn Bus.	Oats Bus.	Wheat Bus.	Clover Lbs.	Timothy Lbs.
Yard manure alone.....	31.00	15.75	16.92	2,196	2,253
Yard manure and lime.....	37.84	17.45	19.53	3,168	3,871

The manure has been applied to corn and wheat at the rate of eight tons per acre on each crop, or sixteen tons for each rotation of five years. The lime has been used first as quick lime and later as ground limestone, all being applied as the land was being prepared for corn and at a rate equivalent in cost to one and one-half tons of ground limestone per acre, or about five dollars per acre for each rotation. Valuing the increase as before, including oats at 40 cents per bushel, the financial outcome has been as follows:

Treatment	Value of increase	
	Per acre for one rotation	Per ton of manure
Yard manure alone	\$59.27	\$3.70
Yard manure and lime	76.19	4.45

In computing the value of increase on limed land the cost of liming is first deducted. The lime is never mixed with the manure, but is applied to the surface and harrowed in after plowing under the manure.

Where a soil is deficient in lime it is usually, if not invariably, also deficient in phosphorus; but a soil that has been formed from the decomposition of limestone may be fairly well supplied with lime and yet be lacking in phosphorus.

These experiments demonstrate the importance of ascertaining whether lime or phosphorus, one or both, is needed by a particular soil, and of correcting any such deficiency that may be found to exist by the use of the appropriate materials; for until this is done manure cannot be used with economy. Whether lime is needed is very easily determined by means of the litmus test, instructions and material for making which will no doubt be furnished by any experiment station. The requirement for phosphorus can best be determined by trial of acid phosphate on a few rows of corn or drill rows of the small grains and carefully weighing the produce in comparison with an equal area of unfertilized land, the phosphate being spread between the rows, not merely in the hill or drill.

Lime and phosphorus are the only fertilizing or soil corrective materials which the dairy farmer should find it necessary to purchase, except that for muck soils the purchase of potassium may be necessary. Of course, his land will require nitrogen and potassium, as well as lime and phosphorus, if maximum production is to be maintained, but the adjustment of his cropping system which will give him the protein necessary for maintaining the most productive ration for his cows, and the careful saving and judicious reinforcement of the manure produced will make him independent of fertilizer nitrogen, and to a large extent of fertilizer potassium.—Charles E. Thorne, in Hoard's Dairyman.

A Middlesex county subscriber to "The Farmer's Advocate" called at this office a few days ago, and in conversation gave substantial credit to alfalfa as a feed crop and a heavy producer on his land. He has three and one-half acres this year which he cut twice. First on June 28, and again some time in August. The yield for the two cuttings was 16½ tons, all of which was saved in good condition, and is now being eaten with a relish by his cattle and horses.



Ayrshires in Scotland.

she'll make it plain to an observant person that she wants to get out on the fine days. To be sure, there are foolish cows as well as foolish people, but not in so large a proportion I sometimes think.

Prince Edward Co., Ont.

A. L.

[Note.—This is the second letter we have had on this subject. Many dairymen keep their cows in all the time, others turn them out for a short time each day. Who can give us any figures on production when kept inside as against milk

given by the same cows on similar feeding outside a short time each day? Also, have any readers noticed a tendency toward weakening of constitution in animals kept in as against those out a part of the time?—Editor.]

## Cutting, Harvesting and Storing Ice.

The season is again at hand when the farmer should be laying plans for the harvest of the ice crop. Ice is year by year becoming more and more important as a factor in good farming, particularly in the best dairy farming. As time goes on the demand for a higher quality of dairy products makes it imperative that these products be kept at a low temperature during the hot weather of summer. The only way the farmer can keep his milk, cream, or butter at the required low temperature is by providing a supply of ice, large enough to last him throughout the season. Many have been able to cool their milk fairly well by utilizing running water from cold springs or by pumping water into a vat so arranged that the milk cans are standing in cold water all the time, but it is generally conceded that the most satisfactory plan, and the one involving least labor and insuring the best quality of products, is to cool all dairy products with ice. Besides the dairy products, there are many articles of diet and many luxuries of the summer season which are dependent upon ice for their keeping qualities and exquisite flavors. No farmer should fail to consider ice as one of the harvests which should be attended to in season, and the season for this year is now here.

### ICE STORAGE.

The first requisite is a place to store the ice. There are ice houses elaborate, and ice houses of a cheap, yet efficient, nature. For the average farmer, who has not already supplied his farm with an ice storage, we would not advise going to great expense in doing so. Some years ago there was recommended in these columns a cheap house, which we believe has proved very efficient on several farms upon which it has been tried. With a house of this kind it is necessary that it be placed preferably at the north end of a larger building where it will be protected from the direct rays of the summer sun; in fact, any ice house is the better of a north exposure. The house of which we speak may be constructed by planting cedar posts firmly in the ground so as to form a square of say 10 feet, three posts on each side of the square and extending up 10 feet from the ground level. On top of these the plate is placed. The inside of the posts is lined up with rough inch lumber. A roof is put on and the building is capable of storing one hundred blocks. About twelve inches of sawdust is put on a dry bottom, and space is left to put a foot of sawdust on top of the ice, and on all sides of it. Some do not nail the lumber on the inside of the posts, but put it on the outside up and down, using any rough lumber that may be about the place, and leave plenty of space around the ice for the sawdust, which should not be less than a foot, and preferably more. Sawdust should be firmly packed, and an open space at the top should be allowed for free circulation of air above the sawdust. This makes a cheap house and one which any farmer can afford to build, and, of course, the size need not be limited to 10 feet square, but may be large enough to ensure plenty of ice. For a dairy farm, never less than one ton of ice per cow should be stored, and preferably from 1½ to 2 tons. One ton per cow is better than none.

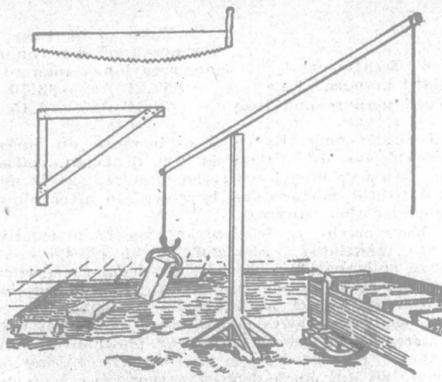
### USE OLD SAWDUST.

In storing the ice it is well to use old sawdust rather than fresh, green material. If fresh sawdust is packed solidly around the ice it has a tendency to heat and thus melt some of the ice around the edges. This difficulty was experienced one year at Weldwood. But do not put off the storing of ice because no old sawdust is available. It is better to lose a little around the edges than to have no ice at all. Where green sawdust is used it might be better not to put in the material at so great thickness as where the dry is available, because the thicker the covering of sawdust the greater will be the heat in it. In expensive ice houses sawdust is not used very extensively, the insulation being obtained through the use of building material, but this would be too expensive for the average farmer.

Where ice is stored in makeshift buildings, such as a corner of a wood-shed or in a drive shed or some such convenient place, the waste is very large, and we would favor the building of a cheap, permanent ice-house. Ice may be kept by piling in a solid pile, and, if the weather is very cold, throwing a little water on the blocks freezing them all together into a solid form. Such a stack, as it is sometimes called, is generally placed on a bottom of old rails covered with straw, and the whole is generally covered with straw and some temporary wooden protection put over it, but in the best of storing of this kind the waste will be nearly one-third.

### A BETTER BUILDING.

For those desiring a better building one described in Bulletin 207, of the Ontario Department of Agriculture, by R. R. Graham, B.A., B.S.A., should be satisfactory. It is 12 feet square outside and 11 feet high to the plate. The sills are double 2 by 4's, on which are erected 2x4 studding, 24 inch centres. These are capped with a double plate of two 2x4's, on which rest 2x6 joists, 24-inch centres. The studs are boarded up outside with drop siding. There is no inside boarding, the sawdust being allowed to fill the space between



An Ice Derrick with Saw and Square.

the studs. The roof is constructed of 2x4 rafters, 16-inch centres, boarded and covered with shingles. In each gable is a slat-ventilator for the purpose of allowing free circulation of air. The ice door should be built in two or more sections, hinged to open outward. On the inside pieces of two-inch plank are placed to keep the sawdust or other filling away from the door. This house is known as Cooper's house, and the actual cost, if the farmer does most of the work himself, should not be more than \$70 to \$75.

There are many different types of ice-houses, some prefer building a combination ice house and milk stand, others desire a more complete cold storage with a house divided into two parts, one for the ice and the other to be used as a cooling chamber. Such houses as the latter are more expensive and are not found in general use on the farms. They are more suitable for dairies and large producers of dairy products. We are concerned chiefly in a cheap storage for ice for the farm. If the ground is not dry under the ice, it should be made so by draining; but this can scarcely be done at this season of the year, more than to use porous material, such as cinders, stone and plenty of sawdust under the ice. Leave no air space under the ice, but leave an air space on top, between the roof and the ice. In case sawdust is not procurable, use cut straw or hay, but it will need twice the quantity, that is twice the thickness, of this material to give proper insulation.

Where a cooling-room is desired adjacent to the ice storage, a room 10 feet by 6 feet is good, and this does not require particular insulation. However, it is the better for being lined inside with matched lumber and kept whitewashed each year. The floor should be of concrete with a smooth surface, and tile drainage should lead from it.

In storing ice the source of supply should be considered. Only the best quality of ice should be stored, but this is not always procurable. In putting the blocks into the building they should be laid in rows and layers, with the joints broken, and all the chinks and small interspaces filled with broken pieces of ice. The point is to endeavor to reduce to a minimum the

amount of air space between the blocks, but under no consideration should sawdust be used for this purpose.

### CO-OPERATE.

In the putting in of the ice crop it is well that neighbors should co-operate in the cutting and hauling, as many hands make light work of this none too attractive job. A number of farmers should plan to harvest ice at the same time, should select their place of cutting from a pond or stream nearby; should all plan to put in their ice as early in the season as good, clear, thick blocks are available. Under no consideration should the ice-harvest be put off until late in the season, for very often an early break-up or a protracted thaw, followed by snow, causes the ice to become deteriorated by four or six inches of a shelly poor material on top. By all means get the ice in early.

### CUTTING.

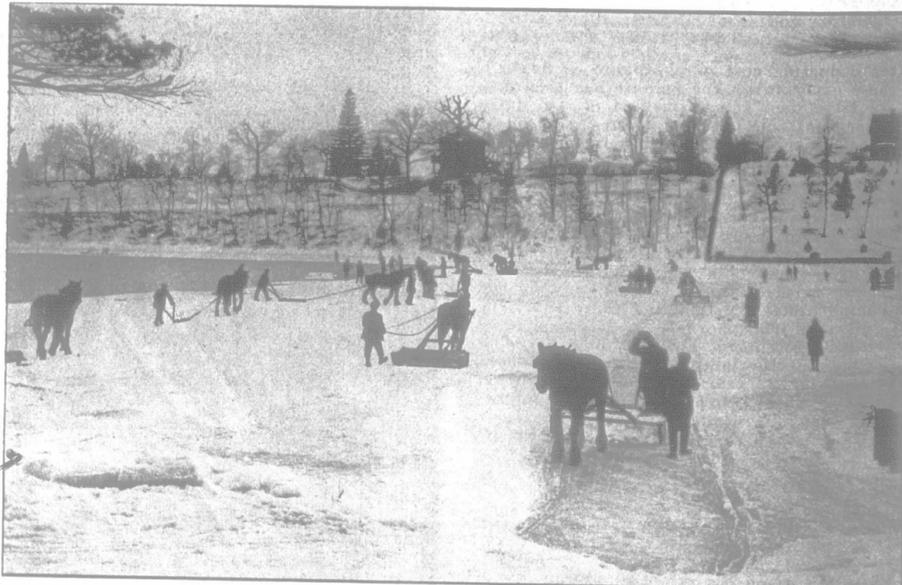
For cutting the ice the most common implement used is an ordinary cross-cut large-toothed saw, with the handle taken from one end. A correspondent some time ago stated that in cutting ice he used a square made of a piece of six-inch board, with a brace attached to make it rigid. This, with a 16-foot 2-inch plank was used to lay-out and mark the squares of ice. Where ice is put in on a large scale, and many farmers are co-operating, an ice plow is sometimes used, but most of the ice which goes into the farm storage is cut with a saw. Where farmers are handy to a city or town where ice is being harvested in large quantities by ice companies they may often be able to purchase the ice, and cut and load it direct from the water on to their sleighs. Derricks are generally provided where this is practiced.

### A DERRICK FOR LOADING.

A plan of a derrick, which might be used where farmers are co-operating, is published herewith, and with it will be seen an illustration of the saw and square used in marking out the ice. In cutting, the cakes should be cut as straight up and down as possible. This is difficult, as the saw will "run" when cutting. In making the derrick, use two strong, white-oak poles for derrick and sweep. The upright may be cut from any strong piece of lumber or may be made by spiking together two 2x4 scantlings. It should be 12 or 15 feet long and well braced at the base, as shown in the illustration. The bottom should be smooth in order to slide freely over the ice. The sweep should be about 16 feet long or more, with a rope attached to each end and is pivoted on top of the upright with one-quarter to one-third projecting over where the ice tongs are attached. The remaining portion gives plenty of leverage for lifting the heavy cakes of ice. Two men can work this derrick, one loading the tongs while the other man pulls up the cakes by the rope at the end of the lever and swings them around to the sleigh in loading. This is a cheap derrick, and if properly made will serve to handle any cake of ice that can be conveniently placed in the ice house.

For unloading at the ice house a block and tackle is very handy to pull the heavy cakes of ice up in to the building and swing them into position.

Another type of derrick is shown in another illustration in this article where several men may be seen working the apparatus. This is a little more complicated,



Clearing the Ice of Snow Before Cutting.

same cows on similar feeding out-time each day? Also, have any tendency toward weakening of animals kept in as against those the time?—Editor.]

## ing Ice.

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Loading Ice with a Double-leverage Derrick.

but the illustration shows the idea, if any reader would like to try it he should have no difficulty in making such a derrick.

It is necessary before attempting to cut the ice that all snow should be scraped clean from it with a horse, and any kind of improvised scraper will do this work very quickly. One of our illustrations shows such preparation for the ice harvest in progress on Grenadier pond, Toronto, from which some of the Toronto ice companies get a great deal of their ice.

Where ice can be bought, ready cut, and floated to a handy loading place by some of these companies, the farmer generally has a very good chance of getting in good ice without very much trouble. One illustration depicts a number of farmers' sleighs being loaded with ice which has been cut by a large company and sold to them to be stored in their small ice houses on the farm.

Remember, in storing ice, to put in plenty for each cow. It has been estimated that three tons will be sufficient for a house refrigerator and the minor uses made of ice in the farm home. Besides this, allow at least one and one-half tons, if possible, for each milk cow in the herd. Allowing for plenty of sawdust, if you wish to store twenty tons of ice, the house should be 12 feet square and 12 feet high, inside dimensions. A double boarding of the house will, of course, insure better insulation. Whether the house provided be cheap or expensive matters not, so long as the insulation is sufficient, and no one, especially those keeping dairy cows, can afford to let the winter pass without storing plenty of ice to be used next summer. Any readers who have any suggestions to offer which will help others in harvesting the ice crop are invited to send their suggestions to us immediately. Harvest the ice early and be sure to harvest plenty of it.

### Cheese Factories Selling Out.

A Western Ontario correspondent writes:—

"The recent sale of two important cheese factories in Middlesex County, to the Canadian end of a large American enterprise engaged in the manufacture and disposal of a variety of milk products, is an incident of more than local interest in dairy circles. The Harrietsville factory has been for years one of the largest cheese making concerns of this province, and in conjunction with it butter making has been carried on. Bacon hog raising has been an important and lucrative end of the business of the patrons in all the adjacent country. Many factories through these sections were originally established with capital supplied by farmers combining as joint-stock companies, but in course of time, for various reasons, they gradually came under the individual management of capable makers who acquired the properties. During the past couple of seasons cheese dairying has been unusually prosperous and to many the disposal of these factories by their owners has been in the nature of a surprise, but no doubt the terms were attractive and the opportunity considered desirable. The purchasing corporation operates a very large and well-equipped plant at Belmont, Ont., capable of converting into powder great quantities of milk, or, if need be, making butter or shipping cream to points like Toronto. It is very easy to see that a big concern like the one in question requires a large and certain supply of milk, and it is understood that the services of the former owners of the two factories purchased are to be retained as local managers for a year at least to operate these plants as auxiliaries to the central factory for the collection of milk, and possibly for its partial reduction to other products. Obviously the change will not be in the interest of swine raising, for why will not be available, and how the returns for milk will in course of time affect the patrons remains to be seen, especially in the summer season, when the milk flow is flush. Powder making requires a high standard grade of milk, and as is now the case with milk generally, dairy farmers find the cost of production increasing, and every item is more closely scrutinized than in times past. Financial obligations in the way of increased taxation, etc., arising out of the war make it absolutely essential that the net returns from the dairy farm be sustained, or its operation will become unremunerative.

The shortage of help is a most vital question with the dairy farmer, and the keeping of fewer cows is therefore a condition that may easily arise. The factories in the district that continue cheese making will probably increase their business and their capacity because of the recent development, and should it not continue satisfactory from the patrons point of view, the prediction has been ventured that new factories may be organized on a co-operative plan or as individual enterprises."

### The Cow's Udder.

The cow's udder is a delicate piece of machinery, as sensitive to abuse, ill-treatment, and improper care as a watch.

The udder of the cow is composed of two separate halves, the right and left halves, which are separated by fibrous tissues. There is no connection between the two halves, so milk cannot be drawn from one to the other. The milk glands proper are located near the abdomen, and extended downward in to the udder, the remainder of which is occupied by blood vessels, nerves, muscles, ducts, and tissues, making it rather open and sponge-like.

At the lower end of the teat is the sphincter muscle, which keeps the milk from escaping. Over this the cow has no control whatever. The upper end of the canal in the teat is connected with the milk reservoir, the size of which varies in different cows, the capacity averaging about one pint. The opening from this reservoir into the teat is also guarded by a muscle over which the cow has little control.

Extending from the sides and top of this reservoir are a large number of ducts or tubes called milk ducts. They divide and subdivide to form a chain work of a very large number of small tubes, and are surrounded by blood vessels, nerves and muscular tissue. There is a still more complicated network of division and subdivision, but let this suffice to illustrate the point that, in dealing with the cow's udder, we are working with a very complex mechanism.

With heavy milkers as a rule the udder is enlarged, and more or less hot and tender just before and after calving. This swelling may extend forward to some extent on the abdomen. This condition is to be expected and need not cause any anxiety. It is more pronounced when the animal has been well fed and is in good flesh.

When this exists, the animal should not receive much grain until the udder softens. The ration should be laxative in nature, and of a light character. Bran is especially adapted for feeding at this time. The milk should be drawn several times during the day after calving, followed by active rubbing or kneading of the udder. Milking before calving is advisable only with the heaviest milkers, when they are suffering greatly from the distension of the udder.

Congestion of the udder may merge into active inflammation or garget, as it is often called. This usually results from exposure to cold, moisture, draughts

from blows or injury to udder, or from over-feeding of rich protein feeds. The cow should be kept from exposure to cold weather and to cold draughts and off cold, wet floors until congestion leaves the udder.

Many times there will be only a slight swelling in the udder, which will not interfere with the milk secretion beyond a tenderness. Or the milk may be lumpy and full of threads, with no noticeable hardness in the udder. In severe cases the milk is usually suppressed and replaced by a yellowish, watery fluid, containing clots of casein. The first symptom in these severe cases is a shivering of the animal, with cold ears and horns, followed in a short time by a fever. One of the best methods of treatment in mild cases is to thoroughly massage the udder, and work in an ointment of one table spoonful of gum camphor and six table spoonfuls of lard. A physic should be given at once, and care taken not to expose the cow to cold weather or draughts. Another treatment for the more severe cases is made by mixing two ounces of fluid extract of belladonna leaves with four ounces of poke root and eight ounces of lard.

There is nothing so good, however, as "elbow grease" in curing mild cases of caked udder. It is always advisable to give the cow a good physic in severe cases of Epsom salts, one to one and a half pounds in a drench; follow this for several days by giving one ounce of saltpetre in the drinking water daily.

Milk fever is a peculiar affection of the cow occurring as a form of paralysis, and associated with young cows, but usually after the growth of the cow has ceased, and all her energy is devoted to milk production, or usually when she is from five to nine years old. The disease is so typical that it is easily recognized. It occurs in nearly every case within 48 hours after calving, and usually only after a normal parturition.

The first indications are restlessness and excitement on the part of the cow. Her gait becomes unsteady, and she gradually loses control of her hind parts, finally falling to the ground. She is usually unable to rise; the cow now assumes a characteristic position, which is a great help in diagnosing the case. She lies with her head turned to one side, with her muzzle pointing toward the flank. The entire body is paralyzed, and she expresses all evidence of being in great pain.

While it is possible to stop milk fever by any means that will fill the udder with air, yet there is danger of introducing infection unless extreme care is taken. But for this fact an improvised outfit could be used. It is well, however, to use a standard milk fever apparatus, which can be secured from any drug store for a nominal price. Before using this apparatus the operator should thoroughly cleanse his own hands, and wash the udder and teats of the cow with an antiseptic solution, then, having the apparatus free from infection, the milk tube may be inserted into the teat without drawing what milk it contains, and the quarter of the udder filled and well distended with air. The tube may then be carefully withdrawn, and a tape tied around the teat tightly enough to prevent the air escaping. The same treatment is applied to each quarter. The udder should remain full of air for at least 24 hours; longer if there is sign of trouble. The tape may be removed and another treatment in case the air has escaped. Of course, the calf has had to get his meals elsewhere during this treatment.

Warts on the teats are often troublesome in milking, besides adding to the danger of increasing the possibility of contaminating the milk through infectious material which may be found upon them. They may be greatly benefited or entirely removed by smearing them thickly with pure olive oil. If they are large, and still persist, despite this treatment, they may be cut off with a sharp pair of scissors, and the spot touched with a stick of caustic potash. They may be oiled now, and the caustic potash treatment repeated as often as necessary to prevent their renewed growth.

Some cows lose a portion of their milk by its leaking from the udder. This may occur when a cow is milking heavily, and the periods between milking are not evenly divided, or it may be because the sphincter muscle is not performing its duties properly. As there is no remedy for this trouble, about the only thing that can be done, in case conditions warrant, is to place a rubber band around the lower part of the teat.

Too small an opening in the teats is the most common cause of hard milking. The size of the opening is controlled largely by a strong sphincter, which closes the teat opening more than it should normally. Anything that will cause this muscle to contract slightly and the opening to remain larger, will, as a rule, make



Farmers Loading Ice Purchased from an Ice Company.

hard milkers easier to handle. Often lead or rubber teat plugs are placed in the teat duct, and fastened there, so the cow wears them from one milking to another; this treatment in time curing most hard milkers.

In some cases this treatment is not sufficient, and the only cure is to cut the teat on the inside with a bistoury. This instrument is passed into the teat canal, and, by means of a turn of the handle, a small knife is projected. As the instrument is removed, it cuts the side of the teat duct, and the surrounding muscles. An ordinary teat plug is then kept in the teat except at milking until the cut heals. This is a rather dangerous operation, and, because of the likelihood of infection, it is best to call a veterinarian. Of course, it is understood that anything which is to be inserted into the cow's teats should first be thoroughly disinfected.—HUGH C. ASSELLTINE, in "New Zealand Dairyman."

## POULTRY.

### Selecting the Male Bird.

As a general thing, there is not enough attention paid to the mating up of breeding pens in the average farm flock of hens regardless of breed. Very often the male birds are not selected according to any set plans, and all too often the eggs for hatching are simply picked out of the basket of eggs from the entire flock, good, bad and indifferent. This year we would recommend our readers, who have pure-bred flocks, to secure, early in the season, one or more extra promising cockerels or year-old birds to use for mating with selected pens of proven good layers for this year's stock. The man who has crossed or mongrel poultry should also take enough interest to purchase a pure-bred male bird of desirable type and from a laying strain. Poultry should be graded up just as much as should the live stock kept on the farm.

It is well to select the male bird early, before the supply has been culled over, and be sure to get one from hens which have been good layers, and particularly, heavy winter layers. It is believed that egg-laying tendencies are transmitted through the male bird from a laying strain of hens rather than through the pullets from heavy layers. We would be safe, if possible, and use only pullets from heavy layers and male birds from heavy layers as well.

Select a well-grown, but not overly large, bird for his breed. Get one true to type. Egg-laying strains of some of the breeds—Wyandottes, for instance—are considerably larger-bodied and rangier than are the best birds of exhibition strains. The farmer's highest return from his poultry comes from eggs first, and then from birds sold for meat. He has very little market for fancy breeding stock unless he or his wife is specializing in poultry. The average farmer should bank on getting eggs when eggs are high-priced, so should fill his laying pens with utility stock. The male bird should be strong and vigorous, with plenty of bone, and should show vigor in shortness of head, width of head, shortness and thickness of beak, and a large, full, bright eye. He should look like "the cock of the walk." Masculinity is important in any male, be it animal or bird, on the farm. Be sure the bird has a straight breast-bone and has width and depth. Prof. Graham of the O. A. C. says that a good judge of a beef steer is generally a fair judge of a bird of the meat breeds. Always turn the bird upside down and see that he has a long, deep, straight keel. Here is where the meat is put on and there should be room for it. Buy the bird that is "boss" of all his mates, provided his general make-up is satisfactory. The leader of the flock should be a leader.

### Rolled Oats Increase Egg Production.

Editor THE FARMER'S ADVOCATE:

I have read a good deal about different methods of feeding poultry in winter and have tried a good many myself. I believe that one of the things which should be well looked after, if winter eggs are to be produced, is a supply of dry mash, which the birds should have before them at all times. There are many different kinds of mashes recommended, but of all I have tried rolled oats, kept in a hopper where the birds may feed at will, seems to give the best satisfaction. For a time last fall my laying stock was not supplied with this feed. During the summer, owing to the high price of this material, a wet mash, composed chiefly of shorts, was fed, and when the cold weather came, not desiring to continue a wet mash, the birds were without a mash feed at all for a few weeks. Very few of them were laying. A few weeks ago rolled oats were again supplied, and within a week's time a difference was noticed in the egg production of the flock. The rolled oats had the desired effect. It is surprising how many the birds will eat when they get their first supply. They will empty the hopper so quickly that the feeder will become alarmed at the cost of feed, but after they have once been filled up on this new feed, which they like, they will not consume anything like as much as they do at first. From experience, I have no hesitation in saying that rolled oats are about the best mash feed the average farmer can supply in winter. He usually has the oats on his own place, and can get them rolled at the mill, making a very economical laying mash.

My own preference is to keep the hens fairly fat during the winter. I never have had good success from thin hens. Of course, they should not be permitted to get over-fat, but this can be avoided by feeding their whole grain in the litter and making them work

for it. A fat hen well exercised will usually lay more eggs than a thin one. For whole grain I prefer a mixture with a little wheat, buck-wheat and corn or barley. No whole oats will be required when rolled oats are being fed in the hopper. If rolled oats are not fed, then a few whole oats should be given in the grain mixture, as oats notwithstanding the percentage of hull are fairly good egg feed. For green feed, a mangel hung on a string from the roof of the house will prove satisfactory, provided cabbage or sprouted oats are not available. The nicest green food I have ever tried was sprouted oats, but it requires a little work to sprout them and keep them always ready for the hens. A few shallow boxes are necessary with a little sand, and a good place to sprout the oats is on the furnace, if the house is supplied with such heating appliance. The oats are then fed to the hens and they consume the sprout as well as what remains of the kernel.

Those who have fed hens for winter egg production have noticed the difference in the consumption of oyster shell as soon as the birds start to laying heavily. As a general thing, birds will not consume very much of this material until egg production has started in earnest or just before this time, and then they will eat surprisingly large quantities of the shell, which should be before them at all times, together with grit, which should be supplied in a corner of the pen. Where one has access to some old plaster from an old building this will be found a very suitable material to use as grit, as the hens will pick a good deal of the hard material from it. Where some such material is not available grit should be supplied. I prefer pullet size for general use in the laying flock.



The Old Way.

I use a cotton front house, and on days when the sun is shining, open it to the south, allowing free circulation of air and access of sunlight. The birds have access to an open yard every day in the year, and it is surprising how much time they spend outside. They are accustomed to being cool and do not suffer in real cold weather. Their pen is never damp and is free from drafts. As previously stated, I believe that the feeding of rolled oats is one of the secrets to success.

Middlesex Co., Ont. MIDDLESEX POULTRYMAN.

## HORTICULTURE.

### Choosing Non-standard Varieties.

In the autumn there is usually a market for the summer and early fall varieties of apples, such as Astrachan, Duchess and Wealthy. Although these kinds are not commonly mentioned when varieties for an orchard are being enumerated, they should not be overlooked for some particular locations. There are markets that will handle these apples in baskets or boxes, and, since the standard varieties are maturing on the trees when the early ones are ready to be gathered, there is a lull in orchard work. The farm which has many lines cannot produce fall apples as economically as can the exclusive fruit plantation, for on the former the grain harvest and early fall cultivation will conflict with the operations in the orchard. Growers who customarily sell on the market or are conveniently located relative to the city trade have an advantage in this regard, while there is a considerable business done in the cities at the head of the Great Lakes which can now be reached through the service provided by the boats that ply those waters. Successful sales have been made on the prairies by growers who have produced the varieties mentioned in carload quantities in Ontario. Duchess and Wealthy are not standard varieties and are seldom recommended, except as fillers, but it is possible to make a fair margin of profit from them if handled wisely.

In the year 1896 a Wealthy orchard was planted on the Central Experimental Farms, Ottawa, and detailed records have been kept regarding it each year since. The trees were set 10 feet by 10 feet each year, or at the rate of 435 trees per acre. The orchard contained 144 trees. Some of the trees were removed as they began to crowd, and usually the poorest bearing ones were taken out. The ground was not plowed, but the grass was cut and allowed to remain as a mulch, and it was manured once in three years.

Out of the original 144 trees, only 88 were left by 1914. The records for that year show that 1043.5 gallons, or 43½ barrels of apples were produced on these trees, besides 867 gallons of windfalls. After deducting all expenses for the year in connection with the orchard, viz., growing, picking, packing, and marketing, the net

profits amounted to \$36.03, or at the rate of \$115.40 per acre. The fruit was all sold in baskets, except 20 bags of small apples. The orchard began to fruit in 1899, and for sixteen years the average net profit per acre amounted to \$107.46. The average net profit per acre from date of planting until 1914 was recorded as \$90.49.

We cite these figures simply because exact records of production and profits are very seldom published and very rarely kept by individuals. It is possible that during the present era as good profits over and above all expenses could not be shown, but the figures which we have given prove that there has been a market for this class of apples, properly put up. There is no reason why a similar orchard would not bring corresponding results. We would not, however, advise planting the trees 10 feet by 10 feet apart. It is seldom that land is so scarce or so valuable that this becomes necessary on the ordinary fruit-growing plantation. Fifteen feet by fifteen feet or twenty feet by twenty feet would be a more suitable distance apart to plant the trees. The space between the rows of trees would permit of thorough cultivation and the growth of crops so no expense should be attached to the orchard when it began to bear.

We would not have this article construed to advise the general planting of these soft and early varieties of apples. Growers must be very careful as to the varieties they set and during their hours of planning for the future, they should take into consideration the matter of convenience in picking and disposing of them during their season, and, most important of all, the market should be studied and known. It is often profitable to discover a market that others are not supplying. Little differences, specialties and diversification has many times meant more prosperous times.

### The Need of Storage Facilities.

The term over-production can never be truthfully applied to the apple growing and marketing business in Canada until proper storage facilities have been tried and have failed to stem that incoming tide which a few, in their hours of pessimism, discern approaching the shore line of the fruit growers' domain. A year of curtailed apple crops will probably dissipate any thoughts of over-production for a time, at least, or until another season comes round, when Canada and the United States perhaps will both harvest an abundance of fruit; then with no adequate provisions made for handling our crop and distributing it over the winter months, the entire production will be dumped on the market in September, October and the first part of November, with results very similar to those of the past which have excited a few to cry wolf! wolf!! Had growers in the Annapolis Valley failed years ago to provide themselves with warehouses where they could store their crop until they had time to grade and pack it, they would have been crying, enough! enough! there are too many apples being grown. On the contrary, they erected large warehouses that would hold thousands of barrels each and made them frost-proof. Here the fruit was hauled as it came from the trees and stored, tier upon tier, in these well-ventilated and spacious buildings. Meanwhile harvesting went on apace, while teams plied between orchard and warehouse, sometimes both day and night. In this way the crop is removed from the trees before damaging weather overtakes the grower, and he is not impeded by packing and shipping except with his early fall apples. If these storage facilities had not been provided and the crops of the last few years had been put on to the market during the same months that Ontario's fruit is being sold, it would have had a damaging effect upon the whole business, for much of it would have unquestionably gone West, where the production of Ontario has formerly found an outlet. Fortunately the growers of Nova Scotia could not find time during September and October to prepare for sale any quantity of their winter varieties. They were stored and packed in the winter. In this way many an embarrassing situation has been prevented and we have had "business as usual."

The telegraphic report of the Dominion Fruit Commissioner, D. Johnson, on December 23, 1915, reveals the condition of the Canadian market in winter. In the cities of Quebec, Montreal, Ottawa, Hamilton, etc., Spys are quoted as high as \$7.00 per barrel. This occurred in Quebec, P. Q., but in the other cities \$5.50 to \$6.00 per barrel for Spys, Snows and McIntosh is mentioned. As a general thing, there is no quantity of Ontario apples in the country after December. They either go West or across the water before heavy frosts render transportation of the fruit dangerous. Abundance of apples in the autumn and a dearth of them in the winter will ever result in low prices in the fall and high prices in the winter. Sometimes with plums, when the fruitgrower harvests a good crop, all trees located in town gardens, fence corners, and such places, will probably be loaded too, and the consumer does not buy just them. Similarly, with apples, there is often a local supply that must be cleared up in October and November before the ultimate buyer will invest in a barrel or two for winter. When selling his entire crop in the fall, the grower meets the competition afforded through this inferior quality which he meets at that season of the year. This condition does not arise in the Prairie Provinces, it is true, but the cities of Ontario and Quebec should consume a great quantity more of the home-grown product than they are doing. The Ontario grower can never develop the trade to its proper proportions with them until he equips himself with ample storage facilities.

Large storehouses situated on railroad sidings, similar to those in Nova Scotia are necessary. Even

to \$36.03, or at the rate of \$115.40 per acre. The orchard began to fruit in 1914. The average net profit per acre for the first six years was \$107.46. The average net profit per acre for the first six years was \$107.46. The average net profit per acre for the first six years was \$107.46.

These figures simply because exact records of profits are very seldom published and kept by individuals. It is possible in the present era as good profits over and over could not be shown, but the figures given prove that there has been a market for apples, properly put up. There is no similar orchard would not bring correct figures. We would not, however, advise a 10 feet by 10 feet apart. It is seldom so scarce or so valuable that this becomes the ordinary fruit-growing plantation. Fifteen feet or twenty feet by twenty feet is a suitable distance apart to plant the trees between the rows of trees would be high cultivation and the growth of crops could be attached to the orchard when

not have this article construed to advise planting of these soft and early varieties. Growers must be very careful as to the time and during their hours of planning they should take into consideration the science in picking and disposing of them in season, and most important of all, the soil should be studied and known. It is often to cover a market that others are not to cover differences, specialties and diversifications meant more prosperous times.

### of Storage Facilities.

Over-production can never be truthfully apple growing and marketing business in proper storage facilities have been tried to stem that incoming tide which a pessimism, discern approaching the fruit growers' domain. A year of crops will probably dissipate any thoughts for a time, at least, or until another year, when Canada and the United States will both harvest an abundance of fruit; adequate provisions made for handling distributing it over the winter months, and the first part of November, similar to those of the past which we cry wolf! Had growers in the failed years ago to provide themselves where they could store their had time to grade and pack it, they crying, enough! enough! there are too long grown. On the contrary, they ehouses that would hold thousands of made them frost-proof. Here the as it came from the trees and stored, in these well-ventilated and spacious while harvesting went on apace, while even orchard and warehouse, some-and night. In this way the crop is trees before damaging weather over-and he is not impeded by packing cept with his early fall apples. If ities had not been provided and the w years had been put on to the market months that Ontario's fruit is being ve had a damaging effect upon the r much of it would have unquestion-where the production of Ontario has outlet. Fortunately the growers of not find time during September and e for sale any quantity of their winter ere stored and packed in the winter. y an embarrassing situation has been have had "business as usual."

hic report of the Dominion Fruit Johnson, on December 23, 1915, on of the Canadian market in winter. bec, Montreal, Ottawa, Hamilton, etc., as high as \$7.00 per barrel. This e, P. Q., but in the other cities \$5.50 el for Spys, Snows and McIntosh is general thing, there is no quantity of the country after December. They across the water before heavy frosts ion of the fruit dangerous. Abund- the autumn and a dearth of them in r result in low prices in the fall and e winter. Sometimes with plums, ver harvests a good crop, all trees dens, fence corners, and such places, aded too, and the consumer does not milarly, with apples, there is often a must be cleared up in October and the ultimate buyer will invest in a winter. When selling his entire crop over meets the competition afforded or quality which he meets at that This condition does not arise in the it is true, but the cities of Ontario consume a great quantity more of the ct than they are doing. The On- ever develop the trade to its proper them until he equips himself with ties.

uses situated on railroad sidings, Nova Scotia are necessary. Even

if transportation facilities in the winter are not all that are desired, yet one man with oil stoves and such, can keep an ordinary car heated sufficiently to carry the fruit without freezing.

We would not advise this plan for districts where apple orchards are small and scattered. Their product is most economically disposed of in the fall, and with those growers fruit is usually subsidiary to other lines of farming, but in apple-growing sections that really influence the market most materially some system of distributing the output over a number of months seems necessary. Apples going West should also move before severe weather sets in. There is a winter trade in Ontario and Quebec that is worth catering to through a system of storing.

### From Whom to Buy.

There are two features of business that are worthy of consideration. First, there is the established business that is permanently located, is well equipped and has money invested in land, buildings, machinery, equipment, or whatever is necessary to carry on that enterprise. Second, there is the transient tradesman who goes from place to place, displaying and disposing of his goods at least expense. The tax collector cannot reach him, neither does he pay into the revenues of the country. Reputation to the latter does not mean so much as it does to the man who has an established and permanently located business. Often-times people think they can get bargains from the transient tradesmen, but too often they err in judgment, and when they have found out their mistake the party from whom they purchased is somewhere else.

This principle applies to the purchase of fruit trees, berry bushes and plants. There are a number of houses that have established themselves and have gained a reputation amongst Canadian fruit growers. These are the proper sources through which to secure seed, berry bushes and fruit trees. The oily-tongued jobber whose headquarters are situated afar off in some little unknown town makes too many sales in Canada, and in evidence of this statement we ask readers to recall instances where growers have waited years for their plantations to come into bearing only to find it made up of worthless varieties. It was impossible to obtain redress, for the agent's name was unknown and the name of the nursery which produced the trees was perhaps not even mentioned. Nurseries and seed firms which for many years have been selling their commodities over the country have a reputation to maintain. They wish to continue in business, and if any mistakes occur, they are ready to make them right.

These are the proper sources of seeds and trees. A few dollars or a few cents saved on the purchase price may result in as many hundred dollars being lost through inferior quality with no opportunity for recovery of damages.

## FARM BULLETIN.

### Some Seasonable Pointers.

Get the ice house ready for the ice. If you haven't an ice house, make one.

The other day we saw a wagon outside, a binder under a leafless tree, a mare in a fence corner, and the cultivator at the side of the barn. Put these in if they are yours.

Go over the implements and machinery and see that all missing nuts and parts are replaced before they will be needed next spring.

Clean the stables twice each day if possible, and at least once on all occasions.

Give the cattle a second application for lice.

Get the wood cut and hauled for next summer while winter and sleighing are here.

For the man who prefers wooden gates, they may be made at this season. Be sure to bolt them together instead of nailing, and brace them well.

If straw is going to be scarce, haul the stack into the barn. It will save better.

Preliminary preparation of the seed grain may be made now.

All teaming can be more easily done while there is good sleighing.

Buy clover and grass seeds early.

Have all the team harness repaired, washed and oiled. Harness is the most neglected part of the farm equipment.

Boil feed occasionally for the stock. It makes a good change.

As soon as the ice is thick enough, lose no time in harvesting it.

### O. A. C. Examination Results.

The following are the results of the Ontario Agricultural College examinations, in the order of proficiency:—

#### FIRST YEAR.

(Maximum 1,200.)

Shales, 994; Cline, 938; Flatt, 934; Hart, 934; Campbell, 928; Grant, 923; Hammersley, 893; Gowland, 879; Thompson, 875; Musgrave, 871; O'Dell, 864; White, 825; Harkness, 825; Wyatt, 822; E. Atkin, 816; Hunter, 814; Hardy, 800; Matheson, 792; Nelson, 788 (No. 6); Neville, 783; Surgenor, 776; W. C. Caldwell, 774; Bateson, 773; Renwick, 771; Whitelock, 770; Barber, 766; Carson, 762; Clark, 762; Steckle, 762; Shield, 749; Hodgins, 745; Almey, 744; Way, 740; Kezar, 738; Oliver, 738; Scouten, 732; W. J. Wilson, 731; Gardhouse, 730 (No. 4); Toole, 730; Mason, 728; McKay, 724; Delamore, 722; Porter, 721 (No. 1); Thomas, 719; Aylsworth, 718; Cody, 715; Minielly, 711; Goudie, 702 (No. 6); Stewart, 701; Moore, 698; Ziegler, 697; Pearsall, 691; Grunder, 688; Andress, 681 (No. 12); Stillwell, 681; R. Atkin, 677; Peters, 675; Hanna, 669; Crews, 667; Higgins, 662 (No. 12); Sibbick, 651; Rutter, 649; Wadsworth, 648; Allan, 647; Taylor, 647; Cornell, 646; Raymond, 631; Hetherington, 628 (No. 1); Haley, 627; Costogue, 620 (No. 1); Fisher, 618 (No. 1); Shutt, 614; Hale, 612 (No. 1); Smith, 608 (Nos. 3, 12); McLean, 606 (No. 12); Wiltshire, 606; F. M. Karn, 605 (Nos. 1, 12); Argue, 598 (No. 4); Wood, 598 (No. 12); Hamilton, 595 (No. 4); Western, 593; Tice, 590; Secord, 589; Jackson, 588 (No. 12); Howard, 583 (No. 12); Patterson, 577 (No. 1); McDonald, 576 (Nos. 1, 12); Stover, 572 (Nos. 1, 4); Cook, 569; Jones, 560 (No. 6); Martin, 556 (Nos. 4, 12); DuToit, 552 (Nos. 3, 12); Mills, 552 (No. 12); Anderson, 545 (No. 1); Cunningham, 543 (No. 12); Carr, 535; Coulter, 509 (Nos. 1, 12); Duff, 502 (Nos. 1, 4).

Given protanto standing in English subjects—Coatsworth, 562.

N.B.—Remainder of class failed in more than two subjects.

The numbers indicate the subjects on which students have failed to obtain a pass.

List of subjects—1, English literature; 2, composition; 3, arithmetic and 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.)

Bremner, 994; A. T. Brown, 991; Heimpel, 982; James, 978; McArthur, 975; Logan, 966; Cooper, 958; E. S. Snyder, 954; Ferguson, 950; Andrew, 940; Arnold, 940; Hammond, 940; Patterson, 918; Newton, 913; Wilson, 912; Malyon, 907; Leggett, 898; A. W. Snyder, 893; Maybee, 891; Lowell, 883; McAdam, 882; Kay, 876; McEwan, 868; DeLong, 867; Stoddart, 866; Sullivan, 863; Macklin, 859; G. T. Shaw, 857; A. L. Watt, 855; Parfitt, 854; Henderson, 852; Long, 838; Jakes, 836; Dodding, 834; Nelson, 829; C. V. Walker, 820; Munro, 808; Davis, 806; M. A. Watt, 803; Ralph Brown, 802; Robinson, 802; Shorey, 799; McWhinney, 795; Halsey, 794; Edwards, 787 (No. 9); McCulloch, 781; Riley, 778; Hoard, 775; Hamilton, 773 (No. 8); Michael, 767; Knowles, 766; McBeath, 765; Scott, 763; Lavis, 762; McLeod, 750; Clare, 741; Finch, 739; Copeland, 735; Ames, 734; J. L. Walker, 727; Hawley, 719; Wallace, 714; J. G. Shaw, 710; W. R. Brown, 696; Smith, 693; Lambert, 672; Fairless, 670 (Nos. 6, 9); Richards, 655; Silverthorn, 648 (No. 6); Wilcox, 643 (Nos. 2, 8); Fleming, 641; Moore, 639; Roy, 636 (No. 9); Clarke, 627 (No. 9); Middleton, 624 (No. 8); Stevenson, 612; DuToit, 596 (Nos. 4, 8); H. J. Shaw, 589 (No. 1); Mosts, 563 (No. 9); Sibbit, 539.

Students given protanto standing in English; therefore not listed above—Mitchener, 650 (No. 6); Edgar, 509 (No. 9); Flock, 486 (Nos. 9, 12).

List of subjects—1, English lit.; 2, 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. science.

#### THIRD YEAR.

(Maximum 1,200.)

Watt, 951; White, 941; Davey, 934; Schurman, 905; Austin, 903; Bissett, 891; Manton, 881; Mason, 880; Wiggins, 877; Slack, 872; Selwyn, 871; Stokes, 868; Neal, 866; Gauty, 864; Sutton, 855; Evans, 852; Guild, 849; Waterman, 849; Bird, 844; Murdock, 842; Clark, 828; Cudmore, 824; Campbell, 821; Van Every, 816; Hill, 812; Luckham, 808; Martin, 796; McKillican, 796; Hunter, 793; Knox, 788; Neff, 770; Redmond, 747; McConkey, 746; Fleming, 740; Skinner, 731; Lawrence, 717; Marrit, 710; Springstead, 710; Merkley, 686; Harding, 683; McCurry, 670 (Nos. 5, 8); McPhail, 669; Sanford, 642 (Nos. 2, 4); McLoughry, 640; Nixon, 620 (No. 5); Begg, 612; Roger, 561 (Nos. 4, 5); Graham, 532 (Nos. 4, 5, 6); McMullin, 506.

List of subjects—1, English literature; 2, composition; 3, economics; 4, French; 5, physics; 6, inorganic chemistry; 7, qualitative chemistry; 8, geology; 9, crypt. botany; 10, syst. entomology; 11, economic entomology; 12, bacteriology.

### Was It Lobbying?

Under the above heading the Christian Guardian of December 29th has the following to say regarding the recent articles relative to the C. N. R. free trip West, which have appeared in THE FARMER'S ADVOCATE:

"THE FARMER'S ADVOCATE and the Canadian Northern Railway have had a slight difference of opinion over the recent C. N. R. free trip to the Pacific, when press men, members of Parliament and senators were accorded a free trip to the coast in a special train over the Canadian Northern Railway. THE FARMER'S ADVOCATE declares that the trip was an adroit and very effective species of lobbying, and as such, members of Parliament and senators had no business to take any part in it. Mr. W. H. Moore, secretary of the C. N. R. system, writes objecting to this view, and declares that the object of the C. N. R. was simply to show the legislators how good a road the C. N. R. is, and he argues that as the members in question have passed over every railway in Canada, the idea of improperly influencing them by the trip is somewhat absurd. But we think the editor of THE FARMER'S ADVOCATE has spoken the mind of very many Canadian citizens, who, while recognizing the value of our great railway systems, recognize also the possibilities of the railway lobby in affecting Canadian legislation, and we think the editor is unquestionably right when he claims that the man who has freely accepted the ungrudging and lavish hospitality of the heads of any railway can hardly be uninfluenced by that fact if he should be asked to vote a further bonus to that railway. The point at first sight may seem to be somewhat unimportant, but we think it will be found to have rather far-reaching implications. Our senators and members of Parliament should be absolutely independent, and they can no more afford to accept presents from interested parties than can a judge upon the bench."

### Nova Scotia's Agriculture in 1915.

The Secretary for Agriculture for Nova Scotia, M. Cumming, in his report on agriculture in that province in 1915, states that excellent pasture conditions were responsible for about 10% extra returns from live stock of all kinds during the year. Particularly was this true in connection with dairying. The co-operative dairy movement has made remarkable progress in Nova Scotia during the last few years. In 1914 the output of the co-operative creameries in Nova Scotia was 360 per cent. over that of 1910 and the returns for 1915 indicate another 40 per cent. increase over the output of 1914. Excellent pastures and an increased production of green feeds and roots were responsible for this very favorable report in connection with live stock. Attractive prices have been paid by butchers for beef cattle, yet correspondents reported to the Secretary a slight all-round increase in the case of dairy cows, sheep, hogs and poultry. It appears from the report that the number of sheep being kept in Nova Scotia has increased by 5 per cent., due in part to the attractive prices which are now being paid for wool and mutton.

During 1915 clover grew in profusion everywhere, even on fields where no seed had been sown for a number of years. The conditions for harvesting were not very favorable, and a considerable quantity of hay was harvested in rather inferior condition, but on the whole the crop was one of the largest ever garnered in the history of the province. Reports indicate that Indian corn, peas, oats and vetches, rape and fall turnips, grown for the purpose of supplementing pasture fields for cattle, saw a considerable increase in 1915, and several silos were erected in districts where previously such equipment was uncommon. Potatoes were a disappointment as regards yield and quality, and apples did not come up to expectation. Tables in connection with this report compared with that of 1914 show for 1915 an increase of 200,000 tons of hay, a decrease of two and three-quarter million bushels of potatoes and about 300,000 fewer barrels of apples.

### The Calgary Fat Stock Show.

With the closing of the year 1915 came the Calgary Fat Stock Show, and both have now passed into history. Although expectations regarding the success of the show were none too sanguine, the event was a surprise both to visitors and to exhibitors. An increase of 22 head occurred in the cattle department, and there were 206 more sheep than in 1914. However, in sympathy with the existing feeling regarding swine-raising in the West there was a decrease of 28 head in that department. There has been great improvement in the finish of the stock seen at this show, yet there is room for still more improvement. A large number of animals came forward that were very good indeed, while some of the entries did not possess the finish that will be seen in future years if the Calgary Fat Stock Show continues to improve as it has done.

In Shorthorns the competition was keen, the entire showing being a record in the history of this fat stock show. Yule & Boves of Calgary, Alta., were the most successful exhibitors, winning the lion's share of the awards. This firm produced the champion of the breed. Standing reserve was H. S. Currie's Roan Lady 46th.

In Herefords, Frank Collicutt, Calgary, Alta., met some competition from the herd of Hill Bros., Lloydminster. However, Collicutt was successful in winning most of the awards, as well as the championship and reserve championship.

Three of the best Aberdeen-Angus breeders in the

Province of Alberta made the fighting keen in the Doddies. To Lew Hutchinson, of Duhamel, went the highest honors in each class, as well as the championship and reserve championship.

The grade cattle bore evidence of careful feeding, and the competition throughout was keen. In the three-year-old steer class Frank Collicutt took first on a grade Aberdeen-Angus, which was ultimately made champion grade. This steer was reputed to be without doubt the best steer at the show.

With 36 entries less than last year, the swine department was weakened somewhat. The Yorkshire, Berkshire, Tamworth, and grade classes were fairly well contested, and in Hampshires a nice lot were forward. The quality of the exhibit maintained the same high standard of the past.

The Shropshire, Oxford, Suffolk, Southdown and grade classes aroused considerable interest in the sheep pens on account of the large number of flocks competing, and because of the high finish and excellence of type represented. In 1914 there were 166 sheep in this department; in 1915, 372—an increase of 206 came before the judges for awards.

A. S. McDonald, Cochrane, Alta., had the first and second prize carloads of fat cattle, while in sheep M. G. Bredt had the best carload and H. W. Watkin was second.

### New Year Nonsense.

BY PETER MCARTHUR.

Santa Claus was certainly good to me this Christmas. For once he brought me something useful—something I needed more than anything else. As a rule he brings me things for which I can be only mildly thankful—books, slippers, and things that I could buy for myself if I needed them. But this year he brought me something that I have never been able to buy in a satisfactory way. Owing to some mental kink, I have never been able to buy collar buttons except when in the pinch of dire necessity. Perhaps it is because they are such trifling things that I can never manage to remember them when I go shopping. Anyway, I can remember no time since my boyhood when I had on hand a proper supply of collar buttons. I could lay in a supply of shirts and collars, but collar buttons seemed to escape me. In consequence, when I went to put on "my other clothes" to go to town or to some public meeting, there was usually a strenuous time in the house. Every year the trouble got worse. With growing boys who used collar buttons in everything from blouses to white shirts and women folks who used them in shirt waists, the supply was always at low ebb. Often and often in moments of rage I vowed to buy a quart or a pound or a gross of collar buttons—whatever the quantity is that people buy when getting them wholesale. But after I got fixed up and went to town, I always forgot to buy even a five-cent card of bone collar buttons. Apparently some rumor of my troubles reached Santa Claus, for this year he showered them on me. On Christmas morning I netted twenty-eight, and for the next few months I hope to dress in a peaceable frame of mind. I am dropping them around in all sorts of odd corners that the children are not likely to find, so that when I go to dress up I shall be moderately sure to find one—if I hunt long enough.

A short time ago the whole family got a great surprise. It was discovered that the mother of Fenceviewer I is still living—a hale and hearty cow, still in possession of all her faculties and giving a highly satisfactory flow of milk rich in butter-fat. She belongs to a man a few miles away who bought her at a sale a few months before we returned to the land. When Fenceviewer came into our possession, she was a thrifty and self-reliant yearling, with an established reputation for breaking through fences. Nothing about her suggested that she had ever had relatives or that she cared a hoot whether she had or not. Like Topsy, she "just grew." No one ever took the trouble to enquire as to her ancestors, for it was quite certain that their history did not figure in the herd book. As the years passed and her descendants increased in number, we learned to speak of her as the old cow, though she is still "in the vaward of her youth." As a matter of fact, she is not yet eight years old, and her mother is still in her prime. And I have no doubt that if they met, they would fight for the leadership of the herd just as if they were strangers. The saying that "blood is thicker than water" would not influence them if they met at the watering place. They would fight just the same. This matter of having regard for your blood relations is a purely human affair. Animals are not affected by it except when actually caring for their young, and in that way they are spared a whole lot of worry. Take the driver, for instance. Last spring she was ready to bite, kick or trample anyone who went near her and her newly foaled colt, but now if that weaned colt goes near her when she is eating, she is ready to kick him through the wall of the stable. Surely it is a strange world we live in, and just as hard to understand whether we consider it from the point of view of animals or of men.

Before I forget it, there is another point of interest about Fenceviewer I. When I made her acquaintance in her "salad days," she was known as "Blossom." Just think of it. This tough old pirate of the barnyard was once so mild and gentle that she suggested to her youthful owner a tender flower. As her character developed, it was found that the name of her calfhood was wildly absurd, and it had to be changed. And I

may as well confess that Fenceviewer is only her society name, one that is used only when she appears in the papers. Her everyday name is "Calamity," and it fits her to a "T." If she is not watched when at large, there is sure to be a calamity of some kind before she has been prowling very long. The fact that she is only a cow made it possible for us to change her name as her nature changed. Wouldn't it be a good thing if we could do the same with people? While children are young and cute they could be given such names as "Birdie," "Dot," "Algie," "Percy," and so on. But when they develop into Amazonian women and rough-necked men, their names could be changed to others more descriptive. I understand that some such system as this prevails among the Indians, and that a man does not get his permanent name until he has deserved it. For this reason we find among them gems something like the following: "Scat-Ah-Nag-Nag" (Man-Afraid-of-his-Wife), Gitche-Whoop Ee (Hunting Trouble), Wow-Wow-Ha-Ha (Laughing Fire-Water), and so on and so on. If we could re-name some of our public men as well as our friends and acquaintances in this way, our voters' lists would make more interesting reading than they do now. Besides, introductions would mean more, and we could avoid serious mix-ups if people had descriptive names. No man in his senses would think of introducing "Laughing-Fire-Water" to "Hunting-Trouble." I don't know, but it seems to me that we are in need of a reform in the naming of people and live stock. It appeals to me more than spelling reform.

### Draft Horse Future Bright.

The following letter has been received from Wayne Dinsmore, secretary of the Percheron Society of America, and it certainly depicts rosy prospects for the draft horse business in the United States for 1916 and future years. Horse market prosperity in the United States should, in time, have a beneficial effect upon the market in this country. The degree of optimism shown in this letter is in marked contrast with conditions in this country, but Canadian horses of the right kind will surely soon be moving at fair, if not high, prices. There is a good future for draft-horse breeding in this country. Such letters as this should stimulate our authorities to action to remedy conditions which have prevailed for several months. All figures given and statements made refer to conditions in the United States—not in Canada.

The letter follows:

"The beginning of 1916 ushers in what promises to be one of the most favorable seasons horse breeders have ever faced. Draft horse producers have especial reason to feel optimistic. The marked improvement in the industrial world has brought transportation facilities again into active service and all transportation agencies—railroads, motors, and teams—are being used more freely than for two years past. Draft geldings have been in good demand at higher prices, and the farm demand for useful draft mares is already so strong that horse dealers are being eliminated as buyers of good draft mares.

"Pure-bred draft horses are also in keen demand. The elimination of imports since August, 1914, has resulted in a marked stimulus to horse breeding in this country, and more satisfactory prices have been paid to the breeders and raisers of good American bred draft colts than at any time in our past history.

"The total number of horses on farms, April 1st, 1910, was 19,833,113 head, and the Government estimates for January 1st, 1915, credited this country with 21,195,000 head—an increase of 6.86 per cent. over 1910.

"The fifteen states on which we have definite data as to stallions in service are Illinois, Iowa, Kansas, Nebraska, Wisconsin, Minnesota, North and South Dakota, Michigan, Pennsylvania, New Jersey, California, Washington, Oregon and Montana. These states had, January 1st, 1915, a total of approximately 11,085,352 horses, assuming the same rate of increase for these states as for the United States as a whole. They also had, according to the latest available Stallion Board reports, 47,697 stallions, all told, in service, 23,671 of which were pure-bred draft stallions.

"If this proportion holds good throughout the United States, it would give us a total of 91,357 stallions in service, approximately half of which would be classed as pure-bred drafters. As a matter of fact, however, the number is probably somewhat less, as all the important horse-producing states, except Indiana, Ohio and Texas, are included in our figures, and the proportion of stallions in use in other states is unquestionably lower, as less attention is given there to horse production. Assuming, for the sake of argument, that these percentages hold good, however, we have about 40,000 pure-bred draft stallions and approximately the same number of stallions of other kinds, most of which are grades and mongrels. Any well-informed horse breeder will admit that at least ten per cent. of the stallions in service are annually being retired because of age, death, unsoundness, or other cause, and it therefore follows that about 8,000 stallions are annually being retired from the breeding ranks. To make good on wastage alone, therefore, we must replace 4,000 pure-bred draft stallions annually, and as the other stallions, grade and otherwise, should for the most part be replaced by pure-bred draft sires, we actually need around seven thousand good draft sires annually to fill the places of horses dropping out of service.

"During the fiscal years of the various draft-horse record associations, ending in 1915, approximately 12,000 American-bred draft horses were recorded. This includes both sexes and all ages of Percherons, Clydesdales, Belgians, Shires, French draft and Suffolks. Less than half of these were stallions so that we are

producing annually now less than 6,000 draft stallions. It is recognized by all horsemen that at least one-fifth of the stallions that are recorded are not good enough to be of any real service in improving the draft horse stock of the country. It therefore follows that we are really producing less than five thousand good, pure-bred draft sires annually, when we need at least 7,000 per year, at the lowest calculation.

"Aside from the foregoing considerations, there are other factors which augur well for the draft-horse industry. High-priced land and labor have led our farmers to study methods of reducing costs in farm work. The advantages draft horses have over light horses in farm work are numerous. The tractive power horses can exert is governed by weight, strength and temperament. Under extraordinary pressure horses can exert from four to six horse power, but under conditions of daily work exert a pull which is about one-tenth of their working weight. The horse-power traction required to move farm implements depends on the soil, climatic conditions, and the condition of implements used. Under favorable conditions five draft horses, weighing 1600 pounds or over, will pull a two-plow gang of 14-inch plows a little more than twenty miles, averaging from five to five and a half acres per day. It will take seven horses that weigh from 1100 to 1300 pounds to do the same work, and it is not practicable to work seven horses on one gang plow with the ordinary class of farm labor. It will therefore require two men on single plows, one with four and the other with three light horses, to do the same amount of work that one man will do with five draft horses. The same general ruling applies in seeding, discing and harvesting, for, while one man can readily handle five draft horses on the implements needed, he cannot advantageously nor safely use enough more light horses to give his equivalent power. The use of draft horses therefore increases the amount of work one man can do in the field; and in actual practice the work is better done when drafters are used. When to this we add the fact that less barn room is needed, and less labor required in handling the heavy horses than is necessary where enough more light horses are used to make up equivalent power, the advantage becomes marked.

"Besides this, the heavy horses sell more readily and at higher prices, when surplus is to be sold. Light weight horses have been bought at prices ranging from \$110 to \$150, while draft horses have brought from \$200 to \$300 each. This is an important factor, for every well-managed farm has a few surplus horses to sell annually, and the readier sale, and higher prices realized for draft stock, are factors which must appeal strongly to all thinking farmers. Maximum cash returns are what we are all interested in, and this we obtain from drafters used in farm work.

"These are facts which thinking farmers will ponder well. Horse buyers have scoured the United States as never before. More than half a million horses and over one hundred thousand mules have gone for war purposes. Demands from abroad will continue as long as the war lasts, and will be strong for years afterward, for the battling nations must call on us for horses for industrial purposes. Country sales already reflect the feeling of conservative farmers, who are reported good buyers at strong prices, on first-class mares weighing 1600 pounds or over, whether grade or pure-bred.

"The recent cable from President Aveline, Percheron Society of France, that the Government there has agreed to allow the exportation of two hundred stallions, foaled in 1912 or earlier, only serves to emphasize the extent to which war has curtailed supplies abroad.

"Good blood and liberal feeding will pay better in draft horses than in any other class of stock, always providing that a man buys no more mares than he needs in his farm operations, and exercises good management—essential to success in any line."

WAYNE DINSMORE.

### A School Teacher on School Matters.

In renewing his subscription to THE FARMER'S ADVOCATE, Robert Gates, a Thunder Bay District subscriber, writes:—

"I am a teacher and have been much interested in your articles regarding rural education and rural life generally, and in this connection I have derived great benefit from the articles by Peter McArthur, and "Nature's Diary," by A. B. Klugh. A number of your correspondents have been advocating that the school be made the center of the social life of the community. I am not sure that they realize just what that means. Truly, I believe, the school is one of the main centers of the life of a neighborhood, but the essential place of the school is to prepare pupils to take their places in life as useful members of society. Play has its value in this regard, and the teacher who plays with the pupils at recess or noon, but teaches during school hours, is a valuable asset. But the school is for the children, and when the young people of a community think it is for them, there is often trouble. In some of the older communities in Old Ontario where the young people are few and belong to the higher classes 'it is all right, but too often there are some rural 'smarties' who could not come into the school without marking up the children's books, writing offensive things on the blackboard, or in other ways misbehaving. It is some years now since most of the rural trustee boards passed resolutions against using the school for any other purpose than instruction. One point more—it is the fashion for some of your writers to always refer to the schools as though they were preparing pupils for city life and not for rural life. This is, I believe, a

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REVIEW

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Cars Cattle Hogs Sheep Calves Horses

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annually now less than 6,000 draft stallions, bred by all horsemen that at least one-fifth of those that are recorded are not good enough for real service in improving the draft horse country. It therefore follows that we are breeding less than five thousand good, pure-bred stallions annually, when we need at least 7,000 at the lowest calculation.

From the foregoing considerations, there are many which augur well for the draft-horse industry. High-priced land and labor have led our study methods of reducing costs in farm work. These draft horses have over light horses in many respects. The tractive power of horses governed by weight, strength and temperament extraordinary pressure horses can exert six horse power, but under conditions of exert a pull which is about one-tenth of the weight. The horse-power traction engine farm implements depends on the soil conditions, and the condition of implements under favorable conditions five draft horses, 100 pounds or over, will pull a two-plow which plows a little more than twenty miles, from five to five and a half acres per day. Seven horses that weigh from 1100 to 1300 lb. do the same work, and it is not practicable to have more than one gang plow with the ordinary labor. It will therefore require two men and one with four and the other with three to do the same amount of work that one with five draft horses. The same general principles in seeding, discing and harvesting, for example, can readily handle five draft horses on one acre, he cannot advantageously nor more light horses to give his equivalent use of draft horses therefore increases the work one man can do in the field; and in the work is better done when drafters when to this we add the fact that less barned, and less labor required in handling the than is necessary where enough more light used to make up equivalent power, the comes marked.

At this, the heavy horses sell more readily at prices, when surplus is to be sold. Light horses have been bought at prices ranging from \$100 to \$150, while draft horses have brought from \$100 to \$150. This is an important factor, for a managed farm has a few surplus horses to sell and the readier sale, and higher prices for draft stock, are factors which must appeal to all thinking farmers. Maximum cash that we are all interested in, and this we drafters used in farm work.

These facts which thinking farmers will ponder buyers have scoured the United States for. More than half a million horses and mules and mules have gone for war demands from abroad will continue as long as this, and will be strong for years afterward, and nations must call on us for horses for purposes. Country sales already reflect the conservative farmers, who are reported good prices, on first-class mares weighing over, whether grade or pure-bred. The cable from President Aveline, Percheron France, that the Government there has the exportation of two hundred stallions, 2 or earlier, only serves to emphasize the fact that war has curtailed supplies abroad. Good and liberal feeding will pay better in than in any other class of stock, always that a man buys no more mares than he can operate, and exercises good management to success in any line."

WAYNE DINSMORE.

### School Teacher on School Matters.

Having his subscription to THE FARMER'S ADVOCATE, Mr. Robert Gates, a Thunder Bay District school teacher and have been much interested in regarding rural education and rural life in this connection I have derived great pleasure from the articles by Peter McArthur, and "The Rural School," by A. B. Klugh. A number of students have been advocating that the school be the center of the social life of the community and not sure that they realize just what it is for. Truly, I believe, the school is one of the best of the life of a neighborhood, but the school is to prepare pupils to take their life as useful members of society. Play in this regard, and the teacher who plays his part at recess or noon, but teaches during the day is a valuable asset. But the school is for and when the young people of a community it is for them, there is often trouble. Older communities in Old Ontario where the people are few and belong to the higher classes, but too often there are some rural schools that could not come into the school without children's books, writing offensive things, or in other ways misbehaving. It is now since most of the rural trustee boards have been instructed against using the school for anything but instruction. One point more—it is one of your writers to always refer to the school though they were preparing pupils for rural life. This is, I believe, a

libel on our whole educational system. Such writers usually condemn History and Literature, etc., but they are just ten years behind the times. The teachers of to-day are quite different from those of ten years ago. Now, our rural teachers are Normal trained, our whole course of study has been revised, and the methods of teaching are entirely different. I do not think that people realize what a wonderful change has occurred. A few years ago I had pupils pass the Entrance who would not be considered good "Third Book" pupils now. Moreover, some of my brightest and best pupils are, after creditably passing the Entrance, making happy and contented citizens on the farm."

NOTE.—We are glad to know that one teacher, at least, is influencing his pupils to stay on the farm. An explanation of those parts of his teaching which tend to keep the boys and girls in the country would be appreciated by thousands of our readers. In what ways has our educational system so changed in the past ten years as to keep the boys and girls in the country districts?—EDITOR.

### The Annual Meeting of the Experimental Union.

The 37th Annual Meeting of the Ontario Agricultural and Experimental Union will be held at the Ontario Agricultural College, Guelph, on the 11th and 12th of January.

The co-operative work amongst the farmers has again been carried on throughout the Province. Upwards of four thousand farmers took part in this work during the past year. The co-operative work now includes the testing of all kinds of farm crops, the application of commercial fertilizers and farm-yard manures, the growing of mixed grains, the eradication of weeds, besides work in forestry and in beekeeping and in connection with the public schools of Ontario.

Besides the presentation of the summary results and the principal conclusions from the co-operative work, subjects of great agricultural value will be discussed at the annual meeting. Amongst the subjects for presentation are the following: "Important Factors in Connection with Ontario Fruit Growing," "Ontario's Supply of Good Seed for 1916," "Business Methods and Farm Accounts," "Thin and Thick Seeding and Mature and Immature Corn," "The Potato Rot as it Will Affect Potatoes for Seed," "Sweet Clover in Ontario," etc. Amongst the speakers are: Dr. G. C. Creelman, Hon. F. G. Macdormid, Mr. C. F. Bailey, Prof. Macoun,

Mr. P. E. Angle, Mr. P. W. Hodgetts, Mr. F. M. Clement, Mr. J. B. Fairbairn, and several of the professors of the Ontario Agricultural College.

All sessions of the Experimental Union to be held on Tuesday and Wednesday, January 11th and 12th, are open to any person interested in agriculture, and everyone is welcome to take part in the meeting. Cheap rates have been arranged on the certificate plan. For fuller particulars and a copy of the program, apply to C. A. Zavitz, Secretary, Agricultural College, Guelph, Ontario.

### The Farmers' Indispensable Paper.

Corresponding with the congratulatory commendations from individual readers far and wide to THE FARMER'S ADVOCATE and Home Magazine upon reaching its half-century jubilee number, have been the unsolicited expressions of appreciation from the newspaper press, which is alert to recognize how much of effort and independent enterprise in the face of obstacles lies behind and underneath the record of achievement. The thanks of the paper are due to this cordial recognition on the part of the newspapers of the country. To reproduce even a fair representation of these expressions of goodwill is, at this season particularly, beyond the limits of our space, but the following editorial from "The Advertiser," London, Ont., probably expresses as finely as could be done in compendium form what so many others have said:—

"THE FARMER'S ADVOCATE" has reached its golden jubilee, and the Christmas number published to commemorate the anniversary is worthy of the occasion. In reading matter and illustrations it recalls the Canada of 50 years ago, and compares it with the Canada of 1915, showing the progress made, an advance in which the Advocate has had no small part. Throughout the half century of its life the Advocate's motto has been 'Persevere and Succeed.' The goal has been reached, and success is abundantly assured. The special number carries a special appeal to those who remember the trials of farm life in 1865. It will recall early days to them and bring that pleasure which only contemplation of the past can induce. The Advocate anniversary issue is in itself an excellent example of what has been accomplished, and should be found in every farmer's house."

## Toronto, Montreal, Buffalo, and Other Leading Markets

### Toronto.

Receipts at the Union Stock Yards, West Toronto, were 125 cars, comprising 1,542 cattle, 1,398 hogs, 564 sheep and lambs, 77 calves, and 700 horses. Cattle trade slow, at last week's decline. Steers and heifers, 900 to 1,000 lbs. each, \$7 to \$7.40; medium, \$6.65 to \$7; common, \$6; cows, \$4.75 to \$6.40; bulls, \$5.50 to \$6.75; feeders, \$6 to \$6.50; stockers, \$5 to \$5.75; milkers, few on sale, at \$60 to \$95; calves, \$5 to \$10. Sheep, \$6.50 to \$7.50; lambs, \$10 to \$10.75. Hogs, \$9 fed and watered; \$9.40 weighed off cars.

### REVIEW OF LAST WEEK'S MARKETS

The total receipts of live stock at the City and Union Stock-yards for the past week were:

	City.	Union.	Total.
Cars	15	178	193
Cattle	239	2,462	2,701
Hogs	226	3,515	3,741
Sheep	16	682	698
Calves	15	169	184
Horses	—	228	228

The total receipts of live stock at the two markets for the corresponding week of 1914 were:

	City.	Union.	Total.
Cars	13	142	155
Cattle	68	1,205	1,273
Hogs	520	5,142	5,662
Sheep	200	1,131	1,331
Calves	3	97	100
Horses	—	142	142

The combined receipts of live stock at the two markets for the past week show an increase of 38 carloads, 1,428 cattle, 84 calves, and 86 horses; but a decrease of 1,921 hogs, and 633 sheep and lambs, compared with the corresponding week of 1914.

The quality of the butchers' steers and heifers was very good last week, the majority of the offerings being well finished and good medium weights. But they were greatly in excess of the demand, for the packers never require any great

number during the holiday week. Trade was very slow, and many loads stood over from day to day. Values fell gradually each day, and the market closed a strong 25c. or more under last week. In the case of the handy butcher type the drop was more. Two weeks ago this class reached \$7.90, and it was impossible to get \$7.50 last week. Fat cows and bulls had the best demand, and did not suffer in the break. Canners were scarce, and became firm. The only kind of feeding steers that any orders are in for are the choice kind, and these were not in evidence. The quoted price was firm. Several loads of light Eastern steers sold at \$4.50 to \$5. The demand was limited, and trade in this division was quiet. Milkers and springers were lightly consigned and were picked up rapidly by the different operators, selling up as high as \$115. Good to choice veal calves improved 50c. per cwt. during the four days, and a few selects have reached \$10.75. Lambs started off barely steady, but became strong, and sold at \$10.50 to \$11 for the bulk of the light kind, while a few extra choice sold 25c. higher. Sheep were correspondingly active and high, up to \$7.50. Hogs had an unsettled week, and while packers quoted \$8.75 fed and watered, they did very little operating, and buying on order was practically the only market, and prices ranged from \$8.90 to \$9.10.

Butchers' Cattle.—Choice heavy steers at \$7.50 to \$7.70; choice butchers' cattle at \$7.15 to \$7.35; good at \$6.90 to \$7.10; medium at \$6.25 to \$6.85; common at \$5.50 to \$6; light steers and heifers, \$5 to \$5.50; choice cows, \$6 to \$6.50; good cows, \$5.40 to \$6; medium cows, \$4.90 to \$5.25; common cows, \$4.25 to \$4.75; canners and cutters, \$3 to \$4.50; light bulls, \$3.75 to \$4.75; heavy bulls, \$5.50 to \$6.75.

Stockers and Feeders.—Choice feeders, 900 to 950 lbs., \$6 to \$6.50; good feeders, 800 to 900 lbs., \$5.50 to \$6; stockers, 700 to 800 lbs., \$5 to \$5.50; common stocker steers and heifers, \$4 to \$4.75; yearlings, 600 to \$650 lbs., \$5.75

to \$6.15; light Eastern steers and heifers, \$4.50 to \$5.

Milkers and Springers.—Choice milkers and springers at \$85 to \$95; good cows at \$70 to \$80; common cows at \$45 to \$65.

Veal Calves.—Extra choice veal, \$10 to \$10.75; best veal calves, \$9 to \$10; good, \$7.25 to \$8.50; medium, \$5.75 to \$6.75; heavy fat calves, \$5.75 to \$7; common calves, \$4.75 to \$5.25; grassers, \$3.75 to \$4.50.

Sheep and Lambs.—Light sheep at \$6.50 to \$7.50; heavy sheep at \$4 to \$5.50; lambs at \$10 to \$11.25; cull lambs at \$6.75 to \$7.50.

Hogs.—Selects, fed and watered, at \$9 to \$9.10; 50 cents is being deducted for heavy, fat hogs, and thin light hogs; \$2.50 off for sows, and \$4 off for stags, from prices paid for selects.

### BREADSTUFFS.

Wheat.—Ontario, No. 2 winter, per car lot, \$1.05 to \$1.06; slightly sprouted, \$1 to \$1.03, according to sample; sprouted, smutty and tough, 90c. to 96c., according to sample. Manitoba, No. 1 northern, \$1.29½, all rail; No. 2 northern, \$1.26½, all rail; No. 3 northern, \$1.22½, all rail.

Oats.—Ontario, No. 3 white, 37c. to 39c., according to freights outside; commercial oats, 36c. to 38c.; No. 2 Canada Western, 50c., all rail; No. 3 Canada Western, 49c., all rail; extra No. 1 feed, 48c., all rail; No. 1 feed, 47c., all rail.

Barley.—Ontario, good malting, 57c. to 60c.; feed barley, 50c. to 53c., according to freights outside.

Rye.—No. 1 commercial, 37c. to 38c., according to freights outside; reselected, 70c. to 80c., according to sample.

Buckwheat.—Nominal, car lots, 76c. to 78c., according to freights outside.

American Corn.—No. 3 yellow, new, 79c., track, Toronto.

Canadian Corn.—No. 2 yellow, old, 75c., nominal, track, Toronto.

Peas.—No. 2, nominal, per car lot, \$1.90, according to freights outside; sample peas, according to sample, \$1.25 to \$1.75.

### Successful Ayrshire Sale.

The Consignment sale of Ayrshire cattle held at the Imperial Hotel stables, Tillsonburg, on December 30, 1915, by the Southern Counties Ayrshire Breeders' Club was a very successful affair. Messrs. Moore & Dean conducted the sale in their usual successful and business-like manner. The highest-priced individual was Scot's Snowball, which went to Smith Bros. of St. Thomas for \$282.50. Thirteen cows, three years or over, sold at an average price of \$165.57. Eight two-year-old heifers made an average of \$94.06; yearling heifers averaged \$71.38; heifer calves, over six months, averaged \$91.66, and heifer calves, under six months, made an average of \$49.64. Five yearling bulls sold for \$377.50 or an average of \$75.50. Four bull calves sold at an average price of \$70.62. Following is a list of the animals selling for \$100 and over, with the names of their purchasers:

#### COWS, THREE YEARS AND OVER

Airmount Boneva, E. B. Palmer & Son, Norwich	\$ 230 00
Pride of Darlington, M. Hotchkiss, Stratfordville	195 00
Lena of Fairfield, J. B. Ross, Meadowdale	165 00
Milkmaid of Mt. Elgin, Smith Bros., St. Thomas	160 00
Polly 2nd of Fernbrook, E. Burpee Palmer, Norwich	140 00
Scot's Snowball, Smith Bros.	282 50
Selwood Highland Mary, W. Leaming, Blandford	117 50
Daisy, Frank Wight, Theford	105 00
Snowdrop of Montebello, J. B. Ross	115 00
Rose of Fernbrook, Geo. Roulston, Thorndale	162 50
Pansy of Hillcrest, Wilbur Dennis, Delmer	105 00
Substitute for Lot 43, Philip Broad, Otterville	157 50
Violet of Fairview, J. B. Ross	217 50
Average	165 57

#### TWO-YEAR-OLD HEIFERS

Selwood Juniper, Strath Lynn Farms, Simcoe	\$ 120 00
Jean Armour of Fairfield 3rd, J. J. Jamieson, Cooksville	125 00
Bess of Wordend, J. J. Jamieson, Cooksville	112 50

#### OTHER SEXES AND AGES

Blue Bell 10th of Neidpath (yearling heifer), Smith Bros.	\$ 105 00
Neidpath Rose 27th (junior heifer calf), R. Brown, Harley	147 50
Neidpath Lieutenant (yearling bull), Wm. Thorn, Lynedoch	100 00
Sir Ivan (yearling bull), John Scott, Innderkip	100 00
Selwood Jupiter (bull calf), Ruben Culp, Guysboro	107 50

Flour.—New, winter, \$4.80, according to sample, seaboard or Toronto freights, in bags, prompt shipment. Manitoba flour—First patents, \$6.80; second patents, \$6.30 in jute; strong bakers, \$6.10 in jute; in cotton, 10c. more.

#### HAY AND MILLFEED.

Hay.—Baled, car lots, track, Toronto, No. 1, \$17.50 to \$18; No. 2, \$13 to \$15, track, Toronto, per ton. Straw.—Baled, car lots, \$6.50 to \$7, track, Toronto.

Bran.—\$24 in bags, delivered, Montreal freight; shorts, \$25 delivered, Montreal freight; middlings, \$26 delivered, Montreal freight; good feed flour, per bag, \$1.60, Montreal freight.

#### COUNTRY PRODUCE.

Butter.—Prices remained stationary on the wholesales during the past week. Creamery pound squares, fresh made, 34c. to 35c.; creamery cut squares, 38c. to 34c.; creamery solids, 38c.; separator dairy, 31c. to 33c.

Eggs.—New-laid eggs were slightly more plentiful on the wholesales, selling at 50c. to 55c. per dozen; cold-storage eggs, 30c. to 33c. per dozen; cold-storage seconds, 24c. to 25c. per dozen.

Beans.—Primes, \$4; hand-picked, \$4.25 per bushel.

Potatoes.—Ontario, per bag, car lot, \$1.25; New Brunswick, per bag, car lot, \$1.40.

Cheese.—New, large, 18c.; twins, 18½c. per lb.

Honey.—Extracted, 10c. and 11c. per pound; combs, per dozen sections, \$2.40 to \$3.

#### HIDES AND SKINS.

City hides, fat 18c.; country hides, cured, 17c.; country hides, part cured, 16c.; country hides, green, 15c.; calf skins, per lb., 18c.; kip skins, per lb., 16c.; sheep skins, \$1.50 to \$2; lamb skins and pelts, \$1.20 to \$1.35; horse hair, per lb., 85c.; horse hides, No. 1, \$3.50 to \$4.50. Deer skins, green, 7c.; deer skins, dry, 20c.; deer skins, wet salted, 5c.; deer skins, dry salted, 15c.

**THE ROYAL BANK OF CANADA**

Capital Authorized - - \$ 25,000,000  
 Capital Paid up - - - 11,500,000  
 Reserve Funds - - - 13,000,000  
 Total Assets - - - 180,000,000

HEAD OFFICE: MONTREAL

Branches throughout every Province of the Dominion of Canada

Accounts of Farmers Invented  
 Sale Notes Collected

Savings Department at all Branches

**WHOLESALE FRUITS.**

Apples.—25c. to 35c. per 11-quart basket; Snows, 50c. per 11-quart basket, \$3 to \$6 per barrel; Spies, \$4 to \$6 per barrel; Greenings and Baldwins, \$3 to \$4.50 per barrel; Russets, \$3 to \$4.50 per barrel; imported, \$2.25 to \$3 per box; British Columbia, \$2.25 to \$2.50 per box; Ontario, \$1.50, \$2 and \$2.25 per box.

Bananas—\$1.50 to \$1.80 per bunch.  
 Cranberries—\$13.50 to \$14 per barrel.  
 Grapefruit—Florida, \$3.50 to \$4 per case.  
 Tomatoes—Hot-house, No. 1's, 27¢ per lb.; No. 2's, 20c.; Californias, \$3 per case of about 30 lbs.

**WHOLESALE VEGETABLES.**

Artichokes—25c. to 30c. per 11-quart basket.  
 Beets—60c. to 80c. per bag.  
 Beans—Green, \$4 to \$5 per hamper; wax, \$4 per hamper.  
 Brussels sprouts—10c. to 12c. per quart, \$1.25 to \$1.50 per four-basket case; imported, 20c. per box.  
 Cabbage—\$1.25 per barrel.  
 Cauliflower—\$3.50 to \$4 per barrel; imported, \$3.25 to \$3.50 per case.  
 Carrots—75c. and 80c. per bag; new, 40c. to 50c. per dozen bunches.  
 Celery—17¢ to 30c. per dozen; California, \$5.75 to \$6 per case.  
 Cucumbers—Hot-house, \$2.50 per case.  
 Eggplant (imported)—20c. each.  
 Endive—50c. per dozen.  
 Lettuce—Boston head, \$4.25 per hamper, \$2.25 to \$2.50 per case; leaf lettuce, 20c. to 30c. per dozen.  
 Mushrooms—Imported, \$2.25 to \$2.75 per six-quart basket.  
 Onions—25c. to 35c. per 11-quart basket; No. 1's, \$1.25 to \$1.35 per sack; other grades, 90c. to \$1.15 per sack; Spanish onions, \$4.75 per large case.  
 Parsnips—80c. per bag.  
 Potatoes—New Brunswick Delawares, \$1.50 to \$1.60 per bag; Ontarios, \$1.40 per bag; British Columbias, \$1.50 per bag.  
 Peppers—Sweets, green, imported, 65c. per dozen, 75c. per basket.  
 Squash—Hubbard, 50c. to \$1 per dozen.  
 Vegetable oyster—75c. per 11-quart basket.

**Buffalo.**

Buffalo's live-stock trade for the year 1915 proved most satisfactory, considering that the year at all markets proved rather lean, in that the supply was lessened, on account of smaller numbers of all classes of live stock being raised. The range sections showed heavy falling off in numbers, and the Buffalo market held up remarkably well, as compared with showings made by other markets. Total offerings for the year 1915 were 236,102 cattle; 1,805,744 hogs; 885,128 sheep and lambs, and 126,137 head of calves. Cattle were a few thousand short for the year as compared with 1914. A few fancy Christmas cattle sold up to \$10 and \$11, but it was seldom that the prime steers reached above \$9.50, and this price was about the best that was obtained for the choicest heavy Canadian steers. On hogs, the receipts were, for the year, something like 235,000 in excess of 1914. The largest receipts for one month were in November,

when the total runs figured 249,896 head. The largest day's supply was November 22nd, with 27,658 head. The best week was that beginning December 13th, when the six days runs totaled 64,600 head. During the year 1914 Canada contributed quite freely to Buffalo, sending to this market 36,329 head, while for the year just closing there were not in excess of 9,000 from across the river, showing that the supply was light and demand strong in the Dominion.

Total offerings for the year on sheep and lambs dropped off around 146,000, due to the general scarcity of feeding lambs throughout the country, and the high prices paid for the feeding lambs by the killers, in the absence of the finished kinds, to meet an urgent dressed demand. The supply of Canada lambs for 1915 was less than half of that for 1914, receipts this year from the Dominion being 5,297, as compared with 10,928 the previous year. Buffalo holds two records for high-priced lambs—that of \$11 for clipped and \$10.50 for December wool lambs. Buffalo did not sell wool lambs as high as other markets last year, for the reason that wool lambs on the local market did not run as late as on some of the Western markets. April of last year about wound up the wool lamb season, and Buffalo's top was registered at \$11.40, Chicago selling wool lambs later on as high as \$11.65, but about the time that price prevailed at Western markets, Buffalo was selling clipped lambs as high as \$11, which was equal to \$12.50 with the wool on.

On calves, receipts for the year 1915 were in excess of 1914 by about 15,000 head. The largest receipts for one day were on April 26, with 2,324; largest week's receipts were from April 26 to May 1, with 5,700 head, and largest receipts for one month came in May, with 18,898.

**COMPARATIVE CANADIAN RECEIPTS AT BUFFALO.**

	Sale cattle.	Sale calves.	Sale sh'p & lmb's.	Sale hogs.	Sale horses.	Export Cattle in bond.	Export Sheep & lambs in bond.
1908.....	1,055	1,148	112,593	18,381	21	7,171	29,706
1904.....	40	518	77,300	2,093	41	5,238	27,915
1905.....	53	319	77,752	72	34	11,078	1,323
1906.....	54	425	87,817	—	—	—	—
1907.....	11,057	789	71,375	—	—	—	—
1908.....	2,536	63	35,619	7	4	7,680	370
1909.....	400	99	44,219	17	41	6,371	280
1910.....	—	1	1,968	2,364	9	5,041	—
1911.....	—	91	5,414	—	2	3,393	—
1912.....	4,802	269	526	—	—	1,953	70
1913.....	96,444	10,156	553	23	3	3,262	—
1914.....	45,860	12,367	10,928	36,829	329	—	—
1915.....	45,440	10,266	5,297	8,928	224	—	—

Last week the cattle trade was lower, as the result of packers having their coolers filled, turkeys being given preference during the holidays. Best steers sold at \$8.40 to \$8.70.

Mixed, medium and heavy hogs closed up last week at generally \$7.50, with light Yorkers and pigs, \$7 to \$7.50; roughs, \$6.50 to \$6.60.

Best lambs sold up to \$10.50 to \$10.55 for the close of the year, general range being from \$10.35 to \$10.50. Fair to good, \$9.60 to \$10.15; cull and common, \$7 to \$9.50; yearlings, \$6 to \$9. Sheep, \$4 to \$7; bucks, \$5.25.

Choice calves ranged for the year's close from \$12 to \$12.50; fair to good, \$10.50 to \$11.75; cull and common, \$5 to \$10.

**Montreal.**

Live Stock.—The cattle markets aroused comparatively small interest in the local market last week. Butchers purchased freely the previous week, and provided for their requirements, in a large number of instances, until after New Year. Some fair cattle were offered, however, and trade went through at prices ranging around those of the previous week, quality being taken into consideration. It is doubtful if more than 8c. was paid for the best steers offered, these being of fair quality, though not exhibition stock. Good stock ranged from 7¢ to 7¢ per lb., and from this, purchases were made down to around 6c., a few less desirable selling at 5¢. There was practically no change in butchers' cows and bulls, which ranged generally from 5c. to 6¢ per lb. Sheep and lambs continued one of the features of the market. Lambs were scarce and in demand, and sales took place at 9¢

to 10c. per lb., some selling at 9¢. Sheep continued to range around 6¢ to 7c. per lb. Trade in calves was fair, and milk-fed stock sold at 9c. to 9½c., with grass-fed stock at 6c. to 8c. per lb. The market for hogs was firmer, and prices scored an advance of ¼c. to ½c. per lb. Deliveries were on the light side, and the bulk of the selected lots sold at around 10c. per lb., weighed on cars.

Horses.—Very little interest was displayed in this market, and dealers reported practically no business. Prices unchanged, as follows: Heavy draft horses, weighing 1,500 to 1,700 lbs., \$225 to \$275 each; light draft, 1,400 to 1,500 lbs., \$175 to \$225 each; small horses, \$100 to \$150 each; culls, \$50 to \$75 each, and fine saddle and carriage animals, \$200 to \$250 each.

Dressed Hogs.—Owing to the continuance of a good demand, and the advance in the price for live hogs, dealers were compelled to pay more for dressed stock last week. Prices advanced a full ¼c. per lb., and abattoir-dressed, fresh-killed stock sold at 13¢ to 14¢ per lb. Country-dressed were also a little scarce, and prices advanced ¼c. to ½c. Light weights sold at 12¢ to 12½c. per lb., and heavies at 11½c. to 11½c. per lb.

Poultry.—The weather turned soft around Christmas time, but not sufficiently so to affect the market. Turkeys still sold at 23c. to 24c. per lb. for the choice, fresh-killed stock, while ordinary grades brought 21c. to 22c. Geese were in somewhat better demand for New Year, and prices ranged from 14c. to 16c. per lb. Old fowl could be had from 12c. to 14c. per lb., while chickens and ducks ranged from 15c. to 19c., according to quality.

Potatoes.—No change developed in the market for potatoes. Deliveries were fairly large, and demand was good.

Green Mountains were \$1.25 per 90 lbs., in car lots, and Quebec stock \$1.20, while jobbers add 10c. to 20c. to these figures.

Honey and Syrup.—Demand was not very active in either of these lines, and prices were about steady. White-clover comb honey was 14¢ to 15c., brown being 12c. to 13c. White extracted was 11¢ to 12½c., and brown extracted 10c. to 10½c. Buckwheat honey ranged from 8c. to 8½c. Pure maple syrup in 8-lb. tins was 95c. to 97c.; in 10-lb. tins, \$1.10 to \$1.12, and in 13-lb. tins \$1.45. Sugar was 12½c.

Eggs.—Stocks are being gradually depleted and the market was firm, at 48c. to 52c. per dozen for fresh stock; 33c. for selected; 30c. for No. 1 candled, and 28c. for No. 2 candled, in a wholesale way.

Butter.—Notwithstanding that Christmas trade is over, butter held steady, at 34¢ to 35¢ for finest creamery; 33¢ to 34¢ for fine, and 32¢ to 33c. for seconds. Dairy was steady, at 29c. to 30c.

Cheese.—Supplies were limited, and prices firmer, at 18c. to 18½c. for finest colored, and ¼c. less for white. Eastern was 17½c. to 17½c.

Grain.—Wheat has again made new record prices on the crop. Oats were in demand, at 45¢ for No. 2 white Ontario and Quebec; 44¢ for No. 3, and 43¢ for No. 4, ex-store.

Flour.—Demand was good, and the market was 20c. higher. Manitoba first patents were \$6.90; seconds were \$6.40, and strong bakers' \$6.20 per barrel in bags, wood being 30c. per barrel extra. Ontario flour advanced 30c. per barrel, being \$6.50 for patents, and \$5.80 to \$5.90 for straight rollers in wood, the latter being \$2.80 per bag.

Baled Hay.—Prices were about \$1 per ton higher than the previous week, being \$21 per ton for No. 1; \$20.50 for extra good No. 2; \$20 for No. 2, and \$18.50 for No. 3, per ton, ex-track.

Seeds.—Seed of all kinds is difficult to obtain, although alsike was more normal. Dealers were paying \$7 to \$10 per bushel of 60 lbs. for it, at country points. Red clover is almost impossible to obtain, being exceedingly scarce. Dealers were bidding \$10 to \$13 per bushel, or \$3 more than a year ago. Timothy is also scarce, and dealers quote \$8 to \$11 per 100 lbs., \$2 more than a year ago.

Hides.—The only change was in lamb skins, which were \$2.15.

**Chicago.**

Cattle.—Beeves, \$6.10 to \$9.75; cows and heifers, \$2.85 to \$8.40; calves, \$7 to \$10.50.

Hogs.—Light, \$6.45 to \$6.95; mixed, \$6.50 to \$7.05; heavy, \$6.55 to \$7.10; rough, \$6.35 to \$6.65; pigs, \$5.50 to \$6.50; bulk of sales, \$6.70 to \$6.95.

Sheep.—Lambs, native, \$7.40 to \$9.75.

**Judges for Ottawa Winter Fair.**

The following judges have been appointed for the Ottawa Winter Fair, to be held in Ottawa, January 18 to 21, 1916:

Imported Clydesdales—D. Montgomery, British Columbia. Canadian-bred Clydesdales—Jas. Torrance, Markham, Ont. Shires, Thoroughbreds, Percherons, Standard-breds, Hackneys and Ponies—Robert Graham, Toronto, Ont. Beef cattle—J. Barron, Carberry, Man. Swine—D. C. Platt, Hamilton, Ont. Dressed Carcasses—Prof. G. E. Day, Guelph, and E. S. Archibald, Ottawa. Sheep, Long-wooled breeds—J. M. Gardhouse, Weston. Sheep, Short-wooled breeds—Wm. Dryden, Brooklin. Poultry—Wm. McNeil, London; L. G. Jarvis, Grimsby; G. Robertson, Ottawa; R. Oke, London; W. C. Baldwin, Ottawa; C. W. Augenstein, Rochester, N. Y.; W. H. Reid, Kingston; Wm. Barber, Toronto; J. S. Porter, Toronto. Seeds—W. J. Squirrel, Guelph.

An additional class, which will be of great interest to sheep breeders, has been added for the coming show, since the prize list was issued. The prize in this class is a sterling silver trophy, value \$50.00, donated by the Union Stock Yards, Toronto, through T. E. Good, Manager. This class is as follows:

Union Stock Yards, Toronto, Silver Trophy.—For the best four lambs, any breed, grade or cross (all lambs comprising the pen to be the same breed, grade or cross). All pure-breds to be registered in the Canadian Flock Books, and to be bred in Canada, and bred by the exhibitor. Exhibitors entering this class will be required to make a regular entry.

In school, a boy was asked this question in physics: "What is the difference between lightning and electricity?" And he answered: "Well, you don't have to pay for lightning."

"I fear that young man to whom I gave a job in the store last week is crooked."

"You should not judge by appearance."

"I am judging by disappearance in this case."

Bacon—"Did you say he awoke one day to find himself famous?"

Egbert—"No; I said he dreamed he was famous and then woke up."

The latest American church device for "raising the wind" is what a religious paper describes as "some collection-box." The inventor hails from Oklahoma. If a member of the congregation drops in a twenty-five-cent piece, or a coin of larger value, there is a silence. If it is a ten-cent piece a bell rings, a five-cent piece sounds a whistle, and a cent fires a blank cartridge.

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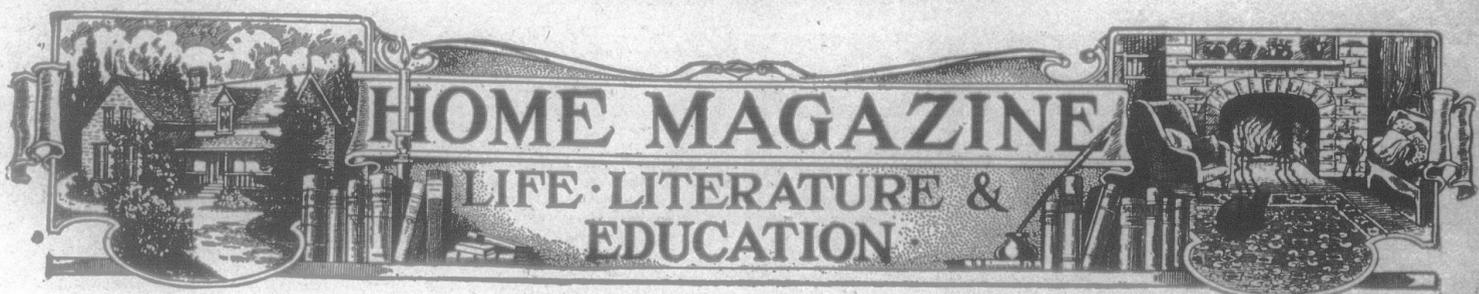
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**The Adventurer.**

He did not come in the red dawn,  
He did not come at noon,  
And all the long, bright highway  
Lay lonely to the moon.

And never more, we know now,  
Will he come wandering down  
The breezy hollows of the hills  
Into the quiet town.

For he has heard a voice cry  
A starry-faint "Ahoy!"  
Far up the wind, and followed  
Unquestioning after joy.

But we are long forgetting  
The quiet way he went,  
With looks of love and gentle scorn  
So sweetly, subtly blent.

We can not cease to wonder,  
We two who loved him, how  
He fares along the windy ways  
His feet must travel now.

But we must draw the curtain  
And fasten bolt and bars,  
And talk, here in the firelight,  
Of him beneath the stars.  
—Odell Shepard, in "The Bellman"  
(Minneapolis).

**To a Canadian Lad Killed In The War.**

Duncan Campbell Scott, in University Magazine.

O noble youth that held our honor in keeping,  
And bore it sacred through the battle flame,  
How shall we give full measure of acclaim  
To thy sharp labor, thy immortal reaping?  
For though we sowed with doubtful hands, half sleeping,  
Thou in thy vivid pride hast reaped a nation,  
And brought it in with shouts and exultation,  
With drums and trumpets, with flags flashing and leaping.  
Let us bring pungent wreaths of balsam,  
and tender  
Tendrils of wild-flowers, lovelier for thy daring,  
And deck a sylvan shrine, where the maple parts  
The moonlight, with lilac bloom, and the splendor  
Of suns unwearied; all unwithered, wearing  
Thy valor stainless in our heart of hearts.

**Browsings Among the Books.**

THE ESCAPE FROM THE COMMON-PLACE.

[From "Ourselves and the Universe," by James Brierley. Published by James Clarke & Co., 13 and 14 Fleet St., London, Eng.—"Clarke's Sixpenny Series."]

There is the story of a man of leisure who found his future an endless vista, as it seemed, of days in which he would go through exactly the same round of getting up, dressing, feeding, and going to bed again—too appalling in its monotony, and so escaped from it by suicide. In such a position we could sympathize with his feeling if we did not proceed to his extremity. One of the greatest of human burdens is the sense of being imprisoned by the commonplace. A man spends his working day in making the eighth part of a pin, or in totting up columns of figures, or in selling calico. His wife,

meanwhile, is occupied with an incessant cooking, cleaning and arranging, which has all to be begun over again to-morrow. "If only there were a respite, and a chance of travel and change!" They take it for granted, and are here voicing the almost universal feeling, that the escape from commonplace is simply an affair of change of circumstances.

How great an illusion this is will be patent to anyone who has the opportunity of studying his fellows under widely varying conditions. Riches in themselves furnish no escape from the commonplace. They can purchase innumerable things, but not this. There is a mob of rich people to day, and they are, on the whole, less interesting than the poor. Their money can, if they choose, buy them laziness, which they share with the tramp, and to about as good a purpose. It can secure the indulgence of animal sensations with all manner of luxurious accessories. But some fatal laws block the way to felicity along this line; the law of familiarity which robs the sensation of its first flavor, and the laws relating to excess, which exact the grisliest of after penalties.

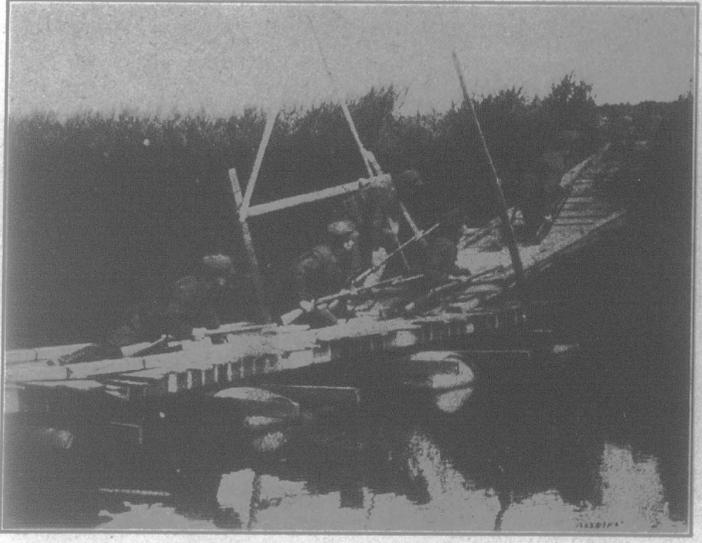
People who have to stay at home, imagine, we have just said, that a sure escape from the commonplace is by travel and change of scene. It is enough to rub shoulders with the average globe-trotter to be disillusioned on that head. He carries, alas! the commonplace everywhere about with him. We call to mind how, at a Swiss hotel, when an expedition was being planned, a

be carted round the planet by contract is, after all, a thin, surface business, that will never turn a fool into a wise man, nor put insight into a blockhead.

So far, then, as at present appears, the business of escaping the commonplace is a difficult one, out of the reach apparently of any but the rarer natures. But that would be a hasty conclusion. The most important factors in the problem have not yet been touched. To begin with, Nature does not seem to have organized man's life here with a view to its being a purely humdrum affair. That she placed him in such an astonishing universe, and, with a relation to it so marvellous, is in itself the answer to such a supposition. When, a million years ago, she turned this new-comer off the track of his fellow mammalian primates and began to add to his brain-power, while these others were merely developing limb-power; when, bit by bit, she brought him along this fresh line until, with a body in the same zoological kingdom as the chimpanzee, he attained to a mind that demanded infinity for workroom and play-place, she gave notice that here was a being whose experience and destiny were to be certainly not common. Nor will she allow any one of us to forget this. The knowledge of good and evil that she rubs into us; our encounters with pain and trouble, the fact that we can never get through a day without some rebuff, some tangle of circumstance; and, most striking of all, that in full view there is placed before every mother's son of us, for wind-up of our present career, the tremendous adven-

constitution." Precisely in proportion as we become in ourselves deeper, purer, more refined, more open-eyed, does our environment become more wonderful, more wholly removed from tedium or vulgarity. There is no need to travel a thousand miles in search of the sublime. A starry night is vastly more sublime than Niagara. Samuel Drew, the Cornish shoemaker, without going from his last, sounded the deeps within him to such purpose as to produce an astonishing work on the soul. Let anyone to whom the hedgerow by his door has become common, take with him on his next visit there some handbook of botany, and he will find his hedge bottom grown miraculous to him. The moment we take ourselves in hand this way and realize that the whole question of change, whether it be of scenery or of circumstance, is from beginning to end a question of our own interior, and of what goes on there, our deliverance has begun. Maeterlinck, in his "Wisdom and Destiny," strikingly illustrates this in what he says of Emily Bronte. Here, says he, is a young woman, daughter of a country clergyman, without means or the excitements of travel and society, who never had lover or husband or family of her own. And yet, as her one wonderful book (Wuthering Heights) shows, she lived out all these experiences in her own soul and in their highest forms. The world for us, let us repeat, is our own interior.

We are not all, it may be said, constructive geniuses like Emily Bronte. But if we cannot speak we can at least listen, and in the great literatures which come now to our doors almost gratis, we may at any hour escape from mean surroundings into the rarest society. If Homer and Socrates and St. Paul and Shakespeare are of our circle, we can dispense quite easily with an invitation to the next Lord Mayor's dinner. We have touched literature here, however, not to dwell upon it, but for something to which it leads us. The power of a great book, we soon discover, is the power of the personality which it enshrines. What moves us is that we are there in contact with a soul, and the more soul there is in the book the more we are moved by it. A treatise of mechanics is not literature simply because this personal element is lacking. It is here that literature helps us to understand religion. The life of literature, its whole emancipating power, lies in this contact with personality. It unites us with the world's great spirits. And it is because of its revelation of the Greatest of all Personalities that religion is for us the everlasting deliverer from the commonplace. The humblest peasant who has felt God steps at once into the world's selecter circle. He can never be henceforth, either to other or, what is more important, to himself, common or unclear. . . . Religion, we say, in the sense of an abiding consciousness of God, is the supreme deliverer from the commonplace. It is, as Joubert has put it, "the poetry of the heart"; it is for every man the open door into the infinite. There seems a corollary to this, a special instruction to the religious teacher of whatsoever name. What his fellowman requires of him, what, indeed, constitutes his chief raison d'être in the world, is that for himself and for his fellows he escape the commonplace. And he is to do it, not so much by genius or by learning, as by enlargement and cleansing of his interior life, by the infiltration into it of the life of God. There is something pathetic beyond words in men's yearning for the Divine, in the eagerness with which they recognize any trace of it in their teacher's speech and life. By a sure instinct they know the reality and its counterfeit.



A Belgian Scouting Party in Flanders. Photo by Underwood & Underwood.

British tourist who was listening exclaimed, wearily, "I suppose it is just the same there as here, a lot of mountains and that kind of thing!" The Alps awakened in him absolutely no response. He wanted Paris. It was a brother soul who, on the Aegean, with Salamis and the mountains that look on Marathon in full view, grumbled in our ear. "I can't for the life of me see what people find to rave about in these places; a lot of barren rocks and tumbledown ruins!" One meets Americans, spending half their holiday in railway carriages, rushing Europe and Asia, the driving power behind them the fear that their neighbors in Philadelphia or Indianapolis will want to know if they inspected this mosque or saw that picture, and will triumph over them if they did not. To

ture of death, are Nature's stern refusal to man to permit himself to be trivial. And with this plain hint from headquarters to start us, we may now profitably turn our attention to the ways in which, imprisoned as we most are in our narrowing labors and positions, we may yet individually escape the commonplace. There is but one way, and it is an inward way. The only change as to our circumstances that is really effective is the change of our mental and moral attitude towards them. It was to this that Madame Swetchine arrived as the result of her wide experience. "At bottom, there is in life only what one puts into it"; and which Montague, from an experience still wider, has expressed in the aphorism, "External occasions take both flavor and color from the inward

"Art thou Brother Francis of Assisi?" said a peasant once to the saint. "Yes." "Try, then, to be as good as all think thee to be, because many have great faith in thee, and therefore I admonish thee to be nothing less than people hope of thee." Yes, truly! Here spoke the deepest heart of humanity, and so speaks it to-day. Our chief debt to our fellows is the obligation to be good, to live the highest life we know. A child-like, God-loving soul, that begins its life afresh every morning, whose history is that of a perpetual soaring, is the most refreshing, heart-healing thing that exists. Beneath the world's cynicism lives the consciousness that its chief treasure, its rarest product, its pearl of price is the saint's supernatural life. When humanity sees this plant growing in the wilderness it takes heart in its journeying, knowing it is not forsaken of God.

## Hope's Quiet Hour.

### Buying Up the Opportunity.

Look therefore carefully how ye walk, not as unwise, but as wise, buying up the opportunity, because the days are evil.—Eph. v: 15, 16 (R. V. margin).

"To-day is added to our time,  
Yet, while we speak, it glides away.  
How soon shall we be past our prime,  
For where, alas! is yesterday?  
Gone—gone into eternity?  
There, every day in turn appears,  
To-morrow?—Oh, 'twill never be,  
If we should live a thousand years."

The year just passed has been the most tremendous one any of us ever experienced. The nations have been filled with distress and perplexity, men's hearts have failed them for fear, and for looking after those things which are coming on the earth. Our Lord warned us of the coming of the day of world-wide distress, and told us what we were to do when men's hearts failed for fear: "When these things begin to come to pass, then look up, and lift up your heads; for your redemption draweth nigh." In our text we are told to "buy up the opportunity, because the days are evil."

Instead of looking forward cheerlessly and fearfully to the possible "evil days" which may lie ahead, let us remember that our orders—as Christians—are to "look up and lift up our heads," and use to the full our "opportunity." Our first business—according to our Lord's command—is fearless gladness. In Rev. xxi: 8, we have a list of those who shall suffer the second death, and first on the list come "the fearful, and unbelieving." Those who are unbelieving may well be fearful, not knowing what terrors the coming year may bring; but those who believe in the power and love of God—in the care of our Heavenly Father, the abiding Presence of our Elder Brother and the Holy Ghost the Strengtheners—cannot be fearful or troubled. St. Paul set his face to go to Jerusalem, not knowing the things that should befall him there, save that bonds and afflictions waited for him. "But," he declared cheerfully, "none of these things move me, neither count I my life dear unto myself, so that I might finish my course with joy." If Christ is our Sun and our bright and morning Star, no days nor nights can be really dark. This is our opportunity to show the troubled world the value of our faith. Christ is able to give us light in the darkness and joy in the midst of sorrow. Whatever else we do in the year 1916, at least let us be happy. We wish each other "A Happy New Year,"—and it is impossible to say the familiar words hopelessly. We greet the New Year cheerfully, and look up expectantly to the Giver of all good, knowing that the world and its troubles are very near His heart. He is able to bring wonderful good out of these "evil days" of war, able to make the New Year grander and better than any year we have yet seen.

"Yes, 'tis dawning, dawning, Oh, be glad!  
Greet it with a glowing welcome, not a sad . . .  
Thankful-hearted greet the New Year,  
and be glad!"

We are to "buy up the opportunity," instead of idly letting it slip through our fingers. Others are doing great things, at home or in Europe; are we content to seek our own prosperity, our own comfort and pleasure, when there are numberless ways of helping our suffering fellows? It is not necessary for us all to dash eagerly to the firing-line. Many of us would only be a hindrance there, an additional burden for the trained workers to carry. Let us buy up our own particular opportunity, instead of wasting the time lamenting that we are not trained nurses or doctors. If we are not called to the front, we are called to serve at home.

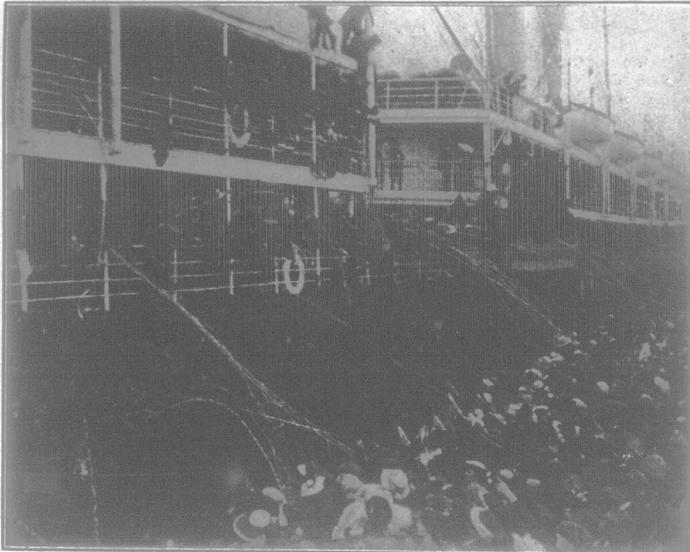
Do you remember those three words, "as he journeyed," in the parable of the Good Samaritan? Our Lord's parables are short and clear-cut; every word tells. Why, then, are those three words in the parable? At first sight the story seems complete without them. The hearers knew that the Samaritan would not have been living in that dangerous, robber-infested region between Jerusalem and Jericho. Unless he had been on a journey he would not have been there at all. Perhaps those three significant words were intended to teach us that our business is with the duty, the opportunity, the neighbor beside us in our journey through life. The Samaritan did not go out of his way to find an opportunity of helping a needy neighbor—notice that the "neighbor" was by race a deadly enemy—he simply made the most of the opportunity lying right in his path.

Do you remember Dickens' caricature of a woman who was so busy thinking of the heathen in far-off lands that she had no time to be interested in her own forsaken husband and neglected children? Let

in her path! But don't let us work because of what "people will think." That is a low motive, and disastrous in its influence on character.

We don't in the least know which of our actions will be far-reaching in its results. The Samaritan had no idea that his kindly deed would be an object-lesson to the world for thousands of years. We have no reason to think that it was an imaginary tale. Many a man "fell among thieves" on that dangerous road, and possibly many priests and Levites hurried past on their way to serve in the Temple. Perhaps they congratulated themselves that they were being very zealous for the Lord, when they were really neglecting His business. I once heard of a self-denying worker who was busy all the time with mission-work. Her own children were not "mothered" or taught, and her boys drifted slowly but surely towards evil. The heart-broken mother at last woke to the fact—when it was too late to buy up the opportunity for influencing them—that she had chosen her own work and entirely neglected that which God had entrusted to her. We are soldiers under orders.

The Samaritan did not trouble himself about the danger and difficulty of caring for the wounded stranger. He did not consider that it was none of his business to trouble himself with the rescue of a deadly enemy to his people—and he certainly never dreamed that his kindly deed would be an inspiration to the world for all time. He did not waste time in dreaming of the great things he intended to do some day, but attended promptly and thoroughly to the opportunity of service that he found lying in his way, "as he journeyed."



An Australian Troopship Leaving Sydney for the Dardanelles.

Gay-colored streamers were used with a novel purpose in Sydney, Australia, when the contingent from the Antipodes sailed aboard the transport for service in the Dardanelles. After the last warning had been given and all those who had no business on the transport had gone ashore, the soldiers threw great rolls of multi-colored streamers to their friends on shore. These streamers, the friends, sweethearts, wives or mothers, held on to until the transport had pulled out of the dock, and the distance had become so great that the streamers of paper had snapped. The picture was made just before the hawsers were cast off and the transport left the dock.—Photo, Underwood & Underwood.

us be careful lest we seize the wrong opportunity, letting the work our Commander has laid in our path lie there unnoticed, while we hunt for apparently grander opportunities. Do you think God wants women to leave their own children and homes to look after themselves, while they work furiously at Red Cross meetings? The world-work may seem much more glorious and grand than the little everyday humdrum duties, which have to be done over and over again every week. Yet it is always greater and nobler to keep the post given to us than to choose a post for ourselves.

"But I can't do patriotic work without neglecting home duties—I have neither time nor strength for both—and everybody will think I am selfish and lazy if I don't go to the meetings," cries a worried mother. Far be it from me to keep any woman from patriotic work if that is the opportunity God has placed

Don't you think we had better do the same? Let our New Year resolutions deal with to-day rather than with next week. Plenty of opportunities for service will meet us "as we journey," and our business is with them rather than with the apparently more interesting opportunities which God has placed along the road of somebody else.

One thing is clear, we cannot glorify God, making our light shine clearly, if we shoulder more work than we can do properly, getting our nerves overstrained and becoming irritable and impatient. Will God be pleased if we sacrifice the peace of the home while we are trying to restore peace to the world? Even in these days of stress, when we cannot carry on "business as usual," it may be that our Master wants us to secure more quiet times for fellowship with Himself—that He may be able to help others through us. It may even be that He wants us to rest more, so that we may

be able to give the world better service. Depression and everyday "crossness" often come from over-work—and they bring dishonor on our Christian profession.

Happily for us all, our orders are given by the day. We have not been told what God expects us to do this year—but, if we ask Him humbly and with glad willingness, He will make clear to us what He wants us to do to-day.

"Hallow this coming year, dear Lord,  
I pray,  
That I may rest in Thee from day to day.  
Stay by my side, Thy loving glance can aid  
When fierce temptations make me sore afraid;  
Thy hand upon my head shall strengthen me  
When human strength would fail me utterly.

Safe in Thy love, I have no thought of fear,  
But trust Thy mercy thro' the coming year."

DORA FARNCOMB.

### Christmas Gifts.

Yesterday a sick woman said to me: "Don't you think the world is getting worse all the time?" How can I think so, when readers of the Quiet Hour are constantly placing "gifts for the needy" in my care? During the last week I have received \$1.00, \$7.00 (especially for a Rescue Home), \$6.00 and \$5.00, for Christmas gifts to the poor. As for the wonderful box from the "Maple Leaf" Sewing Circle, it seems to contain an infinite variety of useful garments. Yesterday warm underclothing for two little children was needed. I dived into my magic box and found exactly the things required. So it is nearly every day—there seems to be no bottom to that box. Thanks to you all, and A Happy New Year!

HOPE.

### Christmas Cheer.

As usual, the readers of the Quiet Hour have given me the privilege of helping to scatter their Christmas cheer. Since the beginning of December I have received from them nearly \$10 ("for the needy") in donations ranging from one to seven dollars apiece. Nearly thirty poor families and sick people have been gladdened by your kindness—dear friends of "The Advocate"—and I have still a small balance in your purse ready for a case of special need. I am doing my best to use the money, and other things you entrust to my care, as you would wish. Thank you, also, for the many personal tokens of fellowship which you have sent. May God give you, this coming year, the happiness which earthly storms cannot destroy.

HOPE.

## The Windrow.

"The one thing to teach our children in the years to come is that it is not merely profits or wages that matter, but the sense of responsibility and the power of self-sacrifice."—Lord Selborne.

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"What we have got to do is to make it clear to Germany that war does not pay, and that war never can pay. After this war there must be a combination of Powers, including America and Japan, which will undertake to combine against any other Power which shall disturb the peace of the world."—J. L. Garvin.

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Wild boars and lions still roam about in the reedy swamps and thick, oak forests of Mesopotamia, where the British soldiers under Generals Nixon and Townshend are trying to win their way through to Bagdad.

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Mr. Glen Curtiss declares that one of the first occurrences after the war will be the establishment of transatlantic airship traffic. The machines built to meet the necessities of the war are already fit for this service.

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America is now threatened with a glycerine famine. Over 60 per cent. of

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it has hitherto come from Europe, and that supply is now stopped. Glycerine is used in many industries, including leather-making, weaving, dyeing, copying-inks, waterproof paper, toilet soaps, cast iron, photography, etc., as well as the manufacture of nitroglycerine and dynamite.

An American electrical engineer, William Dubilier, has invented a tiny microphone by means of which the approach of a submarine 20 miles away can be detected. Mr. Dubilier had gone to Europe at the invitation of the Allies to devise a system of harbor-defense against submarines, and his microphone is now in use in French and English harbors.

Sarah Bernhardt is to give a series of plays in America in the near future. The recent report that she was seriously ill was entirely unfounded. She is seventy-one years of age.

The statue of Eros recently found by French soldiers when practise-digging in the northern part of Lemnos Island, will be kept in a Greek museum. The spot where it was found is believed to be the site of the ancient city of Hephestia.

"Conceivably the Germans will get across the Suez Canal into Egypt; it is possible, even though unlikely; but this will not affect British sea power. It will not take India, because Japan is pledged to defend India, if necessary, and Japan is far nearer to India than Germany can get for many years. Germany has lost the war because there is now nothing that she can get which will permanently repay her for her losses, and the Provinces that she plans to take, now bring with them immediate dangers and future perils."—New York Tribune.

Otesiphon (pronounced "tes-i-fo'n"), near Bagdad, where our troops are now operating under a tropical sun and with delays caused by lack of water, was in its glory during the reign of Khusrav, King of Persia, about the year 550 A.D. His empire extended from the Indus to the Red Sea, and large portions of Central Asia, and probably Eastern Europe, recognized him as Ruler. He built at the city of Otesiphon a splendid palace, of which the principal arch was 85 feet high and 72 feet wide—now, of course, in ruins; he also encouraged literature, causing several Greek, Latin and Sanscrit works to be translated into Persian. And now, it is quite likely, there will be a railway station at Otesiphon within a few years, and Britishers on the way from Ostend to India in a through carriage will lean from the windows of the train to gaze on the palace of Khusrav—built nearly fourteen hundred years ago!—T. P.'s Weekly.

The city of Salonika, the port on the Aegean Sea at which the Allied troops are now concentrated, is the "Thessalonica" of the Scriptures. Saint Paul visited it in A.D. 53, and a year or two later sent epistles to his friends there from Antioch. The city has passed through many vicissitudes. It was captured in 904 by the Saracens, and five hundred years later was taken by the Turks, who held it for five hundred years more. After many vicissitudes, it was seized by the Greeks in November, 1912, during the first Balkan War. Its present population is of a very mixed character—Greeks, Mohammedans, Bulgars, Roumanians, Serbians, and Jews, in addition to the many thousands of French and British soldiers.



Sheepskin Bag for Cold Weather Used by Allied Troops.

## 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.]

### Work That is a Pleasure.

Last day we talked about work that over-tires,—the over-work that deadens ambition and irritates the temper, and that should be fought off and avoided, if possible, as though it were the plague. To-day, let us drive all that away with a wave of the hand, and talk about work that is a pleasure,—or rather, perhaps, to state the subject better, the pleasure that may be found in work.

A very dear woman said to me the other day, "I hope I'll not live three hours after I have to give up work."—And I just wish you could have seen her as she said it; she would have been an inspiration to you as she was to me, and is always. As the result of an accident she is a cripple, cannot walk at all, and goes about the house in a wheel chair. But she keeps busy, and has a face like a sunbeam.

Now, surely her idea of work is the right one. The trouble with all too many of us is that we have been brought up from infancy to look upon it as a task, a disagreeable something that must be done. Away back in the years, some quite off-the-track theologian, or some well-meaning but sadly-blundering parent or relative, began the bad influence by telling us the Garden of Eden story quite literally, explaining to us in solemn tones, while we listened in wide-eyed wonder, that because Eve took a bite out of a real apple and gave Adam some, because a real wriggling snake told her to, all the people on the earth since have been "cursed" by being compelled to work. I hope the readers of this column all have intelligence enough not to make such a blunder as that, and the good sense, if they do not understand the beautiful poem, to leave it alone until they do, and not murder its beauty and turn it into a thing of evil by misinterpreting it to childish ears.

—Well,—that probably began the trouble. Afterwards, it may be, some thoughtless people kept up the mistake by grumbling about work before us, or using it as a threat, or by speaking of folk who had secured sinecures as "lucky"; and, without doubt, the blundering theologian and relatives emphasized it by continually referring to heaven as a place of do-nothingness. So the seeds were planted deep, and the noxious plant grew. Suggestion is a powerful force anywhere, but especially upon children. Acting upon us, the foolish idea sub-consciously became conviction, and we came to maturity looking upon work, especially the work that included "old" clothes and soiled hands, as a grim necessity, rather than a pleasure, a privilege, and a blessing.

Now, work is work anywhere, independently of hands or clothes. Nothing worth while is really easy, and we would be very cowardly and spineless indeed if we wished for a life-occupation that would be. It is by struggle and by overcoming that we GROW. The older I become the more clearly do I see that the whole question of our real rest and happiness depends upon our attitude of mind towards that which we have to do. The individual who can every day wear fine clothes and exhibit white hands, may really be very miserable if he has not found the work for which he is fitted: the one who ploughs, or works in a greasy machine shop may be happy as a lark if he has found his.



A Chinese Princess Who is Travelling in America.

This is pretty Princess Jue Quon Tai, the nineteen-year-old visitor who is making a tour of the United States, minus the usual chaperon accompanying women of China who travel. She is posing especially for this photograph in her suite at the Hotel Astor, and seems charmed with the fashions of American women. The Princess speaks English fluently. She came to New York from San Francisco, where she had been visiting the Exposition, to gaze upon the wonders of New York, although warned by her parents to keep away from the wicked city.—Photo, Underwood & Underwood.

So, it seems to me, the whole question resolves itself into this: that we find OUR OWN work. Upon that depends our happiness and our usefulness. We are made of very different mould. What one is fitted for may be the very antithesis of what is suited to another, and so, for this reason, the most important question in the life of any young man or woman is, "What can I do?"—Not "How can I get the most money?" or "Whom shall I marry?" but "What can I do BEST, and so with most real pleasure to myself and profit to the world?"

There is not a soul in the world, of normal mentality, that is not fitted for some work. Having found it, the rea-

son for living begins to dawn, and life becomes a restful, happy thing—despite the few necessary knocks that invariably come for our spurring. In the words of Bouck White: "Work is not a curse. . . . The Universe is organized on an industrial basis. It hates an idler, is affectionate only towards a toiler. Labor finds its richest requital, not in the thing done, but in the doing of it. Work is the angel that is given charge over us, to keep us in all our ways."

—And again, Will Levington Comfort (in last week's first-page extract which, I hope, you read), "Those who are best loved by the angels receive, not thrones, but a task."

—And again, Thomas Carlyle: "Blessed is he who has found his work; let him ask no other blessedness. . . . One monster there is in the world, the idle man. . . . He who has found his work is king over something."

—And Ruskin: "It is only by labor that thought can be made healthy, and only by thought that labor can be made happy; and the two cannot be separated with impunity. . . . Though you may have known clever men who were indolent, you never knew a great man who was so; and when I hear a young man spoken of as giving promise of great genius, the first question I ask about him always is, Does he work?"

One might go on quoting for an hour.—Surely the thing these great minds—the great minds of great workers—have gone to such pains to emphasize, must be true.

Let us close this with one more, from the illustrious and well-beloved Phillips Brooks: "No man has come to true greatness who has not felt, in some degree, that his life belongs to his race."—We shall only be here for a few short years, and surely we have been placed here, "not for what we can get out of life, but for what we can put into it." This does not mean that we are to be mere sacrifices for others, floors upon which others may build while we stay down, as many mothers do, for instance, when they become abject slaves to their children. We must, rather, be wise, realizing the truth of Kant's gospel, that no human being ought to be used as a mere means to the end of another, but should be really an end in himself. By developing our own individuality to the highest point, and using our development WISELY for others, we are doing our true work in the world.

Much of the discontent in regard to work, as has been intimated above, is no doubt due to the idea that some kinds of work are menial, others "fine," or "aristocratic." But a few of the very greatest minds have divined, and the idea is slowly beginning to make way generally, that no work is really menial, that everything depends upon the man behind the work. You may find an absolute gentleman ploughing in a field, or in a very poor house, and you may find an absolute vulgarian in the midst of luxury. If one fails to perceive the difference, it must be because oneself is a vulgarian. Most of the world's greatest philosophers have been poor. Tolstol was not, but he ploughed and mended shoes. Refinement does not depend upon riches nor the kind of work that one does.—And there are people to-day who are preaching this doctrine. Not long ago, in an article in The Craftsman, I read a very fine article by Mrs. Havelock Ellis, in which she said, "The day will come when no stigma will rest on any necessary work."—And again, "He that is greatest shall be the servant of all," is not the saying of a decadent or a madman, but of one who knew the line along which any great civilization must evolve." With this let us conclude. For who can consider the highest Example in all the world's history, the Carpenter of Nazareth, without



African Chasseurs of French Army Charging.

recognizing that it is possible to reach the very zenith of character and mentality, and still be "servant to all." We struggling folk cannot do that yet; we can only keep on struggling; but there are millions and millions of years ahead of us for growth, are there not?—And who can say what we may yet accomplish? "All things are possible."

JUNIA.

## THE BEST THING IN LIFE.

Dear Junia,—As we have always enjoyed your newy letters in Ingle Nook, and thank you for them, I come now with mine on "What is the Best Thing in Life." In my estimation, the best thing in life is a good home training by a good father and mother. If every one got a good home training there would be no war to-day, but peace and goodwill everywhere. It seems to me we are not taught to love one another as we should. No administration can personally harm us if our home-life is pure, frugal, and Godly. No statesmanship or legislation can save us if once our homes become the abodes of ignorance or the resting-place of prodigality. The home rules the nation. Nothing is so effective in fitting us for usefulness here and for heaven hereafter, as a pure, happy, Christ-lighted home. The memory of the beautiful and happy home of childhood is the richest legacy any man can leave to his children. The heart can never forget its hallowed influences. Such a home is a constant inspiration for good, and as constant a restraint from evil. As I was as a boy is anchored to a happy, Christian home in his youth, and the remembrance of it in his manhood, he is reasonably safe for this life and the life to come.

Well, dear Junia, I will not write a long letter so as to leave room for the others, as I do enjoy reading Ingle Nook letters. I will close with best wishes to all.

MARIE.

Huron Co., Ont.

## ANOTHER OPINION.

Dear Junia and Ingle Nook Friends,—It is so long since I have sent any help to the Nook, that I am sure almost everyone will have forgotten that I ever existed. But did you ever notice that when you do not write that promised letter you think ever so much oftener about the one you should have written to? Twinges of conscience, I suppose, make us resolve to write oftener in future, but we find ourselves as neglectful as ever. But whatever would we do without all the little helpful things which kind hearts send to "The Advocate"? And don't you think that the best thing in life is the loving spirit that makes us want to help others? Because, "It is not the good that you do, dear," but the spirit in which you do it.

You know so many people think they are doing good, and it is done for selfish reasons, and when this is the case it spoils that beautiful, loving, unselfish spirit that should really prompt the good act or deed. A kind act or word has often lifted a soul out of the "Slough of Despond" and put that soul on the right way again. And don't you remember it was Jesus who went about doing good? It would seem now, since there is such a shadow over the world caused by the present war, that the thought uppermost in every mind would be, "Whom can I be of help to?" For after all, the thing which should trouble each individual most is that higher good which concerns the soul of him or herself, or one's fellow brother or sister. And don't you think that if each of us home-makers would try to see things in this light that we would eliminate a great many things from our work that make us feel as though we were carrying the burdens of the whole family upon our own shoulders? So many little things over which we worry are not for the higher good of the family; indeed, the higher is often shut out altogether by the material. We need to be awakened to our ideals quite often, and, as Junia has suggested this thought, shall we not let her have something for her suggestion? I, for one, have almost stopped worrying. But it will come still, perhaps, because I let it go too long before trying to conquer the habit. So let us all try to forget what we think we have cause to worry over in helping someone to a higher, nobler life. Wishing Junia

and all the Nookers a merry Christmas and a happy New Year.

YOUNG HOUSEWIFE.

Simcoe Co., Ont.

## Midwinter Cookery.

Broiled Beefsteak.—Wipe the beef with a damp cloth and trim off superfluous fat. Grease a wire broiler or toaster with some of the fat, and broil the steak over a clear fire, turning every ten seconds for the first minute to sear the surface and prevent escape of juices. Brown on both sides, remove to a hot platter, spread with butter, season, and serve very hot.

Flank Steak with Onions.—Place in a pan a flank steak cut from the thick end of the flank 1½ inches thick. Cover with two inches depth of onions sliced and seasoned. Finally cover with thin slices of salt pork and add one cup of water. Cover closely and bake in a slow oven or a fireless cooker all afternoon. Just before serving remove the cover and brown. Serve in the dish, with a napkin pinned round.

Roasted Hamburg Steak.—To 1½ lbs. freshly-chopped Hamburg steak add 2 slices fat salt pork finely chopped, ½ cup soft stale bread crumbs, 1 egg slightly beaten, ½ teaspoon salt, and a dash of pepper. Shape into a loaf, place on a rack in the dripping-pan, dredge with flour, and arrange thin strips of fat salt pork over the top. Roast 45 minutes in a hot oven, basting every 7 minutes, at first with hot water, then with the fat in the pan. Serve with gravy made in the pan.

Roast Rabbit.—Prepare 2 young rabbits and stuff them with a stuffing made of 1 quart soft bread crumbs, 3 tablespoons shredded suet, 1 tablespoon chopped parsley, 1 egg, pepper and salt, and ½ cup stock or hot water. Tie the rabbits in place, cover with bits of breakfast bacon, and roast in a brisk oven ½ hour, basting frequently. For the sauce, put a calf's liver into a sauce-pan with 3 sprigs parsley and a pint of beef stock, and simmer for 20 minutes. Then strain the broth into a bowl. Mince the liver and put it aside. Melt 1 tablespoon butter, add 1 tablespoon flour and let it brown. Pour in the broth from the liver and cook until it thickens, then add the liver, 1 tablespoon currant jelly, salt and pepper to taste.

Brunswick Stew.—Cut up a 4-lb. fowl and cook it with a sliced onion, ½ lb. bacon, and boiling water to cover, for 1½ hours. Then add 1 pint parboiled beans (Lima, if possible), 1 pint canned corn. When the beans are done, season with salt and pepper, and add 1 tablespoon finely-chopped parsley. Simmer very slowly for one hour.

Baked Carrots.—Boil the carrots until nearly tender, skim them and lay them in a baking-dish. They should be cut in halves. Pour over them enough stock to nearly cover them, adding a tablespoon each of butter and sugar, and a sprinkling of salt. Bake until the carrots are delicately browned. Always add a little sugar to any dish of carrots.

Carrot Soup.—Cut 3 or 4 medium carrots into small pieces, after washing and scraping. Cook them in a cupful of stock until very soft, then mash well. Return to the saucepan with 2 more cups of stock, a teaspoon sugar, and a lump of butter size of a walnut. Serve with bread, buttered, cut in dice, and toasted in the oven.

Cream of Pea Soup.—Drain 1 can of peas, and to them add 2 teaspoons sugar, and 2 cups cold water, and simmer 20 minutes. Put through a sieve, reheat, and thicken with flour and butter creamed together. In a separate dish have 2 cups milk heating. Season it, and add ½ teaspoon onion juice, then add to the peas. Serve very hot with a tablespoon of whipped cream on top of each. This is nice for tea with bits of buttered toast or biscuits.

Baked Apples.—Take nice juicy apples, core without paring and fill with sugar, adding lemon peel and spices if liked. Put into a baking-tin with a little water, and bake. Serve with whipped cream to which sugar and lemon are added.

Steamed Corn Bread.—One-half cup soaked, stoned and drained prunes. Add to them 2 cups sour milk, 1 cup sweet milk, 2 cups corn meal, ½ cup flour, ½

cup Graham flour, ¼ cup molasses, ¼ cup brown sugar, 2 tablespoons butter, ½ teaspoon salt, 1 teaspoon soda dissolved in a little of the milk. Mix very thoroughly, put in a greased dish and steam very steadily for four hours.

## The Scrap Bag.

## A LAUNDRY HINT.

When washing handkerchiefs, tie them in half-dozen to a piece of white rag and pin the rag to the line. In this way they can be put out more quickly, and there will be no risk of tearing them when taking them off the line, as so often happens when they become frozen. Heating the clothespins before going out will help to keep the hands warm.

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## HANDY INVALID TABLE.

If your ironing-board is of the kind that has the adjustable, crossed legs, lower it to the right height the next time you need an invalid's table and push the narrow end over the bed. You will have as excellent an invalid table as you could desire.

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## SQUEAKING HINGES.

To prevent the hinges of doors from squeaking, oil them by a feather dipped in some linseed oil.

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## TO CLEAN DOORS.

To clean finger-marks on doors or other painted or varnished woodwork, rub hard with paraffin oil, applying it with a bit of white flannel. The marks will disappear like magic, and the paint will not be injured.

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## CARE OF EARTHENWARE.

Put new kitchen earthenware in cold water, let come to a boil and boil for 10 minutes, and it will not be so likely to break. Let cool in the water.

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## GLASSES THAT STICK.

When two glass tumblers stick together, put cold water in the inner one and hold the outer one in warm water. The inner one will contract, while the outer one will expand, and the glasses will separate.

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## USE FOR OILCLOTH.

Tack striped oilcloth over the sewing table. The stripes will be found very useful in getting a straight line for hems and tucks.

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## TO KEEP STOVEPIPES CLEAN.

It is said that burning potato parings in the stove will help to prevent soot from forming in the pipes. Dry the parings, and burn once a week. The pipes will not have to be cleaned so often. Burning old scraps of zinc is said to have the same effect.

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## MAKING NEW SHEETS.

Make sheets 2½ yards long, then there will be plenty of material to tuck in at the head and foot.

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## TO SAVE BASTING MEAT.

When about to roast a joint, cover it with a rind saved from a piece of ham or bacon, and cook with it on. This will save the trouble of basting.

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## A SOUP-STOCK POT.

Into a large saucepan put all the scraps of meat that are difficult to cook otherwise, also fresh bones of any kind, cracked or broken. Cover with cold water, put on a tight lid and let come very slowly to a boil, then draw the pan back at once and let simmer very gently for three or four hours. When all the juices have been extracted, strain off the liquor and keep it in a cold place to be used as necessary.

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## TO CLARIFY FAT.

Every housekeeper who wishes to economize makes clarified fat. It is useful for making cake, gravy, for adding to vegetables, and for all kinds of frying. Beef and mutton fats are best, but other

kinds may be added. To make it, save all scraps of fat, and trim all bits of red meat off. Use a heavy saucepan without a lid. Put the fat in and cover with plenty of cold water, the more the better. Bring to a boil over a hot fire, and when it has boiled 10 or 15 minutes, remove the scum, then draw the kettle to one side and let simmer, stirring it frequently. If the water boils away during the first 2 or 3 hours add more water, but do not add water after the fat becomes oily. The fat will require 6 or 8 hours to clarify. When ready, the pieces of fat will be brown and shrivelled; let stand for half an hour to cool slightly, then pour off the fat through a sieve into a crock.

## A JELLY HINT.

A pretty idea for jelly (made of jelly powder or otherwise) is to make it in small moulds, then arrange them in a circle in a dish and fill the center with something else. For instance: (1) With orange jelly, put whipped cream in the center. (2) With chicken jelly, put parsley around the outside edge and beet salad in the center. (3) With tomato jelly, put lettuce around the outside and celery and nut salad in the center.

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## WHEN COOKING VEGETABLES.

When cooking vegetables, remember that to cook them in a great deal of water and drain it off is to waste a great deal of mineral salts that are very useful to the body. Cook in just as little water as possible, and when practicable—as with onions, artichokes, vegetable oyster, parsnips, etc.—let it boil off pretty well, and use what is left in making a milk sauce. Use salads of raw vegetables often, and so secure a proportion of the "vitamines," needed by the body, but destroyed by heat of 120 degrees. Potatoes are of high value as food, but peeling and soaking them takes away much of their food value. They are better baked. Whole-meal bread is better than white.

## The Dollar Chain

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

Contributions for the week from Dec. 24 to Dec. 31, were as follows:

W. B. Grace, Toronto, \$1.50; A Friend, Langdon, Ont., \$2.00; "Toronto," \$2.00; J. F. G. B. E., \$1.00; Wm. M. Armstrong, R. 2, Clarksburg, Ont., \$1.00; Arthur Richardson, Embro, Ont., 50 cents; Robt. Chaklin, Kincardine, Ont., 50 cents.

Amount previously acknowledged .....\$1,980.60

Total to Dec. 31st.....\$1,989.10

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

## DISCIPLINE.

A certain woman demands instant and unquestioning obedience from her children. One afternoon a storm came up and she sent her little son John to close the trap leading to the flat roof of the house.

"But, mother," began John.  
"John, I told you to shut the trap!"  
"Yes, but mother—"

"John, shut that trap!"  
"All right, mother, if you say so—"

"John!"  
Whereupon John slowly climbed the stairs and shut the trap. Two hours later the family gathered for dinner, but Aunt Mary, who was staying with the mother, did not appear. The mother did not have to ask many questions. John answered the first one.

"Mother, she is on the roof."—New York Times.

## PERFECT SAFETY.

Mining-stock Promoter—"Where can I hide? The police are coming!"  
Chief Clerk—"Get into the card-index case. I defy anyone to find anything in there."—Judge.

# Fashion Dept.

## HOW TO ORDER PATTERNS.

Order by number, giving age or measurement as required, and allowing at least ten days to receive pattern. Also state in which issue pattern appeared. Price ten cents PER PATTERN. If two numbers appear for the one suit, one for coat, the other for skirt, twenty cents must be sent. Address Fashion Department, "The Farmer's Advocate and Home Magazine," London, Ont. Be sure to sign your name when ordering patterns. Many forget to do this.

When ordering, please use this form:—

Send the following pattern to:

Name .....

Post Office .....

County .....

Province .....

Number of pattern .....

Age (if child or misses' pattern) .....

Measurement—Waist, ..... Bust, .....

Date of issue in which pattern appeared .....



8809 Middy Blouse for Misses and Small Women, 16 and 18 years.  
8856 Plaited Bloomers for Misses and Small Women, 16 and 18 years.



8754 Girl's Dress, with or without Yoke, 8 to 14 years.



8808 Combination Coat and Drawers, 34 to 44 bust.



8857 Dress with Plaits for Misses and Small Women, 16 and 18 years.



8866 Coat for Misses and Small Women, 16 and 18 years.  
8628 Two or Three-Piece Skirt for Misses and Small Women, 16 and 18 years.



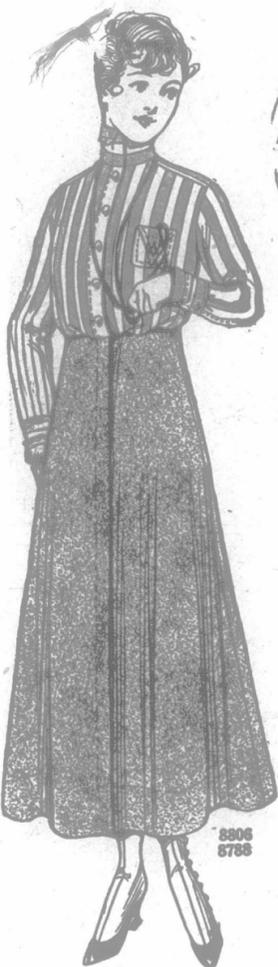
8786 Girl's Dress, 6 to 12 years.



8791 Girl's Dress, 8 and 10 years.



8788 Girl's Dress, 6 to 12 years.



8806  
8788

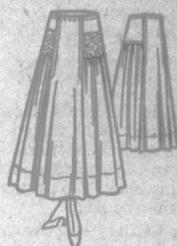
8806 (With Basting Line and Added Seam Allowance) Blouse with Shoulder Piece, 36 to 46 bust.  
8788 (With Basting Line and Added Seam Allowance) Five-Piece Skirt, 24 to 34 waist.



8869 Middy Blouse for Misses and Small Women, 16 and 18 years.  
8628 Two or Three-Piece Skirt for Misses and Small Women, 16 and 18 years.



8871 Bloused Coat, 24 to 42 bust.  
8851 Two-Piece Skirt, 24 to 34 waist.



8804 Yoke Skirt with Gathered Sides, 24 to 30 waist.



8862 Child's Coat, 1 to 6 years.



8861 Flounced Skirt, 24 to 32 waist.



8786 Plaited Skirt with Yoke, 24 to 28 waist.

To make it, save trim all bits of heavy saucepan fat in and cover, the more the better, over a hot fire, and 10 or 15 minutes then draw the fat, let simmer, stir the water boils for 3 hours add add water after the fat will re-clarify. When it will be brown pour off the fat.

... (made of jelly) ... to make it in ...

... (vegetables) ... remember a great deal of ...

Chain ... readers of "The Home Magazine" ...

... \$1,930.60 ... \$1,989.10 ...

... instant and ...

... the trap!

... say so— ...

... Where can I ...



Makes Fine Bread

EVERYONE who bakes bread should know about Cream of the West Flour. It is without a peer as a bread flour. With every four 98-lb. bags of Cream of the West Flour and our other guaranteed flours we give an interesting novel or cook book free. Make out your order now.

## Cream of the West Flour

the hard wheat flour guaranteed for bread

### GUARANTEED FLOURS

	Per 98-lb. bag.
Cream of the West Flour (for bread)	\$3.65
Toronto's Pride (for bread)	3.45
Queen City Flour (blended for all purposes)	3.25
Monarch Flour (makes delicious pastry)	3.15

### CEREALS

Cream of the West Wheatlets (per 6-lb. bag)	.30
Norwegian Rolled Oats (per 90-lb. bag)	3.00
Bob-o-link Cornmeal (per 98-lb. bag)	2.50

### FEEDS

	Per 100-lb. bag.
"Bullrush" Bran	\$1.35
"Bullrush" Middlings	1.40
Extra White Middlings	1.55
"Tower" Feed Flour	1.75
Whole Manitoba Oats	1.80
"Bullrush" Crushed Oats	1.85
Sunset Crushed Oats	1.70
Manitoba Feed Barley	1.85
Barley Meal	1.90
Geneva Feed (crushed corn, oats and barley)	1.80
Oil Cake Meal (old process, ground fine)	2.25
Chopped Oats	1.85
Feed Wheat	1.80
Whole Corn	1.95
Cracked Corn	2.00
Feed Corn Meal	1.95

Prices on Ton Lots—We cannot make any reduction on above prices, even if you purchase five or ten tons. The only reduction from the above prices would be on carload lots.

Terms Cash with Order—Orders may be assorted as desired. On shipments up to five bags, buyer pays freight charges. On shipments over five bags we will prepay freight to any station in Ontario, east of Sudbury and south of North Bay. West of Sudbury and New Ontario, add 15 cents per bag. Prices are subject to market changes.

### LIST OF FAMOUS BOOKS

- Ye Olde Miller's Household Book—Over 1,000 tested recipes, and large medical section. Enclose 10 cents to pay postage and packing on this book. No postage asked for on other books.
- Black Beauty—By Anna Sewell.
- Rebecca of Sunnybrook Farm—By Kate Douglas Wiggin.
- Little Women—By Louisa Alcott.
- Innocents Abroad—By Mark Twain.
- The Lilac Sunbonnet—By S. R. Crockett.
- Quo Vadis—By Sienkiowicz.
- Lorna Doone—By R. D. Blackmore.
- The Three Musketeers—By Alexandre Dumas.
- The Mighty Atom—By Marie Corelli.
- Mr. Potter of Texas—By A. C. Gunter.
- Beautiful Joe—By Marshall Saunders.
- A Welsh Singer—By Allen Raine.
- Adam Bede—By George Eliot.
- Helen's Babies—By John Habberton.
- Tom Brown's School Days—By Thos. Hughes.
- David Harum—By E. N. Westcott.
- The Scarlet Pimpernell—By Baroness Orczy.
- The Mill on the Floss—By George Eliot.
- Jess—By Rider Haggard.
- The Story of an African Farm—By Olive Schreiner.

**The Campbell Flour Mills Company**  
LIMITED  
(WEST) TORONTO, ONTARIO

## The Beaver Circle

### OUR SENIOR BEAVERS.

[For all pupils from Senior Third to Continuation Classes, inclusive.]

#### A Competition.

Dear Senior Beavers,—To-day we shall give over the most of the Beaver Circle to the Junior Beavers, whose letters have been accumulating very rapidly; but before we do so I want to set for you another subject to write about. You see, all of you may not care to write a story, as given last time, and I want to keep you busy during these long winter evenings.

Our subject is, "What I want to do when I grow up, and why."

Kindly send your letters so that they will reach us not later than the 15th of February. Address as usual to the Beaver Circle.

PUCK.

#### RIDDLES.

As most of you seem to like riddles, here are a few that may be new to you:

Why do sailors say there is not a man in the moon? Ans.—Because they have been to see (sea).

Why is a dog with a broken leg like a boy in arithmetic? Ans.—Because he puts down three and carries one.

What is the difference between the hungry man and a glutton? Ans.—One longs to eat, and the other eats too long.

#### Winter Games.

##### ANAGRAMS.

When the letters of a word or sentence are changed about to make a new word or sentence, the transposition is called an "anagram." For instance: "live"—"evil"; "reel"—"leer."

You may often amuse yourselves during a winter evening by forming these. A dictionary will help you. For a start try what new words or phrases you can make out of the following: More—(name of a city).

Flit on cheering angel—(name of a famous nurse).

Lose—(part of a shoe).

Sale—(something placed on a document).

Oh, ay—(a nautical term).

Rasp—(part of a boat).

Heal Pat—(something without which you could not write).

##### MIXED LETTERS.

Making words of mixed letters is also good fun. For instance, a c h r a n y may be arranged as "anarchy"; k e t a s b becomes "basket."

Try these: h w o b c e, c a o o o c, r e s u a e m, t v e a l r i n, m e m t i i a r, h a n t p e l e.

##### ACROSTICS.

A poem or series of lines of which the first or last letter of each taken in succession will spell a word or sentence is called an "acrostic." You can also form these for yourselves. Here is an example:

Christmas comes but once a year;  
How we love its merry cheer!  
Rise you then in early morn,  
It is no time to be forlorn.  
So where, this day, you take your way,  
Trees hung with gifts and stockings, too,  
Make children gay, and troubles few.  
And so we hail each Christmas day,  
Sing "Peace to all and good away."  
The initial letters, you see, spell "Christmas."

If any of you work out good anagrams or acrostics please send them along to the Beaver Circle, won't you?

#### Senior Beavers' Letter Box.

Dear Puck and Beavers,—Seeing my last letter in print has encouraged me to write again. Our entertainment was on the twenty-first. We had a fine programme. We had tableaux, dialogues, songs and almost everything. It was a grand night. We made sixteen dollars at the door. We charged ten and fifteen cents. We are going to send it to the Red Cross.

Say, but isn't it fun to hang up our stockings and come down in the morning to find them full of toys and almost everything imaginable? Santa

Claus is a pretty good old chap. He was up at our entertainment the other night to give the children their presents.

We gave our teacher a present of a fountain pen. She was very glad to get it as she had none. I got a handkerchief and a bag of candy.

We don't have much sleighing here yet. It will snow and then rain so that the snow only stays a little while. I hope we will soon have skating, for I have not been out skating yet this winter.

There is a sparrow match up our way. The Farmers' Club have got it up. It will close next Wednesday. There are a lot of sparrows around our place. I wish we could catch them all, as they are such pests. Well, I guess I will close, wishing the Circle every success.

P. S.—I wish some of the Beavers would write to me.

Wallacetown, Ont.  
ROBERT RIPLEY, (Sr. IV.)

### OUR JUNIOR BEAVERS.

[For all pupils from the First Book to Junior Third, inclusive.]

#### Little Kid Martha.

Here is little Martha!  
And, as you well can see,  
A happy little kiddy,  
As cute as cute can be!

Her mother, Mistress Nanny-Goat,  
Is not so far away;  
But she's busy with the other kids,  
Who try to make her play.

She knows that little Martha  
Is safe in loving care;  
And as she doesn't worry  
But is glad to have her there.

'Tis such a great relief, you know,  
When mothers thus can feel  
One kiddy so contented is  
And "out from under heel."

And so we, too, will leave her there,  
Quite free from all alarm,  
I know she's getting "lots of love"  
Within my sister's arms.  
Anna B. Benseel.



The Pet Kid.

#### Peekaboo Stories.

##### A SNOW FAIRY.

By Juju.

Once there was a fairy called Iceand-snow, who could not bear the heat of summer. When her father and mother and brothers and sisters were out sporting themselves among the leaves of the forest and the grass of the fields, enjoying the bright sunshine, Iceand-snow would be hidden in the very darkest and coolest corner of a hollow tree, or, perhaps, would be standing in the cool water at the edge of the stream, wading out farther and farther until it reached her very neck.

All this grieved her mother very much. It made her sad to see Iceand-snow different from the rest of her children and always so very uncomfortable and unhappy. One day she could stand it no longer, and she said to Iceand-snow: "Daughter, I feel that something must be done for you. Now, I want to tell

you that there is a great fairy, Rageandblow, who may be able to help you, but he must not be called except on very important occasions, so perhaps our calling him will be of no use. If you want to try, you must come out at midnight and call three times,

'Rageandblow, Rageandblow,  
Come thee to Iceandsnow!  
Come on the North wind  
Come on the blast;  
Iceandsnow needs thee,  
And prays thee come fast.'

Iceandsnow was not afraid of the dark. All her life she had been used to going out in it, because she loved the coolness of the night; so at midnight she crept out and said the magic words.

At first there was no answer, and she was afraid that Rageandblow would not come; then she heard a far-off murmur and whistling that came nearer and nearer, growing louder and louder as it came. Soon the trees all about began to sway and bend, and their great branches to creak one against another.

Still Iceandsnow was not afraid, not even when a great black cloud came down before her, for she felt a cold wave of air that made her feel happy and light as a bird.

"Iceandsnow," said the voice in the cloud, "What can I do for thee?"

"I want the sunshine," said Iceandsnow, "but not the summer. In it I almost die."

"It shall be so," said the voice. "When the first bird passes in the morning call to it, 'Junco! Junco! Take me! Take me!'"

Then the cloud raised again, and the cold wind withdrew, and the blast and whistling died away, and all the trees stood still.

In the morning Iceandsnow was out bright and early, and soon a little gray bird with a bit of white beneath, and white feathers each side of its tail, flew to the ground before her.

"Junco! Junco! Take me! Take me!" said Iceandsnow, and at once the little bird spread its wings. Iceandsnow got on its back, and the bird flew up and up. They passed over great dark forests, over fields where people were going out to work, over more forests, where no people were to be seen but only moose and other wild animals, and soon they came to a great white country, where the ground was all covered with snow, and great icebergs floated in the sea, and the Ice King sat in a great hall of ice with his fairies all about him. The sun shone everywhere, and the snow and ice sparkled as though scattered with millions of diamonds.

Iceandsnow thought it all very beautiful, and was happy to live there. She lives there yet, but every year she becomes lonesome to see her father and mother, and brothers, and sisters. So she comes back to visit them, and when she comes snow falls, and sometimes north winds blow, and sometimes the trees are all covered with white and sparkle in the sunshine with some of the diamonds that she brings from the North land. She stays for months and people call her visit "winter."

**Junior Beavers' Letter Box.**

Dear Puck,—My father has taken "The Farmer's Advocate" for as long as I can remember, and I enjoy reading the letters, but I never picked up enough courage to write till now. I am in the third book, and our teacher's name is Miss Price, and I like her fine. I have a little kitten named Topsy. As my letter is getting long I will close with a riddle:

Sisters and brothers I have none, but that man's father was my father's son. Ans.—A father.

I hope the w.-p. b. is not hungry when my letter arrives.

EDNA McVUGH,  
(Age 9 years, Book III.)  
Maberly, R. R. No. 1.

Dear Puck and Beavers,—When I saw my sister's letter in "The Farmer's Advocate" I was tempted to write. My father has taken "The Farmer's Advocate" for a number of years, and likes it fine. We had a school fair in September, and I showed a hem-stitched handkerchief, patch-work and knitting. I got a prize on all of them. I go to

**WISCONSIN INCUBATOR AND BROODER** BOTH \$13.90 FOR

**130 Egg Incubator**  
**130 Chick Brooder**  
BOTH FOR \$13.90 Freight and Duty PAID

If ordered together we send both machines for only \$13.90 and we pay all freight and duty charges to any R. R. station in Canada. We have branch warehouses in Winnipeg, Man. and Toronto, Ont. Orders shipped from nearest warehouse to your R. R. station. Hot water, double walls, dead air space between, double glass doors, copper tanks and boilers, self-regulating. Nursery under egg tray. Especially adapted to Canadian climate. Incubator and Brooder shipped complete with thermometers, lamps, egg testers—ready to use when you get them. Ten year guarantee—30 days trial. Incubators finished in natural colors showing the high grade California Redwood lumber used—not painted to cover inferior material. If you will compare our machines with others, we feel sure of your order. Don't buy until you do this—you'll save money—it pays to investigate before you buy. Remember our price of \$13.90 is for both incubator and brooder and covers freight and duty charges. Send for FREE catalog today, or send in your order and save time.

**WISCONSIN INCUBATOR CO. Box 228, RACINE, WISCONSIN, U. S. A.**

**POULTRY AND EGGS**

Condensed advertisements will be inserted under this heading at 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 for an advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisements inserted for less than 50 cents.

**BRAHMAS**, Black Spanish, Partridge Rocks, Partridge Wyandottes, Indian Runner Ducks, Choice trios at five dollars. White Leghorn cockerels, \$1, bred from winners at Guelph, Ottawa and Detroit. John Annesser, Tilbury, Ont.

**BARRED** Rock cockerels and Pekin ducks of high-grade stock. Prices low. Leslie Kerns, Freeman, Ont.

**BRED-TO-LAY** O. A. C. strain—Barred Rock cockerels, one-fifty each; fine birds. Orville J. Bond, Paris, Ont.

**FOR SALE**, Anything in "Snowflake" White Leghorns. Two to five dollars. E. W. Burt, Paris, Ont.

**FOR SALE**—Some extra choice young Embden geese, bred from imported stock. E. A. McDougall, Milton, Ont.

**FOR SALE**—Choice S.-C. R. I. Red cockerel (Mahood's, St. Louis, best strain of bred-to-lay and prize stock) at \$2.50 to \$5.00 each. D. W. Dunkin, R. R. No. 2, Dundas, Ont.

**FOR SALE**—Mammoth Bronze Turkeys, bred from prizewinning stock; also pure-bred Collis pups. R. G. Rose, Glanworth, Ont.

**WHITE** Wyandottes (Martin strain) Prize Winners. Dunc. McTavish, Chesley, Ont.

**Free** to Stockmen and Poultrymen, our 30-page illustrated booklet on feeding; how to construct a house which will accommodate 100 hens, gives dimensions and measurements of every piece of lumber required. Deals with the common diseases of stock and poultry and the remedies. Tells how to cure roup in four days. Contains full information about Royal Purple Stock and Poultry Foods and Remedies.

**THE W. A. JENKINS MFG. COMPANY**  
London, Canada

**Locharbar Poultry Yards**

Has a nice lot of Barred Plymouth Rocks, English Pencilled Indian Runner Ducks, Rouen Ducks, Toulouse Geese and M. Bronze Turkeys for sale. Pairs furnished not akin.

**D. A. Graham, Wyoming, Ont.**

**Chickens 19c.**

We will pay the above price for crate-fattened chickens, bled, and picked clean to the wing-tips. Chickens must be good size, straight-breasted and white in colour, not torn. These birds are for select trade, so must be A No. 1.

**Waller's, 700 Spadina Ave., Toronto**

**SHOEMAKER'S BOOK ON POULTRY**

and a **Manual for 1916** has 200 pages with many colored plates of fowls true to life. It tells all about chickens, their prices, their care, diseases 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. SHOEMAKER, Box 950 Freeport, Ill.

When you buy a **Sherlock-Manning 20th Century Piano** you get  
"Canada's Biggest Piano Value"  
and at the same time save fully \$100. Write Dept. 18 for Catalogue "T."  
**THE SHERLOCK-MANNING PIANO CO.**  
London, Canada  
(No street address necessary) 62

**Harab-Davies Fertilizers**

Write for Booklet.  
**THE ONTARIO FERTILIZERS, LTD**  
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Study up any subject at home in your spare time. We teach all Public and High School subjects, Commercial, Industrial and Special subjects. Ask about anything that interests you. **Canadian Correspondence College, Limited, Dept. E. E. Toronto, Canada.**

school every day. I have a little kitten which I call Tiger. She is very cunning in her way. When she hears us open the door, she will run to meet us.

Well, as my letter is getting rather long I will close, hoping the w.-p. b. is not hungry, and wishing the Beaver Circle every success. I remain your little Beaver.

FLORENCE CAIN.  
Queensville, Ont. (Jr. 2nd Class.)

Dear Puck and Beavers,—This is my first letter to your charming Circle. I enjoy reading the letters. We have been taking "The Farmer's Advocate" for about two years, and we like it fine. There are two boys in our family and two girls. I am the second youngest. For pets I have two kittens, and I have a dog. He is a good dog. Our teacher's name is Miss McGregor, and we like her fine. I have a lot of books in school. These are some of the ones I read, "The Water Babies," "Eyes and No Eyes," "The Piece of Ice," and a lot more. Well, my letter is getting long; I will close with a riddle.

I know a bull that stands in the field; it eats and eats, but it never gets full.

Ans.—A threshing mill.  
JESSIE ANN GRAVE.  
Dunvegan, Ont. (Book 2, Age 9.)

Dear Puck and Beavers,—I am going to tell you about a runaway. I broke my arm and the horse broke his leg. It was one Sunday when we were going to church. Before my father and mother got in at our own door, the horse got frightened and ran around the yard and turned short at the corner of the barn, and upset the buggy and I fell out. Then he ran over a pile of logs and broke his own leg. My arm was not long getting better, but the horse's leg was a long time. I have just one little brother, he is three years old.

LLOYD WILCOX,  
Eganville, Ont. (Age 10, Bk. II.)

Dear Puck and Beavers,—This is my second letter to your charming Circle. I saw my name in the honor roll. I am going to tell you about our first school fair, which was held at Crosshill on October the fifth. It was very well attended, in spite of the very cold day. I got first prize for my biscuits, and first for the care of my turnip plot, and third for my asters, and fifth for my turnips. My brother also took three prizes. Our school did the best in the township. I hope we will have a school fair every year after this. I will close, wishing the Beavers every success.

ISABEL TRUSSLER,  
(Age 10, Jr. III. Class.)  
Wellesley, Ont.

Dear Puck and Beavers,—This is my second letter to your charming Circle. I did not see my first one in print, so I thought I would write again. I am going to tell you about my pet rabbits. I have two of them. They are both white. I keep them up in the stable in a box in the winter. In the summer I keep them outside. Sometimes I bring them into the house for awhile, and watch them play tag on the floor. I feed them milk and clover; sometimes I give them an apple. I go to school every day, and like it fine. My teacher's name is Miss Scott. Well, my letter is getting rather long. Wishing the Circle every success.

Would like some of the Beavers of my own age to write to me.  
Macville, Ont. (Age 12.)  
GRETA PIERCEY,

**WANTED & FOR SALE**

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.

**FARM** Property—good 200 acre farm for sale in the county of Perth and the Township of Elma. Good buildings; well watered, fenced and drained; soil, clay loam. Wm. Fisher, R. R. No. 1, Atwood, Ontario.

**FERRETS**—Either color, large or small, single pairs or dozen lots. Catalogue free. C. H. Keefer & Co., Greenwich, Ohio.

**TWO-HUNDRED-ACRE** farm for sale, five miles from Simcoe; clay and sand loam. For reference, apply Emma Finch, Simcoe, Ont.

**WANTED**—first class single man for up-to-date dairy farm. Wages, \$325 per year and board. Commence work immediately. A. E. Hulet, Norwich, Oxford Co., Ont.

**J. VICAR MUNRO, ARCHITECT and C. E.** Now is the time to have your plans and specifications drawn. Obtain competitive estimates and save money. Homes, churches and schools. No extras. Address Room 54, Bank of Toronto Building, London, Canada

**Cedar Posts** Car Lots Green 4 1/2 ins. under 7 ins. by 8 ft. 9c., 7 ins. and up by 8 ft. 18c., 7 ins. and up by 9ft., 22c. All bargains. Terms—Cash. Stamps for replies. Box 52, Gooderham, Ont.

**Cedar Posts** for Sale—Good sound, dry timber, no bark. Anchor "Y" braces. Line posts cut to your order, any length or size. Write, anyhow.  
J. J. Cameron, Box 502, New Liskeard, Ont.

**Wanted** Custom Tanning. Horse hides and Cattle hides for robes and coats; Also all kinds of skins and furs. Send them to me and have them tanned soft and pliable. Address: B. F. BELL, Delhi, Ont.

**PATENTS AND LEGAL**  
FETHERTONHAUGH & CO., PATENTS Solicitors—The Old Established Firm. Head Office: Royal Bank Building, Toronto, and 5 Elgin St., Ottawa, and other principal cities.

**BUTTER WANTED**

Highest price paid for dairy butter and new-laid eggs.  
J. D. Arseneault, 142 Sunning St., Montreal

**Cedar Posts** for Sale: 1,200 good sound fence posts cut last winter, 8 ft. long and from four to eight inches diameter at top; also green posts can be supplied in carload lots. Chas. A. Calder, R. R. No. 1, Warsaw, Ont. Norwood C.P.R.

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**SPECIAL ROUND TRIP FARES**  
Long Limit—Stopovers  
Asheville and Hot Springs, N. C.; Charleston, S. C.; Nassau, N. P.; Hot Springs, Ark.; French Lick Springs, Ind.; Jacksonville and all Florida points; Havana, Cuba, and New Orleans, La., via New York and rail for steamer, according to destination) or via Buffalo, Detroit or Chicago

**Bermuda and West Indies**

**Other Health Resorts:**  
Mount Clemens, Mich.; Battle Creek, Mich.; St. Catherines, Welland County, Ont.; Preston Springs, Ont.  
Further particulars on application to Grand Trunk agents.

**London Engine Supplies Co., Limited.**

Our L. E. S. Water Works System will give you the comfort of High Pressure Water System for your home or about the farm. Refer to the Christmas Number for details.

After fifty years of service to the farmers, we submit our 1916

**"Golden Jubilee Catalogue"**

It is free for the asking. Drop us a post card now for one.  
**GEO. KEITH & SONS**  
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**A TRIAL PACKAGE OF Princess Skin Food**

Will be sent post-paid by us on receipt of **5c.** in coin or stamps to cover cost of mailing.



Thousands of ladies know of the Princess Toilet Preparations, the product of Canada's premier dermatologists at the Hiscott Institute, who want every person wanting a clear, healthy, fresh-looking complexion to know the wonderful results that follow their use.

One of their choicest Complexion Creams is

**PRINCESS SKIN FOOD**

You should know the real pleasure obtained by using this excellent unguent; how refreshing its absolute purity; how delightfully beneficial its effect on the skin; how rejuvenating its action on a fading and wrinkling face, and how it works constantly for the freshness of the complexion, and its pure flesh tints.

We remove Superfluous Hair, Moles, Warts, etc., permanently by our safe, sure and reliable method of Electrolysis. Come for treatment during Xmas-New Year's holidays. Booklet "F" mailed with sample of Skin Food.

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No wonder! For they are receiving from \$110.00 to \$190.00 for every \$100.00 invested in premiums, to say nothing of the protection they have enjoyed.

The amount of the return, of course, varies with the term of the Endowment. Don't speculate! Take an Endowment policy and share in the prosperity of

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**FURS - HIDES - WOOL**

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**News of the Week**

The Canadian army for overseas is to be increased to 500,000.

Hydro light and power by-laws were carried wherever voted upon in Ontario.

Henry Ford has returned to New York.

Gen. Castelnau, Chief of the French General Staff, is now on the Balkan front, inspecting the positions of the Allies.

The British Cabinet introduced into the House of Commons a bill providing for a modified form of conscription, giving the Government the necessary power, if needful, to bring single men to serve in the trenches or make munitions.

Indian troops in France have been transferred to another region, probably Mesopotamia or Egypt.

Great indignation has been aroused by the sinking of the British passenger liner Persia, by an enemy submarine and without warning, off the Island of Crete, on Dec. 30th. About 100 of those on board were landed, and over 300 drowned; among them Mr. Robert McNeely, United States Consul at Aden. The ship was bound from London to Bombay.

During the week the most significant fighting news has been the strong offensive of the Russians, who, prevented by Roumania from crossing her territory to the Balkans, has turned her attention to Bessarabia, Volhynia and Galicia.

In the Balkans the Montenegrins, reinforced by a body of Servians have had some success in driving back the Austrians from Montenegro, but the Bulgars are forcing a way across Southern Albania towards Durazzo. The Teuton armies, also, have been ordered to advance into Greece and attack the Allies, hence before this reaches its readers fighting may be in progress in the vicinity of Salonika. . . . From the Western front little has been reported save the usual desultory bombardments, resulting in taking or re-taking of a trench here and there. . . . The unusual activity of enemy submarines in the Mediterranean, resulting in the loss of several vessels, will necessitate the immediate transference to that region of the system of trawlers and destroyers, which has done such effective work for the Allies in waters nearer home. Mr. Lloyd George is strenuously urging a greater output of munitions in Great Britain, especially of long-range guns and machine guns.

**A Stingy Man and a Sacrifice that Paid a Hundredfold.**

My own father died when I was three years old. My mother married again, this time a typical farmer of the old school, whose one object in life was to attain land and money. To achieve this purpose he worked unremittingly, gave up all enjoyments and forced every one under his roof to do likewise. He was, moreover, a widower with several children. I was offered a home with him and my mother, but refused to leave my grandparents, with whom mother and I had lived after father's death. I think that my guardian angel prompted my decision. Surely no mere child could have seen clearly what I see now: that to have accepted the offer would have meant years of profitless drudgery and the foregoing of all that makes life worth while. Yet I loved my mother and the baby brother who came the following year with all the passionate devotion of a child who is starving for love. My grandfather was affectionate, but during all of these years my grandmother never gave me a caress. Many a time I have cried myself to sleep because I so longed for the touch of mothering arms.

After her second marriage my mother's hands were tied. Her husband forbade

her to give a cent of money for my support, or to take a stitch in my garments unless I would come there and slave as the others were slaving. Mother's share of my father's property was promptly swallowed up by the farm; my uncle guardian squandered my share.

A childless uncle and aunt offered me a home in the village. As I had reached the limit of the district school I accepted, and was graduated from the Union School in one year, and from a nearby High School in two years more. Then I longed to go to the Normal School. My uncle and aunt were unable to shoulder all of the expense that this would entail, but they furnished my clothes and a little money. I worked for my board at the home of a dear old lady who was very kind.

I was graduated from the Normal School, where I took the classical course, in three years, and I promptly secured a position as teacher. My uncle had meanwhile died. When I became a teacher my stepfather was proud of me, and welcomed me gladly at vacation-time. I was earning money, real money, more than any of his children who had been denied an education could earn. During the preparatory years he had scoffed, 'pooh-poohed' all education, and declared that I might better be working out and bringing in three dollars a week. Now, figuratively speaking, he patted me on the shoulder and boasted about what a bright, plucky daughter he had. I writhed in spirit, but accepted it with outward grace, for it gave me a chance to be near my mother and my brother.

During the next few years I fought my way up in my profession. I liked my work and was successful. I denied myself fine clothes and theater tickets in order to give my mother and brother something beyond the bare necessities with which they were supplied by my stepfather. There was little that I could do. I wanted to educate my brother, but my stepfather insisted that he should work on the farm until he was of age. An older brother who had tried to escape had been dragged back by the laws of our State. It was useless to attempt to oppose that iron will and narrow prejudice. I longed to give my mother a vacation. She was needed on the farm. I offered to buy an oil stove to replace the big range which made the kitchen insufferable in summer. Mr. A would not have one in the house. All that I could do was to supply books and magazines and give the family what pleasure I could during vacations.

Why did I not go home and help my mother? I could not. I even stayed away for weeks during vacations, because as soon as I shouldered a part of the household her presence was demanded in the fields. Every one under that roof was required to work every hour of the day and a few hours of the night. I might have helped to swell my stepfather's bank account by sacrificing my life, but I would have added no whit to any one's pleasure or well-being. Indeed my mother gloried in the thought that I was out of it all.

One forenoon I was handed a telegram saying that Mr. A had been found dead. There was no will. When the estate was finally settled, the old homestead went to Mr. A's children, while my mother and brother received an abandoned farm which had been one of Mr. A's last acquisitions. My mother was verging on a nervous breakdown. My brother was not yet of age and had never had the spending of five dollars. The house was considered uninhabitable. They wrote that they needed me.

The same mail brought me a letter which offered me a coveted position, with a comfortable salary, for which I had been working—in brief, the goal toward which I had been straining every effort. I had worked hard to attain just this. My education had been won by self-denial and strenuous effort. To drop out now meant that when I returned after years of absence I must again begin at the bottom of the ladder; that I would probably have to spend the remaining years in mediocrity. I knew that the call from home was only temporary. Eventually my brother would marry, and there would be no real place then for the sister. I had learned to hate farm life from the bitter glimpses I had been accorded. I had planned a trip to the mountains for that vacation. It was a hard fight, but I

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wrote mother that I would come as soon as school closed.

I began haunting the library and reading works on domestic science and agriculture. I attended one or two farmers' conventions, visited the State Agricultural College, inspecting some model farms, subscribed for agricultural papers, and prepared in every way to give just as good energy to this task as I had given to pedagogy.

I shall never forget that first day on the farm. My mother was tearful and shrilly fretful by turns. There was a new house at the homestead; she had given twenty years of her life to attain it. They had no right to take it away, she said. My brother's face was clouded and sullen. The two were at cross-purposes. My mother nagged my brother constantly. He hated the old farm. He wanted to go to the city. He had been neglecting his work and running with some utterly worthless village lads, as well as with girls of questionable character. He had been playing cards in low places. He had let the cows go without milking, and crops were half put in or not put in at all. My mother was on the verge of despair; but it didn't worry me. I knew that there was good stuff in the lad. My years of teaching had taught me discernment of boy character. He had never been permitted legitimate amusement or companionship. No matter how hard he worked there had always been another task awaiting him. Now that the restraint was removed he did not know how to use his freedom—that was all.

My mother wailed over the expensive new clothes that my brother had bought. I shuddered at parts of them, the taste was so execrable. He told me that my stepfather had always bought his clothes—cheap, ill-fitting ones—and that when he came home from town with the last suit he lay awake all night hating it.

And the house—an old, gray, tumble-down, frame building! The paint was black with age. The moldy and ugly wall paper hung in dismal strips. Some of the floor boards were broken. It was enough to dishearten anyone.

A paper-hanger and a painter transformed the big living-room; a soft, buff paper and white paint wrought wonders. An inexpensive rug harmonized perfectly. White muslin curtains, simple furniture, scattered books and magazines were added, and there was one restful place in the house. The other rooms took longer. Some of them I painted and papered myself. Meanwhile there was the regular routine work to be attended to. I had never put up a jar of preserves or a glass of jelly, but my brother liked them. My mother was not equal to the work, so I took a book of recipes and plunged in. I followed directions as explicitly as I had followed the chemical formulas in the laboratory, and was rewarded with perfect results. My head ached and my back ached from the unaccustomed toil, but I stuck to it resolutely and kept cheerful at any cost. By early autumn the house was cozy and livable. There were jars of jellies and preserves in the cellar, and chickens ready for broiling, and my brother had begun to manifest some symptoms of interest in his work. A hammock under the big, old elms, and a croquet set on the smooth grass, had proved effectual lures.

Meanwhile I had been trying to win my brother for a chum, since I knew that in that way only could I influence him for good. I rode with him, went with him to the pastures, asked him to take me

to some of the beauty spots near by. Gradually he confided in me. I never preached, but I gave him advice tactfully when he asked for it. As the cool evenings set in I made the counter attraction still stronger. I had girls out to visit me from town; fun-loving, jolly girls, but each pure and sweet. Dick soon lost his taste for the other sort. We played games in the parlor, quite as a matter of course, and the surreptitious haymow game, with its coarse accompaniment of vulgar jest and story, ceased to charm. There was a merry party at home and a chafing-dish supper to follow. Why should my brother fare forth into the night?

The hardest task of all was to persuade my mother to let Dick assume the responsibility which alone would transform him into real manhood. She had depended upon neighbors for advice, had tried to manage the farm work herself, and had carried a burden for which she was unfitted. I talked with Dick and saw that he understood the work, and had excellent business ideas, but lacked incentive. I urged my mother to throw the responsibility upon him, retaining always the legal right to use as a check if necessary. He could not ruin the farm in one year, and I knew that I had his confidence. It was hard to remain passive while he made mistakes, but it repaid the effort, when, having learned his lesson from Dame Experience, he would come voluntarily and talk matters over, explaining where the mistake lay and how he could rectify it another year. His face began to wear an expression of alert strength as he realized his responsibility.

Then, too, Dick began to show a tender solicitude for his mother, to do things to add to her comfort and to shield her from worry. Before we could realize the transformation she was leaning on his young strength instead of trying to prod him to drudging toil.

I enjoyed the life. I had never known the meaning of the word "home." How I reveled in the warm content of the home circle. I came to see how pitifully small were all of my intellectual achievements when compared with the large usefulness which was now mine. I became a comrade of all the living creatures on the farm; I stroked the silken muzzles of the horses, cuddled the downy chickens and ducks, ran races with the playful puppy. I grew sane and healthy and rosy. My nerves were but memories, the sensation of a headache was forgotten. I plunged through the heaped winter snows or roamed through the daisy-strewn meadow. Had the two years given me no other reward than the satisfaction of duty done, the knowledge of the sweetness of a real home and the health of body and mind which came from life in the open, I should still never have regretted my decision. But there came an even greater reward.

My standards of life had been false: the ones learned from the schoolroom instead of from life. I had judged people only from an academic viewpoint, had thought no man worth while unless he were college-bred and a member of one of the learned professions. Now I saw that real worth was the true test. My brother had no diploma, but he was well read and intelligent. There were those all about me who were ignorant of books but rich in a knowledge of Nature and of humanity.

While teaching I had become well acquainted with a man who was a friend of a family where I had boarded. Neither of us had considered the other as a matrimonial possibility. As a school-teacher I made a fairly pleasant companion for a social evening, but manifested none of those domestic virtues which a man would demand of the woman whom he chose to bear the sacred name of wife. And this man was merely a storekeeper, while I was looking for a learned professional man. We had kept up a desultory correspondence. He had quit the store and gone on the road. A drummer! Shades of Froebel! But when the man called casually at the farm the scales fell from both our eyes. The years had brought out my latent housewifely instincts. I saw that he had wealth of heart and character, a knowledge of Nature and of humanity. So to-day his ring is on my finger, and I am happy in my own home with the man whom I love more with each dawning day.—Selected.

**Well to Remember.**

That every path hath a puddle.  
That the fruit of success ripens slowly.  
That he is the richest who wants the least.  
That a million dollars will not buy a ray of sunshine.  
That the greatest of faults is to be conscious of none.  
That the brightest of thoughts sometimes come from the dullest-looking men.  
That all of the good things of this world are of no further good than as they are of use.  
That there can be no greater mistake than the stopping to worry over a mistake already made.  
That with contentment the lowest hovel is more of a palace than the loftiest mansion without it.  
That while few are qualified to shine in company, it is in the power of most people to be agreeable.  
That our homes are like instruments of music, of which a single discordant string destroys the sweetness.

**Our Serial Story**

**"THE CHAPERON."**

By C. N. and A. M. Williamson.

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Chapter XXX.

RONALD LESTER STARR'S POINT OF VIEW.

(Continued.)

We were called early in the morning, to take the twins and Freule Menela—the fiancée no longer—for a drive through Utrecht, to see the beautiful parks and the Cathedral before starting on the day's journey. Since the making of this plan, however, many things were changed. Robert and Menela were both "disengaged," and how they would think it decorous to behave to each other, how the twins would treat the lady (if the truth had been revealed), remained to be seen. If I had had no personal interest at stake, I should have found pleasure in the situation, and in watching how things shaped themselves; but, as it was, I realized that I might be one of the things to be shaped, and that I should be lucky if I were allowed to shape myself.

I thought it well to be late to breakfast, lest the erstwhile fiancée and I should meet en tete-a-tete; and it was evident, at a glance, that Lisbeth and Lilli already knew all. She admirable Menela had probably told them in their bedroom over night, thus giving the pair plenty of solid food for dreams; and the pretty creatures were pale, self-conscious, and nervous, not knowing how to bear themselves after the earthquake which had shaken the relationship of years.

Robert also was uneasy but, to my regret, emotion enhanced his good looks. What I had done had not been done for his benefit. I had not jeopardized my happiness to make him more attractive, to give fire to his eyes, and an expression of manly self-control striving with passion, to his already absurdly perfect features. Though, plainly, he was undergoing some mental crisis, he held his feelings so well in leash that no outside could have judged whether he were the saddest or the happiest of men, and his sisters watched him anxiously, hoping to receive a guiding cue for their own behavior.

As for Freule Menela, she was as composed as ever, and had a self-satisfied air, as though, having slept on it, she was more pleased than ever with the course she had adopted.

Phyllis knew nothing yet, except what she had gleaned from me last night, I was sure of that; but I was not so sure about Alb, who wore a clouded brow. Whether he was worrying over his own affairs, or whether friend Robert had commanded his hero's sympathy, I could not guess, and dared not ask. Nor had I much time to speculate upon Alb's business, for I saw by Freule

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Menela's eye, that my own was pressing, and all my energies were bent in steering clear of her during the good-by excursion through Utrecht.

Luckily, the party distributed itself in two carriages, and though I could not resist the fair Menela's "Come with me, Mr. Starr," fortunately the L.C.P. jumped in with Tibe, whose mood was so obstreperous that clearly he did not find canal life relaxing. Then arose a discussion between Nell and Phyllis as to which should sit in the other carriage, and Nell came to us, wishing, perhaps, to avoid Alb, whose society seems of late to cast a blight of silence upon her.

"Now," said I to myself, "if the late fiancée can't wind her tentacles round a new victim in this vehicle, neither can Robert escape her toils by proposing to Phyllis in that one, surrounded by his family circle. If he doesn't seize his chance soon, he'll miss it forever; because once his Freule discovers that she isn't to be claimed by another, she'll find it convenient to change her mind about life in Rotterdam. I may be saint—or villain—enough to keep her dangling till sunset; but then, at latest, I shall have to cut her down; and woe to any Viking who happens to lie about loose and unattached, when she falls to earth with a dull thud."

Far be it from the clever lady of The Hague to admit that there was a place on earth of which she did not know everything; and though I have reason to believe that she never saw Utrecht till yesterday, she was so busy telling us about it that we were behind the others in arriving on board "Mascotte," our appointed rendezvous.

I noticed instantly that Phyllis was not on deck, helping Alb to entertain the twins, as her kind soul would have prompted her to do. Of course, she might be below, in one of the cabins; but where was Robert? It was a coincidence that he, too, should be missing. Yet no one attempted to offer an explanation. Lilli and Lisbeth merely looked flurried and pink when Freule Menela came airily on board with me, and Alb appeared interested in giving instructions to Hendrik, who disputed respectfully with Tibe possession of countless yards of his beloved cotton waste.

At last, however, I began to wonder why we did not get away. The day's trip was to be a return to Amsterdam, not with the object of reviving impressions of that city, but for the pleasure of the run through the River Vecht, which Alb praised as the prettiest stream in the Netherlands, and named a miniature Thames; it was ten o'clock, and, as usual, we were timed to start at ten; but I did not consider it my place to ask the reason why, or any other question about starting. Mine, but to do or die—and keep out of reach of Freule Menela.

It was through Nell that the mystery was solved, as we stood chatting on deck.

"Where's Phil?" she inquired of the twins.

"Gone back to the hotel to find something she forgot to pack," said Lilli.

"And brother Robert has taken her," said Lisbeth, with a fleeting glance at the self-deposed fiancée.

This revelation of Phyllis's diplomacy came upon me with a shock. She is such a simple-minded Angel; but I suppose all girls are alike in some ways. And she is so kind-hearted, she must have been anxious to put Robert out of his misery as soon as she could. Well, she couldn't have done it much sooner. "There they come," cried Lilli. And perhaps I should have been tempted to search their faces for news if Freule Menela had not turned her back upon the advancing figures, and begun to talk, with an air of proprietorship, to me.

"It's found!" cried Phyllis, to all whom it might concern. "I was so fond of it, I should have hated losing it. And it was so kind of Mr. van Buren to help me."

I wondered whether there were others on board beside myself who detected in this announcement a double meaning? Something in her voice told me that she really was thankful not to have lost the thing of which she was so fond, the thing for which she had gone back

to the hotel, the thing Mr. van Buren had kindly helped her to find. But there was no chance for a self-sacrificing brother to question his sister. Freule Menela saw to that.

It was my luck at its worst, to be torn in my mind on this exquisite day on the Vecht. Once in a while it dimly comes back to me that, in a past existence unbrightened by Nell Van Buren and Phyllis Rivers, I came to Holland with the object of painting pictures. Never, since my arrival in the bright little country of wide spaces, have I had a keener incentive to improve the shining hours; but how can a man remember that he's an artist when the girl he loves has engaged herself to another man, and one of the few girls he never could love is rapidly engaging herself to him?

It was in self-defense, not a real desire for work, that I fled to "Water-spin" and screened myself behind easel and canvas. And then it was but to find that I had jumped from the frying-pan into the fire.

My move was made while "Mascotte" and her fat companion lay at rest, that Alb might buy fruit for us from a fruit boat; and Freule Menela also availed herself of the quiet interval.

"May I come and watch you paint?" she asked, in a tone which showed that vanity made her sure of a welcome.

I longed for the brutal courage to say that I could never work with an audience; but I remembered letting alip last night the fact that I constantly sat sketching on the deck of "Mascotte," during the most crowded hours of life.

I murmured something, with a smile which needed oiling; and, accepting the grudging help of my hand, she floated across with an affected little scream.

"I saw a lovely picture you painted for Miss Rivers," she said, when she was settled in a camp-stool at my side. "Will you do one for me?"

"With pleasure," I answered. "This one shall be for you. But if you want it to be good, we mustn't talk. I shall have to concentrate my mind on my work."

"Thanks for the compliment," she laughed. "I give you leave to forget me—for a little while."

So I did my best to take her at her word, and tried impressionist sketches of the charming and ever-changing scene, upon which her presence was the sole blot; the beautiful old houses set back from the river on flowery lawns, faded coats-of-arms glowing red and blue and gold over quaint doorways shaded by splendid trees; fairy villas rising from billows of pink peonies and green hydrangeas; humble cottages, with tiny window-panes of twinkling glass, shining out from bowers of late roses; dove-gray windmills beckoning across piles of golden hay; above, clouds like flocks of snowy sheep, racing along wide sky-pastures, blue with the blue of forget-me-nots; below, a crystal flood foaming white with water-lilies that dipped before the prow of our advancing boat.

Over this crust of pearl, poised always long-stemmed, yellow lilies, like hovering butterflies; and, in a clear space of water, each little wave caught the sun and sky reflection, so that it seemed rimmed with gold and set with a big, oval turquoise.

"Well—have I pleased you?" Freule Menela asked at last.

The moment had come for an understanding. With my two hands, unaided I had saved Phyllis, and now I must save—or lose—myself. Of course there was no choice which to do. I had played my fish and caught it, and as it was not the kind of fish I liked for dinner, I must tear it off the hook and throw it back into the sea, wriggling. I told myself that it was a bad, as well as an unattractive fish, that if I hadn't hooked it, most surely it would have bolted the beautiful little golden minnow I had been protecting. Still—still, there it was, smiling on the hook, that bad fish, trusting the hand which had caught and would betray it. It deserved nothing of that hand or any other hand; but suddenly, I found mine powerless.

"Phyllis, Phyllis," I groaned in spirit. "you will be my death, for to save you I caught this fish; now I may have to eat it, and it will surely choke me."

Before my eyes stretched a horrible

thing Mr. van Buren  
her to find. But  
for a self-sacrificing  
his sister. Freule  
at its worst, to be  
on this exquisite day  
in a while it dimly  
that, in a past ex-  
by Nell Van Buren  
I came to Holland  
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herself to another  
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thing, with a smile  
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her hand, she floated  
ted little scream.  
picture you painted  
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for me?"  
answered. "This  
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to take her at her  
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vista of years, lived through with Freule Menela—mean, little, vain, disloyal Freule Menela—by my side, contentedly spending my money and hearing my name, while I faded like a lovely lily on the altar of self-sacrifice.

In another instant I should have said yes, she had pleased me; she would have answered; and just because she is a woman I should have had to say something which she might have taken as she chose; so that it would have been all over for Ronald Lester Starr; but at this moment the two boats began to slow down. I suppose that Toon, at the steering-wheel of "Waterspin," must have received a message, which I was too preoccupied to hear; and as speed slackened, came the voice which others know as that of my Aunt Fay.

Never had it been so welcome, sounded so sweet, as now, when it brought my reprieve.

"Ronald dear," cooed the mock-Scottish accents, "you'd better get ready at once to lunch on shore, for Jonkheer Brederode has another surprise for us—and I know that by this time your hands, if not your face, are covered with paint."

Wonderful woman! It was as if inspiration had sent her to my rescue. Not that I am at all sure she would have laid herself out to rescue me from any snare, had she known of its existence; for though, before the watery world I am "Ronny dear" to her, she is, not as considerate with me in private as she used to be when we first started.

We have been frank with each other at times, the L.C.P. and I, and the pot has said in plain words what it thinks of the kettle's true character. When the time comes for us to part it may be that her little ladyship will be still more frank, and let me know, in polite language, that seeing the last of her borrowed nephew is "good riddance of bad rubbish." Nevertheless, her extraordinary, though indescribable, cleverness has woven a kind of web about us all; and whether I am able to respect the L.C.P. or not, I was conscious of passionate gratitude to her as she arrested me with the bad fish half-way to my mouth.

The boats stopped at a private landing, small, but so remarkable that I thought for an instant the whole thing must be an optical illusion.

We had come to rest in the deep shadow of enormous trees. Leaning over the rail of a snug little harbor two dummy men in rakish hats and dark coats stared at the new arrivals with lack-luster eyes. And the dummies, and the wooden wall on which they were propped, with a strange painted motto consisting of snakes, and dogs, and sticks, and a yard measure, were all repeated with crystal-clear precision in the green mirror of quiet water.

"How annoying, just as we were going to have another delicious talk!" exclaimed Melena.

"Yes," said I. "But it can't be helped. Where are we? Is this fairy-land?"

"It must be the place of Heer Dudok de Wit," answered the young lady, snappily. "He is a wonderful man, and many people say that no visit to Holland can be complete without a visit to his house. He's a great character—has walked all over the world, and brought back curiosities for his museum, to which he gives free admission. And from what I hear, there is nothing else he won't give, if asked for it—he's so generous—from a night's lodging or all his best peaches, up to a present of a thousand gulden to a distressed stranger. This can be no other house than his; and I believe Rudolph Brederode is a far-off cousin of Heer de Wit, just as Rudolph is of mine on the other side. I don't see our host, though. Perhaps he is away on one of his walking tours."

"Or in bed," said I. "Taking a noon-day nap, to forget the heat."

"No, for one of his peculiarities is, never to go to bed. He hasn't been in bed for twenty-five years. I don't know how he sleeps—but, look! there he is now. I recognize him from photographs in newspapers."

My eyes followed her nod, which appeared to be aimed at the river. I looked for a boat, but spied a head floating among water-lilies.

It was not a loose head of some early Dutch martyr miraculously preserved—as seemed possible in a place of such surprises—for it smiled and bowed, and addressed Brederode as its dear Rudolph.

It's wet hair, glittering like silver in the water, was rather long, it's eyes were like brown jewels, it had faultless features, not at all of a modern cast, but like those one sees in a seventeenth-century portrait; and its smile, even when visible only as far down as the lower lip, was charming.

The famous Mr. Dudok de Wit, bobbing nearer, explained that he had unduly prolonged his daily swimming bath, owing to the sultriness of the day. As it was, he had been in the water no more than an hour or two, but he was delighted to see us, would come out at once, and expect us to lunch with him at Breukelen, which is the name of his place.

He did come out, in a neat bathing-suit, desiring us to follow him into the house, where we might amuse ourselves until he was dressed, wandering among his treasures in the drawing-room.

The luncheon in the quaint old house, the stroll through the grounds and the hour in the museum, were among Alib's successes; but I was just grudging it to him; besides, he flaunted no triumphant airs. Why should he, when Phyllis had eyes only for her Viking, and Nell, in a newly developed appreciation of her twin cousins, had no time to remember his existence?

I did think that she might have stretched out a hand to save me from Melena, but if she had any conception of what was going on, she thought me able to take care of myself, and I should have been left to the tender mercies of the creature I had freed had it not been for the L.C.P.

During the afternoon, when we had left Breukelen and were gliding on, along the lily-burdened river toward Amsterdam, she unobtrusively made it her business to protect me from the sallies of the enemy, even engaging that enemy herself, as if she were my squire at arms. Now, if ever before, she was worth her weight in gold, and as I saw her politely entangle the unwilling Melena in conversation, I vowed to buy her a present worth having when we arrived in Amsterdam.

(To be continued.)

Gossip.

GLENGORE ABERDEEN-ANGUS.

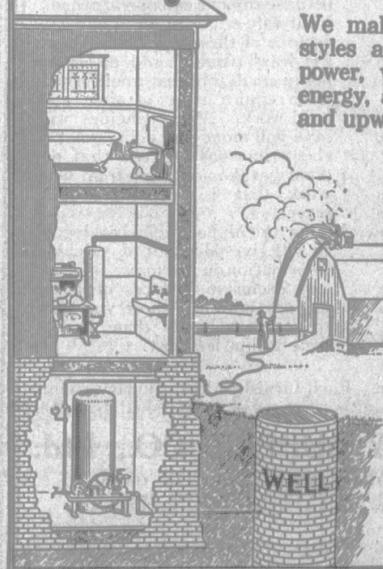
It was the privilege of a representative of this paper a few days ago to visit the noted Glengore herd of Aberdeen-Angus cattle owned by Geo. Davis & Sons, of Erin, Ont., and, as is usual on this well-managed farm, the large herd was going through the winter in nice, thriving condition, the result of a liberal and well-balanced ration of silage, roots, grain, and cut straw. Years ago Mr. Davis purchased as foundation for a herd a few females of the popular Mayflower and Fair Lady tribes, and so satisfactory have they been in his hands that he wants no better, believing that there are no other families of the black Dobbies possessing the general all-around qualities of merit quite their equal, and particularly in the matter of milk production, for, contrary to the general impression, there are some good milkers in the herd. For some months two of the cows have been hand-milked for the house supply of milk and butter, and by careful weighing, averaged from 20 to 22 lbs. a milking, 40 to 44 lbs. a day, and they kept it up. There are plenty of dairy-bred cows that do not do as well. However, Aberdeen-Angus cattle are not dairy cows, neither are they supposed to be, but very few of them need a nurse cow to successfully raise their calves. Still at the head of the herd is the successful sire, Middlebrook Prince 5888, an Aberdeen Pride-bred son of the junior champion, Hundred 2853. On hand for sale are several young bulls and a limited number of heifers, sons and daughters of his. Of the young bulls, three are old enough for service. Dunold 10th of Glengore is a Mayflower, eleven months old; Sixty of Glengore is a Fair Lady, fourteen months old, and Prince of Glengore is a Fair Lady, eighteen months old. Write Mr. Davis your wants in Aberdeen-Angus cattle.

Have city conveniences with ample fire protection

First of all, the cost is much more moderate than you might suppose. One of our complete outfits will meet your needs to a nicety and provide running hot and cold water on every floor; water to the barn and other outbuildings; water for fire protection at a good pressure; water to lighten farm burdens.

Safety and convenience are both assured by putting in an

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We make complete outfits in many styles and sizes to operate by hand power, windmill, gasoline or electric energy, at prices ranging from \$225 and upwards.

Our pumps will supply water and air at the same time—air alone or water alone. Nothing complicated about the EMPIRE SYSTEM. Everything is simple, durable and made to stay in order.

Take the first step towards enjoying better living conditions and greater security. Write now for free illustrated booklet describing our various systems.

Empire Mfg Co., Limited  
East London, Ontario

DISPERSION SALE OF

Aberdeen-Angus Cattle  
Oxford Down Sheep, Etc.

Having sold my farm, I will sell by PUBLIC AUCTION on  
Wednesday, January 19th, 1916

absolutely without reserve, the "Innerleithen" herd of Aberdeen-Angus cattle, consisting of some 18 females and 4 young bulls; also a number of pure-bred steers and grades. A choice flock of 20 Registered Oxford Down sheep and my stock of horses, swine, implements, etc.

TERMS—12 months on bankable paper; 5% off for cash. Conveyances will meet morning trains at Erin, C.P.R., on day of sale. Catalogue on application. See Gossip in this issue.

JAMES BINNIE, Erin, Wellington Co., Ontario  
W. HULL, Auctioneer

High-Class Clydesdale  
Mares and Fillies

We have a big selection of Imp. Clyde, Mares and Fillies and others from Imp. Sire and Dam. Buy now, for another year will see them away up in price. We have always a big selection of stallions.

SMITH & RICHARDSON

Columbus, Ont., Myrtle, Brooklyn and Oshawa Stations

WOODLAND HORSES AND BROWN SWISS CATTLE.

We are now offering for sale the Clydesdale Stallions, Lord Charming, Imp. [2204], Barons Charm, Imp. [2238], The Hackney Stallion, Warwick Model, Imp. 304. Two registered Clyde Mares, High-class Shetland Ponies, and Brown Swiss Bulls of serviceable age.

RALPH BALLAGH & SON, Guelph, Ont. The Old Sorby Farm.

Rosedale Stock Farm offers for quick sale at low prices one 2-year-old Shire Stallion, champion at Toronto. One 2-year-old and one yearling Hackney stallions, both imp. and both first at Toronto. One Hackney pony horse foal, dam champion at Toronto. Two Clyde horse foals, sire and dam imp. Ten Shorthorn bulls. A few choice Leicester ram lambs.

J. M. GARDHOUSE, Weston, Ont. G.T.R., C.P.R. and Electric Line.

Percherons and Holsteins

We have Percheron Stallions from yearlings up, 1st prize winners at Toronto, also mares and fillies from yearlings up, quality and type unsurpassed. In Holsteins we have for sale, cows, heifers and young bulls, come and make your selection. W. G. HILL & SON, Queensville, Ontario, P.O. and Station. Toronto and York Radial Line.

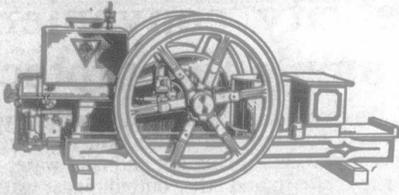
Clydesdale Stallions and Mares—We are now offering for sale a number of extra good stallions, and mares in foal. Write or call on

JOHN A. BOAG & SON, Queensville, Ontario.

The Maples Herefords.

For this season we are offering, without a doubt, the best bunch of young stuff we ever handled, both sexes, including our imported herd bull, 3 years old, undefeated this year, and a sure stock-getter. Prices right.

W. H. & J. S. HUNTER, Orangeville, Ontario



## Alpha Gas Engines Do Any Work—Use All Oil Fuels

An engine that will do the work you want it to do; that will operate without being continually adjusted and tinkered with; that will burn any fuel you wish, is one of the greatest conveniences you can have on your farm.

Alpha Engines entirely measure up to these requirements in every respect. You can always rely on them. They start and run on a simple, low-speed magneto. There are no troublesome batteries to watch or fuss with, or wear out and frequently require renewing. Simply turn on the fuel, give the flywheel a turn, and the engine is good for a steady all-day run at any kind of work.

Alpha Engines are ideal for farm use, because any one can operate them. Your wife or boy or hired man can use one of these engines without the least trouble, and do easily many small jobs that would otherwise require a lot of time and hard work. Alpha Engines will save you money by doing quickly those time-wasting jobs that ordinarily take you away from field work that is demanding your attention.

Ask for the Alpha Engine catalogue. It will give you a lot of valuable information on the many superior and exclusive features of these engines, and will show you how to get more work done in less time and at less cost.

Eleven sizes, 2 to 28 horse-power. Each furnished in stationary, semi-portable or portable style and with either hopper or tank cooled cylinder.

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MONTREAL PETERBORO WINNIPEG VANCOUVER

## ORCHARD GROVE HEREFORDS

Have several young bulls and heifers for sale. Satisfaction guaranteed.

L. O. CLIFFORD, Oshawa, Ont.

## MAPLE SHADE FARM SHORTHORNS

The products of this herd have been in very strong demand. There's a reason. Can always supply a good young bull at a price which will make him well worth the money. Not many females for sale but can show a few which should interest you.

W. A. DRYDEN, Maple Shade Farm, Brooklin, Ont.  
Brooklin, G. T. R., C. N. R. Myrtle, C. P. R.

**Robert Miller** Still Pays the Freight—And he is offering in Shorthorns some of the best young bulls and heifers that can be produced. Young bulls fit for service, heifers fit for service and younger, and some in calf. They are of the best Scotch families, and some of them from great milking families. They are in good condition and made right, just what you want to make a proper foundation for a good herd, and suitable to improve any herd in the land. They will be priced so that you can afford to buy, if you will tell me what you want. Our business has been established 79 years, and still it grows. There is a reason.

ROBERT MILLER, Stouffville, Ontario

## Shorthorns

**RICH IN BREEDING, HIGH IN QUALITY**  
My herd of Scotch and Scotch-topped Shorthorns was never stronger in number nor in quality than now. I have the most fashionable blood of the breed in pure Scotch, as well as the greatest milking blood strains. Visit the herd. Also some rich, choice Yorkshires, both sexes. A. J. Howden, Myrtle, C. P. R.; Brooklin, G. T. R.; Columbus, R. M. D.

## 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.

G. E. Morden & Son, Oakville, Ontario

## Walnut-Grove Shorthorns

Sired by the great Sire Trout Creek Wonder and out of Imp. Cows and their daughters of pure Scotch breeding and others Scotch topped. For sale are several extra nice young bulls and a few heifers. Let us know your wants. Duncan Brown & Sons, R. M. D. Shedden, Ont., P. M. & M. C. R.

## Willowbank Stock Farm Shorthorn Herd

Established 1855. This large and old herd has at the head the two great bulls: Imported Roan Chief = 60865 = a Butterfly and the prize-winning bull, Browndale = 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.

## Shorthorns and Shropshires

Am offering six young bulls at reasonable prices ranging in age from seven months to 19 months. A good lot. Also 10 Shropshire shearing ewes: a first class start for a flock low set and well covered. WM. D. DYER, R.R. No. 3, Oshawa Ont. Brooklin, G. T. R. Myrtle, C. P. 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.

## 10 Shorthorn Bulls

and 40 females. Shropshire and Cotswold ewes for sale at prices within the reach of all. JOHN MILLER, Ashburn, Ont., Myrtle Station, C. P. R. and G. T. R.

## SHORTHORNS AND CLYDEDALES

10 Bulls serviceable age, all good ones (some herd headers) and are offering females of all ages. Have a choice lot of heifers bred to Clansman = 87899 =; also four choice fillies all from imported stock. A. B. & T. W. DOUGLAS Long-Distance Phone STRATHROY, 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.

## Miscellaneous.

### Babcock Test.

There has come into my possession a Babcock milk-tester. I would like very much if you would furnish me, through the columns of your valuable farm paper, the receptacles I would need, and the method used to make a successful test.

I. W. H.

Ans.—In order to make test you will require, besides the tester, properly-graduated bottles holding about 40 c.c. A 17.6 c.c. pipette, a 17.5 c.c. acid measure. You will require enough bottles to make tests for your number of cows. It is not necessary to get a bottle for each cow, but the more bottles you have, according to the size of your tester, of course, the fewer tests you will need to put through. If your tester is a four-bottle tester, we would advise that you get four or six bottles, the two extra to have on hand in case of accidents. The sulphuric acid required should have a specific gravity of 1.82 to 1.83, and must be kept in a tightly-stoppered bottle in a safe place, as it is very corrosive. The bottles and necessary appliances can be obtained from dealers in dairy supplies who advertise in this paper. To make the test, be sure that the sample is well mixed, then measure the sample with the graduated pipette by drawing the milk into the pipette with the mouth, and allowing it to settle to the 17.6 mark by placing the finger over the end of the pipette and allowing a little air to gain entrance. Blow all the milk from the pipette into the bottle, then measure the acid and put it in with the milk in the bottle, being careful to hold the bottle slightly on its side so that the acid runs down the edge, and then by rotary motion mix the milk and acid. Place the bottles in your machine and turn for five minutes, then take out and add hot water at at least 140 degrees, and up to 160 degrees, if working in a cool room, until the fat in the sample comes well up into the neck of the bottle. Place the bottles back in the machine and turn for two minutes longer, then read the test from the highest to the lowest limits of the fat in the graduated neck of the bottle. Be careful to place bottles in the machine so that it is balanced.

### Abortion.

I am having trouble with cows losing their calves. Last year cow lost calf within two months of time due; this year lost it again about one month before time, and now a four-year-old has aborted almost three months before time. What is the cause? They are fed corn, straw and hay, and have plenty of good clean water. Stable is sanitary and well ventilated. Is this contagious abortion, and what is the remedy? After a cow shows signs of abortion, can anything be done to prevent it?

J. W. B.

Ans.—We fear, from your description, that you have contagious abortion in your herd, a germ disease not yet well understood, and which is doing a great deal of damage in the herds of America. We have had it in our own herd at Weldwood, and about the only thing we can advise at the present time is to isolate cows which abort, disinfect the premises, and both the exterior and interior generative organs of the aborting cows. Be careful not to use a bull on cows free from the disease, which has been used on aborters without thoroughly disinfecting his sheath before serving. Formerly we had some faith in methylene blue as a preventive, but scientific investigation seems to prove that there is very little in its use. We fed a large quantity of it at Weldwood, one heaping teaspoonful to each cow daily for five weeks, but we had cows abort afterwards, and we are not in a position to state from our experiment with it, whether or not it is of any value. For a time we thought it was, but it is now questionable, and

as previously stated, scientific investigation shows it to be very little good. The only safe practice seems to be to keep the cows that abort, be careful to disinfect the premises, keep everything clean, and gradually work the disease out of the herd, but to accomplish this it is necessary that no new animals be brought into the herd, or if they are, reasonable assurance should be given that they are not infected with contagious abortion. We would also draw our correspondent's attention to a long article on this subject which appeared in our issue of October 28, on page 1897, and entitled "The Control of Contagious Abortion." This is a lengthy article, and we do not wish to repeat it here, but it sizes up the situation about as well as we have seen it done at any time, and is written by one of the leading veterinarians in the United States. Contagious abortion is a subject which is deserving of the attention of all our investigators in veterinary work.

### Formalin.

Through the columns of your paper, would you please enlighten me upon the following: A short time ago I copied from your paper a recipe for treating oats for smut and potatoes for scab. One calls for formaldehyde and the other for formalin. Please explain the difference in these two articles, as I am told they are the same thing, but must confess I don't believe it.

I. K.

Ans.—We generally favor the term "formalin," rather than formaldehyde, although some druggists claim that they are sold commercially at the present time as one and the same thing. The point to keep in mind is the strength of the material, which should be a 40-per-cent. solution of the aldehyde in water. There has been a great deal of confusion over this subject in the past, and we have generally advised our readers to ask for formalin, which, if it is sold as such, should be up to the strength mentioned. It is always safer to ask for formalin. However, if you get it the proper strength, no matter which name the druggist chooses to call it, it will do the work. If you get the proper strength you get formalin.

## Gossip.

### BRANT DISTRICT HOLSTEIN SALE.

The second annual consignment sale of the Brant District Holstein Breeders will be held at the old Commercial Hotel stables, in the city of Brantford, on Wednesday, January 26, 1916. The first annual sale of the Brant District Holstein Breeders, held one year ago, proved so great a success, both to the consignors and purchasers, that the Club's Executive was encouraged to make the sale an annual one, and on this occasion the offering will consist of 60 head, 50 females and 5 bulls, the quality of which may be gauged from the fact that this district produced the junior and senior first-prize bull calves at Toronto last fall, and champion bull at the late Guelph Show. A number of the cows to be sold have official records, two of them over the 20-lb. mark. One of the heifers is out of a 26-lb. dam, as is also one of the young bulls. Several are daughters of British Admiral Ormsby, a full brother to Birdie Ormsby, two-year-old record 20.42 lbs. He is also a half-brother to Jenny Bonerges Ormsby, which for five years in succession made a record of 30 lbs., the only cow in the world to do it. Several others are in calf to the Toronto first prize, Lakeview Dutchland Hengerveld 2nd, whose breeding and individuality is away up at the top. Others are daughters of King Pontiac Manor, which is out of a 26.67-lb. cow, and sired by the great bull, Prince Hengerveld of the Pontiacs. Several, again, are in calf to Canary Trenton Segis, out of a 25.28-lb. cow, and sired by King Segis Pietertje, with ten R. O. M. daughters. Others are in calf to Fairview Mercedes Korndyke, a son of the great Pontiac Korndyke, and out of a 21.21-lb. dam. Others will be daughters of, and some others in calf to, Hartog Butter King, a half-brother to Jenny Bonerges Ormsby mentioned above, a son of Canary Mercedes Pietertje Hartog 7th, whose dam was a 34.60-lb. cow. For catalogue, write N. P. Sager, St. George, Ont.

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Pietertje Har-  
a 34.60-lb. cow.  
P. Sager, St.

### THE BEST LINIMENT

OR PAIN KILLER FOR THE HUMAN BODY

## Gombault's Caustic Balsam

IT HAS NO EQUAL

**For**—It is penetrat-  
ing, soothing and  
healing, and for all Old  
Sores, Bruises, or  
Wounds, Felons,  
Extensor Canthari, Boils,  
Corns and  
Bunions.  
**Human**—CAUSTIC BALSAM has  
**Body**—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 ex-  
ternal use. Persistent,  
thorough use will cure  
many old or chronic  
sores and it can be  
used in any case that  
requires no outward  
application with  
perfect safety.

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

REMOVES THE SORENESS—STRENGTHENS MUSCLES

Cornhill, Tex.—"One bottle Gombault's Balsam did  
my rheumatism more good than \$100.00 paid in  
doctor's bills."  
OTTO A. BETER.  
Price \$1.00 per bottle. Sold by druggists, or sent  
by express prepaid. Write for booklet to  
The LAWRENCE-WILLIAMS COMPANY, Toronto, Can.

### Dr. Page's English Spavin Cure

Cures the lameness from Bone-Spavins, Side-  
Bones, Ringbones, Curbs, Splints, etc., and ab-



ent 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.

### MAKE YOUR BIKE A MOTORCYCLE

at a small cost by using our Attach-  
able outfit. FITS ANY BICYCLE. Easy-  
ly attached. No special tools required.  
Write today for our FREE BOOK  
giving list and free book  
describing the SHAW Bicycle Motor At-  
tachment. Motorcycles, all makes, new  
and second-hand, \$35 and up.  
SHAW MANUFACTURING CO.  
Dept. 79 Galesburg, Kansas.

### For Sale or Exchange—A beautiful French Coach Stallion, well broken to harness. A chestnut 7 year old, sound and sure. Would like to exchange a small house and lot in Collingwood worth about \$1,000 for a good stallion, any breed.

**Henry M. Douglas**  
Central Hotel, Elmvale, Ontario  
Formerly at Staynor and Meaford

### FOR SALE Champion Hackney Filly

Nellie Performer, No. 1629; bay; foaled 1914.  
Winner at London, Guelph and Toronto, and  
winner of Gold Medal and Championship,  
Ottawa, 1915.  
Brunwood Model, No. 726, Hackney Stallion,  
foaled 1913; chestnut, white markings. Show  
horse anywhere. Prices very reasonable.  
CHAS. OSIER, Cairo, Ont.

### FOR SALE Imported Percheron Stallion

Dark grey, 7 years old. Sound and sure.  
GEO. KEYS, Box 47, Wolfe Island, Ont.

For Sale—Clydesdale Stallion, registered, sired by  
Lord March, out of Pomona Matron, No. 33676.  
Black, 4 white stockings and blaze. An exception-  
ally well built and promising horse. Price reason-  
able. Further particulars from  
Pomona Farm, Cobourg, Ontario

### CONSOLATION.

Visitor—"It's a terrible war, this,  
young man—a terrible war."  
Mike (badly wounded)—"Tis that, sor-  
—a terrible war. But 'tis better than  
no warr at all."—Punch.

### HERITAGE.

Tommy I—"That's a top-hole pipe,  
Jerry. Where d'ye get it?"  
Tommy II—"One of them German  
Oolans tried to take me prisoner an' I  
inherited it from 'im."—Vanity Fair.

### Questions and Answers.

Miscellaneous.

#### Quittor.

I have a horse with what they call  
quittor in his fore foot. Can it be  
cured? Perhaps you could give a cure  
for it. I have not seen your corre-  
spondent, "Whip," mention it. J. G.

Ans.—Pare the sole of the foot down  
until the seat of irritation is reached.  
This will allow pus to escape at the bot-  
tom. A little hydrogen peroxide or  
other good disinfectant should be injected  
into the sinus from above twice daily  
for two or three days. Poultice the foot  
with warm linsed meal until lameness  
disappears.

#### Elevators for Cuttingbox.

I would like to know if there is a  
cutting-box for filling silos, with ele-  
vators for conveying the corn from the  
cutting-box up into the silo. Instead of  
a blower or carriers, as I think such  
elevators as are used in grain elevating  
would give good satisfaction, and would  
require much less power, if there are  
such in use? R. T.

Ans.—There are such cutting-boxes  
manufactured, with elevators, for filling  
silos. Two firms which formerly adver-  
tised these with us are the Exeter Mfg.  
Co., Exeter, Ont., and the Peter Hamil-  
ton Mfg. Co., Peterboro, Ont.

#### No Test for In-Calf Cows.

I think some of my cows will not  
calve in the spring. Can I tell now by  
the taste of the milk which cows will  
calve and which will not? What is the  
difference in the taste of the milk?  
FARMER.

Ans.—We have never heard the conten-  
tion that a cow's pregnancy could be  
proven or disproven by the taste of her  
milk. Such a belief is quite absurd.  
Watch the cows carefully, and, where  
practicable, it is sometimes advisable to  
turn the male animal in the yard with  
them for a very short time each day.  
If they are not pregnant, and are being  
well fed, they should show regular  
periods of oestrus.

#### Permanent Pasture.

I want to seed a field with oats for a  
permanent pasture next spring. We have  
it plowed now, an old alfalfa and blue-  
grass sod, and would like to use it for  
pasture for some years, so please advise  
what kind of grass seed to use.  
W. M.

Ans.—It is not generally considered the  
best practice to seed down land, which  
has been plowed out of sod, the first  
year. However, if you choose to do so,  
you might try, if the land is fairly high,  
orchard grass, 5 lbs.; meadow fescue, 5  
lbs.; tall oat grass, 2 lbs.; meadow fox-  
tail, 2 lbs.; alfalfa, 5 lbs.; white clover,  
3 lbs.; red clover, 1 lb., per acre. This  
will make a heavy and rather expensive  
seeding, but it is one which, if a good  
catch is procured, will stand for many  
years.

#### Frothy Cream.

I have a cow from which I have been  
separating the milk and making butter,  
but just now I have failed to get butter  
no matter how long I may churn. The  
cream becomes frothy, but will not break  
into butter. The cow is five months  
gone with calf.  
A. G. T.

Ans.—There are many causes of diffi-  
culty with churning. Some of these  
were outlined in our issue of Dec. 2,  
page 1884, in an article entitled "The  
Season of Difficult Churning." As a  
remedy for the frothiness, we would sug-  
gest pasteurization. As soon as suffi-  
cient cream has been collected for one  
churning, and while still sweet, set the  
cream vessel into hot water at a tem-  
perature of 180 degrees. Stir the cream  
until it reaches a temperature of 160  
degrees, and allow it to stand at that  
temperature for ten minutes. Then cool  
to between 60 and 70 degrees by setting  
the cream in cold water, then add for  
each gallon of cream about one-half pint  
of good-flavored sour skim milk or but-  
termilk. Stir this well into the cream  
and allow to stand in a warm place for  
twenty hours, when it should be ripe and  
ready for churning. Try churning at a  
temperature of from 64 to 68 degrees F.

## The Great Canadian Annual Sale of

# Scotch Shorthorns

Will be held at the Union Stock Yards, Toronto, Ont., on  
**Wednesday, Feb. 2nd, 1916**

When there will be sold BY AUCTION, without reserve, 65  
Shorthorns of the best type and most fashionable breeding.  
About 30 bulls and 35 young cows and heifers from four of the  
leading herds in Canada. The bulls are selected to make great  
sires, many of them great show bulls. The females will furnish  
show material and breeding cows, to add strength to any herd.  
Many of them have already won prizes at our biggest shows.

Nearly all the very best Scotch families are represented,  
and the sale will afford the best opportunity of the year to buy  
the kind of Shorthorns that are valuable and getting harder to  
find every day.

J. A. Watt, Elora, Ont.; John Miller, Jr., Ashburn, Ont.;  
Kyle Bros., Drumbo, Ont., and Robert Miller, Stouffville, Ont.,  
are the consignors. Write

**Robert Miller, Stouffville, Ont., for Catalogue**

### BULLS ON HAND TO OFFER FROM \$125.00 UP

- 1. Sylvan Power =95871=, white, calved Feb. 9, '14  
Sire  
Lily Fragrance Nonparell Courtier =83324=  
Collynie Fragrance (imp.) Old Lancaster (imp.)  
Scottish Fancy (76601)
  - This bull won first at Western Fair this year.
  - 2. Bramosa Ringleader =101651=, red, Sept. 3, '14  
Broadhooks Ringleader =83494=  
Sweet Fragrance (imp.) Alastair =78217=  
3. Gilt Edge =101652=, red, little white, Dec. 7, '14  
Bandaman's Commander =90929=  
Old Lancaster (imp.)
  - Lily Fragrance  
Collynie Fragrance (imp.) Scottish Fancy
  - 4. Spring Tide =101653=, red, little white, May 2, '15  
Bandaman's Commander =90929=  
P. V. Victoria Ben Lomond (imp.)  
Victoria Lady Greengill Victor (imp.)  
Princess Victoria (imp.) Morning's Pride  
5. Conqueror's Crown, dark roan, June 11, '15  
Bandaman's Commander
  - Victoria 75 Broadhooks Ringleader =83494=  
Victoria of P. V. Lancaster Floral  
Princess Victoria (imp.) Morning's Pride  
and others
- Field Marshall =100215=, first senior  
calf at Toronto and London, 1915.  
A. F. & G. AULD, R. R. No. 2 GUELPH, ONT

### 20 IMPORTED BULLS

These imported bulls, along with 10 home bred bulls may now be seen at our farms. There are some  
choice ones among them. We also imported four cows and a heifer, all of which are forward in  
calf. An invitation is extended to anyone interested in this class of stock to visit us at any time.  
Correspondence will receive our most careful attention.

Burlington Jct. G. T. R. J. A. & H. M. PETTIT,  
Burlington phone or telegraph. Freeman, Ont.

### SHORTHORNS AND CLYDESDALES

10 Bulls serviceable age, all good ones (some herd headers) and are offering females of all ages. Have  
a choice lot of heifers bred to Clansman =87809=; also four choice fillies all from imported stock.  
A. B. & T. W. DOUGLAS Lone-Distance Phone STRATHROY, ONTARIO

### PLEASANT VALLEY FARM SHORTHORNS

Your opportunity to buy a good shorthorn bull as a herd header or to raise better steers is right now.  
We have ten good ones for either purpose by imp. Loyal Scot, also several cows and heifers. Write us  
(before buying) GEO. AMOS & SONS, Moffat Station, Ont., C.P.R. (11 miles east of Guelph.)

### The Salem Shorthorns

One of the largest collections of Scotch  
Shorthorns in America. Can suit you  
in either sex, at prices you can afford  
to pay.  
J. A. WATT, ELORA, ONT.

### Spring Valley Shorthorns

—Herd headed by the two great  
breeding bulls, Newton Ringleader  
(imp.) 73783, and Nonparell  
Ramsden 83422. Can supply a few of either sex.  
KYLE BROS., Drumbo Ont. Phone and telegraph via Arr.

### Oakland—67 Shorthorns (milk strains). Present offering is 10 choice bulls from 8 to 16 months old; also many fine heifers and young cows. nearly all sired by one of Ontario's best bulls (still at head of herd). Good cattle and no big prices. Write your wants to JNO. ELDER & SONS, Hensall, Ont.

### SHORTHORNS OF SHOW-RING QUALITY

We have this year  
the best lot of young  
bulls we ever bred  
they are all of show-  
ring calibre.  
GEO GIER & SON. R.M.D. WALDEMAR, ONT., P.O. AND STATION

### H. SMITH HAY P. O., ONT.

21 SHORTHORN BULLS and as many heifers for sale. Write your wants.  
You know the Harry Smith Standard.

### SHORTHORNS and SHROPSHIRE

With 125 head to select from, we can supply young cows in calf, heifers from calves up and  
young bulls from 9 to 18 mos. of age, richly bred and well fleshed.  
In Shropshires we have a large number of ram and ewe lambs by a Toronto J (prize ram, a  
high-class lot.

**WINTER**



While time and opportunity favors—Make Horse Sound. Don't wait. Go right at it with Save-the-Horse.

**The King of Remedies**  
(Made in Canada)

W. H. Johnson, Graydahl, Sask., Canada—September 27th, 1915, writes: "Troy Chemical Co., Toronto, Ont.—I wrote two years ago about a mare. You advised me how to use Save-The-Horse. I did, and cured the sweeney and also a thoroughpin."

Every bottle sold with a signed Contract to return money if Remedy fails on Ringbone—Thoroughpin—Spavin—or any Shoulder, Knee, Ankle, Hoof or Tendon Disease.

Our Save-the-Horse Book is a Mind Settler; Tells How to Test for Bone Spavin—What To Do for a Lame Horse. It is our 20 Years Discoveries, Covers 58 forms of Lameness with Illustrations.

But write, Book, Sample Contract and Advice—All Free (to Horse Owners and Managers).

Troy Chemical Co., 5 Van Horne St., Toronto, Ont.  
Druggists Everywhere sell Save-the-Horse with Contract, or we send by Parcel Post or Express paid. 51 2

**ROUP**



You can prevent and cure Roup, and avoid trouble and loss by using Fratts Roup Remedy (Tablets or Powder) Sold under our Money Back Guarantee. Dealers everywhere. 25c.—50c.—

**Beaver Hill Aberdeen-Angus**—Bulls fit for service. Females all ages. Cows with calves at foot. Prices reasonable.  
ALEX. MCKINNEY, R.R. No. 1, Erin, Ontario  
Cheltenham, C. T. R. Erin, C. P. R.

**The Glengore Angus**  
Some choice bulls, from 7 to 15 months, for sale. For particulars write:  
GEO. DAVIS & SONS, R.R. No. 1, Erin, Ont.

**Tweedhill**—Aberdeen-Angus. Choice young bulls of serviceable age; also females. If you want anything in this line write:  
James Sharp, R. R. 1, Terra Cotta, Ontario  
Cheltenham, C.P.R. & G.T.R.

**Shorthorns** high class young bulls from 7 to 18 months, 15 young cows and heifers, straight, smooth big kinds of choicest breeding including several families that have produced dairy test winners. I never was in a better position to supply you with a good young bull at a more reasonable price. Write me or come and see them.

Stewart M. Graham  
Long distance Phone, Lindsay, Ont.

**SHORTHORNS**  
Three bulls, 11 months, a number of younger cows with their calves, cows in calf and yearling heifers for sale. Good individuals. Good Pedigrees. Inspection solicited.  
J. T. GIBSON, DENFIELD, ONT.

**FLETCHER'S SHORTHORNS**  
Our herd of pure Scotch shorthorns are mostly direct from (imp.) stock. Three very choice bulls for sale, also females. GEO. D. FLETCHER, R. R. 1, Erin, Ont. L. D. Phone, Erin Sta. C.P.R.

**SHORTHORNS**, bulls, females, reds, roans, size, quality, breeding milkers over 40 years, cows milking 50 lbs. a day. The English, Rothchild's bull Mortimer in herd, the kind you want. Prices easy. Thomas Graham, R.R. 3, Fort Perry, Ont.

**Shorthorns and Swine**—Have some choice young bulls for sale; also cows and heifers of show material, some with calves at foot. Also choice Yorkshire sows.  
ANDREW GROFF, R.R. No. 1, ELORA, ONT.

**Shorthorns "Pail Fillers"**—Our Shorthorns are bred and developed for big milk production. If you want a Stock bull bred that way, we have several; also Clyde stallion rising 3, won 2nd at Guelph the other day in a big class.  
P. CHRISTIE & SON, Manchester, Ont.

**SHORTHORN BULLS AND HEIFERS**—Have eight bulls and ten heifers, from eight to twenty months, for sale. The best of breeding and prices moderate. Write me your wants before you buy. Oshawa Bell phone. C. E. BAIN, Woodbine Stock Farm, Taunton, Ont.

Choice stock to offer in SHORTHORNS, POLAND CHINA AND CHESTER WHITES. First prize Poland China herd at Toronto and London, 1915. Pairs not akin—bred from winners. Prices moderate. Geo. G. Gould, No. 4, Essex, Ont.

**BURNFOOT STOCK FARM**, Caledonia, Ont. Breeders of Heavy Milking dual purpose Shorthorns. Present Offering a choice roan Bull, born April 9th, 1915, a grandson of Daivmail, 8000, the leading cow in the R.O.P. for Shorthorns in Canada. S. A. MOORE, Prop., Caledonia, Ont.

Please mention "The Farmer's Advocate."

**Gossip.**

**C. C. KETTLE'S HOLSTEINS**

Elsewhere in this paper appears the advertisement of C. C. Kettle, Wilsonville, Ont., who is offering Holstein cattle for sale, and regarding which he writes that all of the animals in the herd but four were bred by himself. They are all young, only one being eight years old. Countess Wayne Posch has a record of 22.11 lbs. Nearly all the cows in milk are in Record of Merit. There are seven cows from four to eight years old, two three-year-olds, four two-year-olds, six yearlings, three eleven months old, and two heifer calves about three months old. There are also three bulls, nearly a year old, all from Record of Merit dams, and three bull calves. Included in the herd are five daughters of the stock bull, Grace Fayne 2nd's Sir Mercena, a half-brother to the recent Guelph champion cow. His dam's record was 27.47 in seven days. His full sister holds the Canadian milk record for thirty days as a junior two-year-old. He is a son of Grace Fayne 2nd's Sir Colantha. Five of the daughters of Grace Fayne 2nd's Sir Colantha are bred to Fairview Mercedes Korndyke, one of the best sons of Pontiac Korndyke, a half-brother to the world's record cow of 44.18 lbs. of butter in one week. The record of his dam and twelve sisters averaged 32.43 lbs. in seven days. In the younger females are first-prize animals at London, while a number of the older ones have been prizewinners at both Toronto and London.

**HALEY BROS.' HOLSTEINS.**

The renowned herd of record-making Holsteins owned by Haley Bros., of Springford, Ont., has again added fresh lustre to their already long list of honors, by once more winning the dairy test at Guelph and championship over all breeds. This time, the cow that did the trick was Colantha Butter Girl, and her test was 5.3 per cent. She also holds the Canadian senior two-year-old butter-fat record for thirty days of 104.05 lbs. Her seven-day record at first calving is 25.40 lbs. This is the fourth time the Guelph dairy-test championship has come to this herd. This year's champion is a daughter of the former stock bull, Grace Fayne 2nd's Sir Colantha, the records of whose dam and sire's dam average, for seven days, 30.76 lbs., and for thirty days 122.93 lbs., and he also has two 30-lb. sisters. Another of his daughters, a full sister of this year's champion, one year younger, holds the Canadian junior two-year-old milk record for thirty days, with 2,007 lbs. As a sire of great production, it is only necessary to say that six of his daughters in the herd have seven-day butter records for two-year-olds averaging over 20 lbs. The present stock bull is Butter Baron, a son of Queen Butter Baroness, 33.16 lbs., Calamity Starlight Butter Girl, a full sister of hers, won the Guelph test championship with a butter-fat test of 5.5, and this year's champion is a daughter of Queen Butter Baroness. Again, the dam of this bull's sire was Lady Aggie, which won the Guelph test championship for two years. Her test was 4.3 per cent., and her seven-day record 27.4 lbs. From the above, it will be seen that Butter Baron is choke full of test championship blood and high records. Practically all the herd of milking age are in the Records, and as a show herd their record is too well known to need comment, only to say that Haley Bros. breed all they show. Of the several high-class and richly-bred young bulls for sale, one is a son of this year's champion.

**OUT OF DANGER.**

Genevieve—"I want to give Jack some books. He's ill, you know, and I can't decide just what kind to get."  
Gertrude—"Why not give him something religious?"  
Genevieve—"Oh, my, no! He's convalescent now."—Judge.

Ernest—"One war is trial. I know of a colonel who commanded a regiment of 1,000 privates, and lost half of them in one battle." Mexican—"That's nothing compared with our war. I know of one private who was commanded by 1,000 generals, and lost 750 of them in one battle."—Puck.

# Before You Build

A Concrete Foundation for a Horse Barn

Concrete is becoming recognized as the only material for a barn. Some farmers build the material up to the top of the barn, with concrete walls 12 feet high, and with ground dimensions of 42 feet x 96 feet.

Excavate a foundation trench, to a depth below frost line (2 to 4 feet below the surface). In this trench "pour" concrete, to form a footing of 6 inches, 20 inches thick. On the base, erect the wall proper, some being 12 inches thick.

While building frames, place in position the necessary window frames, so that the concrete will not spill them, and hold them in place. As a further means of securing the frames, some 1 centimeter start-making paper is frames, allowing the paper to project about 4 inches from the concrete.

Should the concrete extend above the window, it is well to place reinforcing rods midway between frames and top of wall, as described on pages 112 and 114. Likewise "set" the foundation on the corners by placing bent iron rods in the concrete, at intervals of 2 or 3 feet.

Having started the concrete to the required height, the next step is to attach the window sash. While the concrete is still wet, place iron bolts at intervals (say every 3 feet), in the concrete, allowing the nut and washers to project above the wall, to hold through the window sill when the latter is added, being being held in the sill or required space, to fit over the bolts.

Proportions for concrete when mixed in 1915, A.

Approximate cost of concrete work, at current prices for materials, and including labor, etc., per cubic foot.

WHAT THE FARMER CAN DO WITH CONCRETE

Concrete is the Best Material for a Horse Barn Foundation

In the first place, concrete foundation walls are cheaper—in first cost—than any other material except wood; and of course farm houses are too valuable for the owner to depend on depending on wood for their protection. As every farmer knows, animals attract lightning—and lightning causes fire. If your barn is entirely of wood, fire will quickly sweep it away, without giving much chance to remove the horses.

Concrete is permanent, sanitary and rat-proof. Concrete wall foundations make a building cool in summer and warm in winter.

Nowadays, the farmer shows his good sense, by being just as thoughtful of the welfare of his animals as he is of his own comfort.

To provide comfortable, cleanly quarters for horses or cattle, one must use concrete.

**Get This Free Book**

It contains 150 pages like those shown here—116 pages give practical instructions for improving your farm, explaining the most economical way to construct all kinds of buildings, walks, foundations, feeding-floors, walls, troughs, tanks, fence-posts, and 45 other things needed on every farm.

There are 14 pages of information vital to every farmer who intends to build a silo. 22 pages show what concrete is; how to mix it; the tools needed; what kind of sand, stone and cement are best; how to make forms; how to place concrete; and reinforce it, etc., etc. In fact it tells everything necessary to know about the world's best and most economical building material—Concrete.

This book is the recognized authority on farm improvements and has benefited 75,000 farmers.

If you haven't a copy of this valuable book, one will be sent to you free. Simply fill in coupon below and mail today.

**CANADA CEMENT COMPANY LIMITED,**  
Herald Building, MONTREAL.

**CUT OUT AND MAIL**

CANADA CEMENT COMPANY LIMITED, Herald Building, MONTREAL

752 Gentlemen:—Please send me a free copy of "What the Farmer can do with Concrete". 12

Name.....

Street and No.....

City..... Prov.....

**Escana Farm Shorthorns**

For Sale—15 bulls 8 to 14 months old, several of them prize-winners at Toronto and London, sired by the noted imported bulls Right Sort and Raphael. Also for sale—20 heifers and cows of choice pedigree and prices. Mail orders a specialty, satisfaction guaranteed.

**MITCHELL BROS.** Burlington P.O., Ontario  
Jos. McCrudden, Manager. Farm 1/4 mile from Burlington Jct.

**IRVINEDALE SHORTHORNS**  
Bulls and heifers of the very best quality. Sired by Gainford Selec (One of the great sons of the celebrated Gainford Marquis).  
**JOHN WATT & SON, R. R. No. 3, Elora, Ont.**

**Maple Grange Shorthorns** Pure Scotch and Scotch-topped. A nice selection in young bulls, and a limited number of thick, mossy heifers.  
**R. J. DOYLE, Owen Sound, Ontario**

**Meadow Lawn Shorthorns** We are offering a select lot of Scotch bulls and heifers' Marth, Roan Lady families, from 10 to 18 months old, from the Claret Wimples breeding and quality for show or foundation purposes. State your wants and we will send copy of pedigree and prices. Mail orders a specialty, satisfaction guaranteed.  
**F. W. EWING**

R. R. No. 1, Elora, Ontario

# HUNT'S



## FLOUR

Established 1854

The flour of three generations—the flour that has made the same delicious and tempting bread and pastry for 60 years. You should use it—it is "always the same."

1674

### Clark Heaters for WINTER DRIVING



In Auto, Sleigh or Wagon a Clark Heater will keep you warm in coldest weather—no flame, smoke or smell—fits in at the feet in any vehicle. 20 styles, from \$1.50 and up—asbestos lined—carpet covered. Ask your dealer for a Clark Heater, or write us for FREE catalogue. CHICAGO FLEXIBLE SHAFT COMPANY A 610 N. La Salle St. Chicago, Ill.

**REFINED** MADE IN CANADA

ALL THE NEATNESS AND STYLE OF THE FINEST LINEN MAY BE YOURS IN

**CHALLENGE COLLARS**

— THE MOST DESIRABLE WATERPROOF COLLARS ON THE MARKET —

AT YOUR DEALER'S, OR DIRECT

**25c**

THE ARLINGTON CO. OF CANADA, 54-56 FRANKLIN AVE. TORONTO

### CHURCH BELLS

CHIMES AND PEALS MEMORIAL BELLS A SPECIALTY FULLY WARRANTED McSHANE BELL FOUNDRY CO., BALTIMORE, Md., U. S. A. Chicago Office: Room 84, 154 W. Randolph St. Established 1864



## HOLSTEINS

One yearling bull by King Segis Pontiac Duplicate, whose dam is a g. daughter of King Segis; 18 bulls under a year old, one from a 29-lb. cow and sired by a son of Pontiac Korndyke. Females any age.

R. M. HOLTBY

R. R. 4, PORT PERRY, ONT.

### Holsteins, Yorkshires, and Cotswolds

R. HONEY & SONS, Hartford, Ont. Offers a bull born May 12, weighing over 500 lbs. whose Jr. 2-year-old dam, her only mature sister yet tested and sires 4-year-old dam average milk 1 yr. 15,172 lbs. Also females all ages and swine of both sexes.

### Walnut Grove Holsteins

Herd headed by May Echo Champion, full brother of May Echo Sylvia, who made 36 lbs. of butter in seven days. Females for sale from one year old upwards. Prices right for quick sale.

C. R. JAMES, Langstaff P.O. Ontario Phone Thornhill.

**BULLS, BULLS.** We have several young Holstein Bulls for sale just ready for service. Sired by the Great Bull, King; Segis, Pontiac, Duplicate, and our Junior Herd Bulls, Pontiac, Hengerveld, Pietertje, and from High Testing Dams. Prices low for the quality. Write and get them. Manchester, G.T.R., and Myrtle, C.P.R. stations; Bell Phone. R. W. Walker & Sons, R.R.-4, Port Perry, Ont.

### Pedigreed Holstein Bull

for sale, 15 months old. Apply HEROLD'S FARMS Beamsville, Ont.

### Questions and Answers. Veterinary.

#### Abscess.

An old wound on the point of the hip of my horse, broke out in August. It has broken and healed alternately several times since, but is always getting worse.

J. R.

Ans.—The bone was either splintered or severely bruised when the wound was inflicted, and the splinter of the bone, or decaying bone, acts as a foreign body and causes the trouble. The wound must be opened up freely and the splinter removed or the diseased bone scraped, and the wound then dressed three times daily until healed, with a five-per-cent. solution of carbolic acid or other disinfectant. V.

#### Enlarged Leg.

Four-year-old colt has a large lump on the outside of his front leg. He has had it for a year. It sometimes swells greatly and he becomes very lame. I have blistered it without results.

S. BROS.

Ans.—Chronic swellings of this nature frequently fail to yield to treatment. Get a liniment made of four drams each of iodine and iodide of potassium, and four ounces each of alcohol and glycerine. Rub a little of this well in once daily. Have patience and continue the treatment, as quick results are not likely to be noticed. V.

#### Weaver.

I have a yearling colt that is a weaver. What will cure him?

L. J.

Ans.—This is a habit for which no cure has been discovered after it is well established. Some claim that it is a form of chorea, a purely nervous affection. In so young an animal it may be checked by keeping him in a box stall with the door shut, so that he cannot get his head over the lower half. If he still weaves, try tying him to each side of a single stall with the straps so tight that he cannot weave. Of course, he would have to be liberated during meal-times and at night in order to allow him to eat and lie down. V.

#### Gravel in Foot.

Three-year-old colt has what is called gravel in his foot. Can anything be done, or will he lose his hoof?

B. M.

Ans.—Pare the sole well down to the sensitive part, and pare away all of the sole that is detached from the sensitive sole, being sure to remove all foreign matter. Then bathe well with a five-per-cent. solution of carbolic acid and apply a powder made of equal parts iodiform, boric acid, and tannic acid. Protect the sole with a piece of ticking or canvas to exclude dirt, etc., and dress it three times daily until the new sole grows. V.

### Gossip.

#### THE BINNIE SALE.

The dispersion sale advertised in this issue by James Binnie for January 19, 1916, of Aberdeen-Angus cattle and Oxford Down sheep, should command the attention of all interested in these excellent breeds of live stock. The offering consists of four bulls, seven to eighteen months; and of the fifteen females, nine are cows and heifers in calf, the balance being heifers and calves nine months old and upwards, the whole giving an admirable choice to buyers. The sheep consist of some twenty registered ewes of the Arkell-Barbour strain.

The terms of sale are liberal, and anyone wishing to invest in these popular breeds should send for a catalogue, which will give full information, to James Binnie, Erin, Ont.

#### ANXIOUS FOR NEWS.

He had waited thirty minutes for a slow waiter to bring his dinner.

"Now," he said to the waiter, "can you bring me some cheese and coffee?"

"Yes, sir; in a minute, sir."

"And," continued the diner, "while you are away you might send me a postal-card every now and then."—Woman's Home Companion.



## She married for a home

—"You see, her first husband left her without a penny—and with three little children to bring up. You can hardly blame her—can you?"

Tragic? Yes! "Of course," you'll say, "that won't be said of my wife if I should die suddenly."

But stop a moment! How would your wife and kiddies fare if you should die to-day? What provision have you made for such a contingency?

If you haven't provided as much protection as you know they should have, you need an Imperial Home Protection Policy. Let us send you our pamphlet and full particulars. You will find them interesting.

### THE IMPERIAL LIFE Assurance Company of Canada

HEAD OFFICE - TORONTO

Branches and Agents in all important centres

*The Imperial maintains for policyholders' protection a larger Government Deposit than does any other Canadian life company.*

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## HOLSTEIN CATTLE

Canary Mercedes Pietertje Hartog 7th heads our herd. His dam gave 116 lbs. milk in one day and 6,197 in sixty days and made 34.00 lbs. butter in 7 days. There are more cows in our herd giving over one hundred lbs. of milk a day than any other in Ontario. We have both bulls and heifers for sale.

D. C. FLATT & SON, R. R. No. 2, HAMILTON, ONTARIO Long-distance Telephone

**Evergreen Stock Farm—REGISTERED HOLSTEINS** Present offering; Several bull and heifer calves, also a few yearling heifers bred and ready to breed. Write for prices and descriptions. Bell 'phone. A. E. Hulet, Norwich Ont.

**Lakeview Stock Farm** Breeds, Ont. BREEDERS OF HIGH TESTING HOLSTEIN-FRIESIAN CATTLE OFFER FOR SALE A FOUNDATION HERD consisting of 1 male and 3 females all bred in the purple and backed by officially tested dams. Terms to suit purchasers. T. A. DAWSON, Manager.

**Clover-Bar, Holsteins.** My special offering just now are some choice young Bulls Ormsby, whose dam has 3-30 lb. sister, and a 24 lb. 4-year old and a 21.06 lb. 3-year old daughters and his sire was the great Sir Admiral Ormsby. Also a few females. PETER SMITH, R. R. No. 2, Stratford, Ont. Stratford or Sebringville, Stations.

**HOLSTEIN CATTLE** Pure-bred cows, heifers and heifer calves. 64 HEAD MUST BE SOLD, having disposed of my two stock farms. Come and make your selection. Price and terms to suit. Cattle will be in good working shape, not forced or fitted for sale purposes. HAMILTON FARMS, SOUTHWIND P.O., ONT. Telegraph and Phone Niagara Falls. Farm 10 minutes trolley from Niagara Falls.

**QUEEN CITY HOLSTEINS** Present Offering is 10 young bulls, from 6 to 14 months of age, the records of whose dams, sires dam and her full sister, range from 23 to 32 lbs. They are sons of King Lyons Hengerveld Segis. R. F. HICKS, Newtonbrook, Ont. On T. & Y. Railroad Line.

**HOSPITAL FOR INSANE, Hamilton, Ont.** For Sale—Nine Holstein bulls, varying in age from 3 to 19 months, from Record of Performance or Record of Merit dams and the grand bulls Sir Korndyke Wayne Dekol, grandson of Pontiac Korndyke, or Lakeview Duchland Le Strange, a grandson of Count Hengerveld Fayne Dekol. Prices right. APPLY TO SUPERINTENDENT.

**PIONEER FARM HOLSTEINS** Bulls nearly ready for service from daughters of Prince Aggie Mechtthide whose first junior two year old daughters averaged 14,600 lbs. milk, 656 lbs. butter in R.O.P., and five juniors now in R.O.P. test have averaged 10,893 lbs., have nearly four months to complete records and still giving from 40 to 50 lbs. each daily. For prices write WALBURN RIVERS, R.R. NO. 5, Ingersoll, Ont.

**Ourvilla Holstein Herd** If you are starting a herd, or wanting to improve one, look at these young sires for sale, from Homestead Susie Colantha, at three years 26.50; Ourvilla Susie Abbekerk, at three years 26.02; Ourvilla Cajamity Ormsby, 22.14 at three years; Homestead Hellon Abbekerk, at three years 23.51, and a few others. Also come and make a selection in choice females from our herd of 100 head. LAIDLAW BROS., Aylmer, Ont.

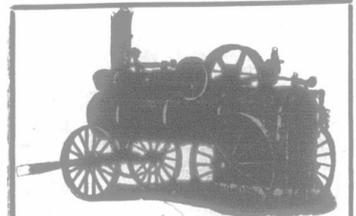
**HOLSTEINS** I am offering my entire herd for sale in block, consisting of 24 females and six bulls at a bargain if sold before the first of February 1916. C. C. KETTLE Wilsonville, Ont. Long-Distance telephone from Waterford

**Constitution That Counts** in any animal; our herd sires are noted for stamping that in their get and they are breaking the records. Choice young stock for sale. Write for prices. M. L. Haley, M. H. Haley, Springford



Mixing concrete with this 1915 Model Hand Mixer saves you time, labor and money. You get a better mix with less cement. Write for catalogues.

**WETTLAUER BROS.**  
Improved Concrete Machinery  
78A Spadina Avenue TORONTO, ONT.



**Rebuilt Portable and Traction Engines and Threshers**  
All sizes for sale cheap. Complete threshing outfit, traction engine with cab, separator, wind stacker, in good operative conditions. **\$875**  
**The Robt. Bell Engine & Thresher Company, Limited**  
SEAFORTH, ONTARIO

**\$15** <sup>95 UPWARD</sup> **ON TRIAL**  
Fully Guaranteed  
**American Cream Separator**  
A SOLID PROPOSITION to send a new, well made, easy running, perfect skimming separator for \$15.95. Skims warm or cold milk; making heavy or light cream.  
**ABSOLUTELY ON APPROVAL**  
Bowl a sanitary marvel, easily cleaned. Different from picture which illustrates our large capacity machines. Shipments made promptly from **Winnipeg, Man., Toronto, Ont., and St. John, N.B.** Whether dairy is large or small, write for handsome free catalog. Address: **AMERICAN SEPARATOR CO., Box 3400, Bainbridge, N. Y.**

**PATENTS** TRADE MARKS and DESIGNS PROCURED IN ALL COUNTRIES. Special attention given to Patent Litigation. Pamphlet sent free on application.  
**Ridout & Maybee**  
CROWN LIFE BUILDING, TORONTO, ONT

**Use Agricultural Lime**  
Manufactured by **Beachville White Lime Co. Limited**  
Beachville, Ontario  
Our lime stone is highest grade in Canada.

Ask for **GOOD LUCK** Brand **Calf Meal**  
MAKES HEALTHY, VIGOROUS CALVES  
Write for prices and sample  
**CRAMPSEY & KELLY**  
Dovercourt Rd., Toronto

**Alderley Edge** Ayrshire cattle and Yorkshire swine. Both sexes.  
**J. R. KENNEDY,** Knowlton, Que.

**KANT-KLOG SPRAYER**  
9 sizes of sprays from one nozzle. Starts or stops instantly—saves solution and work. Send for catalog. Agents wanted.  
**Rochester Spray Pump Co., 196 Broadway, Rochester, N. Y.**

**Gossip.**  
Nellie Performer 1029, a Hackney filly, is being offered for sale by Chas. Osier, Cairo, Ont. The advertisement appears elsewhere in this issue. Communicate with Mr. Osier regarding this Hackney filly.

**THE SALE OF CANADIAN SHORT-HORNS.**  
On another page will be found advertisement of the annual Shorthorn sale, to be held at Toronto. We are assured that the offering will be equal to that of former years, and that the name of each contributor will be upheld by the quality of the animals that each will sell. The men selling represent the second, third and fourth generation of foremost breeders in Canada, and few of the leading breeders in America can say that the blood furnished by them has not figured in the improvement of their herds. This sale has been a great event in cattle-breeding circles each year since it was started, and it will be worth while asking for catalogue and making your plans to attend this year. Bargains have been picked up at former sales, for in a big sale of good things some of them always sell below value.

**LAKE-VIEW YORKSHIRES.**  
Nothing in the line of introductory remarks is necessary in a short review of the well-known and high-class Lake-View Yorkshire herd of John Duck, of Port Credit, Ont. Patrons of the big shows for many years interested in swine breeding, and particularly Yorkshires, are familiar with the high quality of the entries from this herd, which have invariably been among the tops, and more especially in the bacon classes, which is a recommendation stronger than words for their type and quality. The principal stock boar in service is the London champion, Longfellow, and he is well named, but with his great length is an even, smooth, perfectly-balanced form seldom seen. Among the ten brood sows, which, by the way, are principally Cinderellas, are Toronto, London and Guelph first-prize winners, and at the late show in Guelph the reserve championship on sows went to this herd, as well as many other awards, including second, and two other places lower down on bacon hogs. At London last fall, out of 14 entries, 10 firsts came to this herd. For sale are young sows bred and boars ready for service.

**TOWNLINE FARM TAMWORTHS AND LEICESTERS.**  
It is with a considerable degree of confidence that we introduce to the readers of "The Farmer's Advocate" T. Readman & Son, of Streetsville, Ont., owners of Townline Stock Farm, and breeders of Tamworth swine, Leicester sheep, White Pekin ducks, and Black Langshan chickens. Mr. Readman has been in the pure-bred stock-breeding business for many years, and is one of the live breeders of this country. His exhibits at the leading shows, particularly Toronto, Ottawa and Guelph, have always held honorable places, especially in the younger classes, and this year at Guelph, besides his other winnings, was awarded first prize and reserve championship for boar under six months. His stock boar in service is Strathmoor Paddy 8791, bred at Macdonald College. He is all that could be desired in type, and is proving a sire of most excellent merit. In breeding are twenty sows, so that Mr. Readman is in a position to fill orders for both sexes and any desired age on short notice. The Leicesters are up to the same high standard of breed type and quality. Last year's lambs, of which there are for sale both ewes and rams, were sired by Imp. Netherly. They are a big, growthy lot, of excellent quality. In Pekin ducks for sale are both ducks and drakes of last year's breeding; also in Langshan are cockerels and pullets. The pen of hens that produced the eggs from which these birds were hatched, was headed by the cock that won first at the recent Winter Fair at Guelph.

**THE PATRIOT.**  
Gentleman (who has assisted to help in with luggage): "Couldn't you make it another twopenny, lily? I want to get a little bit together for the War Loan."

**I'll Rid Your Hogs of WORMS** GILBERT HESS, M. D., D. V. S.

Your hogs are almost certain to be troubled with worms right now; in fact, at all seasons of the year. Unless you treat for worms and get rid of them you can't fatten your swine at a profit. How about the spring pigs? The chances are that your brood sows are worm-infested. This means stunted litters—pigs from a wormy sow can't get the right start. I guarantee that if you feed my Stock Tonic regularly as directed, you will rid your hogs of worms, they will keep toned up and vigorous, resist disease better and fatten quickly and cheaply.

**Dr. Hess Stock Tonic**

25-lb. pail, \$2.25. 100-lb. sack, \$7.00 (duty paid)  
**A Fine Conditioner—A Sure Worm Expeller**

Your horses, cattle and sheep are apt to be out of fix right now, because animals off pasture and on dry feed are deprived of the laxatives so plentifully furnished in grass. Feed my Stock Tonic to your animals now. It contains tonics for enriching the blood, tonics to help their digestion and help them assimilate their feed better, as well as laxatives for keeping the bowels regular and clean. Remember, when you buy my Stock Tonic from your local dealer you save peddler's horse, team and traveling expenses, and the small dose quantity will prove that my Stock Tonic is the most economical, too. Now read this guarantee:

So sure am I that Dr. Hess Stock Tonic will positively rid your hogs of worms and keep your stock healthy and vigorous, that I have authorized my nearest dealer to supply you with enough for your stock, and if it does not do what I claim, return the empty packages and get your money back.

I guarantee that this fine poultry tonic will help your hens lay. It will keep them toned up, arouse the dormant egg organs and keep your poultry healthy. Easy to feed and very economical—1 cent's worth a day is enough for thirty fowl. Never sold by peddlers. 1 1/2 lbs. 85c; 5 lbs. 85c; 12 lbs. \$1.75; 25-lb. pail, \$3.50 (duty paid).

Kills lice on poultry and all farm stock. Dust the hens and chicks with it, sprinkle it on the roosts, in the cracks or, if kept in the dust bath, the hens will distribute it. Also destroys bugs on cucumber, squash and melon vines, cabbage worms, slugs on rose bushes, etc. Comes in handy sifting-top cans. 1 lb. 85c; 3 lbs. 85c (duty paid). I guarantee it.

Send for my book that tells all about Dr. Hess Stock Tonic—it's free.

**DR. HESS & CLARK, Ashland, Ohio**



Why pay the peddler twice my price?

If you have a sick or injured animal, write me, giving symptoms and enclosure 2c stamp and I will send you a letter of advice and prescription free of charge.

**FREE-FARM ACCOUNT BOOK**

Know How Much You Make This Year  
No one shall pay a cent for Bickmore's Farm Account Book. Mr. Farmer, simply send us your name and address. Business farming puts money in the bank. This book is arranged to keep all accounts in simple form—more simple, and certainly more practical than trying to remember them; shows what to charge against crop production; has a laborer's time record; and section for personal accounts. 64 pages; for ink or pencil. Not a cheap affair. Its quality is in keeping with

**BICKMORE'S GALL CURE**  
A soothing, healing salve, the old-time reliable horse remedy. Horses are now too valuable and too high priced to take chances of losing their services. Get full value out of yours. Bickmore's Gall Cure heals and cures: Harness and Saddle Galls, Rope Burn, Cuts, Scratches, Grease Heel, etc. Keeps them sound and in condition for work. You don't have to lay the horse off. Bickmore's Gall Cure cures while the horse works. Great thing for sore teats in cows. Look out for substitutes and cheap imitations. Be sure to ask for Bickmore's Gall Cure at the store. The work-horse trade mark on every box. Farm Account Book is ready. Send today.  
**WINGATE CHEMICAL CO., Canadian Distr's, 548 Notre Dame St. W., Montreal, Can.**

**Humeshaugh Ayrshires** We have several February, March and April, 1915, bull calves, bred from some of our best imported and home-bred females, which we offer at **Alex. Hume & Co., Campbellford, Ont., R.No.3.** good value for quick sale.

**HILLHOUSE AYRSHIRES** Show-ring winners. Dairy test winners. 75 head to select from. Bull calves and females of all ages for sale. Before buying, come and inspect our herd and get prices.  
**F. H. Harris, Mt. Elgin, Ontario**

**Stonehouse Ayrshires** Are a combination of show-yard and utility type seldom seen in any one herd. A few choice young males and females for sale. Write or phone your wants to Stonehouse before purchasing elsewhere.  
**Hector Gordon, Howick, Que.**

**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.**

**Gladden Hill Ayrshires** Present Offering: Our stock bull, Tam O'Menie = 35101 = dam, Dewdrop of Menie = 25875 =, R. O. P. test 9.733 lbs. milk, 401 lbs. butter-fat as a 3-year-old. This bull stood 3rd at Toronto this year. Also young bulls from record cows, and females of all ages.  
**Laurie Bros., R. R. No. 1, Agincourt, Ont.**

...s of  
GILBERT HESS,  
M. D., D. V. S.

...rms right now; in fact, at  
and get rid of them you

...ows are worm-infested. This  
part.

...ou will rid your hogs of worms,  
en quickly and cheaply.

...k Tonic  
Why pay  
the  
peddler  
twice my  
price?



...If you have a sick  
or injured animal, write me,  
giving symptoms  
and enclose 2c  
stamp and I will  
send you a letter  
of advice and  
prescription free  
of charge.

...UNT BOOK  
This Year

...CURE

...how too valuable and too high priced  
Bickmore's Gall Cure heals and cures  
Greas Hail, etc. Keeps them sound  
the horse off. Bickmore's Gall Cure  
is in cans. Look out for substitutes  
Bickmore's Gall Cure at the store. The work-  
book is ready. Send today.

...Notre Dame St. W., Montreal, Can.

...ve several February, March and  
1915, bull calves, bred from some  
best imported and home-bred  
Wellford, Ont., R.No.3.

...test winners. 75 head to select  
ales of all ages for sale. Before  
herd and get prices.

...Mt. Elgin, Oxford Co.  
Ontario

...combination of show-yard and utility  
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ing males and females for sale.  
phone you wants to Stonehouse  
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...I have been breeding the great  
Ayrshires, dozens of them have  
on twice a day milking. Young  
kind of production appeals to you.

...Williamstown Ont.

...ock bull, Tam O' Menie = 35101 =  
e = 25875 =, R. O. P. test 9,788  
r-fat as a 3-year-old. This bull  
s, and females of all ages.

...R. R. No. 1, Agincourt, Ont.

**Market the Milk**  
Raise your calves and get the bigger money to which you are entitled. But do not feed the calf whole milk, with butter fat worth \$600 a ton.

**RAISE YOUR CALVES WITH BLATCHFORD'S CALF MEAL**

**Blatchford's Calf Meal**  
The Recognized Milk Equal  
You get 100 gallons of rich milk feed from 100 pounds of Blatchford's Calf Meal, and it costs you only one-fourth as much. It will make your calf grow fast and well. Blatchford's Calf Meal is composed of the elements the young calf needs in the most trying period of its life: is thoroughly steam cooked—prevents bowel troubles and other ills due to improper milk substitutes. Blatchford's Pig Meal insures quick, sturdy growth of young pigs at weaning time, without setback or falling off.

Write us for our Free Book on "How to Raise Calves Cheaply and Successfully Without Milk."  
Steele, Briggs Seed Co., Toronto, Ont.  
L. C. Beard, Hagerstown, Md., writes: "I can say Blatchford's Calf Meal will give anyone 100 Pct. that his calves to raise."

**Windsor Circular Saws**  
High grade. Low prices. All sizes. Fully warranted.

**Windsor Stock Feed Cookers**  
A safe, simple and cheap means of cooking feed. Many superior points of merit. Price, \$9 up.

**Windsor Combination Outfit**  
for repairing boots, shoes, harness and tinware. Practical tools, no toys. A useful and profitable outfit for only \$2.75.

**Windsor Tank Heaters**  
filled with either wood or coal morning and evening will keep a 40-bbl. tank from freezing in zero weather. Price \$4.75.

**Windsor Steel Wheels**  
for farm wagons. Highest quality. Low prices. A full list of self-educational books.

Write for our Catalogue  
**Windsor Supply Co.**  
Windsor, Ont.

**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 Sidebone, new and old cases alike. Write for detailed information and a free copy of

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

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

**MAIL CONTRACT**

SEALED TENDERS, addressed to the Postmaster-General, will be received at Ottawa until noon on Friday, the 21st day of January, 1916, for the conveyance of His Majesty's Mails on a proposed contract for four years, six times per week, over Dorchester Station, No. 1 Rural Route, from the 1st of April, 1916, 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, Ingersoll and London, and at the office of the Post Office Inspector, London.

G. C. ANDERSON, Superintendent,  
Post Office Department, Canada, Mail Service Branch, Ottawa, 10th December, 1915.

**ALLOWAY LODGE STOCK FARM**  
**Angus, Southdowns, Collies**

Special this month:  
**Southdown Prize Rams**  
**ROBT. McEWEN, R.R. 4, London Ont.**

**Tower Farm Oxford Sheep.** Champion flock of Canada. Choice shearing rams and ewes, also ram and ewe lambs bred from imported and prize-winning stock. See winnings at Toronto and Ottawa. Erin or Hillsburgh Stations. Long-distance Phone.  
**E. BARBOUR, R. R. 2, Hillsburgh, Ontario**

**Gossip.**  
**R. HAMILTON & SON'S PERCHERONS.**  
The breeder that stays by the Percheron horse will surely reap his reward in the near future, but care must be exercised in the selection of stallions; only the best are the positive winners in the end. R. Hamilton & Son, of Simcoe, Ont., the well-known importers of Percheron horses, are just now in a particularly favorable position to supply the trade with stallions of more than ordinary merit. Stallions that are thoroughly acclimatized, and that have been tried and proven, so that their purchasers will be taking no chances whatever with them. Space will only permit the mention of a few, and the numbers given are Canadian Registry numbers, but the horses are all imported. Kavaignac 4468 is a gray five-year-old, weighing 2,100 lbs. He was second at London and third at Guelph in strong classes. Klausral 4469 is a gray five-year-old, weighing over a ton. He was never shown. Longtemps 4466 is a gray four-year-old, weighing over 1,900 lbs. He was first at Ottawa in 1914. Others are: Luth, a gray four-year-old, weighing 1,900 lbs.; second at Toronto and Ottawa; Kant is a black five-year-old, weighing 1,950 lbs.; Kairouan is a gray five-year-old, up to 1,950 lbs. The last two mentioned horses were never shown. The quality of the horses imported by Mr. Hamilton is well known. There is none better for genuine draft character and excellence of underpinning.

**PERCHERON AND CLYDESDALE STALLIONS AND MARES.**  
Outstanding merit has always been the predominating feature in the horses imported by the popular firm of Hodgkinson & Tisdale, of Beaverton, Ont., and intending purchasers looking for the better class of horse never go away disappointed from a visit to these noted importing barns, and this year is no exception. Just now there is on hand a select lot of Percheron and Clydesdale stallions and mares, also one Standard-bred stallion, a beautiful seal-brown, 11 years old. He is Brilliant Light 976, sired by the famous Searchlight, dam Brilliant Shine, by Charles Derby. He is a horse of grand physique, beautifully turned, and has lots of speed. He is for sale at an easy price. Among the several Percheron stallions is the stylish, good-moving, quality, gray three-year-old, Molitor (imp.) 3849. His quality is best proven by saying that at the late show in Guelph he was awarded first prize. Another Guelph first-prize winner is the gray two-year-old, Nigout (imp.) 3444. He is a big, thick, smooth colt, that moves straight and true. Jovial (imp.) is a gray six-year-old that was reserve champion at Toronto, Ottawa and Guelph as a three-year-old. He is one of the good kind, and a son of the renowned Paris and Chicago \$10,000 champion, Etudiant. Koumis (imp.) 3850 is a black five-year-old, one of the low-down, thick, smooth kind. In Clydesdale stallions there is the bay four-year-old, Douglas Heir (imp.) 13171, by Black Douglas, dam by Montrave Matchless. He is a horse of outstanding merit from top to bottom, and a grand mover. Golden Spark 14567 is a bay three-year-old, Canadian-bred, by Gay Spark (imp.), dam Polly Cameron (imp.), by Royal Derby. He is a colt of excellent merit and character, particularly good at the ground, and moves straight and true. King's Top Knot (imp.) 12685 is a brown five-year-old, by the Belfast first-prize horse, Ganymede, dam by the Royal second-prize Top Knot, grandam by Prince Imperial. This is a beautiful horse, full of style and courage, and a faultless mover. In Clyde mares there is the low, thick, smooth, quality College Queen (imp.) 27876, a black six-year-old, one of the good mares of the country, sired by Baron's Fashion, dam by Baldavie Chief. Lady Bain (imp.) 22697 is a bay 7-year-old, by Faraway Blend, dam by Loudoun King. She is a Toronto and Ottawa winner. Both these mares are in foal to Douglas King. In Percheron mares, only one is left, a 1,975-lb. gray eight-year-old. She is a choice mare. With her great size, she is very smooth, and moves remarkably well. With her, in team, is a 2,100-lb. gray gelding, and together they certainly are a great team. All these horses are for sale, a selection of breeding and draft merit seldom found in any one stable.

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Sanitary, Fire-Proof, Inexpensive

Make your home more attractive, and protect it from fire with these beautiful, sanitary

**"Metallic" Ceilings and Walls**

They will out-last the building and are very inexpensive. They can be brightened from year to year with a little paint at a trifling cost. Made in innumerable beautiful designs suitable to all styles of rooms. Can be erected over old plaster as well as in new buildings. Write for catalogue.

We manufacture a complete line of Sheet Metal Building Materials.

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Manufacturers  
-King and Dufferin Sts., TORONTO 797 Notre Dame Ave., WINNIPEG

**The Bissell Steel Roller**  
With Three Drums and Strong Rigid Steel Frame. Some improvements are: Heavy Steel Axle, Thick, Heavy Steel Plate, Drums Riveted, up to stand any strain, Roller Bearings Runs like a bird. Full particulars free by mail, or ask your dealer. None genuine without the name "BISSSELL." Lock out for it. This Roller will stand hard work and lots of it. Write Dept. W for free catalogue

**T. E. Bissell Co., Limited, Elora, Ont.**

**Brampton Jerseys**  
We are busy. Sales were never more abundant. Our cows on yearly test never did better. We have some bulls for sale from Record of Performance cows. These bulls are fit for any show-ring.

**B. H. BULL & SON,**  
BRAMPTON, ONTARIO

**Jerseys, Shropshires, Tamworths**  
We are offering now for the first time a limited number of high-class and richly bred heifers and young bulls. Shearing ewes. Ram and Ewe lambs by Imp. Sire. Tamworths both sexes from breeding age down, our entire offering is high-class and priced no higher than the other fellow.

**J. B. COWIESON & SONS, Queensville, Ont., Toronto and York Radial.**

**H. ARKELL W. J. ARKELL F. S. ARKELL**  
**Summer Hill Stock Farm**  
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, Ont.**  
Customers, beware of imitations of this advertisement

**SUMMER HILL OXFORDS**  
Flock established many years ago on Summer Hill Stock Farm by the late Peter Arkell, now owned by his son, Peter Arkell. Rams and ewes in any quantity for sale, all recorded. Positively no grades registered as pure-breeds; also no grades handled except by order.

**Peter Arkell & Co., P.O. Box 454, Teeswater, Ont. C.P.R. Sta.**

**Oak-Park-Farm**  
**Shropshires and Yorkshires**

We have over 100 Shropshire ewes, imported and out of imported stock, 40 ewe lambs, 25 ram lambs, a strictly high-class lot in type, covering breeding and condition, we will sell whatever you select. In Yorkshires we have both sexes from breeding age down, all of No. 1 quality. Write us your wants.

**W. G. BAILEY, Oak-Park-Farm, Paris, Ont. R. R. No. 4.**

**Farnham Farm Oxford and Hampshire Downs**  
Flock Established in 1881 from the best flocks in England. We are offering a splendid lot of yearling rams and ram lambs for stock headers or show purposes. We ourselves have retired from the show-ring so hold nothing back. We are also offering 80 yearling Oxford ewes and ewe lambs; a few superior Hampshire yearlings and ram lambs. All registered Prices reasonable.

**HENRY ARKELL & SON, Route 2 GUELPH, ONT.**  
Guelph, G.T.R.; Arkell, C.P.R. Telegraph Guelph.  
Long-distance phone in house.

**OAK - LODGE SHROPSHIRE**  
We have on hand for sale a large number of Shearing Rams and Shearing Ewes, Ram and Ewe lambs, got by noted sires that have produced winners at Toronto for the last 3 years, highest quality.

**J. E. Brethour & Nephew, Burford, Ontario**

**Shropshires and Cotswolds** For Sale—Yearling rams and yearling ewes, a few lambs from imported ewes. Prices very reasonable.

**JOHN MILLER, Clarendon, Ont.**  
Clarendon, C. P. R., 3 miles Pickering, G.T.R., 7 miles Greenburn, C. N. R., 4 miles.

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Even in a match you should consider the "Little Things"—the wood—the composition—the strikerbiuty—the flame.

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Are made of strong, dry pine stems, with a secret perfected composition that guarantees "every match a light." Sixty-five years of knowing how—that's the reason!

All Eddy Products Are Dependable Products—Always.

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Locked securely on four sides. Galvanized to meet the British Government test. Send for free booklets.

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Boars and sows—10 weeks to 8 months—Sire and dam 1st prize winners at Toronto. First-class Shorthorn bull by Sea Foam, (Dark Roan, 12 months old).

Industrial Farm, Muncey, Ont.

**Tamworths** Boars fit for service, young sows ready to breed, pigs of all ages for sale. Before buying, write for prices.

JOHN W TODD  
R. R. No. 1, Corinth, Ont.

**SUNNYSIDE STOCK FARM**  
**Chester White Swine** Champion herd at Toronto and London Fairs; also Dorset Horn Sheep, young stock of both sexes for sale.  
W. E. Wright & Son, Glanworth, Ontario

**CLEARVIEW CHESTER WHITES**  
For many years my herd has won the highest honors at Toronto, London, Ottawa and Guelph. For sale are both sexes of any desired age, bred from winners and champions.  
D. DeCoursey, R. R. No. 5, Mitchell, Ont.

**Poland-China Swine** Duroc Jersey, Berkshires and Chester Whites, also Dorset Horn sheep. Young stock of both sexes. Come and see, write or phone.  
GEOIL STOBBS, Leamington, Ontario. Phone 284.

**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.

**Tamworths** A choice lot of bred sows some due in February and others about 1st of April.  
Herbert German, St. George, Ont. Bell Phone.

**Lakeview Yorkshires** If you want a brood sow, or a stock boar of the greatest strain of the breed, (Cinderella), bred from prize winners for generations back, write me. Young sows bred and bears ready for service.  
John Duck, Port Credit, Ont.

**Townline Tamworths** We can supply worths of both sexes and any desired age of superior quality. Also Leicester Ram and Ewe lambs, Pekin ducks, Langshan cockerels and pullets. Write us your wants.  
T. Readman & Son, Streetsville, Ont. R. M. D.

**Yorkshire Sows for Sale.** Two choice Yorkshire sows, bred eight months old, weight about 275 lbs. L. D. Phone. Geo. D. Fletcher, R. R. No. 1, Erin, Ont.

**Morrison Tamworths and Shorthorns** bred from the prize-winning herd of the same name. Choice Tamworths, both sexes, 140 lbs and to choose from. Choice Shorthorn cows and heifers, 8 mos. old, bred from the best cows and heifers of the deep milking strain.  
Charles Currie, Morrison

### Questions and Answers. Miscellaneous.

#### Lambs Killed by Dogs.

1. Can a Township Council be sued at a Magistrate's Court for price of lambs killed by dogs?

2. Can a Township Council be sued for price of lambs killed by dogs, whether they collect a dog tax or not?

Ans.—1. No; the suit should be entered in the Division Court.

2. Yes. We would add that it is only where the owner of the dog is unknown that the corporation of the municipality is required to award compensation to the owner of the sheep or lambs killed; and the Council must be first satisfied that he has made diligent search and enquiry to ascertain the owner or keeper of the dog, and that he cannot be found. The award would not exceed two-thirds of the damage sustained.

#### Communicable Disease.

I had diphtheria and was quarantined for four weeks. I asked the doctor if I should spray the room every day with carbolic acid, but he said not to do anything with the room, and when we got better the Health Inspector would come and disinfect the place; that a man was appointed for that work. He also said I would be better and out in two weeks. He used anti-toxin, but when the two weeks were up he said my throat was a little red, and I had better stay in another week, and then he would send the inspector to disinfect the place, but if he should forget, I was to send word to him and remind him of it. I sent him word when the time was up and no one came, and then I sent word to him again in a couple more days, and still no one came. In a couple more days I sent a man to the doctor, and the doctor said he had nothing to do with it, to go to the township clerk, and the clerk said he had nothing to do with it, to go to the inspector.

1. Who has the authority to let me out?

2. Who should pay for the disinfecting?

Ans.—1. The medical officer of health for the municipality.

2. The municipality.

#### Veterinary.

##### Thrush or Canker.

Mare's feet smell like decayed meat. She has been treated for thrush for eight months by two veterinarians. One of them threw her, cut out the diseased parts, packed her feet with tar and oakum several times, and put on leather boots. She is not cured, and she limps a little on one foot. I am now treating myself with carbolic and coarse salt.

H. L. B.

Ans.—This condition is very hard to treat. It usually requires a year or over to effect a cure, and some cases will not yield to treatment. Your treatment is probably original, but not likely to give good results. Your veterinarian followed the proper course of treatment, but evidently you became impatient and decided to treat it yourself.

##### Leucorrhoea.

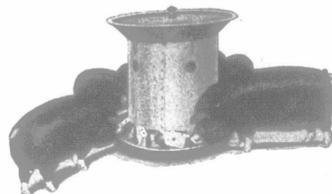
Mare was bred last July, but ever since she has an irregular discharge of whitish matter. Some days there is none, and other times for a day or two there is a large quantity.

Ans.—This is leucorrhoea, commonly called "whites." It is very hard to cure. Treatment is usually troublesome and tedious. Flush out the womb daily with about a gallon of a warm one-per-cent solution of Zenoleum or other coal-tar antiseptic, or a solution of boracic acid, two ounces to a gallon of warm water. This can be introduced into the womb by the use of an injection pump, or syringe with a long nozzle. In addition, give her three times daily, 40 drops carbolic acid mixed with a pint of cold water and sprinkled on her food, or given as a drink. Continue treatment until all discharge ceases. It is not probable that she will come in until cured.

Someone noticed that Pat was undependable. "When I was a boy," he explained, "my father always said to me, Pat, learn to cut yer finger nails wid yer left hand, for some day ye might lose yer right hand."—Boston Transcript.

LET THE HOGS GRIND THEIR OWN FEED WITH A

## HOG MOTOR



You would buy a HOG MOTOR if you were sure the Motor is pleasing forty farmers in Perth and Huron counties?

You would buy a Motor if you were sure almost every farmer in the Listowel district was convinced they should have a HOG MOTOR?

We will prove this to you if you will let us! We will pay your R.R. fare to and from Listowel and prove this statement to be true on condition that you purchase a Motor!

The following are a few extracts from letters and statements from farmers who are using the HOG MOTOR. We have them from every part of Ontario and the West.

Mr. Wm. Smith, of Trowbridge, states he is able to produce a pound of pork on one less pound of grain than can be produced by the average trough-feeder. Mr. Smith is one of Perth's foremost feeders of hogs and a successful farmer.

Mr. Richard Chamney, of Listowel, salesman for the Wallace Cheese Company, has used a Motor since his hired man left on the harvest excursion to the West. He states his hogs gave him no trouble during the busy season, and showed splendid growth, besides, the Motor attended to the hogs while he was from home. His hogs were on exhibit at the Listowel Fair, and were commented upon as being in perfect growing condition.

Mr. Wm. Shott, of Listowel, purchased a Motor because of loss of pigs through crippling, and has since sold two lots off the Motor. He states the Motor has solved the hog trouble with him, and is leading him to pay more attention to this branch of farming.

Mr. Herb. Jackson, of Listowel, has had so good results with his first Motor he has purchased a second and is feeding some 40 hogs, and could feed 10 more on the two machines. He is always pleased to show them to persons desirous of learning how to successfully feed hogs.

Mr. David Riddell, of Newton, says that after using the Motor a month he is satisfied with the result, as his hogs are doing splendidly. He will be pleased to distribute some literature showing the benefit to feeders with the Motor, especially during the winter.

Mr. G. D. Robertson, of Welland, has two of these machines, and will supply information concerning them to interested persons.

We can fill the Advocate with testimonials of the usefulness of the HOG MOTOR, but it will do you no good unless you are the owner of one and using it to feed your hogs.

The HOG MOTOR sells at \$60.00 in the U.S. In Western Canada the price is \$50.00. In Ontario and the Eastern Provinces the price is \$45.00 f.o.b. Galt, Ont.

THE CANADIAN HOG MOTOR CO., LIMITED  
Listowel, Ontario

## Ottawa Winter Fair

Howick Hall, Ottawa

January 18, 19, 20, and 21, 1916

\$16,000.00 OFFERED IN PRIZE MONEY

Greatly increased prizes and extended classification. Entries close January 7. Reduced rates on all railways.

JOHN BRIGHT, President  
Ottawa, Ont.

W. D. JACKSON, Secretary  
Carp, Ont.

## Yorkshire Pigs

AGES FROM SIX WEEKS TO FIVE MONTHS.

Strong growthy individuals from well bred sire and dams. Inspection invited. Address—

WELDWOOD FARM  
Farmer's Advocate, London, Ontario

### DUROC JERSEY SWINE, JERSEY CATTLE

In Duroc Jerseys we have either sex of any desired age, bred from winners and champions for generations back. In Jerseys we have young cows in calf, and young bulls, high in quality and high in producing blood.  
MAC. CAMPBELL & SONS, Northwood Ont

### Cloverdale Large English Berkshires!

Sows bred, others ready to breed; boars ready for service; younger stock, both sexes, pairs not akin. All breeding stock imp. or from C. J. Lang, Burketon, Ont. R. R. 3. imp. stock. Prices reasonable.

**Newcastle Tamworths and Shorthorns** Boars ready for service. Sows due to farrow, others bred and ready to extra choice young bulls and heifer calves, recently dropped; grand milking strain, 2 bulls 5 and 8 months old. All at reasonable prices.  
A. A. COLWILL, NEWCASTLE, ONTARIO Long-Distance Telephone

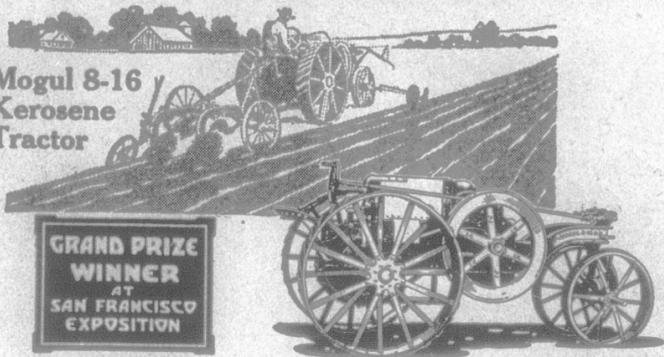
**ELMHURST LARGE ENGLISH BERKSHIRES**  
From our recent importation of sows, together with the stock boar, Suddon Torredor, we can supply select breeding stock, all ages. Satisfaction and safe delivery guaranteed.  
H. M. VANDERLIP, Breeder and Importer, R. R. 1, Brantford, Ontario  
Langford Station on Brantford and Hamilton Radial.

**YORKSHIRES** Our offering never better. Champion hog winner of 12 firsts, 5 championships, 2 years showing, still at the head. Boars and sows all ages, same breeding as WM. MANNING & SONS.  
WOODVILLE, ONT.

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

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**Mogul 8-16  
Kerosene  
Tractor**



**GRAND PRIZE  
WINNER  
AT  
SAN FRANCISCO  
EXPOSITION**

THESE are the days of heavy horse power expense. The horses are idle. Hay and oats are worth so much it's a shame to use them for feed. It takes five acres of land to raise enough to feed one horse one year. Horses are at the top of the market, with prices higher than for years past. The market for horses is so good that, even at these higher prices, they are easy to sell. What better time could there be to consider replacing some of your horses with a Mogul 8-16 kerosene tractor?

You can use a Mogul 8-16 with profit for about all the work you are now doing with horses—the tractor does it better and cheaper. It takes less of your time to care for it. It increases the amount of land you make a profit from—five acres for every horse it replaces. It is the right size for most of your belt work. It burns any fuel oil—kerosene, naphtha, benzine, motor spirits, enabling you to use the cheapest fuel you can buy.

Why not plan to sell some of your horses now and save the winter feeding? Mogul 8-16 will take their place and do your spring work in time. Write today for our 100-page book "Tractor Power vs. Horse Power," which we will send promptly if you'll only ask for it. Write us at the nearest branch house.

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At Brandon, Calgary, Edmonton, Estevan, Hamilton, Lethbridge, London, Montreal, N. Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Winnipeg, Yorkton

### Gossip.

#### COMING EVENTS.

Experimental Union at Guelph, January 11 and 12, 1916.

Western Ontario Dairymen's Association Convention at St. Mary's, January 12 and 13.

Ottawa Winter Fair, January 18-21, 1916.

Convention of the Ontario Fruit Growers' Association at Toronto, January 19, 20 and 21, 1916.

Live Stock Association meetings at Toronto, Jan. 31 to Feb. 4.

J. M. Gardhouse, Weston, Ont., writes that he has just purchased the entire herd of Shorthorn cattle formerly owned by John Milton, Brantford, Ont. This herd is comprised of thirty head of choicely-bred cattle, among which are four imported cows, an imported bull, and a number from imported sire and dam. Mr. Milton spared neither time nor money in collecting this herd. However, he found it necessary to curtail his farming interests, and Mr. Gardhouse bought the entire herd. Mr. Gardhouse purposes holding an auction sale of between 40 and 50 head shortly, composed of some of these cattle, together with a number selected from the well-known Rosedale herd. Among the draft will be one of the best sons of the great champion, Gainford Marquis, and there will also be a daughter of the well-known show bull, Browndale.

#### SALE DATES CLAIMED.

Jan. 19, 1916.—Jas. Binnie, Erin, Ont.; Aberdeen-Angus cattle and Oxford Down sheep.

Jan. 25, 1916.—Victoria Pure-bred Stock Association, Lindsay, Ont.; A. A. Knight, Secretary.

Jan. 26, 1916.—Brant District Holstein Consignment Sale of Holsteins, Brantford, Ont.; N. P. Sager, St. George, Ont., Secretary.

Jan. 27, 1916.—Bertram Hoskin, Grafton, Ont.; sale of Holsteins at Coburg.

Jan. 27, 1916.—Wm. A. Rife, Hespeler, Ont.; Holsteins.

Feb. 2, 1916.—Canadian Sale of Scotch Shorthorns, Union Stock Yards, Toronto; Robt. Miller, Stouffville, Ont., Manager.

Feb. 8.—Southern Ontario Consignment Sale Company's Annual Sale of Holsteins at Tillsonburg; R. J. Kelly, Culloden, Ont., Secretary.

Feb. 10, 1916.—C. E. Treblecock, London, Ont.; Holsteins.

Feb. 16, 1916.—Norfolk Holstein Breeders' Sale, at Simcoe; W. A. Mason, Simcoe, Secretary.

March 29, 1916.—Western Ontario Consignment Sale, London; Harry Smith, Hay, Ont., Manager.

To the village clergyman's home there came one day a bouncing baby boy. Kind neighbors and members of his flock hastily gathered together a few dollars and presented the money to the proud but poor father.

So great was his gratitude that he decided to thank his congregation the following Sunday before beginning his sermon, and this is what the wondering congregation heard:

"Friends, I want to express my keen appreciation and gratitude for the timely little succor that came to my home yesterday."

The Sunday-school teacher put to her class a number of questions touching the history of the cities mentioned in the Bible.

"What happened to Babylon?" was the first query.

"It fell," said one boy.

"And what became of Nineveh?"

"It was destroyed."

"And what of Tyre?"

"Punctured!"

A country school-teacher was cashing her monthly check at the bank. The teller apologized for the filthy condition of the bills, saying: "I hope you are not afraid of microbes."

"Not a bit," answered the school-ma'am; "I'm sure no microbe could live on my salary."

## PLEASURE CRUISES BY

**R.M.S.P. TO  
WEST INDIES**

FORTNIGHTLY SAILINGS  
By Twin-Screw Mail Steamers.

SPECIAL FACILITIES FOR TOURISTS.

Next Sailing from HALIFAX:  
R. M. S. P. "Chignecto" Jan. 14, 1916

APPLY TO  
The Royal Mail Steam Packet Co.,  
57-59, Granville Street, HALIFAX (N.S.)

OR TO THE  
LOCAL TICKET AGENCIES.

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Where are you shipping now?  
And what are you getting for your cream?

We want more individual shippers and more men to gather cream for us.

Write for our proposition.

**Silverwoods Limited**  
LONDON, ONTARIO

## Sarnia Creamery

Pays express, furnishes cans and remits weekly  
Pay Highest Price.

Write for particulars.

**Sarnia Creamery Co., Ltd.**  
Sarnia, Ont.

## CREAM

We pay express charges and furnish cans.  
Remit promptly. Take all you can make. Write us.

**THE BERLIN CREAMERY CO.**  
Berlin, Canada

## CREAM Mr. Shipper, Attention!

Reasons why you should send your cream to us:  
1. We aim to pay the highest prices.  
2. We give you a square deal.  
3. We have the largest market in Ontario.  
4. We are prompt in making remittances.  
The market indicates a gradual advance. Act now.  
Write us for further particulars.  
**THE TORONTO CREAMERY CO., LIMITED**  
9 Church Street, Toronto, Ont.

When Building—Specify

## MILTON BRICK

Smooth, Hard, Clean-Cut.  
Write for Booklet.

**MILTON PRESSED BRICK COMPANY**  
Milton, Ontario

## "1900" Gravity Washer

Sent free for one month's trial.  
Write for particulars.

**"1900" WASHER COMPANY**  
257 Yonge Street Toronto, Ont.  
(Factory 79-81 Portland St., Toronto)

## Louden Barn Equipments

SAVE Time—Save Labor—Save Expense

Our new catalogue describes every kind of device for money making and labor saving on farms. Write to:  
**Louden Machinery Company**  
Dept. 1 Guelph, Ont.

**Ear Tags FOR STOCK**

Tag your stock—best and cheapest means of identification for Hogs, Sheep and Cattle. Name, address and number stamped on tags. Catalog and samples free on request.  
**F. S. Birch & Co., 173 W. Wabash St. Chicago**

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### The "Rideau" to Ottawa

Popular Afternoon Train

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**LAKE ONTARIO SHORE**

Leaves Toronto 1.45 p.m. for Whitby, Oshawa, Bowmanville, Port Hope, Cobourg, Trenton, Belleville, Kingston,

arrives **OTTAWA** 10.00 p. m.

**CENTRAL STATION**

Sparks Street, at Chateau Laurier.

THE "YORK"

Leaves Ottawa 1.15 p.m.

Arrives Toronto 9.30 p.m.

### The "Transcanada"

From **TORONTO** Daily

6.40 p.m.

**PORT ARTHUR**

**FORT WILLIAM**

**WINNIPEG**

**VANCOUVER**

Through Equipment

Electric Lighted Compartment Observation Car, Standard and Tourist Sleepers, Dining Car, First-class Coaches.

"The Frequent C.P.R. Service passing through the Business Centre of each City is an asset to the Traveller."

### ATTRACTIVE WINTER TOURS

To CALIFORNIA, FLORIDA, ETC.

Limited Trains connect at Detroit with through Sleepers to Florida; also connection via Buffalo, Washington and Cincinnati.

Improved service via C. P. R. and M. C. R. to Chicago connects with all through service Chicago to California.

Particulars from Canadian Pacific Ticket Agent, or write M. G. MURPHY, D.P.A., Toronto.

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# RAW FURS

To the Largest, Most Reliable and Oldest House in Canada

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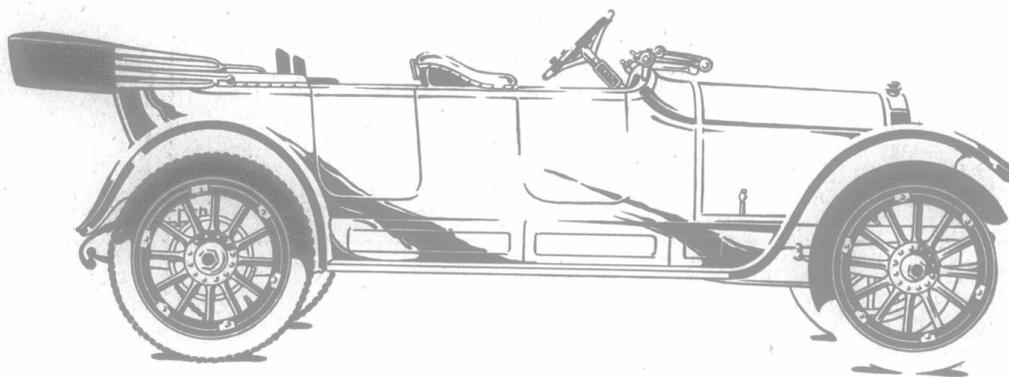
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